



“From January 1, 2023, until today, our energy cost is zero!” Homeowners



PROJECT DATA

- **Layout:** 3 bdrm, 3 bath, 1 fl + bsmt, 5,394 ft²
- **Climate:** IECC 5A, cold
- **Completed:** December 2022
- **Category:** Custom for Buyer

MODELED PERFORMANCE DATA

- **HERS Index:** without PV 29; with PV -8
- **Annual Energy Costs:** without PV \$2,650; with PV \$100
- **Annual Energy Cost Savings:** (vs typical new homes) without PV \$4,750 with PV \$7,450
- **Annual Energy Savings:** without PV 29,550 kWh; with PV 46,500 kWh
- **Savings in the First 30 Years:** without PV \$198,000; with PV \$311,300

CONTACT

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KEY FEATURES

- **Walls:** ICF: R-22 total, 11.25" ICF blocks with integrated air barrier and drainage plane. Lap siding.
- **Roof:** Truss gable roof, 5/8" coated OSB sheathing, architectural shingles.
- **Attic:** Unvented attic, vaulted ceilings. Spray foam on underside of roof decking - 10" R-44 medium-density spray foam topped by 2" R-14 high-density spray foam.
- **Foundation:** Insulated basement, ICF walls, 11.25" R-22. Below-grade covered with waterproofing tar and cement boards. Under slab is 4.5" R-31 of closed-cell spray foam.
- **Windows:** Triple-pane, U=0.16, SHGC=0.25. Low-e, argon gas.
- **Air Sealing:** 0.25 ACH50. Liquid-applied flashings at all rough openings.
- **Ventilation:** ERV, supplies to return of central ducted HVAC, exhausts from bathrooms, kitchen, laundry, and mechanical room. Manual timed boost settings in bathrooms and kitchen. CO₂ sensed controls for whole house.
- **HVAC:** Ground source heat pump, 4.8 COP, hydronic radiant heating. 3-ton air-handler unit.
- **Hot Water:** Ground-source heat pump, 80-gallon storage tank, 2.66 EF. Central manifold.
- **Lighting and Appliances:** LED lighting, ENERGY STAR appliances.
- **Solar:** 14.790 kWh; two 10-kWh batteries.
- **Energy Management System:** App allows homeowners to monitor their climate conditions, solar production, and home energy consumption in real time.
- **Other:** Disaster-resistant ICF construction. EV-ready for bi-directional charging with plans and infrastructure in place to install a 100-Amp electrical vehicle charger in the future.

