WELCOME

Sponsors:

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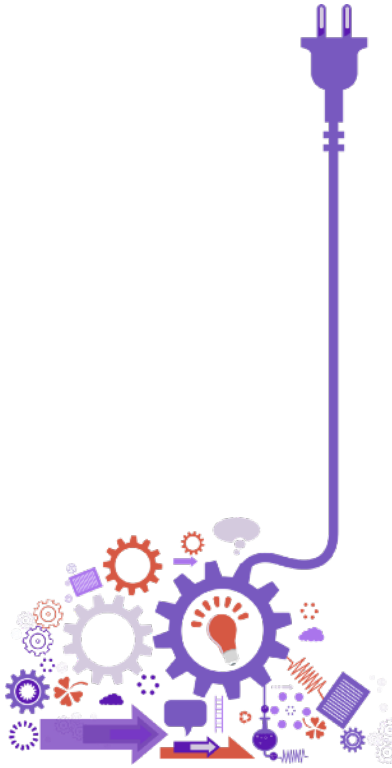
Life Takes Energy

A important acknowledgment

Trevor Trainor, M.Sc., M.A.Sc.

President & Building Science Specialist,

Bawating Building Science



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Thank You !

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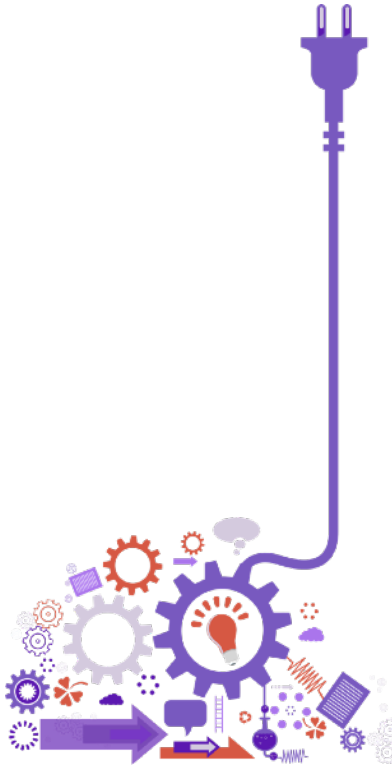

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Your Hosts

Gord Cooke, P. Eng.

President, Building Knowledge Canada

There are few professionals in Ontario that can match Gord Cooke's broad knowledge of the inner workings of a house. Highly regarded in the Ontario homebuilding industry, Gord is a professional engineer, trainer, author, educator and industry consultant with over 35 years of experience in the low- and high-rise residential building and renovation industry.

Sonja Winkelmann, EP

Senior Director, Net Zero Energy Housing, Canadian Home Builders' Association National

Sonja has been working in the field of energy efficient homes for 18 years. She joined CHBA in 2014 as the first Director of Net Zero Energy Housing and has led the development of the Net Zero Home Labelling Program as well as the associated training courses and marketing efforts. Sonja is an organizer of this year's Net Zero Summit.

Andrew Oding

Vice President, Building Knowledge Canada

Andrew brings insightful and real-life practicality to building science principles and their in-field applications. As a recognized building science trainer by the Government of Canada-Office of Energy Efficiency, Building Science Specialist, and HVAC designer and commissioner, Andrew is working closely with the development of new building codes and advanced building programs across North America.

Tex McLeod

President, McLeod & Associates

Tex is a successful developer with more than 30 years of experience as one of Canada's leading presenters on energy, housing and indoor air quality. He is the president of The McLeod Associates and one of the organizers of Spring Training Camp.

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STRATFORD

Stratford, Ontario, Canada is located on the Avon River in southwestern Ontario. **The community, referred to as "Canada's Art Town"** is well known as **the home to the Stratford Festival which is a yearly festival showcasing modern and Shakespearean plays** using many of the local venues.

Stratford is best known for its culinary selection, art scene and festival season running from May to October. The 2 most popular events and festivals to visit include the very popular Stratford Shakespeare Festival and the Stratford Summer Music Festival!

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2013 -2023

10 years of Advanced Building Science Spring Camp

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It’s warming.

It’s us.

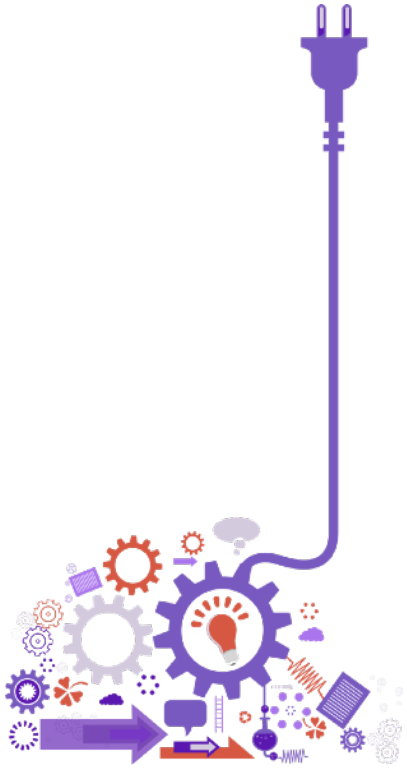
It’s bad.

We’re sure.

We can fix it.

Peter Love

Spring Camper & Industry Leader,
(Camp 2019)



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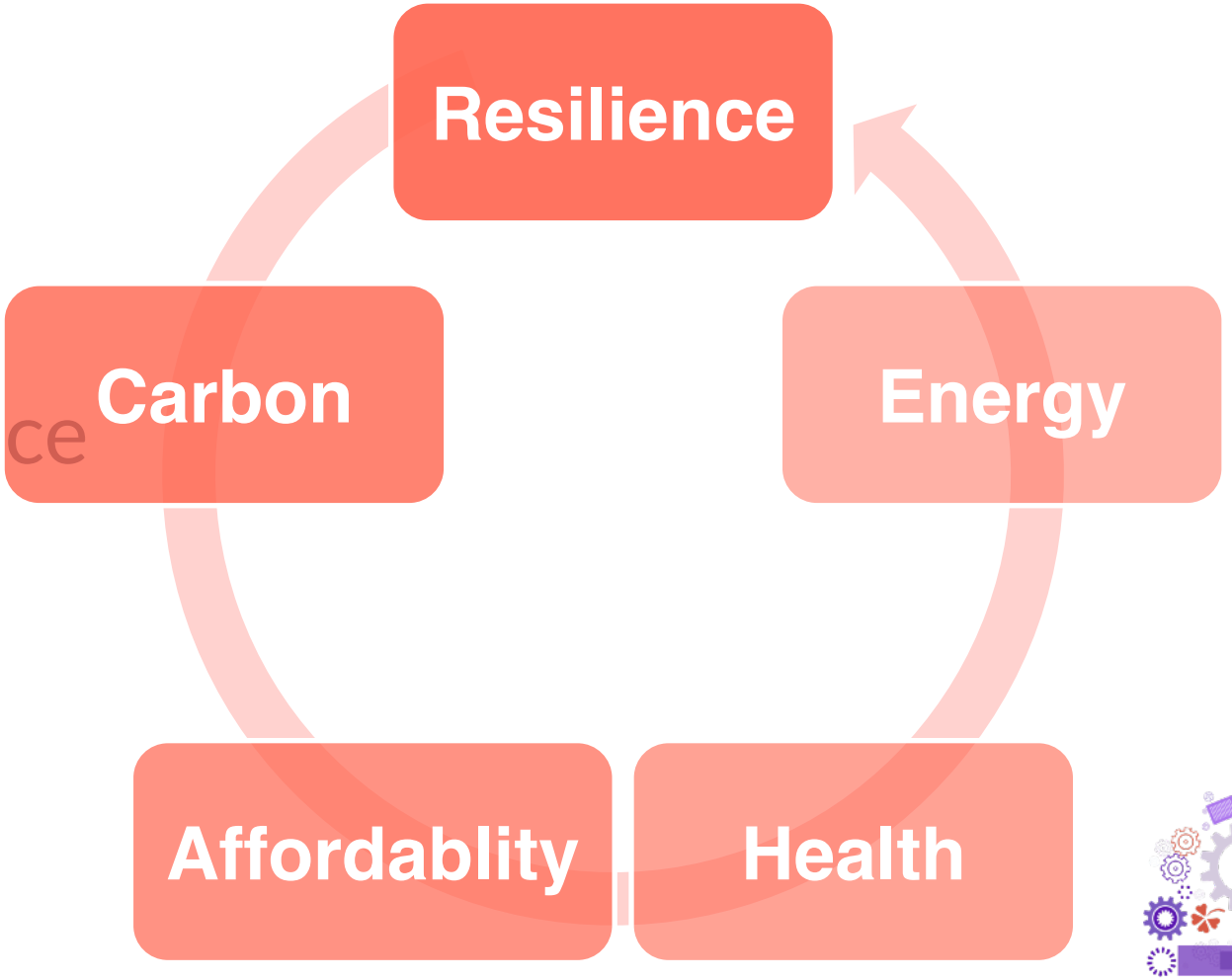
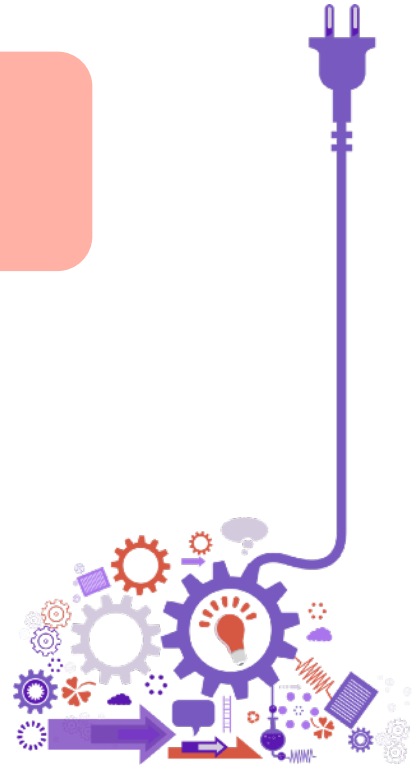
he **Ultimate** Building Science Challenge

2023 and beyond…





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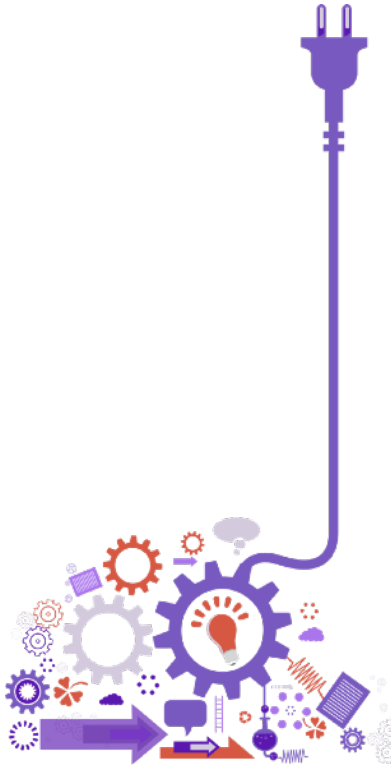
Invest yourself in these 3 days

Talk with each other

Challenge your self first.
Challenge others next.

Be Kind
Be Thoughtful
Be Practical
Be Canadian

Take a task back home to work on – with others.



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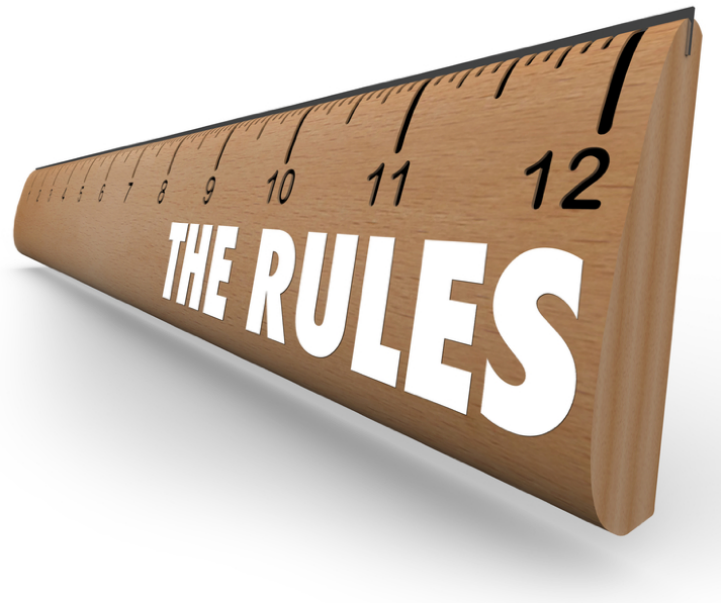
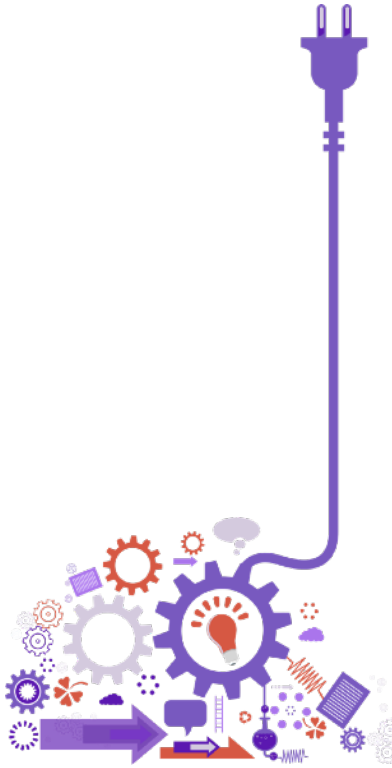
- BKC’ers & CHBA’ers are all around to help out. Ask them!
- Exits
- Washrooms
- Schedules
- Presentation and info sharing
- Be safe





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Day 1

8:00-8:30 AM Welcome to Advanced Building Science Camp + CHBA Net Zero Summit 2023
Gord Cooke, Tex McLeod, Sonja Winkelmann & Andy Oding

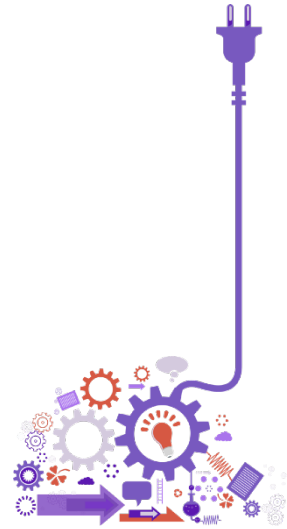
8:30-9:30 AM **Exergy: We Are Wasting Our Potential To Do Better**, Be Smarter and Apply the Science We Have Known for Over 150 Years
Robert Bean, ASHRAE Fellow

9:30-9:45 AM Break

9:45-10:45 AM **Air to Water Heat Pumps: The Next Frontier for Heating/ Cooling/Domestic Hot Water** in Low-Load, NZR, Tier 4+ Homes
John Siegenthaler, Appropriate Designs
10:45-11:15 AM Q&A
Robert Bean, ASHRAE Fellow & John Siegenthaler, Appropriate Designs

11:15 AM-12:15 PM **High Performance Builder, the Road to High Performance & Lessons Learned**
Brad Carr CEO Mattamy Homes

12:15-1:30 PM Lunch + Presentation: Building For The Future **Doug Tarry, Doug Tarry Homes**



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1:30-2:30 PM **Air Source Heat Pumps Testing & In-Field Performance: Are They Working Like Expected?** Gord Cooke & Sonja Winkelmann, CHBA (Moderators); **Gary Proskiw, Proskiw Engineering Ltd.; Dr. Nima Alibabaei, BKR Energy Company; Maxime Savard, NRCan**

2:30-2:45 PM **Break**

2:45-3:45 PM **NZ, Deep Energy Retrofit of Mass Walls: Critical Building Science Details** and Tools
Trevor Trainor, Bawating Building Science

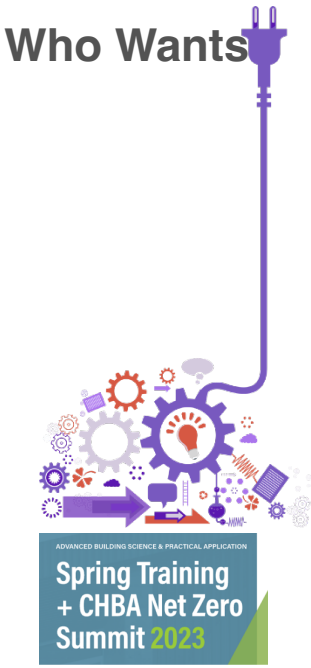
Day 1

3:45-4:45 PM **Advanced Air Distribution Systems for Low Load Homes: The Science and Testing** Behind Optimized Duct Design Systems
Gord Cooke & Nigel Watts, RHEIA

4:45-5:00 PM **Day 1 Wrap-Up/ Day 3 Prepare : What Did We Learn? What Needs To Be Done? Who Wants To Take It On**?
Gord Cooke, Tex McLeod, Sonja Winkelmann & Andy Oding

6:15 PM Dinner

7:30-9:30 PM **Open Mic: Deep Topics, Deep Challenges**
Hosted by Andy Oding & Sonja Winkelmann I Cash Bar



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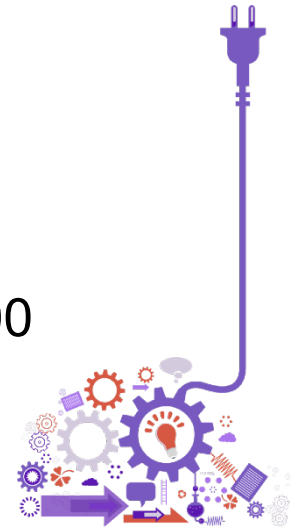
7:30-9:30 PM Open Mic: Deep Topics, Deep Challenges

Hosted by Andy Oding & Sonja Winkelmann I Cash Bar –Demo Hall

- Center for Advanced Building Envelope Research **Cynthia Cruickshank**
- Canada's FIRST FULL Living Building Challenge Home-Lessons Learned **Dan Butler, Insightful Homes**
- A New Learning Platform –Opportunity Carla Harder Blue House Energy
- Alberta New Home Gets Reno'd to NZ and Beyond: Lessons Learned **Amelie Caron EcoSynergy**
- NZ Electric Communities: Why DHW loads, EVs, PV and electrification doesn't need 400 amp panels! A EMS solution hits mainstream **Wil Beardmore Bluewater Energy**
- Domestic Hot Water in Homes-A solution to Peak problems through storage? **Bob Chown EcoSwitch**



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Day 2

8:15-8:30 AM Welcome Back
Gord Cooke, Tex McLeod, Sonja Winkelmann & Andy Oding

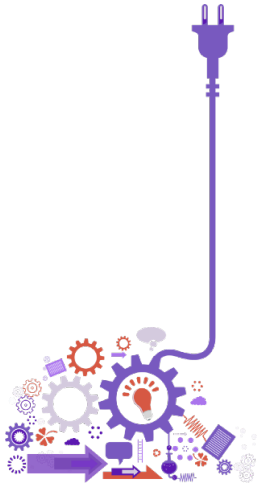
8:30-10:30 AM **Building Science + Carbon Reduction (and Resilience): Enclosures and Beyond**
Dr. John Straube, RDH Building Science Labs

10:30-10:45 AM Break

10:45-11:15 AM **High Performance Walls and Enclosures—A Hands-On Review**
Dr. John Straube, RDH Building Science Labs; Gord Cooke & Team

11:15 AM-12:15 PM **Towards Integrating Resilience**
Frank Lohmann, CHBA & Dr. Marzieh Riahinezhad, National Research Council Canada

12:15-1:30 PM Lunch + Presentation: **New Technologies for Low Carbon Community Development—On the Horizon**
Matt Cable, Enbridge Gas Inc. & Guest



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Day 2

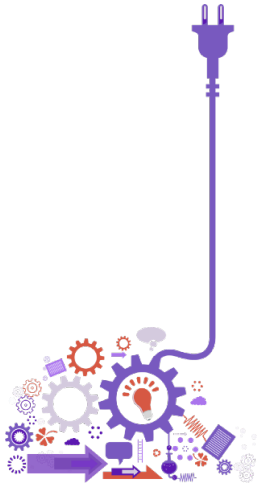
1:30-2:45 PM **Carbon Reduction Strategies For Home Builders**
Carl Pawlowski, Minto Group; Phil Santana, Mattamy Homes, Stefanie Coleman, Doug Tarry Homes, Andy Oding BKC
2:45-3:00 PM Break

3:00-4:00 PM **Home Builder Night in Canada: What Keeps a Great Builder Awake at Night?**
Mike Memme, Mountainview Building Group & Andy Oding BKC

4:45-5:00 PM **Final Wrap-Up: What Did We Learn?**
What Needs To Be Done?
Who Wants To Take It On?
Gord Cooke, Tex McLeod, Sonja Winkelmann & Andy Oding

6:15 PM **Dinner**

7:30-9:30 PM Auction



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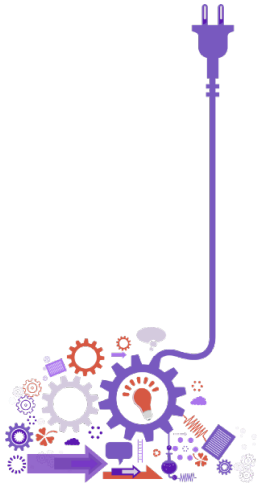


6:45-7:45 AM Breakfast TRAINING OPTION
8:00 AM-10:00 AM Welcome and Intro Sonja Winkelmann & Andy Oding

Energy & Carbon Codes Update and Why Resilience Matters Frank Lohmann, CHBA
ESG: What Is It and What It Could Mean for Your Business Stefanie Coleman, Doug Tarry Homes
10:00-10:15 AM Break

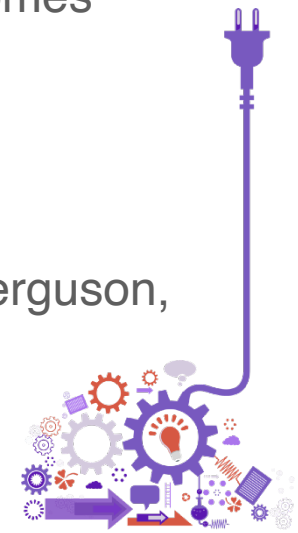
Day 3

10:15 AM-12:00 PM **The Volta SNAP Tool: How To Teach an Old HOT2000 New Tricks**
Leigh St. Hilaire & Aidan Brookson, Volta Research;Patric Langevin, Lucas Coletta & Alex Ferguson, NRCan; Andrew Oding & Scott Schrier, Building Knowledge Canada;Dan Sinclair, Sinclair Homes
12:00-1:00 PM Lunch

1:00-4:30 PM Choose between two concurrent interactive workshops:

1. **Energy, Cost, and Carbon Optimization Tools : Hackathon**
Leigh St. Hilaire & Aidan Brookson, Volta Research; Patric Langevin, Lucas Coletta & Alex Ferguson, NRCan; Andrew Oding & Scott Schrier, Building Knowledge Canada

2. **Adaptation, Resilience, Climate Risk Disclosure & ESG**
Stefanie Coleman, Doug Tarry Homes & Frank Lohmann, CHBA



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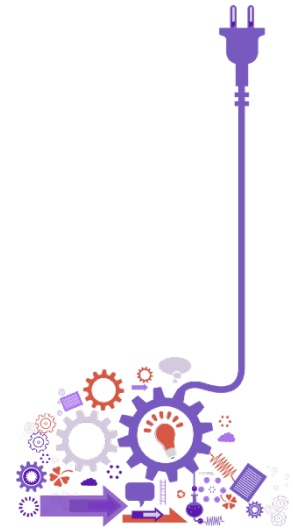
Day 3

8:00 AM DEP. Arden Park Hotel **TOUR OPTION**

9:00 AM ARR.
Sifton Centre at West 5 Net Zero Community & Walking Tour Including EVE Park
At 10:30 groups swap places.

12:00 PM DEP. Brown bag lunch on the way to the next site
12:30 PM ARR. **Doug Tarry Homes Net Zero All-Electric Model Home & Graphenstone Gallery**
At 1:10 the buses swap locations.
2:00 PM DEP.
3:00 PM ARR. **Sinclair Homes Net Zero Ready Model Homes + Langlois Eco Homes Passive House Certified Townhomes**
4:00 PM DEP.

4:30 PM ARR. Arden Park Hotel



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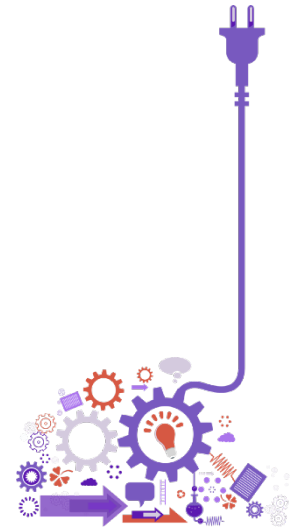
Lets Get Rolling !



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