

Planning your 2024 Renovations

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A&J Energy Consultants

"your success is our success"

Agenda

1. Introduction to Jack and AJEC
2. What is involved in Deep Retrofit / Retrofitting to Net Zero emissions
3. Benefits of a deep retrofit / net zero emissions
4. When is a good time to think about a deep retrofit
5. What rebates are available for deep retrofit What to ask your contractors and Energy Advisor?
6. Some common issues / challenges with homeowners doing deep retrofit



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Introduction

With a background in building science, Jack Zhou has worked in low-rise residential construction since 2004.

Early in his career, Jack worked as a framer, insulator, drywaller, installed Hi-Velocity ductwork, and performed energy simulation. He later earned the HRAI Residential Air System Design Technician and Residential Hydronics Design Technician Designation and started designing HVAC systems and performing energy audits for existing homes.

Jack teaches energy-efficient housing techniques through both private and public sector organizations, colleges and universities in Ontario, British Columbia, the Republic of China, and South Korea.

He also works as a Technical Committee member for the OHBA, CHBA, EnerQuality, NRCan ENERGY STAR® for New Homes Standard, and CACEA.

Jack enjoys cost-effectively accelerating the transition to sustainable housing!

Retrofitting to Net Zero Emissions

No “prescribed path”

- Unique to project

General Guidelines

- Engage a professional early on
- Start with the building envelope
- Improve the mechanical systems
- Consider renewable energy



Benefits



Comfort



Durability



**Environmental
consciousness**



Indoor Air Quality



Noise Reduction



Financial

When



Consider a Net Zero retrofit at any consideration of renovation

For example, small renos can provide an opportunity for increased insulation in that room



Equipment malfunction



Bigger renovations

Canada



Rebates

City of Toronto's HELP program

- Low interest Loan
- Incentives for heat pump, solar and deep retrofit

Canada Greener Homes Loan Initiative

- 40k maximum loan
- 0% Interest rate

Enbridge HER+ Pause

- New Program TBD

Considerations

Plan ahead

- Look into financial incentives
 - Municipalities
 - Provincial government
 - Federal government
 - Utility companies

Choose your retrofit team carefully

- Are they the right fit for this project?

Questions to Ask

Previous
experience with
Net Zero Projects

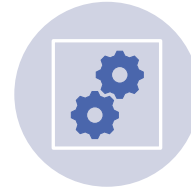
Reference
customers

Training and
education related
to Net Zero homes

Common Challenges



Cost



Technical
Complexity



Regulatory
Compliance



Homeowner
Education



Product
Availability



Payback periods
and Upfront Costs