Supporting Energy Advisor Capacity in Small and Remote Communities in BC

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Disclaimer

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This project was conducted under the mentorship of the Community Energy Association staff. The opinions and recommendations in this report and any errors are those of the author and do not necessarily reflect the views of the Community Energy Association or the University of British Columbia.

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Contents

Executive Summary

Project overview and objectives

The 2017 BC Energy Step Code (the Step Code), sets out a performance-based requirement to substantially improve energy efficiency in new buildings in British Columbia (BC). The Step Code adopts a phased implementation approach to achieve net-zero energy ready performance buildings by 2032. For part 9 buildings, Step 3, which requires a 20% improvement in energy performance compared with the current building code, will become mandatory in 2022. The adoption of the Step Code varies across the different regions in the Province. Step Code uptake is concentrated in regions such as the Lower Mainland and Vancouver Island and other more populous and urban communities.

Energy modelling and airtightness testing is a required part of Step Code compliance. For Part 9 buildings the majority of this work is conducted by Energy Advisors (EAs) registered to administer the EnergGuide Rating System (ERS) by Natural Resources Canada (NRCan). Lack of EAs is one of the main barriers that hinder the widespread adoption of the Step Code. While the availability of EAs varies across the Province, most EA companies are based and serve the Lower Mainland-Southwest, Vancouver Island and Coast, and Kootenay regions. There is a relatively higher engagement of EAs in these regions compared with smaller and remote local governments such as those in the Northeast, North Coast, and Caribou regions of BC. Using the northern region as a case study, this report explores and analyzes the EA capacity context in rural and remote communities in BC and provides recommendations to support local EA capacity in these communities. The project intends to support the Energy Step Code Council and other stakeholders to outline mechanisms to strengthen local EA capacity in northern and rural communities to facilitate the adoption of the Step Code.

Methodology

The data for this report is collected through desk research and interviews. As part of the background research, several reports, meeting minutes and other relevant publications were reviewed to understand the policy context and Step Code implementation issues and progress. Stakeholder meetings and semi-structured interviews were conducted with various stakeholders including Provincial and local government representatives, industry associations and EAs to assess local EA capacity issues in northern BC communities.

Findings

Energy Step Code adoption constraints and opportunities: The major constrains to adopting the Step Code expressed by the interviewees include the lack of local EAs, the absence of EAs within a reasonable service area (and the associated travel costs), the perceived cost of implementation, and limited local government resources. The presence of well-experienced builders who are already building above code minimum, a good relationship with the building community and Council support were mentioned as advantages to adopt and easily implement the Step Code.

Barriers to Local EA Capacity: the following four factors were highlighted as the major barriers to local EA capacity in remote and northern communities.

Lack of demand for EAs: There is consensus that currently there is not enough work in remote communities that require local EAs. The current demand is met by the two EA companies with 1 full-time and 3 part-time EAs based in the north and by some EAs willing to travel to the region. Because the Step Code is not required in any northern communities, builders are not well informed about the requirements of the Step Code and do not have the motivation to work with EAs on a voluntary basis. With future code changes aligned with Step Code, the development of the upcoming retrofit code, and expanded incentive programs, the demand for EAs is expected to increase. This is expected to motivate interested individuals to train and become EAs as well as encourage companies to train and hire more EAs to serve the region.

Lack of EA training and education: In addition to training and equipment costs, the perceived lack of clear information about the EA training and certification requirements poses a barrier for local governments to develop EA capacity in remote communities. The costs, time commitment, mentorship, and affiliation requirements are additional challenges to remote communities due to the lack of nearby Service Organizations, training providers, and mentors for on-site training.

Limited capacity of local governments: The adoption and enforcement of the Step Code is expected to stretch the limited resources of local governments in remote communities. Surveyed local governments are interested to work with neighboring communities to explore alternatives to build local EA capacity if assistance is provided to facilitate the process.

Lack of Provincial support: There is a perception among surveyed local governments that the Step Code implementation process has failed to take into account the particular context of remote communities. There is a lack of direct targeted support for Step Code implementation for these communities from the Province. Currently, most local governments receive capacity and

educational support on the Step Code from industry associations and Community Energy Association (CEA).

Recommendations

Awareness creation and outreach: Limited education and awareness among small and rural local governments and the building community remains one of the barriers to Step Code adoption and engaging EAs. The strengthening of targeted education and outreach activities to provide up-to-date information about the Step Code requirements and implementation implications can help to clearly communicate the capacity and resource investments required to adopt the Step Code.

Strengthening incentive programs: Consistent and targeted incentives that take into consideration the unique needs of remote communities are required to incentivize builders to engage EAs as well as create demand for EA services in remote communities. Incentives that subsidize the cost of EA travel expenses and fees would be helpful for builders in rural and northern communities.

Training building officials as EAs: Training building officials to provide EA services could be explored to facilitate early adoption of the Step Code. This approach may pose enforcement challenges for local governments as some stakeholders raise liability and conflict of interest concerns. Through careful analysis of the local context, supporting the training of building officials, or hiring a full-time EA as a local government employee in selected local governments to serve a particular region, could address the current capacity crunch in northern and remote communities. It is likely that in many contexts, however, it would be more cost-effective to subsidize EA travel than for a building official to go through the EA training process.

Training others to become EAs: To address local government capacity issues and conflict of interest concerns, supporting individuals working in the building industry to train as EAs could be a viable option for communities in remote areas to address EA capacity gaps. The required support may include providing free EA foundational courses or subsidizing EA training costs for building industry professionals.

Direct Provincial support: Targeted Provincial support would help facilitate Step Code adoption in remote communities. There are several areas for provincial support including covering EA training and equipment costs, building the capacity of local governments, outreach and awareness to building community, and supporting existing EA companies in remote communities to expand in the region.

Project Overview

Background

The British Columbia Energy Step Code (the Step Code), adopted in 2017, is a provincial incremental framework to assist local governments and industry to move towards higher levels of energy efficiency in new construction to achieve net-zero energy ready building performance by 2032. The Step Code sets out performance-based requirements providing flexibility to the building community to meet established energy-efficiency requirements. Starting from 2022, Step 3 of the Step Code, which requires a 20% improvement in energy efficiency above the current BC building code, will become the mandatory energy compliance pathway for part 9 buildings.[1] Currently, 68 local governments have started the required consultations or have already incorporated the Step Code utilizing different policy tools including incentives and regulations.[2] The Province's urban and populous communities represent the majority of the local governments that have adopted the Step Code. Due to several factors including capacity, political, and communication limitations, smaller and remote local governments have a lower rate of Step Code adoption and implementation.[3]

There are three Step Code compliance pathways for part 9 buildings. The Step Code energy performance compliance is conducted by 1) energy modellers according to the requirements of the BC building code subsection 9.36.5 2) certified Energy Advisors (EAs) or 3) by using passive house standards according to the Passive House Planning Package models (PHPP).[4] An energy modeller is a registered professional who is qualified to complete energy modelling as per the requirements set by local governments. The compliance determination for the Step Code through the energy modeller pathway does not officially involve third party oversight and review.[5] As such, the preferred compliance pathway of the Step Code is through energy modelling and on-site airtightness tests conducted by licenced EAs. Energy Advisors are "third-party consultants who have been registered by Service Organizations licensed by Natural Resources Canada (NRCan) to deliver NRCan's EnerGuide Rating System (ERS), ENERGY STAR® for New Homes and R-2000 programs."[6] According to Efficiency Canada's provincial energy

[1] Government of BC (2019). Lessons from the BC Energy Step Code. https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/construction-industry/building-codes-and-standards/reports/bcenergystepcode_lessons_learned_final.pdf
[2] https://energystepcode.ca/implementation_updates/ (As of July 27, 2020)
[3] Lloyd, G (2019). BC Energy Step Code Local Government Needs Assessment: Understanding How to Support Smaller Communities. https://sustain.ubc.ca/sites/default/files/2019-18_BC%20Energy%20Step%20Code%20Local_Lloyd.pdf
[4] BOABC (2019). BC Energy Step Code Handbook for Building Officials Part 9 Residential Buildings. http://energystepcode.ca/app/uploads/sites/257/2019/10/BOABC-BCEnergyStepCodeHandbook-2019-10-01.pdf
[5] BOABC (2019). BC Energy Step Code Handbook for Building Officials Part 9 Residential Buildings. http://energystepcode.ca/app/uploads/sites/257/2019/10/BOABC-BCEnergyStepCodeHandbook-2019-10-01.pdf
[6] https://energystepcode.ca/energy-advisors/

efficiency scorecard, British Columbia (BC) ranks third after Nova Scotia and New Brunswick with 21 new-home energy advisors per 1000 single home construction permits.[7]

Project description and objectives

As a key Energy Step Code compliance tool for part 9 buildings, local EA capacity is one of the main factors determining local governments' decision to adopt the Step Code. Currently, the lack of local Energy Advisors is among the top barriers for local governments to adopt and implement the Step Code. Previous reports on Step Code implementation have indicated that the EA capacity in the Province greatly differs across regions and communities. The purpose of this project is to analyze and understand the local EA context in smaller and remote communities and provide potential solutions to address existing gaps. The project aims to support the Energy Step Code Council to outline mechanisms to develop local EA capacity to advance the adoption of the Step Code throughout BC.

Selection of case study regions

According to the 2019 BC Energy Step Code Training and Capacity survey[8], Lower Mainland-Southwest, Vancouver Island and Coast, and Kootenay regions of the Province have more experience working with EAs. In contrast, Northeast, North Coast, Caribou and Thompson Okanagan regions reported a considerably lower rate of engagement with energy advisors (Figure 1). Based on data from the Better Homes BC database complemented by other data sources from service organizations and industry associations, there are currently over 100 EAs in BC. Most of these EAs are based in the Lower Mainland and Vancouver Island regions. Remote communities in northern BC lag in local EA capacity compared with the rest of the Province. Accordingly, for this project, smaller and remote communities in the north, including the Northeast, North Coast, and Caribou regions, are used as case study regions to understand the EA capacity issues in remote regions of BC.

[7] Efficiency Canada (2019). The 2019 Provincial Energy Efficiency Score Card. https://www.scorecard.efficiencycanada.org/wp-content/uploads/2019/11/Scorecard.pdf

[8] BC Housing & CEA (2019). 2019 BC Energy Step Code Training and Capacity Survey http://energystepcode.ca/app/uploads/sites/257/2019/07/FINAL-BC-Energy-Step-Code-Local-Government-Survey-Report-July-2019.pdf

Figure 1. Map of British Columbia's regions.[9]

Methodology

The project is based on desk research and semi-structured interviews. The desk research component of the project involved a review of policies and reports as well as meeting notes of the Province's working group on EAs. The primary data for the project is collected from interviews and meetings with stakeholders. To understand the perspectives and works of the various stakeholders working on the topic and to refine the scope of the project, initial meetings were held with representatives from the government of British Columbia, Natural Resources Canada (NRCan) and industry associations.

To gather information from local governments and EAs working in the region, interview requests were sent to 11 municipalities, 4 Regional Districts and 4 EAs in northern BC. Semi-structured interviews were conducted with 4 local governments, 1 Regional District, 2 EAs and 1 builder who responded to the interview request. Some local governments declined the interview request stating that they lack adequate knowledge about the Step Code to provide input for the project. The population size of the municipalities and the regional government interviewed ranges from 5,000- 12,200. Out of the 11 municipalities contacted for an interview, only 2 local governments have started the process to adopt the Step Code.

[9] https://www.bcbusiness.ca/BC-City-Guide-2018

Interview Results

Challenges to adopting the Energy Step Code

All the surveyed local governments noted that the lack of local EAs is among the top barriers for adopting the Step Code. Specifically, the airtightness test requirement is limiting local governments to adopt the Step Code as the energy modelling component of the compliance requirement can be conducted remotely. The closest EA for all the surveyed local governments is 350-700 kilometres away. The other common barrier for local governments to adopting the Step Code includes the perceived cost of implementing the Step Code for builders, limited local government resources, both human and financial, and lack of awareness and interest from staff and Council.

Challenges to adopting the Step Code:

- Airtightness testing requirement
- Lack of local EA capacity
- Long distances to nearest EA
- Perceived high cost of implementation
- Limited resources of local governments
- Lack of awareness and interest from staff and Council

Some interviewees noted that there is a perception by staff and Council that building using the Step Code is costly and would further burden local builders, developers and homeowners by increasing construction costs as well as home prices. In addition to cost, interviewees noted that with the current limited supply of local EAs, adoption of the Step Code would cause delays in construction and approval processes. There is fear that engaging EAs will delay construction, especially in areas with short-building seasons, which results in extra costs and loss of revenue for developers and contractors as well as additional costs to homeowners. In addition to capacity and logistical concerns, some communities raise enforcement concerns in relation to the adoption of the Step Code. In communities such as the Peace River Regional District (PRRD), there is a lack of interest from the Board of Directors to adopt the Step Code because the PRRD has a large non-permit area and already faces challenges to expanding and enforcing the existing building code.

Success Factors for Adopting the Energy Step Code

As Step 3 Part 9 of the Step Code is set to become mandatory in 2022, some of the surveyed local governments highlighted their strengths as a local government to adopt and implement the Step Code. Local governments such as the City of Terrace and Town of

Success factors for adopting the Step Code:

- Builders experience
- Good communication with building community
- Political support

Smithers as well as the PRRD noted the advantage they have in terms of the experience of their building community. These local governments believe that most builders in their communities have progressed far more in building energy-efficient homes than the current building code. They indicated that builders in their communities can easily meet the requirement of the Step Code and believe that some are most likely meeting Step 2 and 3 of the Step code without additional cost and training. For instance, in the City of Terrace, about 75% of new buildings are now being built above code minimum requirements. Good communication and contact with the building community are also noted by some local governments as an advantage to adopt and easily implement the Step Code. Political support from Council is also an advantage for some local governments to adopt the Step Code without difficulty before its mandatory implementation in 2022.

Barriers to local EA capacity

Lack of demand for EA services

Barriers to local EA capacity:

- Lack of demand for EA services
- Local EA training and education
- Limited capacity of local governments
- Lack of Provincial support

Interviewed local governments mentioned lack of demand as a common barrier to developing local EA capacity. All the surveyed local governments have noted that currently there is not enough work/business in their communities and regions that requires a local EA. Among other factors, the demand for EA services is tightly linked to the adoption of the Step Code. If all communities in the region adopt the Step Code, it is expected to create a guaranteed demand that will motivate individuals to become full-time EAs or supplement other work. Currently, most builders in the region are not well aware of the Step Code and its objectives, which hinders their willingness to engage EAs on a voluntary basis in addition to the cost and travel barriers.

The demand for EAs is also related to the construction trend in communities with some of the surveyed local governments expecting a boom in new construction warranting a full-time local EA in their local government or region. In some of the surveyed local governments such as Prince Rupert and PRRD, there is a limited number of new builds and they do not expect a change even with the implementation of the Step Code. For instance, Prince Rupert issued less than 10 permits in the last 5 years while a few new single-family homes are built in PRRD administered municipalities annually. Thus, even with the adoption of the Step Code, some communities might not be able to create the market demand to have a local EA within their local governments or regions.

From EA service providers' perspective, there is currently a demand for EAs in some communities in the North both for new and existing buildings. Most of the work is in and around Prince George. The interviewees noted that the current demand in northern communities is fairly met by the two EA companies with four EAS (1 full-time and 3 part-time) located in the north and other few EAs willing to travel to the northern and rural communities. EAs serving the region indicated willingness to travel anywhere within 650-800 kilometres to provide services in the region by charging travel mileage fees in addition to accommodation expenses. They try to minimize the travel cost by using different strategies including coordinating to book multiple jobs per trip to divide the travel cost among different clients. However, this might be problematic for builders as there are few builds in their communities to line-up the scheduling. For instance, an interviewed builder in Quesnel noted that as the blower door test is conducted at a specific time in the building stage, it is difficult to coordinate with other builders in the community.

Most interviewees agree that currently the demand or business is limited in the region to make the financial and time commitment to train as an EA in these communities. All interviewees noted that with the mandatory adoption of the Step Code and the anticipated retrofit code as well as the expected interest-free retrofit loans[10] it would become more attractive for individuals to train as EAs and for established companies to start training additional employees to work in these communities.

Lack of local EA training and education

Most of the surveyed local governments noted the lack of clear information about the EA training and certification requirements as a barrier for developing local EA capacity in their communities. The pathway to getting the EA training and certification is not currently clear and some of the requirements fail to consider the realities of remote communities. Interviewees noted that local EA training and mentorship is not available in their communities. The need for supervision to get fully licensed is an additional barrier as there are no certified individuals nearby or based in these communities to play that role. In addition to the logistical aspects of certification, most interviewees noted that the training cost and the investment for the airtightness testing equipment is an additional barrier to becoming an EA.

Limited capacity of local governments

Most interviewees indicated that implementing the Step Code requires additional local government resources for enforcement. The Step Code is expected to become an additional burden to local governments especially building departments that are often under-staffed. All surveyed local governments are open to working with nearby local governments to navigate the

[10] Harris, K (2019). Trudeau Promises $40K Interest-Free Loans to Make Homes Energy Efficient and Safer from Severe Weather. https://www.cbc.ca/news/politics/liberal-climate-change-plan-home-retrofits-1.5296400

local EA capacity issue. However, the resources to initiate and facilitate the partnership is lacking in all the interviewed local governments.

Lack of Provincial support

Most of the interviewed local governments have noted that they are aware of, or have received, outreach and capacity development support from CEA or industry associations rather than directly from the Province. Some of the surveyed local governments highlighted the lack of direction and support from the Province as a barrier to adopting the Step Code as well as to developing local EA capacity. In the process of introducing the program, some interviewees noted that the Province has not taken into consideration the context in remote areas and the additional support these communities require to adopt the Step Code. For instance, some interviewees mentioned that some of the existing incentives offered by the Province and utilities for energy evaluation do not include travel and lodging fees that are associated with engaging EAs in the region.

Discussion

The current demand for EAs in remote and northern communities is being met by the few EAs operating out of Prince George. There seems to be a consensus that with the mandatory adoption of the Step Code, the introduction of the retrofit code, as well as the incentive programs, the demand for EAs, will increase which would, in turn, incentivize companies and individuals to get certified to serve the region. The local EA capacity trend will be shaped by the mandatory requirements to be imposed by the Province or respective local governments. The well-established companies are perceived to be capable of training and deploying EAs in communities with high demand as the EA training takes a relatively short time from 6 months to a year. Though all communities might not have a dedicated local EA due to their size and construction and renovation volume, it is expected that EAs would be available within a reasonable service area once the building code change comes into effect, with short-term and immediate disruption to the industry.

Early adoption of the Step Code is possible for local governments if provided with the right support to prepare their building community and develop their capacity. The interviewees and stakeholders engaged in this project propose several solutions to support local EA capacity in rural and remote communities in BC. Though each community is different, the following potential solutions were highlighted and discussed throughout the interviews.

Recommendations:

- Awareness and outreach
- Strengthening incentive programs
- Training building officials as EAs
- Training other professionals as EAs
- Direct Provincial support

Awareness and outreach

Most interviewees pointed out that increased awareness and engagement on the Step Code, specifically for builders, is crucial to make them more comfortable to build using the Step Code as well as to engage Energy Advisors. Interviewees also see value in clarifying some of the misconceptions about the cost and capacity implications of the Step Code to builders and City staff as well as Council. As some local governments such as the City of Terrace noted, builders are increasingly building above code minimum without significant additional cost and training. As such, outreach about the Step Code could be strengthened to adopt the Step Code before the mandatory implementation deadline to prepare the building community and prevent immediate and short-term disruptions.

Recommendation: *The Energy Step Code Council and other stakeholders should support and mobilize resources to strengthen targeted northern and rural education and outreach activities to introduce and clarify the Step Code and its requirements, specifically concerning the cost and capacity implications for local governments and builders.*

Strengthening Incentive programs

Different forms of incentives are considered to encourage builders to engage EAs as well as to increase demand for their services. Incentives that take into account the travel costs associated with engaging EAs in remote areas is seen as a feasible option to encourage the building community by most of the interviewees. Some interviewees noted that the amount and consistency of the incentive programs offered determine the expected outcome of creating demand and motivating individuals to train as EAs. If the incentive programs are short-term/irregular and fail to cover most of the costs associated with EAs, there is a risk that builders will struggle to easily adopt the Step Code.

Some interviewees noted that to increase demand for energy advisor services some of the energy-saving incentive programs administered or offered by utility companies and the Province should require energy assessments. Some interviewees noted that the incentives available through utilities such as FortisBC are not available in northern BC as the region is outside the utility's service area. Currently, the incentives and rebates offered by Pacific North Gas (PNG) do not require energy assessments. As utility companies' energy-saving programs and incentives are approved by the Province, they noted that prioritizing incentive programs with energy assessment requirements would support increased demand for energy advising services in the region.

Recommendation*: Establish and expand Provincial incentive programs to reflect the extra travel costs associated with engaging EAs in the north and remote regions as well as encourage/require utility incentive programs to include energy assessments.*

Training building officials as EAs

As the lack of local EAs is among the top barriers for surveyed local governments to adopt the Step Code, making local EAs available for a smooth transition until market demand is created is a top priority. Training and certifying building officials to become EAs is a potential solution that divided the interviewees given local governments' code enforcement mandate. Some local governments including the City of Prince Rupert and Town of Smithers view it as a practical solution that may work for their local government as their municipalities are not capable to hire

additional positions in the building department. In this arrangement, local governments would provide fee-based airtightness test services. However, they acknowledge that this proposed solution would increase the workload for building officials. This is important, as in some local governments, such as the City of Quesnel, there is a noted shortage of building officials and in some cases, regional districts do not have a building inspection function that would take on the EA role. Further, some industry representatives' noted the need to balance the time and cost investments required to train and assign a building official to work as an EA vis a vis similar investments to bringing in an EA from other areas. In most cases, it is expected that it may be more cost-effective to subsidize EA travel than training a building official to become an EA.

For other communities, including the City of Terrace and PRRD, ideally EA services should be conducted by an independent entity that is outside of local governments. These communities raise liability and conflict of interest concerns if the role is taken on by local governments. One recommendation proposed to address the conflict of interest concern is related to disclosing the conflict of interest by the EA if the EA works for a local government. In addition to these perceived legal barriers, the provision of EA services by building officials might also have an impact on the working relationship between builders and building officials. Builders may trust and prefer to work with independent EAs outside of local governments than EA building officials due to experience and impartiality concerns.

If the EA should be part of the local government, the local government could either contract an EA to only conduct the airtightness tests or the Province could create a regional EA position in regional districts, or hire EAs in selected local governments, to serve the region. Interviewees noted the challenge of justifying hiring an EA position in local governments with existing departmental budgets. It is important to note that due to demand and capacity barriers most local governments in small and rural communities will likely not have a full-time local EA. Supporting the training and certification of an EA that serves a region may be a feasible option for these communities. All interviewed local governments are willing to work with nearby local governments and their respective regional districts' to hire or train an EA that would be reasonably accessible to all communities in a particular region.

The proposal that the EA in local governments should only be providing airtightness tests is not only because it is possible to do the energy modelling remotely, but also because energy modelling does not require EA certification. However, due to the lack of quality assurance mechanisms, relying on energy modellers could be counter-productive to local governments as they would face greater liability concerns. As some interviewees mentioned, using the EA pathway offers local governments' advantages in terms of third-party oversight and clear and uniform professional requirements. Thus, to minimize liability concerns and incentivize builders to use EAs, local governments can adopt different mechanisms including the introduction of

different fees, administrative requirements, or policies for using EAs and modellers in the building process.

Recommendation: *The Province, in partnership with stakeholders, should explore mechanisms to train and certify building officials within local governments or Regional Districts to provide EA services, specifically blower door tests, in the region.*

Training others as EAs

Not all local governments want to or can hire an EA. In addition to the capacity limitation of local governments to hire an EA, some local governments insist that EA services should be provided by a third party. Supporting the training of individuals working in the building industry such as home inspectors may be a feasible option for some local governments to develop local EA capacity. The level and type of support required may vary across the region but could include providing free foundational EA courses or subsidizing EA training costs to individuals in the building industry. As the primary challenge for remote communities is the airtightness testing, EAs may only provide the airtightness testing/mid-construction on-site services and work with an existing EA company based outside of the region.

Recommendation: *The Province, in partnership with stakeholders, should explore mechanisms to train and certify other members of the building industry as EAs, including home inspectors, designers, mechanical contractors and others.*

Direct Provincial support to local governments

Most of the interviewees pointed out the lack of noticeable direction and support from the Province for remote communities to adopt and implement the Step Code. In particular reference to EA capacity, this lack of support ranges from providing adequate information about the EA certification to requirements for the incentives offered by the Province. Most interviewees noted that the Province should tailor its Step Code support to rural and remote communities. The proposed approach ranges from assigning a Provincial employee in the north to help implement the Step Code, to contracting an independent firm to coordinate all EA issues including making EAs available in the region.

In relation to direct support to local governments, some industry representatives pointed out the need to directly support existing EA companies in remote communities to train and hire new EAs. This would incentivize experienced EA companies to expand services in these communities as well as help interested individuals to access EA training and mentorship more easily. It is expected to address the cost, mentorship as well as accessibility barriers related to becoming an

EA. This type of support makes it easier for individuals to start up as new EAs as they would be able to access EA equipment and pay lower fees for insurance and business license.

Recommendations: *The Province, in partnership with stakeholders, should prioritize and explore mechanisms to better support remote communities. Areas of direct Provincial support could include setting up a funding structure to support code compliance services for remote communities, covering EA training costs or hosting free foundational EA courses, purchasing EA equipment, and strengthening the capacity of local governments to implement the Step Code. Direct support should also be extended to existing EA companies in remote communities to train and hire EAs.*

Conclusion

Local governments are delaying the adoption of the Step Code and waiting for mandatory implementation due to various reasons including the lack of EAs in their region. Though most seem to think that the local EA capacity issue will fix itself with the increase in demand for EAs after the mandatory implementation of the Step Code, they expect a short term disruption in the building industry. Understanding the specific context of each remote, rural or northern community and the issues that shape their approach is important to provide support and facilitate the adoption of the Step Code. Various stakeholders are involved to support local governments with Step Code adoption and implementation. The support structure set up to reach remote communities by stakeholders such as CEA and other industry associations could be leveraged by the Province to better understand and provide assistance to develop local EA capacity in the north to advance Step Code adoption.

Appendix 1: Interview Guide

Interview guide for local governments

1. In relation to the BC Energy Step Code, where would you say your LG is on an implementation pathway:
    a. Not familiar with/no interest in Step Code
    b. Familiar with ESC
    c. Initial notification of intent to consult on the Step Code sent to Province
    d. Public consultation stage
    e. Bylaw, policy or program drafted/under preparation
        i. Requirements in place (or will be by XX date) for Steps X
        ii. Nature of policy in place (or will be by XX date)
        iii. Type of incentive program in place (or will be by XX date)
        iv. Other…

2. What, if any, challenges exist in your community in relation to Step Code adoption or implementation?

3. What, if any, advantages does your LG have in relation to Step Code adoption or implementation?

4. What do you expect the building trend will be in your region over the next 5 years? Why?

5. How many EAs do you know about that work in your region? Could you provide us with their names/business contact information? How many reside locally vs. from other regions?

    How busy would you say they are:
    a. Under-worked- must take on side jobs in addition to EA work
    b. At capacity- working full time with their employees
    c. Over-capacity- they cannot keep up with demand
    d. None available to your knowledge?
    e. Don't know

6. What proportion of new part 9 builds currently use the performance pathway (use energy modelling/EAs), vs the prescriptive pathway?

7. What, if any, barriers exist to developing EA capacity within your municipality?

8. What are the possible solutions to these barriers? In other words, what would help your local government and builder community?

9. If applicable: What are/were the main considerations of your LG for adopting Step Code and its associated implementation timelines?

10. If you have received support, what type of support have you received to adopt the energy step code as well as develop EA capacity from the province, CEA and other stakeholders?

11. Would you be interested in working with communities in your region to try to support a locally-based EA?

12. What type of support would be most helpful for developing your region's EA capacity?

    a. Creating awareness among industry and other key stakeholders
    b. Providing financial support for builders to hire EAs for their projects
    c. Supporting local governments to train building officials to become EAs
    d. Providing ATT equipment/kit at no cost for LGs to keep and use
    e. Other

Interview guide for EAS

1. Are you familiar with the BC Energy Step Code and its requirements in relation to EAs?

2. What do you think of the EA capacity and demand in your region?
    a. Under-worked- demand is low
    b. At capacity- working full time
    c. Over-capacity- cannot keep up with demand

3. Do you provide EA services for both new and existing homes? Why or why not?

4. On average, how many files do you complete each year?
    a. New homes
    b. Existing homes

5. How many files did you complete in 2019?

6. How many files do you expect to complete in 2020?

7. How do you assess your service provision capacity?
    a. Under-worked- demand is low
    b. At capacity- working full time
    c. Over-capacity- cannot keep up with demand

8. How much do you charge for your services:
    a. per file on average

b. Energy Modelling
c. Blower Door Test-(mid-construction
d. Blower Door Test- final
e. Travel fee (flat rate or per kilometre)
f. Other

9. What is the furthest distance you would be willing to travel to provide EA services?

10. Have you ever collaborated with another EA on a file (i.e. one EA does modelling remotely, another does the blower-door test/site visit).

11. If not, would you consider doing so in the future? Why or why not?

12. Do you provide services in rural and remote areas outside of your priority region(s)? Why or why not?

13. If applicable, how do you charge fees for your services in these areas?
    a. Set different service rate in these areas
    b. Charge travel fee as a flat rate or per kilometer
    c. Other

14. What strategies do you adopt to minimize cost and provide affordable EA services in rural and remote areas?
    a. Booking multiple jobs per travel to split the extra charge between multiple customers
    b. Collaborate with other EAs in the region
    c. Other

15. What, if any, are the main barriers to conducting EA business in your region as well as remote/rural areas?

16. What, if any, are the barriers that may limit local builders to work with EAs?

17. In your opinion, what industry trends that you see coming in the next few years that might influence EA service provision in your region and/or BC?

18. What type of support, if any, do you think is required to support EA capacity in your region as well as in rural and remote areas from local governments, industry and other stakeholders?
    a. Incentives for builders and homeowners
    b. Supporting training of new EAs
    c. Education and outreach
    d. Other