

Home Performance Stakeholder Council Energy Advisor and Service Organization Sector Working Roadmap

FEBRUARY 2018

The Home Performance Stakeholder Council is working together with BC's home improvement industry sectors to develop and grow the home performance industry into a sustainable and profitable market segment.

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Executive Summary

The Home Performance Stakeholder Council aspires to assist industry stakeholders involved in residential renovation in delivering exceptional services and solutions, priced at affordable levels for consumers, to support the growth of a long-term, sustainable market for home performance related activities that significantly reduce energy use and carbon emissions in homes across the province while enhancing building durability, occupant comfort, and health.

To this end, the HPSC has established six Sector Councils (HVAC, Fenestration, Insulation, Renovation, Energy Advisors, and Utility and Government) composed of key industry players tasked with amalgamating and addressing the fragmented interests, opportunities, and challenges that exist in a home performance industry, which is evolving and growing.

The following *Energy Advisor and Service Organization Sector Working Roadmap* documents the recommendations made by the Energy Advisor and Service Organization Sector Council to address the issues and opportunities prioritized by the Sector Council. It provides a high-level outline of how and when the industry will get from the EA & SO landscape analysis to the EA & SO Sector 2025 Vision.

In 2025, according to this vision, energy evaluations, energy advisor services, and home energy improvements are carried out at a significantly greater rate than in 2017, stimulating a large and economically vibrant home performance industry and delivering large and measurable energy savings and GHG reductions.

The Roadmap recommendations are directed primarily at industry, by industry, but also include recommendations for Utilities and Government. The recommendations are directed at achieving the following goals in response to the issues identified in Table 1 below. The priority of each recommendation is indicated by the following key:

HIGH	MEDIUM	LOWER
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Roadmap recommendations are prioritized according to when their development must begin in order to meet the 2025 Vision. Some recommendations are dependent on the development of other recommendations and some will take several years to reach full implementation. High priority recommendations include those whose development needs to start in 2018, and those which can start right away as soon as resources are available.

Table 1: Summary of the Issues and Goals for the Energy Advisor and Service Organization Sector Council's Draft Home Performance Roadmap

ISSUE	INDUSTRY ASSOCIATIONS	UTILITIES	GOVERNMENT
Market Growth: Consumer Demand and Quality Awareness	1. Build consumer and industry understanding of the full value of an energy evaluation and the EnerGuide Rating System rating and label.	Support	Support
	Support	2. Facilitate building consumer market demand for home energy evaluations and energy labelling services.	Support
	Consult	3. Support energy advisor industry training and education to enhance industry capacity (in both number of energy advisors and accessibility in different regions)	
	Consult	Consult	4. Support implementation of voluntary energy labelling programs to enhance capacity for mandatory programs.
	Consult	Consult	5. Take leadership in BC for advancing the Canada Buildings Strategy goal of requiring labelling of building energy use by as early as 2019.
Capacity Building: Availability of Trained Trades, Workforce Development, and Professionalism	1. Further advance the professionalism of the industry through training and capacity building to provide services of quality, accuracy, and consistency that can support implementation of future rebate and incentive programs and future regulatory programs (mandatory labelling and retrofit codes).	Consult	Consult
Advocacy: Effectiveness and Enforcement of Codes, Regulations, and Bylaws	Consult	Support	1. Take leadership in BC for advancing the Canada Buildings Strategy goal of developing a model code for existing homes by 2022.
Capacity Building: Changing Landscape and Demands on Industry	1. Identify and implement appropriate resources to assist homeowners in selecting the appropriate contactor.	Consult	Consult
	2. Develop an industry-agreed-upon expanded set of roles and responsibilities for energy advisors (and other sectors) within rebate programs.	Consult	Consult

This *Energy Advisor and Service Organization Sector Working Roadmap* herein organizes recommendations by issue and presents the current situation, goals, and recommendations, along with the suggested lead(s).

This Roadmap has been developed by the Home Performance Sector Council with input from the EA & SO Sector Council and other industry representatives. The members of the HPSC EA & SO Sector Council include:

- Luke Dolan, Capital Home Energy Inc.
- Vanessa Joehl, CHBABC
- Peter Sundberg, City Green
- Zhi Chen, City Green
- Christi Sachs, Elemental Energy Advisors
- Einar Halbig and Kristi Owens, E3 EcoGroup
- Doug Green, Grok Energy Services
- Rod Croome, Hometech Energy Solutions Inc.
- Gary Lowney, The House Whisperers
- Cory Legge, Integris Project Management
- Ray Smith, Kootenay Energy Advisor Ltd.
- Rob Bernhardt, Passive House Canada
- Torsten Ely, RDH
- Gilles Lesage, Total Home Solutions

Input was provided to the EA & SO Sector Council through an online survey, review of previous draft documents, in person, and during phone interviews. Survey responses were also provided by other non EA Sector Council members.

The information and recommendations within this Roadmap are intended to represent the input of the HPSC EA & SO Sector Council and other industry representatives. However the information and recommendations within the Roadmap may not be representative of the views or opinions of the broader industry.

The primary purpose of the *Energy Advisor and Service Organization Sector Working Roadmap* is to provide input into the broader, cross-sector *Home Performance Industry Roadmap*.

1 Introduction to the HPSC

1.1 Background

Home performance is a holistic approach to identifying and addressing energy efficiency, comfort, health, and safety related issues to make a home perform better.

It is estimated that nearly 500,000 single detached houses in BC may benefit from home performance upgrades. Row houses and townhouses present an additional opportunity. Whole home performance renovations in BC could represent a four-billion-dollar industry over the next 10 years.

The Home Performance Stakeholder Council (HPSC) is composed of key industry players tasked with amalgamating and addressing the fragmented interests, opportunities, and challenges that exist in the home performance industry, which is evolving and growing. *We gratefully acknowledge the financial support of BC Hydro, FortisBC, and the Province of British Columbia.*

1.2 Vision

The HPSC aspires to assist industry stakeholders in delivering exceptional services and solutions, priced at affordable levels for consumers, to support the growth of a long-term, sustainable market for home performance related activities that significantly reduce energy use and carbon emissions in homes across the province while enhancing building durability, occupant comfort, and health.

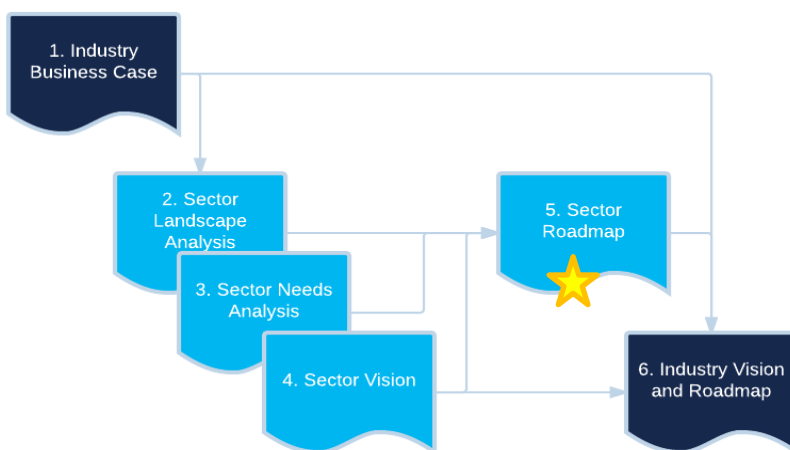
1.3 Mission and Core Objectives

The mission of the HPSC is to work together with BC's home improvement industry sectors to develop and grow the home performance industry into a sustainable and profitable market segment that delivers products and services to:

- Lower utility bills through reducing energy use
- Improve home comfort and building durability
- Reduce environmental impact
- Improve air quality, health, and safety

2 Roadmap Development Process

The Roadmap is a key step in organizing the industry to reach their vision.



The Roadmap aims to:

- bridge the gap between the Needs Analysis and Industry Vision,
- take into consideration the issues and priorities of other sectors operating in the home performance industry and identify areas for potential synergies,
- and provide a specific set of actionable recommendations for the public and private sectors.

3 Home Performance Industry Overview

3.1 Political Landscape

Canada's Buildings Strategy has the following goals:

- Federal, provincial, and territorial governments will work to develop a model code for existing buildings by 2022, with the goal that provinces and territories adopt the code.
- Federal, provincial, and territorial governments will work together with the aim of requiring the labelling of building energy use by 2019.

The Ministry of Energy, Mines and Petroleum Resources has been given the mandate to make substantial progress on the following priority:

- Create a Roadmap for the future of BC energy that will drive innovation, expand energy efficiency and conservation programs, generate new energy responsibly and sustainably, and create good, lasting jobs across the province.

3.2 Industry Landscape

- Includes disparate industries with some key players interested in home performance.
- There are few coordinated home performance contractors in BC.
- Representatives from the HVAC, Renovator, Insulation, Energy Advisors, and Fenestration industries, as well as Utilities and Government, are interested in working together to develop and grow a home performance industry into a sustainable and profitable market segment.

3.3 Summary of EA & SO Sector Landscape

This section provides high-level summary information documenting the existing landscape of the British Columbia Home Energy Evaluation sector in terms of services provided, industry players, industry size, professional development, licensing and registration, quality assurance, market drivers, and industry outlook. Refer to *Home Performance Stakeholder Council: Landscape Analysis for Industry Sectors, Home Energy Evaluation Industry, Updated October 2016* for detailed notes on the EA & SO Sector landscape.

The home energy evaluation industry encompasses businesses, non-profits, and individuals that provide services to evaluate the energy efficiency of new or existing homes with the aim of recommending options to reduce the energy consumption and/or greenhouse gas emission impact of the homes. Given that most service organizations and home energy evaluators work with both home energy retrofits and energy-efficient new construction, this landscape analysis includes information on both existing and new home energy evaluators.

Number Employed in Industry: The home energy evaluation industry in BC has seen a reduction in the number of energy advisors delivering EnerGuide Rating System energy evaluations but an increase in the diversity of services provided by the sector.

Number of Energy Evaluations: Post-2014, the number of energy evaluations done on existing homes in the province has dramatically decreased. The reduction in demand of energy evaluation services can be directly linked to energy evaluations not being a requirement for most home energy rebate programs in the province.

Market Demand: Demand for the services of energy advisors has been increasingly driven by:

- Regulations for new and existing homes (for example, the Vancouver Building Bylaw)
- Building code compliance
- Engaged builders and renovators
- Local, regional, or product-specific rebate programs, including Energy Save New West, energy diet programs, and the Oil to Heat Pump Incentive Program

Correlation with Program Participation and Energy Savings/GHG Reductions: An analysis of participant uptake in existing homes rebate programs shows much higher numbers of homeowner participants in rebate programs that require an energy evaluation, and as a result much higher energy savings and GHG reductions from home energy improvements.

Home Performance Training: The existing homes energy evaluation industry is the only home performance industry sector in BC that has a requirement for all individuals to have completed the following industry training:

- Foundation Training: Building Science and House as A System
- Energy Advisor Core Competencies
- Program Qualified Energy Advisor

Quality Assurance: The existing homes energy evaluation industry is the only home performance industry sector in BC that has a detailed and established process for quality assurance, which is delivered on a minimum of 5% of energy advisor files.

The services provided by the EA & SO Sector include:

- Service organization services
- EnerGuide Rating Service evaluations for existing homes
- EnerGuide Rating Service evaluations for new homes
- Energy Star For New Homes services
- Built Green consulting
- LEED certifications for new homes
- Passive House energy design
- Net Zero energy design
- Energy modelling for code compliance
- Mid-construction blower door tests
- Thermal imaging services
- Combustion spillage testing
- Thermal bypass inspections
- HRAI heat load calculations

- RSI calculations
- Energy coaching services
- Walkthrough energy evaluations
- Energy modelling
- Quality assurance
- Product installation verification services
- Rebate processing administrative support (BC Hydro and FortisBC Home Renovation Rebate Offer and FortisBC New Home Program)

3.4 Summary of the EA & SO Sector 2025 Vision

In 2025, over 200 energy advisors have an essential and central role in increasing the energy efficiency, and reducing the GHG emissions, of existing homes in BC.

Stable and growing demand for existing homes energy advisor services is driven by:

- Consumer education and engagement that increases homeowner understanding of the full value of an energy evaluation, energy advisor services, and home energy labels.
- Demand for home energy improvements driven by consumer understanding of the multiple benefits of home energy improvements, including reduced energy waste, lower utility bills, improved home comfort, improved home aesthetics, a smaller environmental footprint, improved indoor air quality, and healthier, safer, more durable homes.
- Homeowners, contractors, renovators, and designers seeking science-based, prioritized guidance to improve home energy performance.
- Regulatory measures supporting energy efficiency and climate action, such as mandatory home energy labelling and retrofit codes.
- Long-term, coordinated government, utility, and private financing and financial incentives that effectively overcome financial barriers to home retrofits.
- A diversification of energy advisor services to meet consumer and industry market demands and increasing needs for energy advisor services to assist homeowners in achieving higher levels of energy efficiency.

Well-established service organization and energy advisor licensing and registration processes, training and continuing education programs, and best-in-industry quality assurance processes ensure that all industry representatives are professionals delivering quality, accurate, and consistent energy efficiency services.

Building off the energy advisor model that currently exists, there is an integration of existing homes and new homes energy advisor registration, accreditation, training, quality assurance, and programs and policies.

The data collected through the home energy evaluation process (such as energy efficiency opportunities by home, retrofits completed, and energy and GHG emission, potential and realized) is available, in aggregate, to home performance industry stakeholders. It is used to inform public sector policy and program development and private sector market opportunity, market penetration strategies, and market development.

The energy and GHG reporting from energy modelling is utilized by Government and Utilities to measure progress towards achieving targets to reduce average energy demand by home and for community-wide GHG emission reductions.

An industry-led organization represents the interests of EAs and SOs and brings house-as-a-system expertise to inform government, utility, and wider home performance industry development and initiatives.

The integrated role and services of energy advisors in whole home retrofit rebate programs, energy labelling programs, and retrofit code programs increases province-wide uptake in home energy improvement projects, both in terms of depth of retrofits pursued by individual participants and in terms of the number of overall participants. It also assists the province in meeting and surpassing energy conservation and GHG reduction targets for existing residential homes.

3.5 Home Performance Industry Vision

3.5.1 2025 Consumer Vision:

- **Valued Services:** Home performance contractors are a valued and major component of whole home multiple-measure projects.
- **Increased Volume:** Retrofits that value home performance are being carried out at a significantly greater rate, and are in steady demand, resulting in greater energy savings and GHG emission reductions.
- **Consumer Understanding:** Consumers understand the benefits of home performance retrofits, including more comfortable and durable homes with a higher resale value, and the importance of selecting a qualified contractor.
- **Consumer Resources:** There are viable resources and mechanisms for consumers to seek out industry advice if they have questions or concerns about their certified contractor or their home performance project.

3.5.2 2025 Industry Vision:

- **Accredited Professionals:** There are recognized, accredited professional home performance contractors available to advise consumers and guide them through the process of home improvements, often in combination with broader home performance projects.
- **Benefits Tools:** Home performance contractors have the means to easily estimate customer benefits and include these benefits as part of their standard offerings of products and services.
- **Industry Organization:** A contractor-led industry organization represents accredited contractors by ensuring ongoing, coordinated two-way communication of issues and ideas to utilities and governments, providing coordinated communication to consumers about the industry, its members, and its benefits, and working to ensure sufficient capacity and geographic coverage within the province so consumers have reasonable access to its members.
- **Home Performance Education:** Building science, product knowledge, and related business training and support are required and available on an ongoing basis for home performance contractors and their employees.

3.5.3 2025 Utility And Government Vision:

- **Utility and Government Support:** Utilities and Government promote professional home performance upgrades within renovation projects by providing credibility to potential benefits and encouraging consumers by giving them information and examples of success.
- **Regional and Community Goals and Targets:** Cities, regional districts, and municipalities play a key role at the regional and community level in encouraging residents to participate in home performance upgrades by setting local goals and targets around GHG emission reductions and energy savings, along with specific local programs help spur consumers to act.
- **Home Labelling System:** A well-known and well-understood home labelling system for energy efficiency is supported by government, utilities, mortgage lenders, the real estate industry, and purchasers.

3.6 Summary of EA & SO Sector Issues

The following four issues were identified by the Energy Advisor and Service Organization Sector Council as priorities in working towards the vision of a home performance industry in BC:

- **Market Growth:** Consumer Demand and Quality Awareness
- **Capacity Building:** Availability of Trained Trades, Workforce Development, and Professionalism
- **Advocacy:** Effectiveness and Enforcement of Codes, Regulations, and Bylaws
- **Capacity Building:** Changing Landscape and Demands on Industry

While the recommended actions in this Roadmap are specific to the EA & SO Sector being discussed, each of the other Sector Councils identified their priority issues. The HPSC recognizes the many synergies between the sectors' issues, as shown in Table 2 below.

Table 2: Roadmap Issues Across the HPSC Industry Sectors

Issue	U&G	HVAC	EA	Reno.	Insul.	Fen.
Quality Workmanship: Industry Reputation, Standards of Practice, and Installation Quality	✓	✓	✓	✓	✓	✓
Market Growth: Consumer Awareness and Education	✓	✓	✓	✓	✓	✓
Capacity Building: Availability of Trained Trades, Workforce Development, and Professionalism	✓	✓	✓	✓	✓	✓
Advocacy: Connectivity to and Engagement in Utility and Government Program & Policy Design	✓	✓	✓	✓	✓	✓
Advocacy: Effectiveness and Enforcement of Codes, Regulations, and Bylaws	✓	X	X	✓	X	✓
Advocacy: Longevity and Consistency of Utility and Government Programs	✓	X	✓	X	✓	X
Advocacy: Industry Representation for Contractors	✓	X	✓	X	✓	X
Capacity Building: Changing Landscape and Demands on Industry	X	X	✓	X	X	X
Market Growth: Limited Ability to Connect Consumers with Quality Contractors	✓	X	✓	X	X	X

4 Recommendations to Address the Issue of Market Growth: Consumer Demand and Quality Awareness

4.1 Current Situation

- For the EA & SO Sector, the issues of consumer demand and quality awareness involve the market for and education about energy evaluations, ratings, and labels.
- As of 2018 there is moderately low demand for existing homes energy evaluations and EnerGuide Rating System ratings and labels.
- The Home Renovation Rebate Bonus Offer and the Oil to Heat Pump Incentive Program are the only two rebate offers in market that require an energy evaluation.
- Canada’s Buildings Strategy, released in August 2017, has the following goal: “Federal, provincial, and territorial government will work together with the aim of requiring labelling of building energy use by as early as 2019.”
- In September 2017, the Union of BC Municipalities endorsed a resolution calling for “Provincial Action on Building Energy Benchmarking,” which demonstrates widespread local government support for energy-efficient buildings that improve the quality and health of living and work spaces, and supports innovation in the local supply chain.
- In September 2017, the BC government’s throne speech promised “decisive action” on climate change, including creating jobs through energy retrofits.
- In addition to supporting benchmarking, the 2017 UBCM resolution identifies significant local government support for energy labelling
- As an example of one model for requiring energy labelling, existing homes energy evaluations, based on the EnerGuide Rating System, are being integrated as a requirement into the Vancouver Building Bylaw, for some renovations over \$5,000 in value.

4.2 Barriers and Challenges

- The cost of an energy evaluation (to produce an EnerGuide Rating System energy label) is seen as a financial barrier.
- Building industry capacity to deliver a province-wide energy labelling program when there is currently low demand for energy evaluation and energy labelling services.
- Funding availability.
- Training more existing homes energy advisors prior to market demand is needed to sustain a higher number of existing homes energy advisors.
- Uncertainty as to the market demand needs and timelines for existing homes energy advisors.
- Regulatory barriers to utilities subsidizing energy evaluations.
- The need to streamline voluntary energy labelling disclosure processes so that fluid mechanisms are in place prior to the launch of mandatory programs.

4.3 Goals for Sector

- Build consumer and industry understanding of the full value of an energy evaluation and the EnerGuide Rating System rating and label.

- Facilitate building consumer market demand for home energy evaluations and energy labelling services.
- Support energy advisor industry training to enhance industry delivery capacity (in both number of energy advisors and accessibility in different regions).
- Support implementation of voluntary energy labelling programs to enhance capacity for mandatory programs.
- Take leadership in BC for advancing the Canada Buildings Strategy goal of requiring labelling of building energy use by as early as 2019.
- Continue to support local governments whose focus, effort, and time has been centred on the implementation of the BC Energy Step Code since fall 2017.

4.4 Recommendations for Achieving Goals

The following table outlines the HPSC's recommendations for the EA & SO Sector best achieving these goals

Table 3 Recommendations to Address the Issue of Market Growth: Consumer Demand and Quality Awareness

INDUSTRY ASSOCIATIONS	UTILITIES	GOVERNMENT
<p>1. Build consumer and industry understanding of the full value of an energy evaluation and the EnerGuide Rating System rating and label.</p> <p>The energy evaluation and homeowner report is a key tool for increasing homeowner energy literacy and identifying home energy improvement opportunities within a home. The energy rating and labels provided by energy advisors can become the primary market transformation tool for validating homeowner investments in home energy improvements and creating stronger markets for energy-efficient homes, products, and services. It is understood that energy ratings and labels provide:</p> <ul style="list-style-type: none"> • For consumers, the home energy label is a clear and recognizable means to determine a home’s comparative energy efficiency to enable better investment choices in energy conservation retrofits. • For home sellers, the home energy label can validate investments made in home energy improvements, and has potential to increase building value, resulting in a potentially faster sale at a potentially higher price. • For home buyers, the home energy label provides standardized third-party information about the comparative energy efficiency of the home they are considering buying and information on operating energy costs (“second price tag”) similar to car and appliance labelling. • For the home performance industry (contractors), an energy label for a home with high energy consumption represents a market opportunity to sell products that will enhance the efficiency, comfort and value of the home. An updated energy label on a home that has received their energy upgrade services is a validation that their services and products have improved the home. <p>Initiative should leverage:</p> <ul style="list-style-type: none"> • Consultation and collaboration with government and industry stakeholders engaged in the Canada Buildings Strategy goal of requiring energy labelling by as early as 2019. • Creation of communications materials for consumers and industry on the value of energy ratings, energy labels, and energy evaluations. • The value of the energy rating/label should be highlighted to the consumer at each step of the energy evaluation process, from scheduling, to the site visit, to delivery of the pre-retrofit and post-retrofit reports. This can be achieved by delivering well-crafted messaging about what the energy rating/label is and why it is important. • Support participation in the innovative rateourhome.ca home energy labelling disclosure program, as a mechanism to build awareness of home energy labels and long-term demand for energy evaluation services. • Support engagement of real estate industry to advance integration of energy labelling into the homes sales process, to drive energy literacy and demand for energy efficiency at the point of home purchase or sale. • Stakeholders working to advance Canada Buildings Strategy goal of requiring home energy labelling by as early as 2019. • The Labelling and Disclosure Working Group, facilitated by Natural Resources Canada. • The Energy Advisor Home Performance Stakeholder Council. • To be identified as stakeholders and resources working on the same goal in other provinces. <p>INITIATIVE LEADERSHIP: Industry Associations</p>	<p>Support</p>	<p>Support</p>

Table 4 Recommendations to Address the Issue of Market Growth: Consumer Demand and Quality Awareness

INDUSTRY ASSOCIATIONS	UTILITIES	GOVERNMENT
Consult	<p>2. Facilitate building consumer market demand for home energy evaluations and energy labelling services.</p> <p>Initiative should leverage:</p> <ul style="list-style-type: none"> • Incentives (homeowners): Explore options to increase incentives for home energy labelling. • Requirement for energy evaluation to access rebate: Explore options to re-introduce a requirement for an energy evaluation to access a program rebate, beyond the Home Renovation Rebate Program Bonus. With potential to add other value-added energy evaluation services to the homeowner and utility program. • Consider, as a longer-term market transformation strategy, a shift in use of energy evaluation subsidies to build demand for home energy labelling (rather than just to access incentives). • Marketing and consumer engagement: Support creation and distribution of communications materials for consumers and industry on the value of energy ratings, energy labels, and energy evaluations. <p>INITIATIVE LEADERSHIP: Shared (Utilities and Government)</p>	
INDUSTRY ASSOCIATIONS	UTILITIES	GOVERNMENT
Consult	<p>3. Support energy advisor industry training and education to enhance industry capacity (in both number of energy advisors and accessibility in different regions).</p> <p>Initiative should leverage:</p> <ul style="list-style-type: none"> • Consultation with industry and other stakeholders on the most appropriate approach to growing industry delivery capacity. • Natural Resources Canada EnerGuide Rating System training infrastructure – training program, service organizations, etc. • Leveraging growth in demand for new homes energy evaluation services (linked to the BC Energy Step Code) to build energy advisor capacity in more rural areas that may not be able to sustain energy advisors who only work on new or existing homes. • Natural Resources Canada EnerGuide Rating System training resources and service organization infrastructure. • Program Registered Energy Advisor Initiative. • Relevant training materials and infrastructure being developed via the BC Energy Step Code. <p>INITIATIVE LEADERSHIP: Shared (Utilities and Government)</p>	

Table 5 Recommendations to Address the Issue of Market Growth: Consumer Demand and Quality Awareness

INDUSTRY ASSOCIATIONS	UTILITIES	GOVERNMENT
Consult	Consult	<p>4. Support implementation of voluntary energy labelling programs to enhance capacity for mandatory programs.</p> <ul style="list-style-type: none"> • The voluntary energy labelling disclosure infrastructure available through the rateourhome.ca program. • Funding for incentives and subsidies that support energy labelling for the bridge period between 2018 and the introduction of mandatory energy labelling. • Building on rebate programs that already require an energy evaluation and energy labelling – Oil to Heat Pump Incentive Program and Home Renovation Rebate Program Bonus Offer. • Communication and engagement materials and campaigns that build consumer awareness of the importance and value of home energy labels and ratings. <p>Initiative should leverage:</p> <ul style="list-style-type: none"> • The EnerGuide Rating System infrastructure. • The Metro Vancouver Regional District www.rateourhome.ca program. <p>INITIATIVE LEADERSHIP: Government</p>
INDUSTRY ASSOCIATIONS	UTILITIES	GOVERNMENT
Consult	Consult	<p>5. Take leadership in BC for advancing the Canada Buildings Strategy goal of requiring labelling of building energy use by as early as 2019.</p> <ul style="list-style-type: none"> • Collaboration with federal and other provincial government stakeholders working to advance the Canada Buildings Strategy • The formation of a council, following the BC Energy Step Code Council model, of Government and Utility stakeholders to advance implementation building energy labelling in BC. • The creation of communications materials for consumers and industry on the value of energy ratings, energy labels, and energy evaluations. An engaged and supportive real estate industry would support integration of energy labelling into the home sales process to drive energy literacy and demand for energy efficiency. • The EnerGuide Rating System infrastructure • The Metro Vancouver Regional District www.rateourhome.ca program. <p>INITIATIVE LEADERSHIP: Government</p>

5 Recommendations to Address the Issue of Capacity Building: Availability of Trained Trades, Workforce Development, and Professionalism

5.1 Current Situation

As of 2017, the existing homes EnerGuide Rating System energy evaluator industry is the only home performance industry sector in BC that has a requirement for all individuals operating in the field to complete a standardized training for building science and for the administrative and technical tasks involved in delivering energy evaluation services.

The following types of training are currently available:

- **NRCan Administered Training:** The training for energy advisors is based on a formal set of core competency profiles and training materials for proctored exams delivered through training institutions. Energy advisors and quality assurance specialists are also required to complete a foundation exam with a focus on building science and house as a system principles. The training documents include: ERS Standard, ERS Technical Procedures, ERS Hot2000 User Guide, ERS Administrative Procedures, and ERS Quality Assurance Procedures. Service organization quality assurance specialists and managers are also required to complete a specific set of training requirements.
- **Service Organization Administered Training:** Service organizations facilitate energy advisors' access to NRCan-administered training materials and exams and provide training, guidance, and oversight on energy advisor field training files. Quality assurance is regularly and continually conducted on energy advisor files, based on NRCan Quality Assurance procedures, to validate the accuracy of their work and to identify where ongoing learning is needed.
- **BC Utility Administered Training:** The BC utilities adminisrates a Program Qualified Energy Advisor workshop and training guide with a focus on the Home Renovation Rebate Offer and highlighting other existing homes energy advisor service delivery best practices.
- **Third Party Administered Training:** Energy advisors actively pursue continuing education independently (thermal imaging, building science, etc.) This training is often provided by independent third-party training institutions or organizations.

5.2 Barriers and Challenges

- As of 2018 the moderately low demand for existing homes energy evaluations and corresponding industry revenues from existing homes energy evaluation has resulted in less industry focus on training for these services.
- With the increase in demand for new homes energy evaluations anticipated due to the launch of the BC Energy Step Code, the money and time invested in training may be focused on new homes energy evaluations and related services. However, future training focused on enhancing new homes energy advisors' technical, building science, and energy modelling skills for the BC Energy Step Code can have crossover benefits to enhance the skills of existing homes energy advisors.
- As the home performance industry grows due to Utility and Government promotion, it may be challenging for EA and SO businesses to grow at the same pace, due to the time required for training new staff and/or businesses.

5.3 Goals for Sector

- Further advance the professionalism of the industry through training and capacity building to provide services of quality, accuracy and consistency that can support implementation of future residential energy retrofit programs, including incentive programs and regulatory programs (mandatory labelling and retrofit codes).
- Expand services provided by EA & SO business to meet the needs of other utility, government, and industry stakeholders.

5.4 Recommendations for Achieving Goals

The following table outlines the HPSC's recommendations for the EA & SO Sector best achieving these goals:

Table 6 Recommendations to Address the Issue of Capacity Building: Availability of Trained Trades, Workforce Development, and Professionalism

INDUSTRY ASSOCIATIONS	UTILITIES	GOVERNMENT
<p>1. Further advance the professionalism of the industry through training and capacity building to provide services of quality, accuracy, and consistency that can support implementation of future residential energy retrofit programs, including incentive programs and regulatory programs (mandatory labelling and retrofit codes).</p> <p>Items for discussion include:</p> <ul style="list-style-type: none"> • Minimum prerequisite training qualifications, or equivalent experience requirements, should be introduced for individuals taking energy advisor training. • Investigation of what training is required to ensure consistency of energy modelling results and energy ratings across different energy advisor/service organization companies. • Determining which existing and pending training initiative would EAs be able to access as continuing education to learn more on all the products and installation practices they are expected to make recommendations on – space and water heating systems, high-efficiency ventilation equipment, high-efficiency windows, insulation upgrades, air sealing, and other products. For example, can EAs access the Program Registered Insulator training to be provided to insulation companies operating within the Home Renovation Rebate Offer? Which other home performance contractor training programs are available to energy advisors to enhance their skills and capacities? • How can Quality Assurance (QA) procedures and processes for the EnerGuide Rating System be further standardized and enhanced to include a continuing training and education component, to ensure the results of QA leads to continual improvement in the quality, consistency, and accuracy of ERS files? For example, most commonly identified energy modelling errors from QA could result in the development of energy modelling training bulletins for SOs and EAS to address the issues. • How to best engage homeowners with the non-financial benefits of home energy improvements (get rid of cold drafts, remove mould, improve building durability, reduce allergy symptoms, and insulate against noise, among others). • Determining which best practices training programs can be provided to enable service organizations and energy advisors to continually improve their services and meet the emerging demands of new programs and policies • Identify what specific training would be beneficial or required for: <ul style="list-style-type: none"> - Voluntary labelling program - Mandatory labelling program - Retrofit code programs - Incentive and rebate programs - Net Zero and Near Net Zero Home retrofits - Passive House Retrofits <p>The organizational resources available include:</p> <ul style="list-style-type: none"> • Natural Resources Canada • Existing Homes Service Organizations • Home Performance Stakeholder Council EA & SO Sector Council • BC utilities with existing homes energy efficiency programs • Canadian Association of Consulting Energy Advisors <p>Initiative should be implemented in advance of Canada Buildings Strategy target to implement mandatory energy labelling as early as 2019.</p> <p>INITIATIVE LEADERSHIP: Industry Associations</p>	<p>Consult</p>	<p>Consult</p>

6 Recommendations to Address the Issue of Advocacy: Effectiveness and Enforcement of Codes, Regulations, and Bylaws

6.1 Current Situation

- In the EA & SO Sector, the issue of the effectiveness and enforcement of codes, regulations, and bylaws involves the connectivity of energy evaluations and energy labels to those rules and other policy development.
- In BC, the City of Vancouver, through the Vancouver Building Bylaw, is the only government entity that has integrated the existing (and new) home energy evaluations and energy label into a regulation.
- The Canadian Buildings Strategy has made a commitment for federal, provincial, and territorial governments to work towards requiring labelling of building energy use by as early as 2019. Labelling will provide consumers and homeowners with transparent information on energy performance and drive awareness and market demand for energy evaluations. A successful voluntary home-labelling program will pave the way for political acceptance of mandatory labelling.
- Develop a model code for existing buildings by 2022, with the goal that provinces and territories adopt the code. This code will help guide energy efficiency improvements that can be made when renovating buildings.

6.2 Barriers and Challenges

- Since the fall of 2017, the focus, effort, and time of many energy advisor industry, local government and utility stakeholders is on the roll out and implementation of the BC Energy Step Code. The work of implementing the BC Energy Step Code will continue well into 2018 and beyond. The development of a model retrofit code will require financial resources and considerable time investment from stakeholders. This means that many of the limited EA & SO resources are focusing their time on new construction, rather than renovations.

6.3 Goals for Sector

- Take leadership in BC for advancing the Canada Buildings Strategy goal of developing a model code for existing homes by 2022.

6.4 Recommendations for Achieving Goals

The following table outlines the HPSC's recommendations for the EA & SO Sector best achieving this goal:

Table 7 Recommendations to Address the Issue of Advocacy: Effectiveness and Enforcement of Codes, Regulations, and Bylaws

INDUSTRY ASSOCIATIONS	UTILITIES	GOVERNMENT
Consult	Support	<p>1. Take leadership in BC for advancing the Canada Buildings Strategy goal of developing a model code for existing homes by 2022.</p> <ul style="list-style-type: none"> • Collaboration with federal and other provincial government stakeholders working to advance the Canada Buildings Strategy • The formation of a council, following the BC Energy Step Code Council model, of government and utility stakeholders to advance developments of a model code for existing homes by 2022. <p>Initiative should leverage:</p> <ul style="list-style-type: none"> • The EnerGuide Rating System infrastructure. • The City of Vancouver Building Bylaw model for existing homes. <p>INITIATIVE LEADERSHIP: Government</p>

7 Recommendations to Address the Issue of Capacity Building: Changing Landscape and Demands on Industry

7.1 Current Situation

For the EA & SO Sector, concerns about the changing landscape of and demands on the industry revolve around the definition of energy advisor and contractor relationships and roles.

Best practices research on home energy upgrade rebate programs in the US identified that the “upgrade process is smoother when contractors and EAs have a consistent understanding of the division of roles and responsibilities. A clearly defined relationship also limits customer confusion during the upgrade process. Furthermore, when all parties present consistent, coordinated information, customers’ trust in both the contractors and the program is significantly increased.”

Currently:

- Homeowners have challenges finding and selecting appropriate contractors and energy advisors are limited in how they can provide consumers with contractor selection assistance. This challenge in finding the right contractor may limit the number, depth, and breadth of energy upgrades homeowners complete, resulting in less participation in rebate programs, less revenues for contractors, and lower program energy savings and greenhouse gas emission reductions for Utilities and Government.
- Energy advisors identify energy upgrade opportunities and provide energy evaluation reports, but the homeowner needs to translate that information into a scope of work for a contractor.
- Energy advisors and contractors working within a rebate program may not be communicating the same information to consumers about a variety of topics—including but not limited to: the value of air sealing prior to installing insulation, the importance of quality installation of products, the value of a home energy label, etc.
- Since September 2017, the BC Home Energy Coach program has been available to provide homeowners, contractors, and energy advisors with an incentives and rebates database and information about rebates available (by product and location), FAQs on rebate programs, and phone and email hotlines to answer homeowner questions through the home energy upgrade process. As of spring 2018, the BC Home Energy Coach program will provide an online searchable list of program-qualified energy advisors and program-registered insulation contractors.

7.2 Barriers and Challenges

- While program-registered contractor search tools have been developed for existing homes energy advisors and are in progress for program-registered insulation contractors, the task of developing this type of program for all the home performance sectors is large and complex.
- The program-registered contractor model may not work for contractors who do a smaller number of home energy improvements a year. For example, some general renovation contractors do insulation upgrades, but only as part of a larger home renovation. They are not specialized in insulation upgrades but should be able to participate in rebate programs for their insulation projects.

7.3 Goals for Sector

- Identify and implement appropriate resources to assist homeowners in selecting the appropriate contactor.
- Develop an industry-agreed-upon expanded set of roles and responsibilities for energy advisors (and other sectors) within rebate programs.

7.4 Recommendations for Achieving Goals

The following table outlines the HPSC's recommendations for the EA & SO Sector best achieving these goals:

Table 8 Recommendations to Address the Issue of Capacity Building: Changing Landscape and Demands on Industry

INDUSTRY ASSOCIATIONS	UTILITIES	GOVERNMENT
<p>1. Identify and implement appropriate resources to assist homeowners in selecting the appropriate contractor.</p> <p>Initiative should leverage:</p> <ul style="list-style-type: none"> • The evolution of the Program Registered Contractor Initiative initiated by BC Hydro and FortisBC, which allows consumers to find a contractor that has demonstrated that it meets a set of minimum requirements: <ul style="list-style-type: none"> - Program Qualified Energy Advisors - Program Registered Insulators • For industry sectors where there will be no Program Registered Contractor Initiative, develop very clear guidelines and materials available to assist consumers in finding the right contractor for the job. • Existing resources on how to select a contractor (CMHC and others) that can be used as a foundation to develop similar ones for other resources. <p>INITIATIVE LEADERSHIP: Industry Associations</p>	<p>Consult</p>	<p>Consult</p>
<p>2. Develop an industry-agreed-upon expanded set of roles and responsibilities for energy advisors (and other sectors) within rebate programs.</p> <p>Initiative should include:</p> <ul style="list-style-type: none"> • The EnerGuide Ratings System administrative procedures and technical standards. • A consultation process with the energy advisor industry, utility rebate program staff, and government stakeholders advancing home energy labelling and retrofit code policies and programs and other home performance industry sectors to define the potential expanded role for energy advisors (and other industry stakeholders) within programs. See Appendix A for outline of some of the roles and concerns other HPSC Sector Councils have identified for EAs. <p>Roles and responsibility items to define include:</p> <ul style="list-style-type: none"> - Enhancing energy advisor capacity to educate homeowners on the full range of consumer benefits of home energy improvements. - To determine how the energy evaluation report can best be used as a homeowner general scope of work that outlines all the energy upgrade opportunities and energy savings and other consumer benefits from each upgrade. - Contractor selection assistance. - When conducting a post-energy-upgrade evaluation in the home, providing post-energy-upgrade quality assurance and inspection services. - The administrative tasks of supporting homeowners with rebate applications. - Limiting consumer confusion during the upgrade process, limiting consumer decision paralysis, and enabling consumers to move forward with more confidence. <ul style="list-style-type: none"> • While it is not anticipated that energy advisors themselves will fulfill all these roles in the immediate term there is a need for resources <p>INITIATIVE LEADERSHIP: Industry Associations</p>	<p>Consult</p>	<p>Consult</p>

8 Resources Available

Financial and in-kind resources may come from several sources. Utilities and Government contribute time and funding. Government contributions may come from federal (NRCan), provincial (MEMPR, Ministry of Housing, Building Standards Branch), and local levels of government. These potential sources have not yet been fully explored but consideration is underway.

Contractors, industry associations, manufacturers, suppliers, and distributors contribute their time and possibly funding where appropriate.

9 Summary and Next Steps

Resources need to be put in place and a plan developed to move the priority initiatives ahead in 2018.

The plan would cover 2018 to 2025 and specify timing, dependencies, and resources for each initiative. It should also include a dashboard, or online tracking tool, so everyone can see progress measured against the plan.

The implementation of many of the Roadmap recommendations needs to begin in 2018. This process should focus on recommendations that have a long development cycle (e.g. the development of an accreditation program), and those that are clearly needed and don't require other recommendations to be completed first (e.g. the development of trades training). It is important that the industry starts to see real benefits from this work in 2018.

Appendix A: HPSC Sector Councils' Recommendations for the EA & SO Sector Council

The EA & SO Sector Council notes that the following draft information has been provided by other HPSC Sector Councils. The EA & SO Sector Council will respond to all final Roadmap recommendations made by other Sector Councils per the guidelines set out in the Executive Summary.

The HPSC Renovation Sector Council has outlined the following roles for energy advisors in supporting their sector with home energy renovations:

- Perform home energy evaluations prior to renovations being completed, and possibly after the work is completed.
- Support sales by providing consumers with a home renovation roadmap, to outline home energy upgrade opportunities, and estimating energy savings from energy upgrades.
- Providing consumer support on energy renovations throughout a given project.
- Providing post-renovation quality assurance and inspection services (details to be defined).

The concerns of the HPSC Renovation Sector Council include:

- The number of energy advisors currently available in the market is low.
- There is a need for greater consistency of service and work product between different energy advisors.
- Additional training is needed, especially for the newer roles of quality assurance and inspections and to enhance consistency of service between different energy advisors.

The HPSC Insulation Sector Council has outlined the following roles for energy advisors in supporting the sector with insulation upgrades:

- Energy evaluations provide consumers with independent third party information, not just from contractors and manufacturers.
- Energy evaluations make customers aware of insulation upgrade and air sealing opportunities in the home.
- Energy evaluations and energy advisors have a role to play in communicating how air sealing should be conducted prior to insulating a home.
- Energy advisors could have a more involved energy coaching role in helping customers make decisions on home energy upgrades by helping to identify priorities based on the needs and circumstances of the homeowner.
- There is a need for a well-known and well-understood home labelling system for energy efficiency, supported by government, utilities, mortgage lenders, and the real estate industry. This would enable purchasers of homes to seek evidence (labelling/energy rating) of the level of energy efficiency of the home.
- The labelling system for energy efficiency creates the potential for higher resale value for homes with greater efficiency.
- Investigate how energy evaluations can become part of the home selling/purchasing process, including the possibility of home inspectors becoming home energy advisors

The concerns of the HPSC Insulation Sector Council include:

- The EnerGuide Rating System for energy evaluation is not considered cost-effective for customers or by customers. The service is considered too expensive for the current level of service and advice the customer gets.

The HPSC Fenestration Sector Council has outlined the following roles for energy advisors in supporting the sector with insulation upgrades:

- Have energy advisors trained on what is the right window for the right application in BC and the importance of qualified installers.
- Have energy advisors deliver pre-retrofit and post-retrofit energy evaluations to ensure proper selection and installation of windows.
- Have government promote the EnerGuide Rating System home labelling program.