1.0 Introduction to the Course

by HPSC Admin

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Acknowledgments

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1.0 Introduction to the Course

Summary

This course is an introduction to retrofitting with a whole-home, or house-as-a-system, approach to both create better homes for your clients and to grow your business. You will learn how a house operates as a system, how to identify common home issues with energy retrofit solutions, and how to avoid creating new issues. The course also covers how to explain the home- and life-improving benefits of your products and services and how to create your own reciprocal referral network that can support your clients to complete whole home retrofits and bring in more business for your company. This course focuses on practical examples and scenarios providing participants with takeaways they can immediately put into practice.

The course is online and self-paced. It will take approximately 3.5 hours to complete. To successfully complete the course, you must complete a total of 30 quiz questions, distributed throughout the 6 sections, and receive a minimum score of 75%. You must complete the quiz in each section to unlock the next one. If you do not pass a quiz, you can retake it as many times as you need.

Target Audience

The target audience for this course is single-family home retrofit contractors in British Columbia Canada. As of June 2021, this course will be included in the mandatory qualification criteria for the HPSC's Home Performance Contractor Network.

Learning Objectives

- Define the concept of house-as-a-system (HAAS) and explain why it is relevant to retrofit contractors
- Define the components included in house-as-a-system (occupants, environment, mechanical systems, building envelope)
- Identify common energy related house problems, pre-existing or unintended consequences of isolated retrofits, their complex causes, and reasons for concern
- Explain the HAAS considerations and solutions to avoid unintended consequences for each major retrofit type, and identify and solve existing problems
- Learn how to uncover the specific desires, motivations and needs of customers and communicate with them in consumer-friendly language about the benefits of HAAS retrofits
- Identify the benefits and best practices of making contractor referrals for complementary energy retrofits and creating a referral network

Learning Outcomes

Upon completion of this course students will be able to:

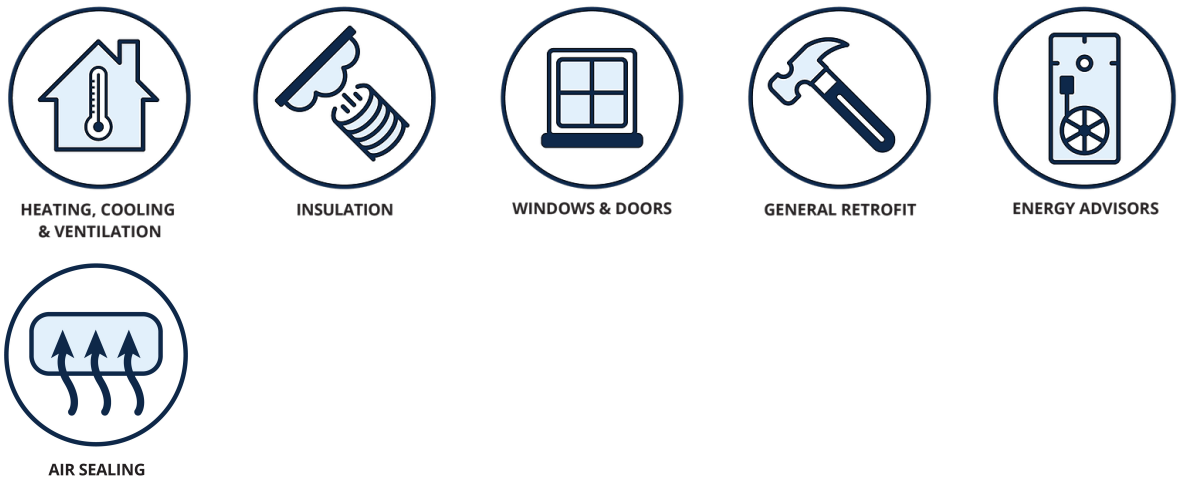
- More accurately identify the house-specific potential consequences of an isolated retrofit and any pre-existing issues in the home
- Effectively interview customers to understand their specific whole-home desires, motivations, and needs, and common activities and behaviours inside the home
- Capably communicate the house-specific consequences of isolated retrofits and the homeowner-specific benefits of a HAAS approach on their retrofit projects
- More accurately implement HAAS solutions and recommend additional complementary retrofits to customers as applicable, including recommending other contractors

- Pursue the development of a personal referral network and make use of it to increase sales

1.1 Who is this course for?

The guidance in this training primarily applies to wood-frame residential detached, semi-detached (e.g., duplex to quadplex), row house/townhomes, and mobile homes in British Columbia (BC), Canada. While some of the content is relevant to other building types, non-wood frame homes, and multi-storey multi-unit residential and non-residential buildings are beyond the scope of this training.

This course is designed for residential retrofit contractors in the energy advisor, air sealing, insulation, window & doors, heating, cooling, and ventilation (HVAC), and general retrofit sectors.



In this course, the term *contractor* is used broadly to describe any member of a retrofit company that is responsible for one or more of the following: assessing a customer's home, identifying their product and service needs, making recommendations to the homeowner and providing a quote, and training, supervising, or otherwise directing installers. At a minimum, contractors that fit into one or more of these roles should be acquainted with the HAAS approach, but it is recommended that all members of the project team, including all installers, are trained as well.

This course is not designed to provide training on how to install products, but instead to help different contractors identify when it is appropriate to consider other aspects of the house in parallel with their specific retrofit service/product.

BC Housing CPD Credits

Upon successful completion of this course (sections 1.0-6.0), participants are eligible for 3 informal Construction Technology CPD points through BC Housing. Successful participants will have the opportunity to download a certificate of completion. For more information on CPD points and

reporting, contact BC Housing.

1.2 Why House-as-a-System Retrofits Now?

Retrofitting with a house-as-a-system (HAAS) approach is the best way to maximize comfort, health, home durability, and energy savings for homes. Although the HAAS approach has always been important, typically most homeowners in BC have only been completing single energy retrofits in isolation from other home retrofits; in part, this is because there are few whole-home contractors, HAAS retrofits can be complex, multiple retrofits are expensive, and there has been limited homeowner awareness on the importance of HAAS retrofits.

Now, things are changing. The BC government has set ambitious targets to lower greenhouse gas emissions (GHGs), including those from residential energy use. Utilities in BC are committed to helping their consumers' homes become more energy efficienct. Achieving these goals will require a large percentage of BC homes to complete multiple retrofits or *deep energy retrofits* to reduce a homes' energy use by 50% or more.

In addition to increasing energy savings, the HAAS approach is also now necessary to maintain or improve occupant comfort and health and building durability. With climate change in B.C. projected to increase the instances of extreme temperatures and weather events, the retrofit and construction industry will need to adapt their practices and products to be more resilient to changing climates.

Completing multiple complementary retrofits, including increasing the air tightness of homes, is central to achieving deep energy retrofits, but there are benefits and risks with this work. A deep energy retrofit can deliver improved occupant comfort, enhance the durability of a home, and reduce energy bills, energy consumption, and household greenhouse gas emissions. Deep energy retrofits are a tremendous business opportunity for the retrofit industry as it requires the selling of more retrofits to more homes.

However, the unintended consequences of retrofits completed poorly can cause serious health and safety, comfort, durability, and performance issues in a home. Retrofit contractors should acknowledge a duty to "*do no harm*", meaning the work of retrofitting should not cause, or worsen, issues in a home. In order to avoid the potential negative unintended consequences of home retrofits, the HAAS approach can no longer be a "nice to have option", it must become the standard

approach to retrofitting homes.

1.3 Safety Note

There are common safety hazards that contractors may come across during residential retrofits such as asbestos, combustion spillage, mould, structural deficiencies or deterioration, lead paint, and confined spaces.

This training course does not include content on workplace safety considerations for the work discussed and is not a substitute for dedicated job safety training per WorkSafeBC requirements and relevant experience related to residential insulation retrofits. It is the contractor's duty to consult the appropriate regulatory bodies for workplace health and safety prior to conducting residential retrofit inspections or work.

1.4 Referral Opportunities

This course discusses the interconnections of home retrofits and introduces the need for contractors to work together more closely. Throughout the course, look for the symbol below as a helpful indicator of opportunities for potential referral opportunities between contractors. The final section of the course, 5.0 Creating a Referral Network, elaborates on this further.

REFERRAL OPPORTUNITY