



Photos courtesy of ZeroNetNow

“The future PV array has already been designed to exceed the home’s energy output.” ZeroNetNow



PROJECT DATA

- **Layout:** 3 bdrm, 2 bath, 3 fl + bsmt, 2,408 ft²
- **Climate:** IECC 5A, cold
- **Completed:** January 2024
- **Category:** Custom

MODELED PERFORMANCE DATA

- **ERI:** without PV 30
- **Annual Energy Costs:** without PV \$1,600
- **Annual Energy Cost Savings:** (versus typical new homes) without PV \$1,200
- **Annual Energy Savings:** without PV 16,890 kWh
- **Savings in the First 30 Years:** without PV \$50,300

KEY FEATURES

- **Walls:** ICF, R-22 total: 5.25” EPS + 6” reinforced poured concrete, fiber cement siding.
- **Roof:** Flat truss roof; unvented, vaulted ceilings; 10” R-44.5 medium-density spray foam in cavities, topped with 2.25” R-15.75 high-density closed-cell spray foam. 5/8” coated OSB sheathing, EPDM roofing membrane on flat roof used as a deck.
- **Attic:** R-60 total: 4R-44.5 med.-density spray foam, R-15.75 high-density spray foam.
- **Foundation:** Insulated basement with 11.25” R-22 ICF walls and R-32 closed-cell spray foam under slab. Waterproofing tar, fiber-cement board.
- **Windows:** Triple-pane windows, U=0.17, SHGC=0.21.
- **Air Sealing:** 0.30 ACH50; sealed ICF walls, liquid flashing at all openings and penetrations, spray foam at roof-to-wall intersections, underside of roof deck, and under slab.
- **Ventilation:** ERV, integrated with HVAC system. Real-time IAQ monitoring.
- **HVAC:** Ground-Source Heat Pump with one 3-ton central air handler, 4.8 COP. Variable-speed compressor.
- **Hot Water:** Ground-source heat pump water heater, 80-gal, 2.66EF. Manifold systems.
- **Lighting and Appliances:** ENERGY STAR appliances.
- **Solar:** None.
- **Energy Management System:** Real-time remote monitoring of energy use, IAQ, indoor climate, future PV production.
- **Other:** Wired for an electrical vehicle charger and bi-directional charging. Disaster-resistant construction.

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