

**Conference on ENERGY RETROFITS FOR HOUSES**  
Affordable Comfort for Canadians

<u>TRACK</u>	<u>WORKSHOP TITLE &amp; DESCRIPTION</u>	<b>Possible BPI CEU Credit</b>
<b>RETROFIT PROGRAMS:</b>	ENERGuide & ecoENERGY: What Have We Learned: Over 500,000 houses tested and 150,000 remediated. Is this a furnace replacement subsidy or have great strides been made? Details from the program managers.	
<b>RETROFIT PROGRAMS:</b>	Updating ecoENERGY- What Works Better? The flagship program is due for an update. How will it be changed? How do these changes provide opportunities? As well, should the changes reflect a return to better reports to homeowners?	
<b>RETROFIT PROGRAMS:</b>	Canadian Case Studies: Good & Bad: Canada has had CHIP, Espanola, Manitoba programs, and others, as well as federally funded research samples. What has worked in these programs to reduce energy consumption in those houses?	
<b>RETROFIT PROGRAMS:</b>	How to Evaluate Programs: Michael Blasnik is the ultimate litmus test for weatherization programs in the US. If he confirms that savings have been made, the program has been successful. Find out how he reviews and evaluates program success.	
<b>RETROFIT PROGRAMS:</b>	Low-Income Weatherization: Implementation Issues: We may have big government support for such programs. What are the particular requirements for doing good low-income weatherization.	
<b>RETROFIT PROGRAMS:</b>	Lessons learned from the US Retrofits: Blasnik, Round 2. Less on analysis and more on programs. Material in this presentation will probably surprise many. Michael is an entertaining and informative speaker. He will specify what are the characteristic of households that save energy and discuss predicted vs actual savings	
<b>RETROFIT PROGRAMS:</b>	Reducing Electrical Loads: You can put in compact fluorescents (especially the good ones) but that does not mean you have resolved high electricity use in a house. This is a comprehensive session on reducing all electrical loads.	<b>X</b>
<b>MODELING RESIDENTIAL ENERGY USE</b>	HOT 2000: Never used a home energy model before? Here is an introduction to how and why you need to model the house energy usage in order to predict savings.	
<b>MODELING RESIDENTIAL ENERGY USE</b>	RETScreen: Solar is becoming a big part of the equation, especially at \$0.80/kWh payback in Ontario. RETScreen is the NRCan program that shows how to predict and optimize solar energy. This workshop is the introduction.	
<b>BEYOND SINGLE FAMILY</b>	Ventilation and IAQ in Multis: There has been good research to show how this can be done right. Do the energy retrofit and then leave the building with good air quality.	<b>X</b>
<b>BEYOND SINGLE FAMILY</b>	Air Sealing Multifamily Buildings: So many places to seal ... One often expects multi-family buildings to be tighter than single family, but that is usually not the case. There are many opportunities to tighten multifamily buildings	<b>X</b>
<b>BUSINESS LESSONS</b>	From Audits to Action: You've done energy audit - the need is established. How do you get the homeowner to act on the results? How do you prioritize the possible retrofits. This workshop will look at what works. Bring your own successes to the session and share them.	
<b>BUSINESS LESSONS</b>	Making Money by Air Sealing & Insulating: Great. You can tell everyone that you work in a "green" sector, saving the environment. How do you ensure that some of the green (or lots) stays in your pocket? This is an industry led workshop.	
<b>BUSINESS LESSONS</b>	Good Business Practice for Retrofit Contractors: You know how to blow cellulose. You can airseal a house. The other stuff - making sales, contracts, permits, accounting, insurance, etc. - still has to be done. This workshop provides the basics of good business practice.	
<b>OPPORTUNITIES ON THE LEADING EDGE</b>	Efficient Heat Pumps for Cold Climates: Lots of choices these days - air to air, minisplits, and geothermal. How do you choose between heat pump technologies when saving money for homeowners.	<b>X</b>
<b>OPPORTUNITIES ON THE LEADING EDGE</b>	New Choices for Water Heating: Gas, oil or electric? High efficiency or conventional? Instantaneous or with a tank? How about solar? So many choices ... Find what works for what homes and lifestyles. Are there real savings available?	<b>X</b>
<b>OPPORTUNITIES ON THE LEADING EDGE</b>	Next Generation Heating Systems (integrated space and water): If you have the same efficient appliance doing your space and water heating, you should be able to save. As well, energy efficient houses need less space heating. This workshop describes how the systems work and their success in the field.	<b>X</b>
<b>OPPORTUNITIES ON THE LEADING EDGE</b>	Beyond Business as Usual: Deep Energy Reductions: So everyone thinks HVAC when you talk alternative technologies, but what if your house does not require conventional space heating? This session concentrates on alternative or ultra high performance envelopes. If you can make the house so good, the choice of HVAC systems becomes almost inconsequential.	
<b>OPPORTUNITIES ON THE LEADING EDGE</b>	NRCan Results: They do the energy research in Canada. Come find out what they say about appliances, retrofits, savings, etc.	
<b>OPPORTUNITIES ON THE LEADING EDGE</b>	Practices for the Coldest Climates: We have lots of US data on retrofit programs but the climate there is milder than our worst. Experts will discuss retrofit options if you are work in really cold places (Winnipeg, Saskatoon, Yellowknife, Whitehorse, etc.)	<b>X</b>

<b>OPPORTUNITIES ON THE LEADING EDGE</b>	Saving Water: Latest Tools & Techniques: Water has an energy implication too, as well as being a resource worth saving. There are relatively easy ways to save water in a house and some good paybacks. Learn from those who have implemented successful water saving programs and find out what we are learning about changes in cold and hot water use.	X
<b>AIR LEAKAGE/ AIR SEALING</b>	Canadian Houses: What We Know from ecoENERGY: Canada has probably the best airtightness data on their houses of any country. There are significant variations in airtightness due to house age and location. NRCan will show what we know.	
<b>AIR LEAKAGE/ AIR SEALING</b>	Defining Air and Thermal Boundaries: Is the polyethylene sheet the air barrier? Is the Tyvek? What happens when you project out a bay window? Is a kneewall attic inside or outside the house? This introduction to air and thermal boundaries shows where the dangerous discontinuities lie.	X
<b>AIR LEAKAGE/ AIR SEALING</b>	Air Sealing of Canadian Homes: Priorities & Principles: The basics: why to do this, how to do this, how to measure it.	X
<b>AIR LEAKAGE/ AIR SEALING</b>	Air Sealing with Foam: Foam can be faster and more effective than other air barrier systems. There are ways to use foam for airsealing that make a big difference in reducing house air change rates. Learn about it in this session.	X
<b>VERIFYING PERFORMANCE</b>	Using and Interpreting Infrared: Now inexpensive enough to be in wide usage, infrared can take you inside the wall. Learn how to use this powerful diagnostic tool (and quality checker).	X
<b>VERIFYING PERFORMANCE</b>	Getting the Most from your Blower Door: You have a blower door and you want to make it sing (and you want to make money doing so). Find out how blower doors and pressure diagnostics can pinpoint the areas of concern. (Advanced)	X
<b>VERIFYING PERFORMANCE</b>	IAQ: Measurement Techniques: Good information on simple (or more expensive) measurement techniques for IAQ problems. This could be an adjunct service for a retrofit contractor. Learn how to test.	X
<b>DURABILITY AND HEALTH</b>	Ventilation Systems for Existing Houses: What Works: Ventilation? Isn't that just for new houses? If you have a successful program or a good retrofit, you are going to need to know that the house you leave is well ventilated. Learn the basics on ventilation systems, costs, controls, and ducting. Learn how to encourage the residents to use their systems so problems are avoided.	X
<b>DURABILITY AND HEALTH</b>	HRV Best Practices: Heat Recovery Ventilators (HRVs) are the most promising ventilation equipment for a cold country. They need a good installation, proper balancing, and diligent maintenance. Learn how this is done and what happens if you ignore these issues.	X
<b>DURABILITY AND HEALTH</b>	Bugs, Mold, & Rot: High humidity in houses can lead to poor occupant health, as well as physical damage. Older houses often have moisture problems that need fixing before energy retrofits take place. Learn from the experts.	X
<b>DURABILITY AND HEALTH</b>	Other Hazards: Renovation Dust, Lead, Radon, etc. You will not be praised for a good retrofit if a child subsequently gets sick from leaded dust exposure from the renovation. It happens more frequently than you think. Taking this workshop should help you to avoid endangering your clients.	
<b>DURABILITY AND HEALTH</b>	Moisture Impacts, Sources & Remedies: Identifying and troubleshooting moisture problems. How to recognize common moisture problems in houses and how to resolve them.	X
<b>DURABILITY AND HEALTH</b>	Indoor Air Quality in Existing Houses: So, where are the dead bodies? There are many Canadian houses with poor indoor air quality (IAQ), leading to health effects. Learn how to recognize problems and promote solutions.	X
<b>DURABILITY AND HEALTH</b>	Depressurization Issues: Making Sure the Chimney Wins: House depressurization goes beyond blower doors. Depressurization by ventilation systems, dryers, central vacuums, and even natural stack pressures can affect the way that a chimney operates. If you contribute to making houses tighter, make sure you know how to avoid these dangers.	X
<b>TECHNIQUES THAT WORK</b>	Cooling Strategies for Hot Cities: Some Canadian cities see their peak electrical load in mid-summer, dealing with cooling. This session shows how to minimize cooling loads and then how to take care of what is left.	X
<b>TECHNIQUES THAT WORK</b>	Retrofitting Windows: Best Practices: If you are replacing windows, you know they are a major source of heat loss and water entry. There are good ways to put windows into houses, and good windows to specify. This workshop shows how.	X
<b>TECHNIQUES THAT WORK</b>	Wall Retrofits: The Basics. The walls, whatever their age or construction, have to be well-insulated for a good retrofit. Learn what works.	X
<b>TECHNIQUES THAT WORK</b>	Retrofits According to House Type: You can prioritize retrofit procedures if you know the envelope details and the flaws of particular types of houses. Review a variety of house types and discuss what is the best way to deal with their particular features.	X
<b>TECHNIQUES THAT WORK</b>	Insulating & Air Sealing Attics: Attics are always the first to be insulated. It's easy. They are out of the way. The payback is good. Find out how to do this better and avoid causing problems.	X
<b>TECHNIQUES THAT WORK</b>	Basement Retrofits: Many older houses have wet or damp basements. These have to be fixed before insulating becomes feasible. Learn about basement problems, basement solutions, and when to walk away.	X
<b>TECHNIQUES THAT WORK</b>	Crawl Space Retrofits: Crawl spaces – basements' dirty cousins. If you cannot save energy and improve air quality through a crawl space retrofit, you are not trying. Crawl space retrofits are quite straightforward and have a huge market. Find out how to do it right.	X