“People just don’t believe that you can actually build a house like that for about the same cost as essentially any other house.”  

Home owner

**PROJECT DATA**

- **Layout:** 3 bdrm, 2 bath, 2 fl, 1,379 ft²
- **Climate:** IECC 5A, cold
- **Completed:** December 2015
- **Category:** affordable

**MODELED PERFORMANCE DATA**

- **HERS Index:** without PV 41, with PV -12
- **Projected Annual Energy Costs:** without PV $1,492, with PV $-443
- **Projected Annual Energy Cost Savings:** (vs home built to 2009 IECC) without PV $1,926, with PV $3,862
- **Annual Energy Savings:** without PV 9,634 kWH, with PV 19,308 kWh

**KEY FEATURES**

- **Walls:** First floor R-35.5: pre-cast concrete and steel walls with R-12.5 foam board + R-23 rock wool in cavities. Second floor 10.5” R-39 SIPs, draining house wrap, vinyl shingle siding.
- **Roof:** Full self-adhered membrane, architectural shingles.
- **Attic:** R-45 12.25” SIPs.
- **Foundation:** Concrete slab w/8” R-40 edge foam, R-15 rigid foam underneath; pre-cast concrete wall panels sit at grade on 3-foot-wide stone-filled trenches.
- **Windows:** Triple-pane, vinyl-framed, argon-filled, low-e windows; south-facing are U=0.18, SHGC=0.39, others are U=0.17, SHGC=0.2.
- **Air Sealing:** 0.76 ACH 50.
- **Ventilation:** Continuous exhaust fans, auto-open skylights.
- **HVAC:** Ductless heat pump 21 SEER, 12 HSPF.
- **Hot Water:** Heat pump hot water heater, electric on-demand water heater at kitchen sink.
- **Lighting:** 100% LED. Exterior lights on motion & daylight sensors.
- **Appliances:** Heat pump clothes dryer, ENERGY STAR refrigerator, dishwasher, bath fans.
- **Solar:** 7.6-kW PV.
- **Water Conservation:** WaterSense-certified fixtures.
- **Energy Management System:** Programmable thermostat. Programmable skylights.
- **Other:** Electric car charging station, passive solar water preheating through concrete slab. No-VOC interior paints and finishes. Passive heating and cooling with thermal mass concrete walls and slab and ¾” drywall. All construction debris recycled. Disaster-resistant concrete and SIP construction.

**CONTACT**

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For more information on the DOE Zero Energy Ready Home program, go to http://energy.gov/eere/buildings/zero-energy-ready-home or scan the QR code.