

Presented By:



Sustainable Housing Webinar Series

High-Performance homes and comfort
December 15 at 10 AM

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Discussion Points

- 1.) Design & Comfort
- 2.) Greenhouse Gas Emissions
- 3.) Investment
- 4.) Cash Flow – The Economics
- 5.) Future Building Codes & Innovation
- 6.) Becoming a Trailblazer





Introduction

Buying an innovative home can be an exciting decision. As new home building techniques and certification becomes more prevalent, there is quite the scale that can be achieved when exploring a sustainable home.

Whether it is high-performance, Net-Zero-Energy or Passive House, these homes are becoming more popular, and it is important that Realtors have the expertise and knowledge to lead their clients through informed and successful buying/selling experiences.

To start, what is a sustainable home and the scale of other high-performance homes?

Sustainable Home

A sustainable home is an efficient home that's built or retrofitted in a way that respects resources, optimizes energy and water use, and will last longer with quality systems.





High Performance Home

There is no standardized definition for high-performance home, our definition for high-performance is designing and building a home that is well above the caliber of a conventionally-built home.

Your high-performance home is designed and constructed with intention to ensure your home is efficient and will stand the test of time. It could include eco-friendly construction materials, solar panels, or rough-in for future solar panels. Consideration of your building envelope and exterior wall assembly is a must, where intentional, cost-effective decisions are thought about, considered and advised.

High performance homes are healthier, environmentally friendly and a great long-term investment. If you are considering a new custom home, learning more about building a high-performance home is a great way to start!

Net Zero Energy Home

Simply put, a Net Zero Energy Home is a home that produces as much energy as it consumes on an annual basis and is at least 40% more energy efficient than a home built to conventional standards.

Every part of the house works together to provide consistent temperatures throughout, prevent drafts, and filter indoor air to reduce dust and allergens. The result: exceptional energy performance and the ultimate in comfort – a home at the forefront of sustainability. It all adds up to a better living experience.



Passive Energy Homes

Passive building comprises of a set of design principles used to attain a quantifiable and rigorous level of energy efficiency within a specific quantifiable comfort level.

Simply put, energy consumption for heating and cooling is extremely low, on average it is reduced by up to 90% compared to a conventionally-built home.

The building envelope of the home is so well planned, designed and built through insulation, solar gains and removing any thermal bridging that it seals it from outside temperatures and maintains the temperature inside and high air quality.





Topic one

Design & Comfort

Design

- Home orientation
 - Solar exposure
 - South facing windows
- Mechanical systems
 - Heat pump technology
 - Consideration of a fully electric system
- Building envelope
 - Triple pane windows
 - Exterior wall assembly
 - Foundation wall assembly
 - Basement slab detail
 - Roof assembly
 - Minimizing thermal bridging
 - Airtight home



Comfort

- Consistent temperatures
- Exceptional air quality
- Quiet home





Topic two

Greenhouse Gas Emissions

Greenhouse Gas Emissions

- Approximately 20% of Canada's overall greenhouse emissions are through residential homes
- More people than ever before are looking to be apart of the solution towards climate change
- Sustainable homes keep the overall energy consumption as low as possible
- Renewable energy systems, like solar panels can provide enough power to operate the home
- Greater user satisfaction



Topic three



Investment



Investment

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- One of the biggest myths and misconception about sustainable homes is that it is too expensive
- Putting your money towards something that is going to be worth something in the future
- Increased resale value
- Avoiding the ownership of an obsolete home in future years
- More reliable
- Increased costs for a high-performance homes average around 7-12% more than your comparable conventionally built home
- Payback period discussion



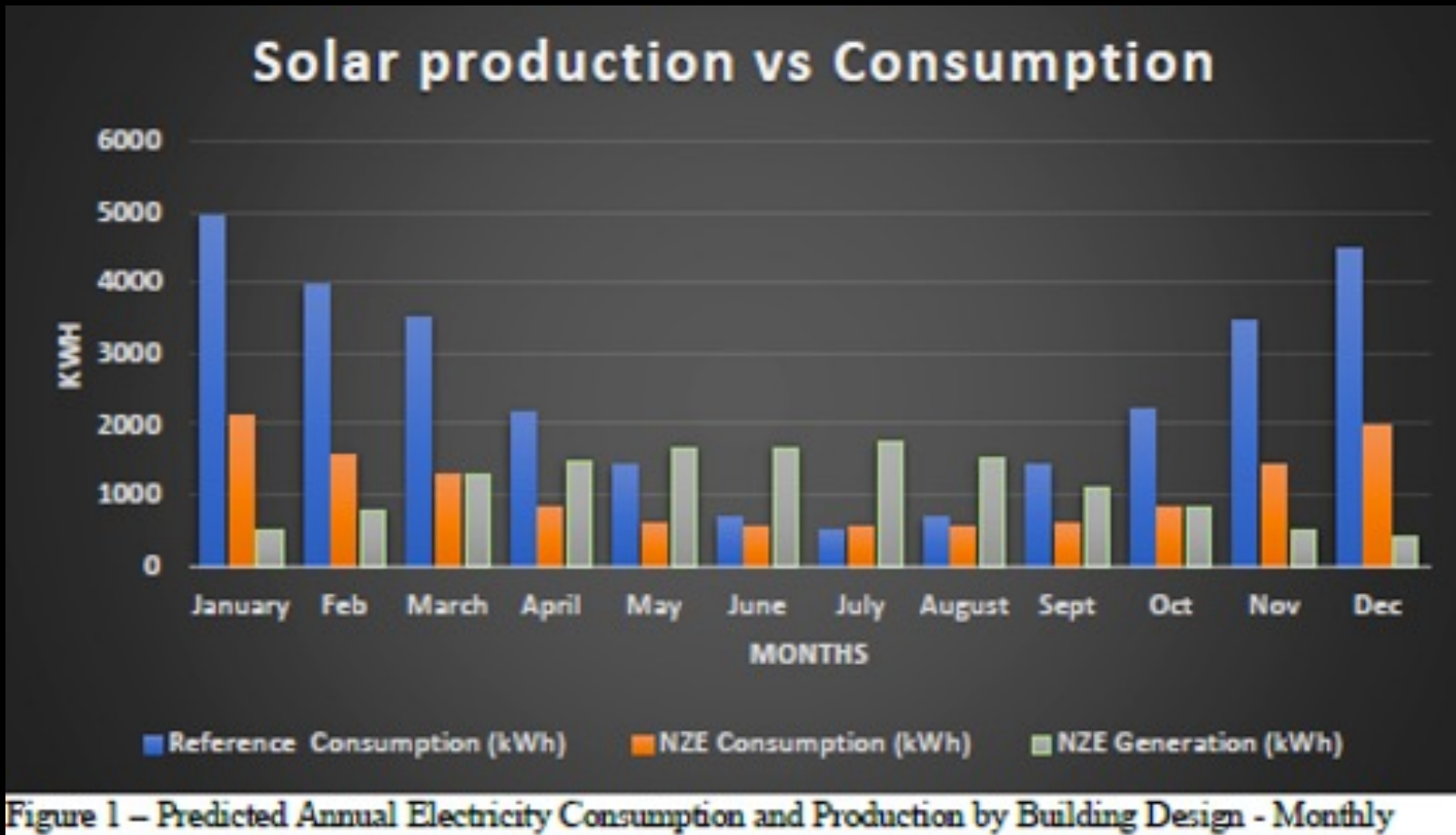
Topic four

Cash Flow – The Economics

Cash Flow

- Energy efficient upgrades pay for themselves through lower operating costs (even without the installation of renewable energy systems such as solar panels)
- Reduced maintenance
- Discussion on solar production and selling it back to the grid for a premium





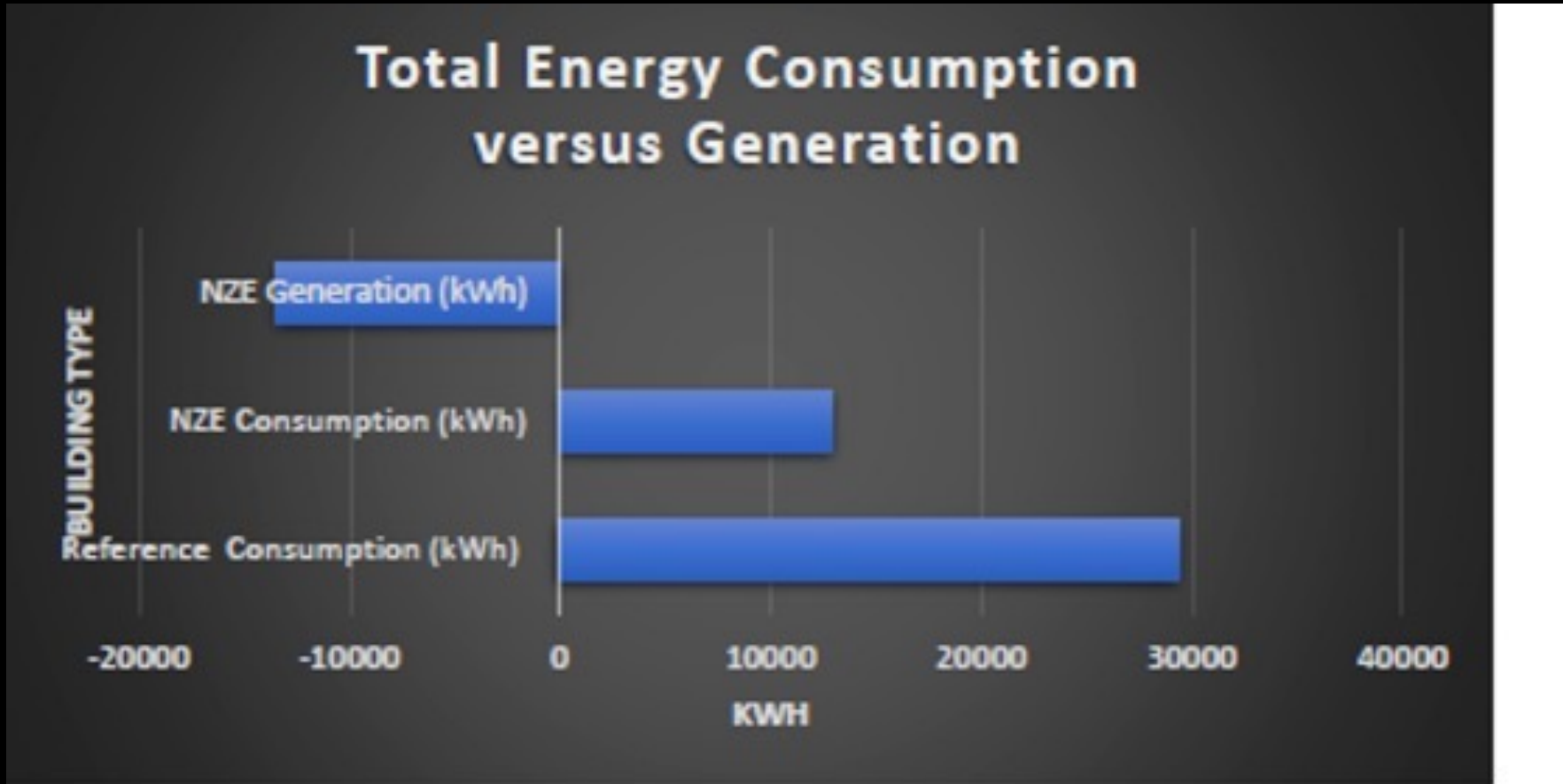


Figure 2 – Annual predicted Annual Electricity Consumption and Production by Building Design

Cash Flow – Case Study

- \$35,000 in solar costs
- \$12,500 in upgraded mechanical system
- \$25,000 in upgrades for wall assemblies
- Total = \$72,500
- Monthly increased mortgage = \$325
- Annual energy bills = refund!
 - Estimated refund of \$400 this year
 - Prior year refund of \$300 for entire year of energy usage
 - Current account in a credit position of \$(2,072) – which will get used up in the winter months, but with a refund of \$400 remaining
 - If this home was a conventionally built home, estimated annual energy bills of \$5,000 (\$415/month on average)





ALBERTA CO-OPERATIVE ENERGY

Your Energy Co-op

CALGARY AB [REDACTED]

** Both electricity and natural gas prices have risen significantly in the province over the past several months, so please be aware of the current Fixed and Fusion rate options that are available to you **

ACE customers whose rates are expiring, please take the time to renew your rate by visiting <https://ace-enrol.albertautilitybilling.ca/ace-renewal/>. We also send email reminders when your rates are close to expiring – please check your spam or junk folders for notifications from us. If you do not choose a new rate once your current rate expires, your rate will default to the Variable rate. The expiry date of your current rate can be found on the detail pages of your bill.

Alberta Cooperative Energy is wholly owned and operated in Alberta, and we greatly appreciate your support!

Account number	[REDACTED]
Statement date	December 7, 2021
Statement number	[REDACTED]
Payment due date	December 17, 2021
Amount owing	\$ (2,071.91)

Account summary:

Last statement - Nov 05, 2021	\$ (2,189.10)
Balance forward	(2,189.10)

New charges:

Electricity charges	111.61
Natural gas charges	0.00
	111.61
GST # 79421 4528 RT0001	5.58
	117.19

Amount owing	\$	(2,071.91)
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Topic five

Future Building Codes & Innovation

Building Codes & Innovation

- The national goal is to have a building code that is “net-zero-energy-ready” and work with the province to adopt it by 2030-2032
- This change is inevitable
- Innovative homes are homes of the future
- The focus is to discover new opportunities and solutions for buyers, sellers and our communities
- Innovative homes allow us to offer better products and services to our clients





Topic six

Becoming a Trailblazer



Becoming a Trailblazer

- Learn to evolve with the market
- Solve problems in the industry
- Going green has transcended trends and is now a necessity for many businesses
- Add value
- Learn about the scale and types of sustainable homes to better educate your clients and assist them with their buy/sale – stay on top of trends (or in this case a global movement)



I skate to where the
puck is going to be, not
where it has been

Wayne Gretzky

Summary





Thank you

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Question & Answer

AREA and Rise Sustainable Housing Webinar Series

Watch the entire series recordings on our website:

www.albertarealtor.ca

