



**HOME PERFORMANCE  
STAKEHOLDER COUNCIL**

# **WORKING ROADMAP**

**PREPARED BY**

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# HOME PERFORMANCE STAKEHOLDER COUNCIL (HPSC) WORKING ROADMAP

## EXECUTIVE SUMMARY

Home performance is a holistic approach to identifying and addressing homeowners' 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. Whole home performance renovations in BC can assist utilities meet energy conservation targets and governments meet greenhouse gas reduction targets. It could represent a four-billion dollar industry over the next 10 years and more in the longer term supporting job creation and business development in communities across the province.

In order to realize this market potential, the issues of demand: Demand for Quality Home Performance projects and Supply: Availability of Quality Contractors to do Home Performance work must be addressed. To this end, the HPSC Sector Councils have identified the following goals:

- ✓ **Increase awareness** of house as a system concepts and practices.
- ✓ **Define and increase the capacity** of trained home performance professionals.
- ✓ **Provision of clear and stable market signals** that illustrate the need and desire for house-as-a-system renovations.

- ✓ **Build a clear and definitive brand** that communicates that carrying out a home performance project is a wise decision and there are recognized contractors who provide quality work.
- ✓ **Establish a functioning, systematic approach** to consultation between industry, utilities and governments.

This roadmap summarizes a cross industry view of the HPSC recommended priority initiatives of:

- Contractor Accreditation & Trades Training (Phase 1)
- Home Performance Training (for trades and contractors)
- Quality Assurance / Inspections
- Consumer Education & Awareness

Each Sector Council has developed a Working Roadmap that may be consulted for fuller understanding of individual industry sector needs.

Industry, utilities, and government working openly together to incrementally raise the professionalism of the home performance industry in step with communicating a clear and consistent market signal for house-as-a-system renovations will promote quality products and installation, increasing customer satisfaction and ensuring real energy and greenhouse gas savings.

# 1 | INTRODUCTION

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## 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.

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*We gratefully acknowledge the financial support of BC Hydro, Fortis BC, and the Province of British Columbia.*



## 1.2 HOME PERFORMANCE INDUSTRY OVERVIEW

### Political Landscape

Canada's building strategy has the following goals:

- Federal, provincial, and territorial governments will work to develop a model renovation retrofit 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, reduce GHG emissions, and create good, lasting jobs across the province.
- The BC Climate Leadership Plan commits to reduce GHG emissions to 80% below 2007. This involves local governments with respect to buildings.

### Industry Landscape

- There are few “whole-home” contractors in BC currently offering the full scope of home performance products and services.
- Training, accreditation and codes/standards infrastructure that exist for new construction are generally lagging in the existing homes industry.
- Representatives from the HVAC, Renovator, Insulation, Energy Advisors, and Fenestration industries, as well as Utilities and Government, are interested in working together.
- Develop and grow a home performance industry into a sustainable and profitable market segment, that integrates the existing networks of single upgrade contractors (businesses that install just windows, insulation or HVAC) into an integrated framework that allows homeowners to complete “whole home” energy improvements.

# 1 | INTRODUCTION

## 1.3 VISION

The HPSC aspires to assist industry stakeholders to deliver exceptional services and solutions, priced at affordable levels for consumers, in order 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.

The HPSC Sector Councils have defined the following visions for Consumers, Industry, and Utility & Government respectively.

### 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.

### 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.

- **Present Benefits:** 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.

### 2025 UTILITY & 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 that 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.

## 1.4 MISSION & 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**

## 1.5 ROADMAP DEVELOPMENT PROCESS

The Roadmap is a key step in organizing the industry to reach their vision. The roadmap was developed over approximately two years through:

- Identification and recruitment of key industry stakeholders and leaders in each of the respective sector groups to actively participate.
- Interviews, workshops, conference calls, and surveys to gather industry input and contributions defining the issues and developing recommendations.
- Sector Council evaluation for sense checking and vetting of content and ideas.

The process was designed to ensure that issues which are limiting progress in the development of a larger, thriving home performance are brought forward and addressed. The Roadmap aims to:

- Bridge the gap between the Needs Analysis and Industry Vision.
- Take into consideration the issues and priorities of other organizations operating in the home performance industry and identify areas for potential synergies.
- Provide a specific set of actionable ecommended priority initiatives for the public and private sectors.

## 2 | HOME PERFORMANCE INDUSTRY ISSUES SUMMARY

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Each of the HPSC Sector Councils independently discussed the landscape of their sector as well as what is needed to move towards the HPSC vision. These discussions were framed around the nine (9) priority issues that were categorized into the four (4) HPSC strategic pillars of: Quality Workmanship, Capacity Building, Advocacy, and Market Growth, and are listed below.

As conversations progressed, and recommendations were formed the HPSC Executive synthesized these nine (9) into two (2) key issues:

1. Availability of Trained and Qualified Professionals recognized for providing home performance solutions and;
2. Demand for Home Performance Solutions by quality trained professionals that are valued by consumers.

The Availability of Quality Trained Professionals is the synthesized term for the issues of:

- **Quality Workmanship:** Industry Reputation, Standards of Practice, Installation Quality
- **Capacity Building:** Changing landscape and demands on industry
- **Capacity Building:** Availability of trained trades, Workforce Development and Professionalism
- **Advocacy:** Effectiveness and Enforcement of Codes, Regulations, and Bylaws
- **Advocacy:** Industry representation for contractors
- **Market Growth:** Limited ability to connect consumers with quality contractors

The Demand for Home Performance Solutions is the synthesized term for the issues of:

- **Market Growth:** Consumer Demand and Quality Awareness
- **Advocacy:** Connectivity to and engagement in Utility and Government Program & Policy Design
- **Advocacy:** Longevity and consistency of Utility & Government programs

The current situation for each of these key issues is detailed below and pulls content from each of the Sector Roadmaps.

### 2.1 THE CURRENT SITUATION - AVAILABILITY OF QUALITY TRAINED PROFESSIONALS

The reasons for low availability of quality trained professionals is multifaceted and is strongly linked to the lack of demand for quality trained professionals. While there are government regulations and utility programs, they are ever changing, and the requirements are not adequately enforced. For consumers, there is no obvious way to differentiate low quality contractors from true professional contractors and price is too often the determining factor. On the contractor side, there can be a lack of understanding as to what quality product and installation looks like in BC's specific environmental conditions and in the context of whole home performance. It is difficult for employers to attract quality people to the residential renovation sector, and they are hesitant to invest in training because retention is also an issue.

While regulations are needed to ensure quality and comprehensive work to protect the consumer, contractors are often not consulted adequately when new codes, regulation, policies, and bylaws are developed which can lead to unintended consequences to the regulation. Regulations are in constant flux and change everywhere. Even professional contractors have difficulty keeping up, and sometimes come across to their clients as uninformed. The time and cost of compliance with regulations results in some contractors not complying in order to minimize costs and move their projects ahead. Contractors who fully comply can face delays and added costs that are avoided by others. There is no systematic approach to getting and using industry input and keeping the industry up to date on developments and changes. When regulations are often not effectively communicated, consistently applied, or enforced, work is driven to the underground economy to the detriment of consumers, the industry, and society as a whole.

## 2 | HOME PERFORMANCE INDUSTRY ISSUES SUMMARY

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There are few markers to differentiate professional contractors from low-quality, low-cost companies whose work and behaviour reflects poorly on the entire industry, and makes the sale of quality projects and installations difficult. Rebate and incentive programs have typically equally incentivized poor and high-quality installations and may, in some cases, have unintentionally increased the number of inferior quality installations. It is difficult for consumers to find and select quality contractors to do home performance work with the result that contractor selection is often primarily based on price, not value.

Whole home residential renovations with a focus on energy reduction, comfort, and safety are relatively new to the market. Many manufacturers, suppliers, and installers don't understand what home performance is or the value that it can provide. There are many organizations that supply information, training, and resources; however, there is no BC or Canadian authority or industry organization for home performance in residential renovation.

Quality people who see a career in residential renovation are hard to find. The rise of groups not traditionally involved in trades work in BC is a changing dynamic within the industry, and the ability to reach, communicate, train, and certify this growing segment requires planning and strategy. Employers may also be reluctant to invest in training as there is little value ascribed to professional credentials, and some are concerned that well-trained employees may leave and join competitors or start their own businesses.

### 2.2 THE CURRENT SITUATION - DEMAND FOR QUALITY HOME PERFORMANCE SOLUTIONS

Similarly, the reasons for low demand for quality trained professionals to deliver home performance solutions are multifaceted and are strongly linked to the lack of understanding of what constitutes a quality project and how to distinguish between a low-quality contractor and a true professional. Homeowners often make their home renovation decisions around cosmetic or functional upgrades, with little thought to energy

efficiency, envelope upgrades, or building science issues. Educating them regarding efficiency options, performance improvements, the need to comply with regulations, potential for hazardous materials, and basic building science at this point is extremely challenging. There is also lack of consumer awareness about the wide range of variability in the training of professionals and quality of installations and potentially a consumer assumption that most contractors already provide quality installations. Many consumers don't understand what is required for a quality job and don't appreciate the value.

Homeowners face conflicts between their wants, needs, and available budget. They don't want to pay more for home performance measures because they often cannot be seen and so there is a sense that everything must be fine.

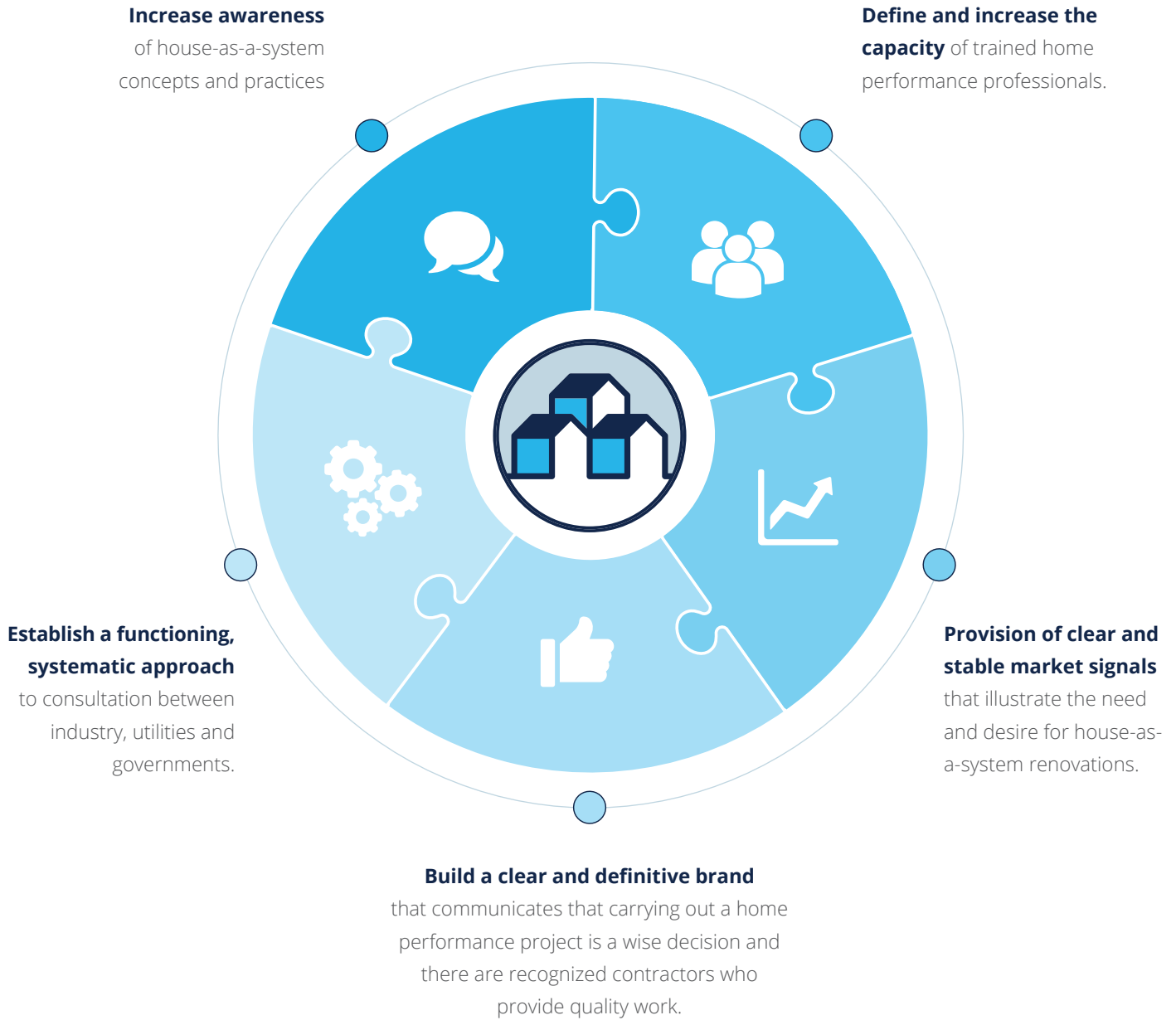
Homeowners do not understand that cost-effective home performance upgrades can improve affordability due to lower operating costs. Media outlets and online sources can be a primary source of information for homeowners planning a renovation. These programs often set unrealistic cost expectations, leading consumers to choose a lowest cost proposal. And, they may over-simplify the renovation process, leading to people believing that they can do it themselves or that they don't need skilled labour to do the job. Too often homeowners select contractors based on low cost rather than value and quality.

Homeowners typically have little understanding of the applicable regulations and what is required in order to comply. There is nowhere for the homeowner to go for real, unbiased advice that is trustworthy, clear and relevant. The existence of multiple short-term home performance programs and government objectives and targets in the marketplace is confusing.



### 3 | GOALS SUMMARY

THE SUMMATIVE GOALS OF THE HPSC RECOMMENDED PRIORITY INITIATIVES ARE TO:



## 4 | RECOMMENDED PRIORITY INITIATIVES

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The following recommended priority initiatives have been identified by HPSC Sector Councils as being needed to reach the goals. Sector Councils have not yet had the opportunity to confirm these are their top priority recommendations. HPSC will also need to secure funding for agreed upon priorities. This process will begin in Spring 2018.

### 4.1 CONTRACTOR ACCREDITATION & TRAINING (PHASE 1)

Develop an initial Contractor Accreditation for utility/government programs that extends across each of the key home performance sectors. This effort would build on the current efforts of the Program Registered Contractor (PRC) designation to encompass additional home performance sectors with immediate focus on HVAC, Renovator, Insulator, Energy Advisor, and Fenestration sectors. The opportunity for HPSC would be to support government/utility objectives with industry input for enhanced program design and implementation. HPSC would harness the key learning, experiences (positive and constructive) and unintended consequences from the PRC initiative with Energy Advisor and Insulation industry sectors to inform potential refinements for a Contractor Accreditation (Phase 1). This initiative would focus on training, industry value proposition, prerequisites, terms & conditions, code of conduct, registration, documentation and other aspects towards building a substantive Contractor Accreditation offering/solution.

#### Design Phase – Considerations:

- Determine key criteria and requirements for contractor accreditation with each of the sectors.
  - o Business/individual prerequisites
  - o Alignment and integration with industry specific accreditations
  - o Terms and conditions of accreditation
  - o Accreditation management and alignment for inside/outside utility and government program frameworks
- Review successes/challenges and gaps in Program Registered Contractor (PRC).
  - o Value proposition for contractors
  - o Induction program and training
  - o Market penetration and scalability

- Develop strategy for staged voluntary/mandatory adoption requirements within government/utility energy-efficiency programs.
- Develop strategy for longer-term accreditation structure that would exist and be valued by consumers and industry independently of energy-efficiency programs, including ongoing management of the accreditation program.
- Determine implementation plan that covers contractor recruitment, training, ongoing professional development, scalability for market coverage, etc.

### 4.2 HOME PERFORMANCE TRAINING

Evaluate and determine the requirements and implementation plan for home performance training and/or industry certification in Canada. Currently, there is no established training program and certification that covers the comprehensive home performance curriculum and training focused on health and safety, building analyst and envelope/heating specializations. Initial options for home performance training may include but not be limited to the options of developing a “Made in BC” training program, bringing together and expanding existing industry association training, or adopting a program from the Building Performance Institute.

The US-based Building Performance Institute ([www.bpi.org](http://www.bpi.org)) leads the standards development and certifying body for personnel credentials related to home performance and there might be potential opportunities to extend this BPI accreditation into Canada.

#### Design Phase – Considerations:

- Determine training requirements for contractors and trades.
- Assess training available and conduct a gap analysis.
- Develop training needed to address the training gaps.
- Establish training providers.
- Ensure that there is a viable value proposition for those requiring the training.

## 4 | RECOMMENDED PRIORITY INITIATIVES

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### 4.3 QUALITY ASSURANCE / INSPECTIONS

Utilities have started the process of “program compliance evaluations” for insulation and furnace retrofits in their DSM programs. The program compliance evaluation structure including developing prescriptive requirements for installations that guide evaluation of installation performance is informing future direction of inspections. In particular, the experience of the HVAC industry engagement and input into the prescriptive requirements of furnaces in FortisBC’s “2017 Furnace & Boiler Rebate Program” provides a development model for progress in collaboration with industry on a quality assurance/inspection model. Further industry input is required to inform extension of prescriptive requirements with program compliance evaluations for other home performance solutions (e.g. heat pumps, boilers, insulation, air sealing, windows, etc.). The home performance industry will need to develop a regime for more permanent, comprehensive, and self-sustaining inspections beyond those that are program related.

#### Design Phase – Considerations:

- Develop a list of equipment/situations where new equipment and/or installation standards are needed.
- Assess currently available standards for equipment and installations.
- Develop any additional standards required.
- Assess the need for inspections beyond those currently being carried out.
- Specify additional inspections required and develop protocols for them.
- Determine who is best to carry out the additional inspections and how they would be funded.

### 4.4 CONSUMER EDUCATION & AWARENESS

Consumers need to be informed about the need for and value of home performance improvements. They need to develop the confidence that they can easily find professional contractors who can do this work at a high level of quality on time and on budget. To this end, a single clear and definitive brand that communicates that carrying out home performance work is a wise decision and is easy and safe to do using recognized quality contractors needs to be developed. This brand must provide a solid value proposition for contractors and must provide quality assurance. This will be a long-term undertaking, but initial steps can be taken in 2018.

With the new federal/provincial Building Energy Retrofit Partnership program along with potential integration with FortisBC and BC Hydro’s DSM portfolio, there is an opportunity to help mobilize industry to support programmatically and improve contractor/consumer program awareness and understanding. Consumer/contractor confusion with program offerings, requirements and administration is an existing issue and there is a risk for this exacerbating with another “new program” in the design pipeline. With the HPSC and Home Energy Coach website/program infrastructure in place, there is an opportunity for utilities to collaborate with industry on an improved design/implementation model to mitigate potential unintended consequences with launching a new rebate-focused program.

#### Design Phase – Considerations:

- Determine the specific needs for consumer education around home performance.
- Assess existing materials and initiatives currently available.
- Determine how the gaps can best be filled.
- Develop and offer the needed consumer education materials with timing dependent on the availability of qualified contractors.

## 5 | CONCLUSION

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*Industry, utilities, and government working openly together to incrementally raise the professionalism and capacity of the home performance industry in step with communicating a clear and consistent market signal for house-as-a-system renovations will promote quality products and installation, increasing customer satisfaction and ensure real energy and greenhouse gas savings.*

*The Industry Working Roadmap represents a very brief consolidated view of the home performance industry based on input from each of the individual Sector Councils supporting the Home Performance Stakeholder Council. In order to gain a broader understanding of the home performance industry, it is recommended that individual Sector Council Roadmaps are consulted for a detailed perspective of issues and recommendations that could support industry development decision making. This guidance is provided by the HPSC in support of industry, government and utilities. Each of the Sector Council roadmaps can be accessed at [www.homeperformance.ca/resources](http://www.homeperformance.ca/resources).*



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