

Home Energy Alternatives Trade Show



Saturday, March 1, 2008 – Noon – 6:00 pm
Sunday, March 2, 2008 – 10:00 am – 5:00 pm
Northern Lakes College – Slave Lake

Tours, Information Sessions, & Workshops

Tours:

The Home That Ken & Deb Built – Energy Efficient!

Come and take a tour of the home that Ken & Deb built to be energy efficient. Ken & Deb will take you on a tour that showcases their high efficient boiler with in-floor heating, the three heating zones controlled by programmable setback thermostat, on-demand water heater, task lighting, Solarwall, solar lighting tubes, solar water heater and other unique features of their home.

Tour Guides: **Ken Caissie** works for Focus and **Deb Lafoy Caissie** works for Northern Lakes College. Both are committed to reducing their environmental footprint and their home showcases how they took action to realize their goal.

Tour Times:
March 1 12:30 pm – 2:00 pm
March 2 11:30 am – 1:00 pm

The Straw House that Won't Blow Down – Nowochin Home

Take a tour of this lovely 2150 square foot home that has its external walls made with flax straw square bales. The house was constructed in 2000 and has a floor heat system with external boiler and an air to air exchanger. Find out how this house stays warm in the winter and cool in the summer.

Tour Guides: **Dale & Janice Nowochin** will be on-hand to answer your questions about the construction and energy efficiency of their straw bale home.

Tour Times:
March 1 2:15 pm – 3:45 pm
March 2 3:00 pm – 4:30 pm

Energy Efficiency IS for the Birds! – Boreal Centre for Bird Conservation

Composting toilets, a giant rain bucket and heat from the earth... What do these three things have in common? Join us on a guided tour of the new Boreal Centre for Bird Conservation and find out! Learn more about LEED building standards and see first hand the green building ideas that we've incorporated into the centre. Features include: geothermal heating and cooling, a passive solar design, as well as innovative water conservation and construction technologies. Transportation to and from the centre is provided along with a guided tour and information about what you can do to make your home more energy efficient and environmentally friendly.

Tour Guides: **BCBC staff and Robert Deacon** – Chair of the Lesser Slave Lake Bird Observatory

Tour Times:
March 1 4:00 pm – 5:30 pm
March 2 1:15 pm – 2:45 pm

Eco-Kids Korner - Hands on Activities for Children

Drop in and join the **Boreal Centre for Bird Conservation** for some hands on activities that the whole family can enjoy! Find out how wind turbines generate electricity and create your own pinwheel to take home. Or maybe you would like to learn how to capture solar energy to cook some tasty treats? Then our pizza box solar oven activity is for you. All materials for the activities will be supplied, you just need to bring along your creativity!

Session Times: March 1 & 2. Drop in anytime between 1:00 pm – 3:00 pm!

For More Information Contact:

WorkForce Development – Northern Lakes College, 1201 Main St. SE, Slave Lake, AB T0G 2A3
Phone: (780) 849-8623 Email: mackenzie@northernlakescollege.ca



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Information Sessions: Reducing your Environmental Emissions

Carbon Busting for Fun & Profit

How can a typical family cut its carbon emissions by 73% and save \$17,800 over 5 years in the process? Learn about the most cost-effective approaches to reducing your carbon emissions from heating, cooling, power and water use, and transportation. From power vampires to demand water heaters, hybrid cars and biodiesel, this presentation tells you what works and what doesn't, and how to achieve an internal rate of return of 32%.

Godo Stoyke is an award-winning environmental researcher and presenter. Godo has been sharing his passion for sustainable design and education for the past 17 years. As president of Carbon Busters (www.carbonbusters.org), a sustainable building consultancy focusing on energy efficiency and green building design, he has saved clients over 67 million kilograms of CO₂ and \$21 million in utility bills in North America and Europe. Godo's second book, "The Carbon Buster's Home Energy Handbook" (New Society Publishers, (2007), describes how a typical North American family can save \$17,800 in energy costs over five years with an annual rate of return of 32%, cutting carbon emissions by 73% in the process.

Session Times: March 1 1:00 pm – 2:00 pm
March 2 2:00 pm – 3:00 pm

Low-Carbon Diet – How to Calculate Your Ecological Footprint

Did you know that the ecological footprint concept was invented in Canada? How much arable land is there per person on the planet? How many earths does it take to sustain our lifestyle? What has more environmental impact, driving to Edmonton or eating a pound of butter? Find out what makes up an ecological footprint, and how to calculate yours. Environmental expert Godo Stoyke runs the environmental numbers, from Apples to Zambonis, for your edification. This informative (and entertaining) look at the ecological footprint examines your daily environmental actions: the good, the bad and the ugly!

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Session Times: March 1 4:00 pm – 5:00 pm

Information Sessions: Energy Efficiency

Lighting & Home Appliances – Making Your Home More Energy Efficient

The objective of this presentation will be to assist you in understanding what options are available, the cost implication of your choices and the benefits that you will likely realise by making these wise decisions. You will get a more detailed understanding of what to look for, the different government and agency labelling systems and how to interpret these. We will be reviewing different types of lights such as CFLs, incandescent, halogens etc., the different appliance options including fuel source and go through calculations to better demonstrate the potential savings and payback periods.

Stephen Farrell is the owner and director of VerdaTech Energy Management & Consulting. Verda Tech's focus is on energy management and specializing in commercial and residential energy matters. Their goal is to reduce their client's energy consumption, saving them money and saving the environment. Stephen is a trainer for the EnerGuide for Houses program and the EnerGuide for New Houses program.

Session Times: March 1 1:00 pm – 2:00 pm
March 2 12:00 pm – 1:00 pm

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Low Cost Ways to Improve Energy Efficiency in Your Existing Home

This session will provide a full review of options that are available to homeowners on ways to find the areas of their home that could be improved from an energy efficiency perspective: Where do you start? What options are available? What materials can one use or should one use? Accessing government grants. What can you do yourself? The building science behind an energy efficiency renovation. We will cover the costs and benefits to making these changes and how to consider a home as a system along with some calculations to better understand the benefits and how to prove if it is right for you.

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Session Times: March 1 2:00 pm – 3:00 pm
March 2 1:00 pm – 2:00 pm

Low Cost Ways to Keep Your House Comfortable Through the Seasons

Join us for an informative session on how to keep your home comfortable year round, taking advantage of free cooling in the summer, using passive solar in your home and stopping the solar gain when you do not need it. This will help you treat your home as a system and know how to use this to your advantage – making your home comfortable, safe and healthy. You will have some fun while playing with proven ways to do things better.

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Session Times: March 1 3:00 pm – 4:00 pm
March 2 2:00 pm – 3:00 pm

What's the Cost? What's the Savings? Making Your Older Home More Energy Efficient

This session will give you a step by step approach to starting a renovation of an older home; to make your home more energy efficient, reducing operating costs, using less energy and of course improving indoor comfort levels. Topics covered will be a review of options available, cost benefit analysis of available choices, available government grants and last but not least, knowing what's right for you.

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Session Times: March 1 4:00 pm – 5:00 pm
March 2 3:00 pm – 4:00 pm

The Economics of Solar and Energy Efficiency – How Does it Fit With Your Values?

We've done lots of research for you about the economics of solar power, solar heating and energy efficiency, and assembled it into one place. What are the economics of these? Does it pay to do? How do you get financing for this? How do you figure out what are the values that are worthwhile for you? Understand how to do a full-cost/full-benefit analysis. Get the answers to these questions to understand whether the economics of solar is right for you now. The presentation focuses on being practical and includes handouts.

Gordon Howell is a solar power system specialist with Howell-Mayhew Engineering, working with people to get their own systems designed and installed. Gordon lives in an energy efficient house that has a solar power system on his roof which provides 100% of his annual electricity use.

Session Times: March 1 4:00 pm – 5:00 pm
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How to Read Your Energy Bills

Are you confused by all the information on your energy bills (electricity & gas) and wondering what it all means? Do you want to have a better idea of what you are paying for and how you can figure out what your consumption patterns are? This session will take a look at energy bills and how to read them so you can use your energy bill as a tool to reduce your energy consumption.

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Session Times: March 2 11:00 am – 12:00 pm

Straw Bale Construction

From the perspective of an owner preparing to design and build their home, this course will take an introductory look into the evolving field of straw bale construction. We'll examine Canadian design considerations and a variety of styles & techniques. Differences between load bearing, post and beam and hybrid will be explored. Design considerations for the Canadian climate will be included.

Habib Gonzalez is the Director of Sustainable Works, a resource centre for sustainable land use systems practicing permaculture and straw bale construction. Habib has been a CMHC contractor in two bale related research projects. He has vast experience in the design and building of straw bale structures as well as being a regular contributor and guest technical editor of the "Last Straw Journal".

Session Times: March 2 1:00 pm – 2:00 pm

Rammed Earth Construction for Energy Efficiency

Description: TBA

Session Times: March 2 2:00 pm – 3:00 pm

Information Sessions: Water Efficiency

Greywater Recycling & Rainwater Collection

Learn what blackwater, greywater and wastewater all mean. How we can reduce our consumption of potable water by over 30% and recover over 50% of the energy from your greywater. How do we recycle it and what is involved? Learn what rainwater collection is all about and how we can use this to reduce our potable water consumption inside the home and outside.

Harold Verburg operates Trimline Design Centre to make information and technology more available to local folks, and if it could not be found, manufacture it. He opened the Training Centre to educate his clients and where theory and hands on experience could now be completed regardless of the weather or the readiness of a particular project.

Session Times: March 1 5:00 pm – 6:00 pm

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Information Sessions: Sustainable Materials

Sustainable Environments

The Green Building movement is transforming the market at an alarming rate. It is hard to keep on top of the flood of information. This presentation will slow things down for a moment to review why this movement was started, why it is here to stay, how it affects you as a consumer and your career, and where it will take us in the future. This presentation will share with you what is happening in your own province. This presentation will be fun and informative, making going green easy and understandable. Get a breakdown of what to look for, what really is in our building products and touch and smell everyday examples.

Stephani Carter is a LEED Accredited Professional and a passionate Sustainable Building Materials Specialist. She runs her own consulting firm, EcoAmmo which is geared toward making sustainability easy, understandable, and accessible for everyone.

Session Times: March 2 12:00 pm – 1:00 pm

Information Sessions: Renewable Fuels

Make Your Own Biodiesel

Learn how to make your own biodiesel. Anything you own that runs on #2 diesel fuel can be powered with biodiesel. Biodiesel advantages: costs only 25 cents per litre to make; has 80 per cent lower emissions than fossil fuel diesel; is made mostly from waste vegetable oil; is as biodegradable as salt; can be used in vehicles, generators and furnaces; exhaust smells like a deep fat fryer; reduces dependency on foreign oil; dramatically reduces diesel pollution; and engines run smoother and last longer.

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Session Times: March 1 2:00 pm – 3:00 pm

Information Sessions: Renewable Electricity

Micro Wind – is it for You?

Learn what Micro Wind is and what it can do. We cover the basics of wind power from how much they actually produce, types of installations, sizing of wind turbines to various installations and choosing to be grid connected or stand alone.

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Session Times: March 1 3:00 pm – 4:00 pm
March 2 11:00 am – 12:00 pm

Grid Connected Solar Power – The Basics

We've done lots of solar research for you and assembled it into one place. What is solar power? How does it work? What can it do for your home? What equipment is there? What are the costs? Can you feed any excess electricity to the grid? How much does it save on your electricity bill? How does it compare with energy efficiency? Get the answers to these questions and make informed decisions.

Gordon Howell is a solar power system specialist with Howell-Mayhew Engineering, working with people to get their own systems designed and installed. Gordon lives in an energy efficient house that has a solar power system on his roof which provides 100% of his annual electricity.

Session Times: March 2 12:00 pm – 1:00 pm

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Home Energy Alternatives Trade Show

Information Sessions: Renewable Heat

Solar Domestic Water Heating – The Basics

What is solar domestic water heating? How does it work? What can it do for your home? What equipment is there? What are the costs? How much does it save on your heating bill? How does it compare with energy efficiency? Get the answers to these questions and make informed decisions.

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Session Times: March 1 1:00 pm – 2:00 pm
March 2 4:00 pm – 5:00 pm

Making Your New House Solar Ready

What does it mean to make your house "solar ready"? What equipment is there? What are the costs? What will it do for your home's marketability? Get the answers to these questions and make informed decisions. You will leave knowing how to get started.

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Session Times: March 1 2:00 pm – 3:00 pm

Introduction to Net Zero Energy Homes

What is a net zero energy home? Can you really get there? How does it work? What does it take? What equipment is there? What are the costs? Can you feed any excess electricity to the grid? What is the role of solar energy and energy efficiency in it? Where can you go for designers, suppliers and installers? Can you buy one yet? Get the answers to these questions and make informed decisions. You will leave knowing how this might fit into your 5-year home plans. The presentation focuses on being practical (it includes some homework for you!) and includes handouts.

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Session Times: March 1 3:00 pm – 4:00 pm

Geothermal Systems

The geothermal general interest course has been designed for residential consumers, home builders and commercial contractors who want an introduction to the technology. Topics covered include the following: general introduction to alternate energies, why we need to consider alternates, economics and the cost benefit analysis and the components of a geothermal system.

Leigh Bond is one of the founders of Threshold Energies Corporation and is current Chairman of the Alberta Geothermal Energy Association.

Session Times: March 2 11:00 am – 12:00 pm

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Home Energy Alternatives Trade Show

Information Sessions: Going Off-Grid

Living the Lifestyle – Off the Grid

Margaret Cardinal & David McConnell will do a show and tell about what it's like to live in an independent, small footprint house with several eco-friendly systems. The emphasis will be on the day-to-day decisions that contribute to making the whole system work satisfactorily from a "his" and "hers" perspective. Focus will be on solar PV electricity, composting toilets, wood gathering, water gathering, insulation, passive solar techniques, interior greenhouse and recycling. With pictures to support their show & tell you will have the opportunity to find out what it means to live with a small ecological footprint.

Margaret Cardinal is a 20 year Northern Lakes College instructor who was born at Saddle Lake. David McConnell is a housekeeper who was born in Edmonton. They have been married for 35 years and have at various times been farmers, parents, teachers, travellers, musicians, technicians, artists and grandparents.

Session Times: March 1 5:00 pm – 6:00 pm

Going Off Grid – What You Need to Know

What can I power with solar energy? Will the kids have to get on a bicycle generator to watch their favourite TV program? What happens when it's cloudy? Does a solar powered light bulb give off exceptionally good vibrations? What does it cost? Can I do it myself? What is the "Dark Side of Solar"? Living independent off the utility grid can be comfortable and satisfying if we can lighten our footprint and design the system carefully. Mr. Harlan will explain the joys and challenges as well as the technicalities of living with a solar electric system.

Rob Harlan is the Executive Director of the Northern Alberta Chapter of the Solar Energy Society of Canada and teaches a class in Renewable Energy at Grant MacEwan College. Mr. Harlan is a Solar Contractor and General Building Contractor with ten years experience designing and installing over 150 solar electric and solar hot water installations in California. Mr. Harlan has also lived for twenty-five years in an off-grid house powered and heated by the sun.

Session Times: March 2 1:00 pm – 2:00 pm

Workshops:

Arxx Insulated Concrete Form (ICF) Installer Training Seminar

This comprehensive training course focuses on providing Designers and Installers with the knowledge and skills required to efficiently and effectively utilize Arxx High Performance Wallsystem.

No experience necessary to participate.

All participants will receive hands-on instruction along with an installation DVD & technical CD.

Trainer: **Ron Funk**, Arxx Regional Manager, Western Canada

Date: Sunday, March 2, 2008 (during the **Home Energy Alternatives Trade Show**)

Time: 9:00 am – 4:00 pm

Fee: **Special Price during the Trade Show - \$99+GST! (lunch provided)**

Sponsored by: Arxx, Teatree Developments & Northern Lakes College

Pre-Registration is required for this workshop. Please call (780) 849-8623 to register.

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Home Energy Alternatives Trade Show

Schedule of Tours/ Children's Activities/ Information Sessions:

Saturday, March 1, 2008

Time	Tours	Location
12:30 – 2:00 pm	The Home That Ken & Deb Built – Energy Efficient!	Main Entrance
2:15 – 3:45 pm	The Straw House that Won't Blow Down – Nowochin Home	Main Entrance
4:00 – 5:30 pm	Energy Efficiency IS for the Birds! – Boreal Centre for Bird Conservation	Main Entrance

Time	Children's Activities	Location
1:00 – 3:00 pm	Eco-Kids Korner	Room #4

Time	Information Sessions	Location
1:00 – 2:00 pm	Lighting & Home Appliances – Making Your Home More Energy Efficient	Room #1
1:00 – 2:00 pm	Carbon Busting for Fun & Profit	Room #2
1:00 – 2:00 pm	Solar Domestic Water Heating – The Basics	Room #3
2:00 – 3:00 pm	Low Cost Ways to Improve Energy Efficiency in Your Existing Home	Room #1
2:00 – 3:00 pm	Make Your Own Biodiesel	Room #2
2:00 – 3:00 pm	Making Your New House Solar Ready	Room #3
3:00 – 4:00 pm	Low Cost Ways to Keep Your House Comfortable Through the Seasons	Room #1
3:00 – 4:00 pm	Micro Wind – is it for You?	Room #2
3:00 – 4:00 pm	Introduction to Net Zero Energy Homes	Room #3
4:00 – 5:00 pm	What's the Cost? What's the Savings? Making Your Older Home More Energy Efficient	Room #1
4:00 – 5:00 pm	Low-Carbon Diet – How to Calculate Your Ecological Footprint	Room #2
4:00 – 5:00 pm	The Economics of Solar and Energy Efficiency – How Does it Fit With Your Values?	Room #3
5:00 – 6:00 pm	Living the Lifestyle – Off the Grid	Room #1
5:00 – 6:00 pm	Greywater Recycling & Rainwater Collection	Room #2
5:00 – 6:00 pm		Room #3

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Home Energy Alternatives Trade Show

Schedule of Tours/ Children's Activities/ Workshop/ Info Sessions:

Sunday, March 2, 2008

Time	Tours	Location
11:30 am – 1:00 pm	The Home That Ken & Deb Built – Energy Efficient!	Main Entrance
1:15 – 2:45 pm	Energy Efficiency IS for the Birds! – Boreal Centre for Bird Conservation	Main Entrance
3:00 – 4:30 pm	The Straw House that Won't Blow Down – Nowochin Home	Main Entrance

Time	Children's Activities	Location
1:00 – 3:00 pm	Eco-Kids Korner	Room #4

Time	Workshop	Location
9:00 am – 4:00 pm	Arxx Insulated Concrete Form (ICF) Installer Training Seminar	Room #5

Time	Information Sessions	Location
11:00 am – 12:00 pm	Geothermal Systems	Room #1
11:00 am – 12:00 pm	How to Read Your Energy Bills	Room #3
11:00 am – 12:00 pm	Micro Wind – is it for You?	Room #3
12:00 – 1:00 pm	Grid Connected Solar Power – The Basics	Room #1
12:00 – 1:00 pm	Lighting & Home Appliances – Making Your Home More Energy Efficient	Room #2
12:00 – 1:00 pm	Sustainable Environments	Room #3
1:00 – 2:00 pm	Going Off Grid – What You Need to Know	Room #1
1:00 – 2:00 pm	Low Cost Ways to Improve Energy Efficiency in Your Existing Home	Room #2
1:00 – 2:00 pm	Straw Bale Construction	Room #3
2:00 – 3:00 pm	Carbon Busting for Fun & Profit	Room #1
2:00 – 3:00 pm	Low Cost Ways to Keep Your House Comfortable Through the Seasons	Room #2
2:00 – 3:00 pm	Rammed Earth Construction for Energy Efficiency (not confirmed)	Room #3
3:00 – 4:00 pm	The Economics of Solar and Energy Efficiency – How Does it Fit With Your Values?	Room #1
3:00 – 4:00 pm	What's the Cost? What's the Savings? Making Your Older Home More Energy Efficient	Room #2
3:00 – 4:00 pm		Room #3
4:00 – 5:00 pm	Solar Domestic Water Heating – The Basics	Room #1
4:00 – 5:00 pm		Room #2
4:00 – 5:00 pm		Room #3

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