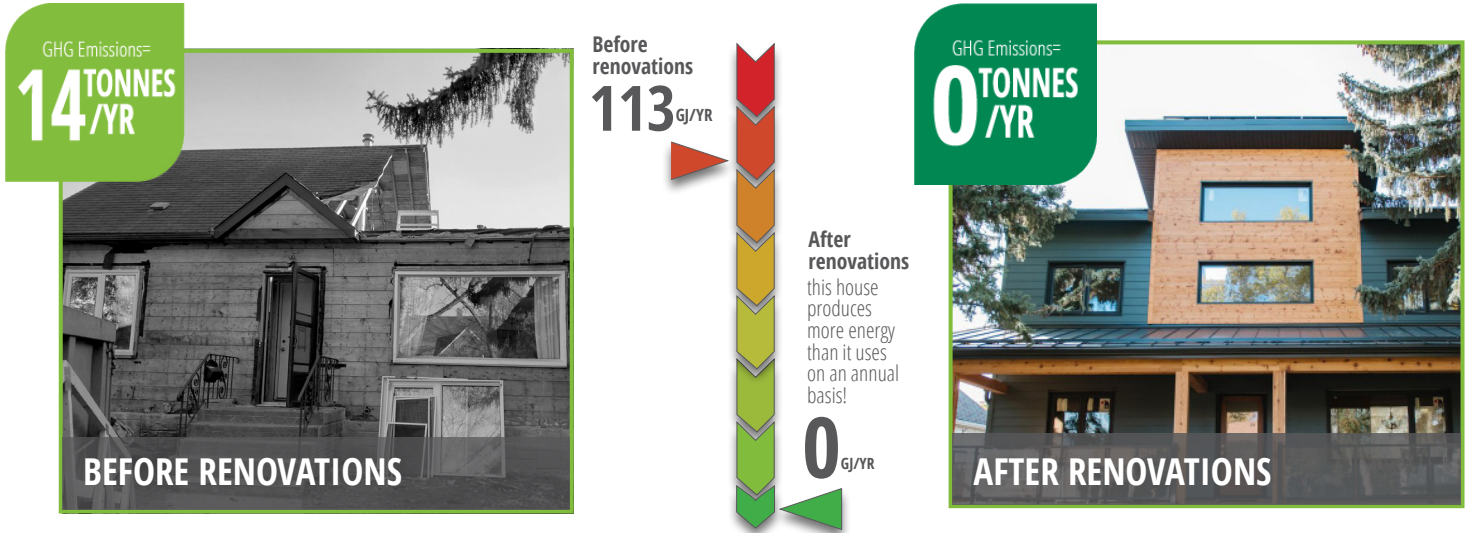


**Renovator** Dave Butterwick, Butterwick Construction

**Service Organization** 4 Elements Integrated Design

**Energy Advisor** Tyler Hermanson, 4 Elements Integrated Design

**Net Zero Pilot Home** Edmonton, AB (Climate Zone 7a)



## NET ZERO RENOVATIONS PILOT HOME POST-RENOVATION DETAILS

### BUILDING ENCLOSURE

**Windows:**

All-Weather Windows Triple Glazed, dual low-E & argon

**Walls:**

R14 roxul, R36 reclaimed foam exterior

**Ceiling:**

R50 spray foam flat & cathedral, R77 blown-in attics

**Foundation:**

R36 reclaimed foam & R8 foam on exterior, R12 fiberglass interior

**Envelope:**

72% better than NRCAN reference house

**Airtightness (ACH @ 50 Pa):**

Pre-reno 4.24 → Post-Reno 0.74

### MECHANICALS

**Fuel Source:**

All-Electric

**Heating & Cooling:**

Fujitsu ASHP & Electric Furnace

**Water Heating:**

Electric heat pump

**Ventilation:**

VanEE G2400H ECM

### RENEWABLE ENERGY

**PV System:**

12.24 kW PV Longi Solar

**Energy Monitor:**

Neurio W1

### Testimonial

*"We essentially arrived at a Net Zero renovation through a series of smaller stretch goals and decisions. When we started, with moderate efficiency improvements in mind, Net Zero seemed like an impossibly high bar, but each efficiency step enabled the next one. Once we decided to replace siding and add insulation, the cost for 5" vs 2" was minimal. With surprisingly few similar steps, we were able to economically cut off natural gas and were a few solar panels away from full Net Zero. It's not some high bar, way out of reach – it's a ladder."*

(Estimated)  
**\$2,000 /YR  
SAVED**  
On energy bills!\*

\*Utility cost savings based on Energuide energy profiles and assumes the following utility rates: Natural Gas: \$3.93/GJ plus carbon price: \$1.58/GJ \$40/month admin. Electricity: \$.08117/kWh plus \$6/month admin.