



# Overcoming Barriers to HVAC Contractor-Led Building Retrofits

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# About HRAI-Canada

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## ❖ Established in 1968

## ❖ >1,200 member corporations

- 90 Manufacturers; 60 Wholesalers/Distributors; 900 Contractors; 150 Associates
- 22 staff, 10 instructors, 5 regional offices, 15 chapters

## ❖ Services to Members and Industry

- Industry Advocacy and Government Relations – “the voice of the industry”
- Industry Training (technical design, business management)
- Communications (magazine, e-newsletter, webinars)
- Trade Show – Canadian Mechanicals and Plumbing Exposition (CMPX 2022)
- Environmental Stewardship (Refrigerant Management Canada, Thermostat Recovery Program)
- Conservation/Demand Management Program Administration (almost a million rebates in 10 years)



# The Industry We Represent

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- ❖ Space heating and cooling of buildings (by various methods)
- ❖ Domestic water heating
- ❖ Ventilation and indoor air quality (IAQ)
- ❖ Refrigeration processes
  - Industry
  - Grocery stores
  - Institutions (hospitals, schools)
  - Ice rinks
  - Various specialty applications
- ❖ Building control systems
- ❖ > \$12 billion in activity per year and tens of thousands of jobs across the country



**HRAI**  
YOUR ENVIRONMENT • OUR EXPERTISE



Under the *Pan-Canadian Framework on Clean Growth and Climate Change*, building-related measures are expected to deliver significant GHG reductions

## PAN-CANADIAN FRAMEWORK



## on Clean Growth and Climate Change

Canada's Plan to Address Climate  
Change and Grow the Economy



# The Climate Change Mandate

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Space heating is an important part of the solution to reduce GHGs in the buildings sector

- ❖ Heating, on average, represents between **56-64%** of energy use in homes and buildings, and among the largest sources of direct sector emissions (**17%**)
- ❖ Improvements in the performance of space heating technology can reduce energy use significantly for a typical residential home

## Context for the Research

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- ❖ Recognized need to improve energy performance and reduce carbon emissions in homes across Canada
- ❖ The growing number of programs aimed at addressing “*whole home energy retrofits*” (mechanical and envelope measures)
- ❖ Homeowners’ desire for “packaged solutions” to ease implementation of needed retrofits (including financing)
- ❖ A nearly non-existent population of businesses currently available to fill this need



## Context for the Research

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*The premise: HVAC contractors can/should evolve into “whole home comfort and energy retrofit contractors” – to fill this growing need in the marketplace*





## Why HVAC Contractors?

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- ❖ HVAC contractors already deliver a significant component of home energy retrofits
- ❖ HVAC contractors understand the concept of “house as a system” (a strong theme in technical training)
- ❖ Current technical training quotient for contractors is high (other components of HAAS are less technically complex)



## Why HVAC Contractors?

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- ❖ HVAC contractors are invited into homes to solve problems and thus gain access to opportunities before they are even recognized as such
- ❖ HVAC contractors see themselves and sell themselves as “comfort advisors”
- ❖ HVAC contractors enjoy *trust relationships* with customers

## Why HVAC Contractors?

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- ❖ HVAC contractors already know how to sell energy efficiency (less so for emissions reductions)
- ❖ Selling financing solutions for big ticket items is already standard procedure for most
- ❖ There *are* successful models to follow...



***So... why aren't more HVAC contractors acting on the opportunity?***



# The Research Project

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The Atmospheric Fund (TAF) supported the research, which was facilitated by Lenard Hart at Climate Action Services

**The Primary Research Question: *What is stopping HVAC Contractors from becoming “Whole Home Energy Retrofit” contractors?***

# The Research Project

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## Methodology

- ❖ Survey questionnaire of 100 contractors: to identify barriers to diversification
- ❖ Interviews with leading contractors to flesh out ideas more fully
- ❖ Facilitated focus groups/workshops to explore means for overcoming barriers



# The Research Project

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## Expected Barriers (Hypotheses)

- ❖ Regulatory restrictions (a common constraint in the industry)
- ❖ Not “buying into” the need for climate action solutions
- ❖ Inability to source supply of needed products
- ❖ Inability to find qualified labour
- ❖ Reluctance to invest in “risky business”
- ❖ Lack of capital
- ❖ Fear of change or departing from “comfort zone”

# The Research Project

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## Key Findings

- ❖ The industry is far more ready than anticipated!
- ❖ Contractors *do* see the opportunity but they are already busy and generally don't have excess capacity
- ❖ Many are risk-averse
- ❖ Almost all of the barriers they identified are more imagined, or at least self-inflicted, than real

# The Research Project

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## Key Findings

- ❖ Importance of “guided self-discovery” via “peer exchange”
- ❖ There is a need for guidance and training on the “how”
- ❖ Need clear signals from the market (or governments) that the investment in adding capacity will be rewarded

# The Research Project

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## Recommendations

- ❖ Facilitate industry transition through peer exchange process
- ❖ Develop/curate training programs to support the transition (most training already exists)
- ❖ Create incentives for contractors who make the “leap”
- ❖ Reward the leaders/innovators; others will follow (Pilots)
- ❖ Implement comprehensive workforce development plan



# HRAI's Workforce Development Plan

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## *“Accelerating the Development of Canada’s Low-Carbon HVACR Workforce”*

Tied to (but not dependent) on a funding application to Employment and Social Development Canada Sectoral Initiatives Program

### **Three elements in plan:**

- ❖ Shifting the HVACR Industry “Culture”
- ❖ Establishing and Implementing National Training Standards (residential)
- ❖ Facilitating the “Re-Skilling” or “Up-Skilling” of existing workers and/or those from related sectors



# HRAI's Workforce Development Plan

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## *Specific training (“upskilling”) needs (a preliminary menu)*

- ❖ New A2L and A3 refrigerants
- ❖ Equipment sizing and selection
- ❖ How to sell carbon reduction savings (avoided costs)
- ❖ Commercial IAQ solutions
- ❖ Selling and delivering integrated “whole home” services
- ❖ GSHPs and loop installation/design
- ❖ VRF/VRV applications
- ❖ Advanced control systems
- ❖ Residential commissioning and re-commissioning



*With modest support from suppliers, government programs, associations like HRAI and allies, HVACR contractors are poised to lead the way towards major emissions reductions in the built environment.*



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