



AGENDA  
COMMITTEE OF THE WHOLE MEETING  
FEBRUARY 12, 2019

**CALL TO ORDER:**

**INTRODUCTION OF LATE ITEMS:** - Resolution required to add late items, if any

**ADOPTION OF AGENDA:** - Resolution to adopt the Agenda for the February 12, 2019 Committee of the Whole Meeting.

**PETITIONS & DELEGATIONS:** -

**NEW BUSINESS:**

Community Energy Association – Trish Dehnel, Senior Energy Specialist/Community Relations Manager - Regional Energy Efficiency Program & BC Energy Step Code Consultation Notification

**ADJOURNMENT:**

- Resolution to adjourn the meeting at \_\_\_ p.m.





## Regional Energy Efficiency Program

Regional District Central Kootenay  
Regional Energy Efficiency Program

February 2019

Trish Dehnel, CEA  
Carmen Proctor, Nelson EcoSave



Regional Energy Efficiency Program  
**HOME RENOVATION**



Regional Energy Efficiency Program  
**NEW HOMES**



Thanks to our funders and partners



FEDERATION  
OF CANADIAN  
MUNICIPALITIES

FÉDÉRATION  
CANADIENNE DES  
MUNICIPALITÉS



*Energy at work*



**FORTIS BC™**



**BC Hydro**  
Power smart



# Agenda

- Introduction
  - Community Energy Association and Nelson EcoSave
  - Common Commitments
  - Local Government Action/Programs
- Residential Energy Efficiency Program
  - New Home Program Component
  - Existing Home Program Component
- Community Launch – April 2019



**Regional Energy Efficiency Program  
NEW HOMES**



**The trusted independent  
advisor to local governments  
on climate and energy.**

**Connecting communities,  
energy and sustainability.**



**Implementation  
Engagement  
Education  
Research  
Planning**



**Waste Management  
Renewable Energy  
Transportation  
Buildings  
Land Use**



**CEA are regional advisors for  
FCM-ICLEI Partners for Climate  
Protection Program (PCP).**

**The first step for local  
governments wanting to close  
the implementation gap & take  
climate action.**



Regional Energy Efficiency Program  
HOME RENOVATION



# The City of Nelson

Carmen Proctor

EcoSave Program Manager





## Regional Energy Efficiency Program

All Kootenay local governments are signatories to the **Climate Action Charter**

Climate commitments for:

- ***Corporate emissions***
- ***Community emissions***
- ***Complete communities***

Eligible for: **Climate Action Revenue Incentive Program (CARIP)**

As local government, the RDCK and member municipalities can take **climate action** and implement policy to **reduce emissions** in 3 key areas:







## Regional Energy Efficiency Program

### Community – residential, commercial, institutional



- Energy/emissions measured - CEEI
- Senior Energy Specialist/CEEP
- OCP reduction targets
- Nelson EcoSave/ Kootenay Energy Diet
- 100% Renewable Kootenays
- REEP

### Local government Corporate operations

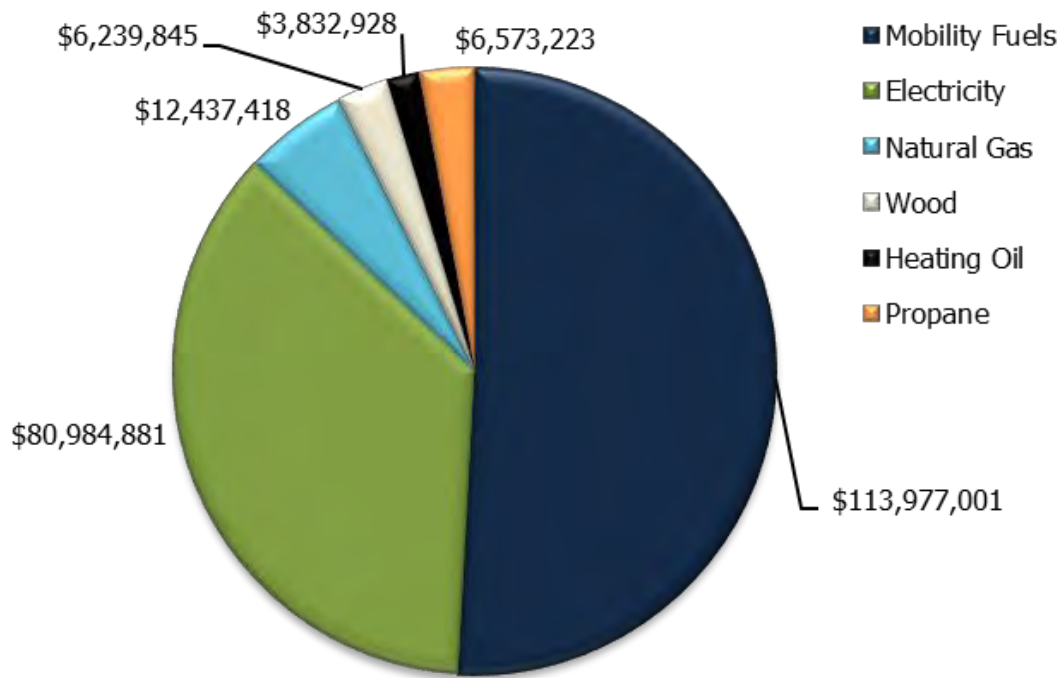


- Energy/emissions measured  
Corporate Inventory / SmartTool
- Carbon Neutral Kootenays 2009-2014
- Carbon Neutral Action Plans and Corporate GHG Emission Reduction Plans



## Regional Energy Efficiency Program

### Community Energy Cost, 2016



★ \$224 million per year spent in RDCK  
\$3,764 per capita per year



## Policy and Program Development

- Sustainability Checklist
- Regional approach to Step Code

## Training and Education

- Community Information Sessions
- Builder Step Code workshop

## Promotion of Energy Efficient Programs

- EfficiencyBC
- BC Hydro
- FortisBC





# Regional Energy Efficiency Program NEW HOMES



## Central Kootenay Sustainability Checklist Residential Construction

This checklist is for BC Building Code Part 9 Buildings (Climate Zones 5 to 7a)

Attention to sustainability in planning and building your residence will create a healthy and more comfortable home with reduced long-term utility costs. Use this checklist to help plan, design and build with goals of sustainability and energy-efficiency.

The Kootenay Region encourages energy efficiency measures and renewable energy technologies in new residential building construction and retrofits. This supports regional goals of sustainability and energy reduction objectives as outlined in local Community Energy and Emissions Plans.

Please return the completed checklist with your building permit application package.

Property Owner/ Project Manager Name: \_\_\_\_\_

Property Address: \_\_\_\_\_

Project Description: \_\_\_\_\_

<input type="checkbox"/> New residential construction	<input type="checkbox"/> Addition to existing residence
<input type="checkbox"/> Structural or building envelope renovation	<input type="checkbox"/> Other

Consider each item and check those applicable to your project: (ALSO SEE REVERSE)

- Take a holistic approach to building and reap the reward: energy efficiency, shade trees, solar exposure, attention to building practice detail, etc.
- Check for updated energy advice and incentives at [BC EnergyCoach.ca](http://BC EnergyCoach.ca)
- Review utility rebates and savings offers as applicable: [EfficiencyBC.ca](http://EfficiencyBC.ca), [Fortis BC](http://Fortis BC), [BC Hydro](http://BC Hydro), [Nelson Hydro](http://Nelson Hydro)
- Review [BC Energy Step Code](#) guidelines. Examples of green labels include [ENERGY STAR® for New Homes](#) or [R-2000 home](#)
- Work with an Energy Advisor from initial project design. Plan to meet a minimum Step 1 of the [BC Energy Step Code](#)
- Find an Energy Advisor through [BC Home Performance Stakeholder Council](#) or [Natural Resources Canada](#) service provider listings.



### Notes on [BC Energy Step Code](#).

The BC Energy Step Code is a voluntary provincial standard that provides a consistent approach to achieving more energy-efficient buildings. Builders work with an energy advisor, who uses software to analyze construction plans and determine building energy efficiency. During construction, pay special attention to air sealing, walls, windows, doors and insulation to achieve energy model performance. Regardless of the BC Energy Step Code step chosen, the ultimate building comfort and reduced utility bills will reward the future homeowner / building occupant.



**Sustainability Checklist INSTRUCTIONS:**  
The intent of this Checklist is not to "pass" or "fail", but rather to assist applicants and the Building Department to work together to develop high quality residential buildings and promote energy efficient building practice in our region. Please review and consider all items on the checklist.

- Site consideration**
  - Optimum solar orientation and use natural geographic/ecological features in building siting.
  - Compact development and minimum disturbed site area considered.
  - Surface water management: permeable lot, permanent erosion controls and/or roof run-off management.
  - Landscape plan: shade trees, fire-smart varieties, low irrigation demand, drought tolerant plants, no invasive plants.
  - Plan for site erosion control during construction.
  - Make your property [FireSmart](#)

- Building Energy Efficiency (BC Energy Step Code)**
  - Work with an [Energy Advisor](#).
  - Review building energy efficiency and [EnerGuide home evaluations](#)
  - Use efficient hot water distribution/domestic hot water equipment.
  - Install hot water pipe insulation.
  - Use appropriate sized & high efficiency HVAC equipment; minimal losses from heating and cooling distribution system.
  - High performance envelope; including exterior or enhanced insulation.
  - Build for minimal envelope leakage and maintain strict [attention to air sealing detail](#) during construction.
  - Install enhanced performance windows and doors.
  - Install external window blinds / shades
  - Use efficient ENERGY STAR® lighting options.
  - Install ENERGY STAR® / water efficient appliances, e.g., washing machine.
  - Investigate renewable energy system, e.g., air source heat pump with electric or natural gas backup.
  - Investigate [drain water heat recovery](#).
  - Install solar photovoltaic system, or make ready for future retrofit.

- Indoor Environmental Quality (BC Building Code)**
  - Review combustion venting measures.
  - Review moisture load control.
  - Install outdoor air ventilation.
  - Install local exhaust vents.
  - Consider enhanced energy efficiency performance for distribution of space heating and cooling.
  - Install high quality air filters.
  - Choose low-VOC or zero-VOC (volatile organic compounds) paint.
  - Use [radon resistant construction](#) practices.
  - Ensure garage pollutant protection.

- Active and Low Carbon Transportation**
  - Clear and safe pedestrian access and pathways.
  - Bicycle storage or racks.
  - Electric vehicle charging infrastructure placement (make ready for easy retrofit of "level 2" charger).
- Water Conservation**
  - High efficiency fixtures and fittings (low flush toilets, low flow showerheads, tap aerators).
  - Rainwater harvesting system.
  - If available, graywater reuse system.
  - Maintain xeriscape or low irrigation needs (e.g. consider native plants, fire-smart varieties) or high efficiency irrigation system.
  - Ability to monitor occupant water usage. (i.e., install water meter)

- Waste Management**
  - Plan for recyclables, compost and waste storage on site.
  - Use environmentally preferred products.
  - Practice material efficient framing (order waste factor limit, detailed framing documents, detailed cut list and lumber order, framing efficiencies, off-site fabrication).
  - Use construction waste management and reduction practice.

Date Checklist completed: \_\_\_\_\_ Signature \_\_\_\_\_  
Property Owner/Project Manager



# BC Energy Step Code

PATHWAY TO 2032: **PART 9 (HOMES)**



## Initial Notification:

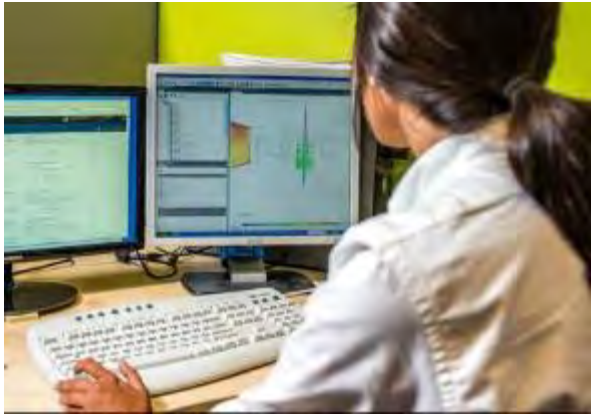
Notify the Energy Step Code Council you have started to consult on the BC Energy Step Code



Regional Energy Efficiency Program  
**NEW HOMES**



# BC Energy Step Code



Energy Modeling by Natural Resources Canada Certified Energy Advisor



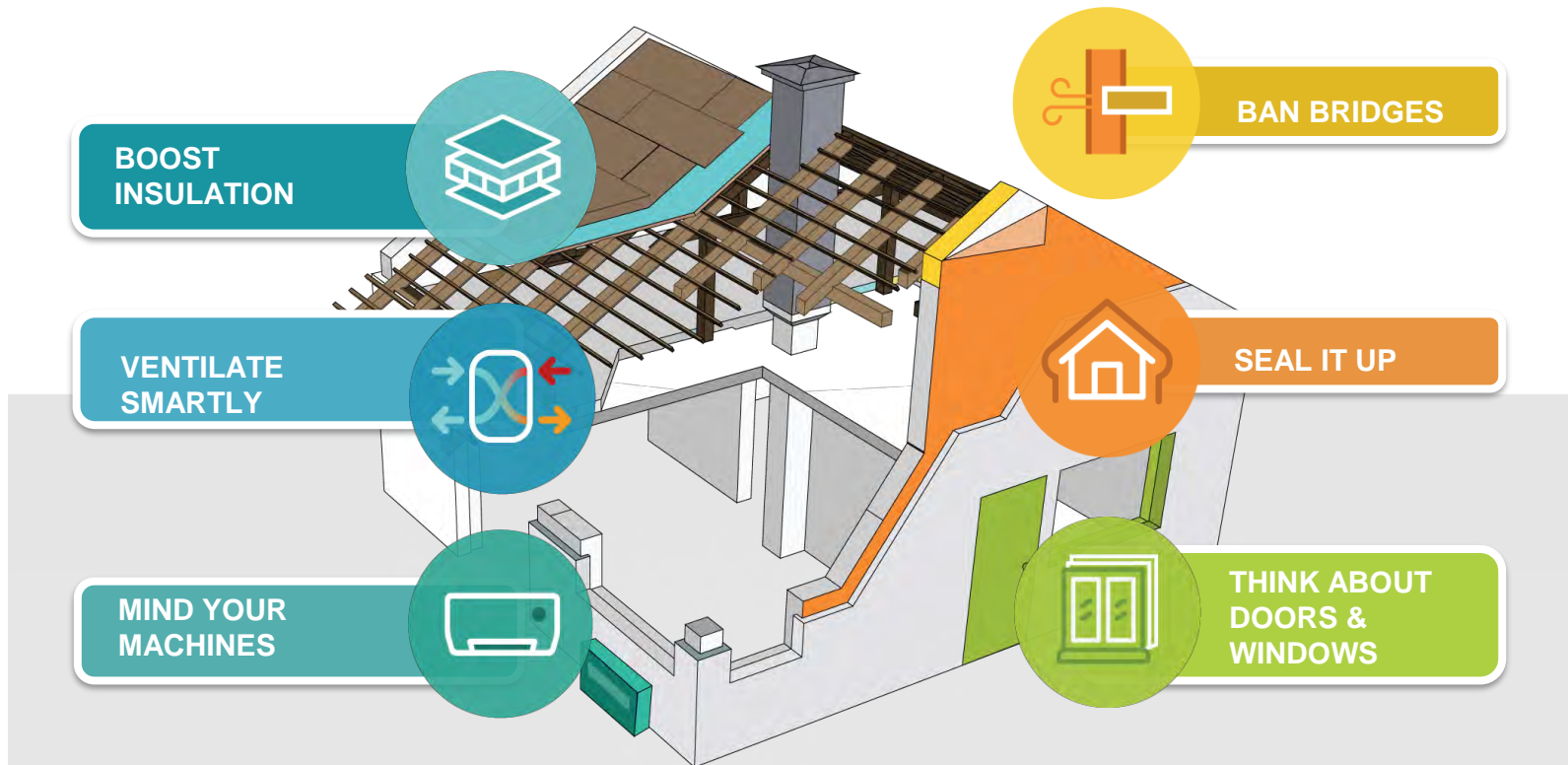
Air-Tightness Testing to achieve minimum performance levels



No Prescriptive Energy Requirements



# How to Boost Performance





# Step 3 Case Studies

CASE STUDY: Maryland Residence, Campbell River

Climate zone: 5  
Project size: 2,525 square feet  
Build cost: \$381,564, or \$151/square foot  
Step achieved: 3

**0% above**  
cost to build to the energy efficiency requirements of the BC Building Code

“ A high efficiency heat pump keeps the occupants warm through the chilly and damp northern Vancouver Island winters—and cools the place in the summer when needed.

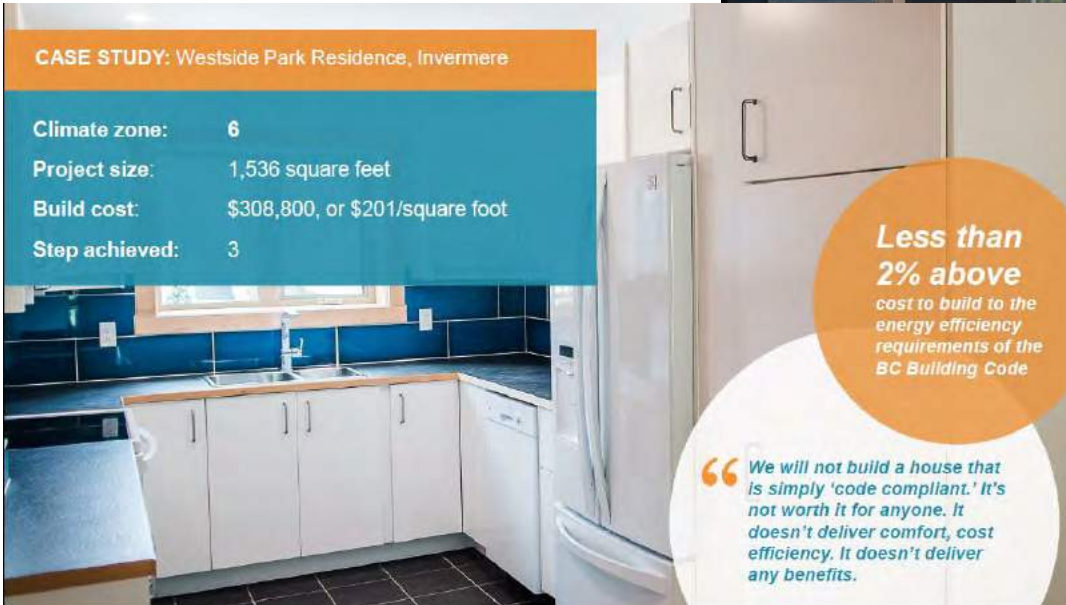


CASE STUDY: Westside Park Residence, Invermere

Climate zone: 6  
Project size: 1,536 square feet  
Build cost: \$308,800, or \$201/square foot  
Step achieved: 3

**Less than 2% above**  
cost to build to the energy efficiency requirements of the BC Building Code

“ We will not build a house that is simply 'code compliant.' It's not worth it for anyone. It doesn't deliver comfort, cost efficiency. It doesn't deliver any benefits.



[energystepcode.ca/case-studies/](http://energystepcode.ca/case-studies/)





Regional Energy Efficiency Program  
**NEW HOMES**

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# Home Owner Benefits

- **Lower energy bills:** lower energy consumption reduces operation costs
- **Comfort:** minimizes warm and cold spots
- **Quiet:** increased insulation levels and better windows can reduce outside noise
- **Durable:** focus on envelope first, minimum requirements beyond building code
- **Peace of mind:** third part verified by trained energy advisor

Highly Encouraged: Mid Construction Blower Door Test

Check: **efficiencybc.ca** for utility incentives



# Top 10 Must Haves for new homes

- Walk-in closets
- **Energy-efficient appliances**
- **High-efficiency windows**
- Linen closets
- **Overall energy-efficient home**
- Kitchen islands
- Open concept kitchens
- Large windows
- Two-car garage
- **HRV-ERV air exchange**





RESIDENTIAL BUILDING PERMITS (Total number of single residential units/year)	Number building Permits Year 2016	Number Building Permits Year 2017	Projected Number Building Permits Year 2018
	2016	2017	2018
<b>Central Kootenay RD Total</b>	<b>167</b>	<b>230</b>	<b>289</b>
Castlegar, C	15	10	28
Central Kootenay, RD Rural Areas*	98	125	126
Creston, T	15	9	13
Kaslo, VL	1	2	3
Nakusp, VL	7	4	6
Nelson, C	30	79	108
Salmo, VL	1	1	5

(\*includes New Denver, Silverton, Slokan)

Source: Statistics Canada, Produced by BC Stats ([www.bcstats.gov.bc](http://www.bcstats.gov.bc))



# Targets

Year	# New Builds Anticipated Region Wide	# New Builds Voluntary Step 1	# New Builds Mandatory Step 1	# New Builds Voluntary Step 3	# New Builds Mandatory Step 3 (Base Code Change)
2019	200	100 (50%)		50 (25%)	
2020	200		200 (100%)	100 (50%)	
2021	200		200 (100%)	160 (80%)	
2022	200		200 (100%)		200 (100%)



Regional Energy Efficiency Program  
NEW HOMES

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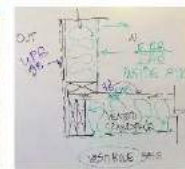
# Incentives and Policy Support

- Examples in East Kootenay (Kimberley and Sparwood): initiated Step Code through incentives, now have adopted policy
- Voluntary incentive aims to remove barriers and encourage learning: Uses CARIP funds
- BC Hydro Energy Step Code Implementation Funding – to incentivise working with an Energy Advisor
- Consider mid-construction blower door as the opportunity for enhanced learning



# Builders Workshops

- **Past workshops in 2018**
- **March 8, 2019** BCIT Stepcode Lab in a box builders workshop, Nelson (and March 11, Revelstoke)-.
- **March 16, 2019** Airtightness Training in Nelson.





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HOME RENOVATION



- Help homeowners to reduce energy and GHG emissions
- Program offered Spring 2019 to December 2020
- Information sessions will be offered in most RDCK communities
- Simple registration process
- Program Targets & Program evaluation

## Nelson Mayor John Dooley Registering in 2012!





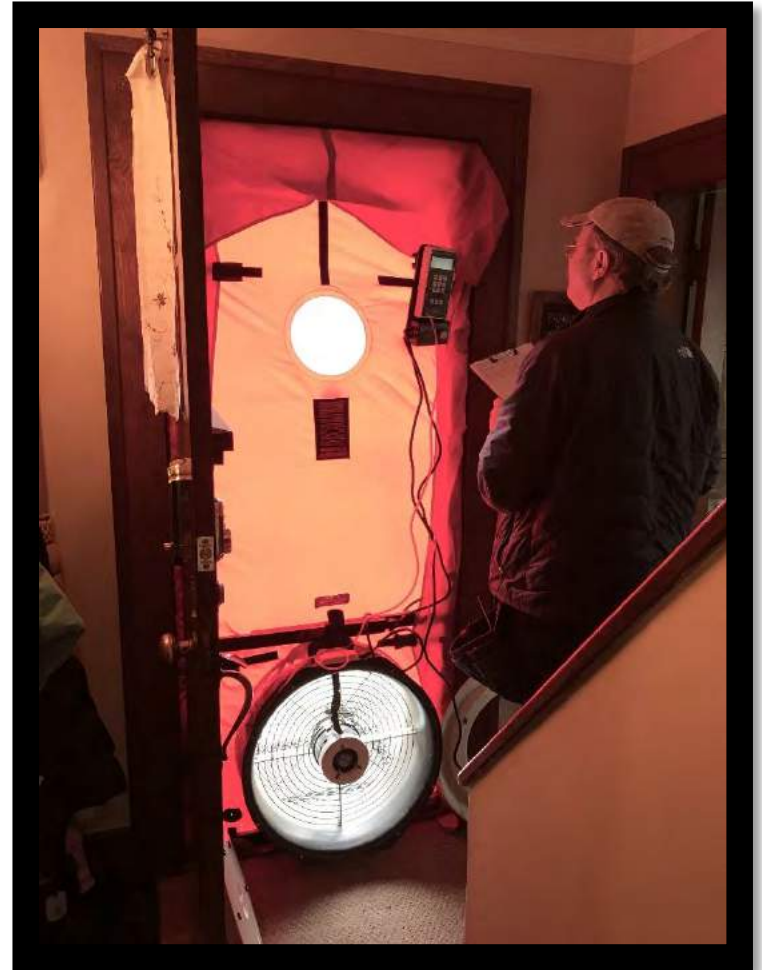
Regional Energy Efficiency Program  
HOME RENOVATION



## How to participate:

1. Register
2. Pre-energy evaluation
3. Rebates and financing
4. Upgrades completed
5. Post-energy evaluation
6. EnerGuide Rating

## Blower Door Test

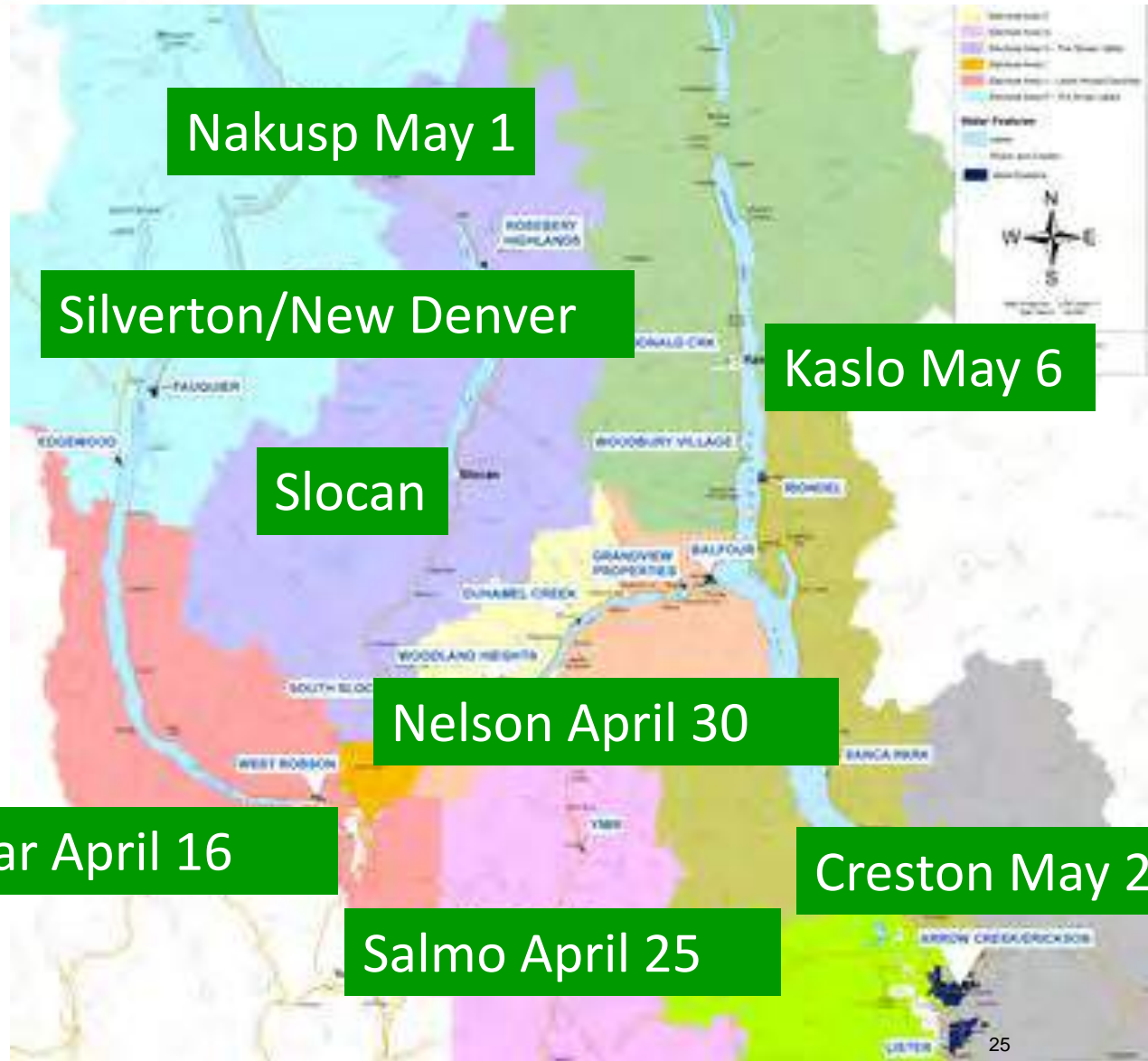






Regional Energy Efficiency Program

# Community Launches Spring 2019





Regional Energy Efficiency Program

# Thank you!

Trish Dehnel

[pdehnel@communityenergy.bc.ca](mailto:pdehnel@communityenergy.bc.ca)

250-505-3246

Carmen Proctor

[cproctor@nelson.ca](mailto:cproctor@nelson.ca)

250-509-2021

Local governments should use this form to notify the Province and Energy Step Code Council when they have started or plan to initiate consultation with stakeholders on the potential application of the BC Energy Step Code in their communities. Please read the [online information about the notification process](#) before completing this form.

To provide industry with sufficient time to adjust to new energy-efficiency requirements, the Province and the Energy Step Code Council recommend the following transition timelines, as noted in the Energy Step Code [provincial policy guide](#) (sections 3.4.1 to 3.4.4):

- a) Enforcement with no delay: The transition of energy-efficiency requirements existing prior to December 2017, to an equivalent Step(s) in the BC Energy Step Code, may be enforced with no delay.
- b) Three-month transition: The expansion of an existing program(s) that is equivalent to a Step(s) in the BC Energy Step Code (item (a) in this list), to a new location within a community (e.g., a neighbourhood plan) or situation (e.g., rezoning), may be enforced no sooner than three months from the date this form is received by the Building and Safety Standards Branch.
- c) Six-month transition: New or expanded requirements for Lower Steps may be enforced no sooner than six months from the date this form is received by the Building and Safety Standards Branch.
- d) Twelve-month transition: New or expanded requirements for Higher Steps may be enforced no sooner than 12 months from the date this form is received by the Building and Safety Standards Branch.

The transition timelines start when the notification form has been received by the Building and Safety Standards Branch (the Branch will send an email to confirm receipt of the notification and the transition start date).

The information you provide will be summarized and shared with the Energy Step Code Council, to help support the successful implementation of the BC Energy Step Code. Summarized information from Sections 1, 3, 4 and 5 of the form will also be shared publicly.

**The information submitted here does not commit a local government or Authority Having Jurisdiction to any future action regarding the BC Energy Step Code.**

<b>1. Local Government</b>	
<i>Which BC local government or other authority having jurisdiction are you reporting on behalf of?</i>	
Village of New Denver	
<i>Which regional district is your community in?</i>	
Regional District of Central Kootenay	
<b>2. Contact Information</b>	
<i>Please provide contact information for the person completing this notification.</i>	
<i>First Name</i>	<i>Last Name</i>
Catherine Allaway	
<i>Job Title</i>	
Acting CAO	
<i>Municipality (if different from the local government)</i>	
<i>Telephone</i>	
250-358-2316	
<i>Email Address</i>	
office@newdenver.ca	

<b>3. Initial or Revised Notification of Consultation on the BC Energy Step Code</b> Please indicate if this is an initial notification of your consultation on the BC Energy Step Code, or a revised notification based on a change in requirements. If this is a revised notification, note that the transition timelines referred to above restart.		
<input checked="" type="checkbox"/> Initial Notification <input type="checkbox"/> Revised Notification		
<b>4. Consultation</b> Please indicate the Step(s) you expect to consult on for each building type and whether you are considering a community-wide or other type of application (e.g., builder incentives, or a neighbourhood requirement).		
Part 9: Houses and Small Buildings	<b>Community-Wide Application</b>	<b>Other Application</b>
	<input checked="" type="checkbox"/> Lower Steps (1, 2 or 3)	<input type="checkbox"/> Lower Steps (1, 2 or 3)
		<input type="checkbox"/> Higher Steps (4 or 5)
Part 3: Large and Complex Residential Buildings (Wood Construction)	<b>Community-Wide Application</b>	<b>Other Application</b>
	<input type="checkbox"/> Lower Steps (1, 2 or 3)	<input type="checkbox"/> Lower Steps (1, 2 or 3)
		<input type="checkbox"/> Higher Step (4)
Part 3: Large and Complex Residential Buildings	<b>Community-Wide Application</b>	<b>Other Application</b>
	<input type="checkbox"/> Lower Steps (1 or 2)	<input type="checkbox"/> Lower Steps (1 or 2)
		<input type="checkbox"/> Higher Steps (3 or 4)
Part 3: Large and Complex Office and Mercantile Buildings	<b>Community-Wide Application</b>	<b>Other Application</b>
	<input type="checkbox"/> Lower Steps (1 or 2)	<input type="checkbox"/> Lower Steps (1 or 2)
		<input type="checkbox"/> Higher Step (3)
<b>5. Transitioning, Expanding, or New Requirements</b> Please indicate if you are consulting on new energy-efficiency programs for buildings, or consulting about transitioning an existing program or expanding an existing program to an equivalent Step(s) of the BC Energy Step Code. Check all that apply.		
<input type="checkbox"/> Transitioning an existing energy-efficiency program(s) to an equivalent Step(s) of the BC Energy Step Code <input type="checkbox"/> Expanding an existing energy-efficiency program(s) to an equivalent Step(s) of the BC Energy Step Code <input checked="" type="checkbox"/> Introducing a new energy-efficiency program(s) or going to a higher Step		
<b>6. Notification Submission</b> Please ensure only one submission is received from your community.		
<input checked="" type="checkbox"/> I have conferred with my colleagues to ensure this will be our only submission at this time.		

Please email this form to the Building and Safety Standards Branch of the Ministry of Municipal Affairs and Housing.

Email address: [building.safety@gov.bc.ca](mailto:building.safety@gov.bc.ca)

Subject line: Notice of Consultation on the BC Energy Step Code

Administrative Intake – Building and Safety Standards Branch Internal Use Only	
Receiver	Date Received
Administrator	Date Completed