



Photos courtesy of Paltrin

“With temperatures soaring over 100°F in the summer and dropping below -20°F in the winter, the home consistently provides superior comfort year-round thanks to its resilience and exceptional design.” Paltrin



PROJECT DATA

- **Layout:** 4 bdrm, 4 bath, 2 fl, 3,442 ft²
- **Climate:** IECC 6A, cold
- **Completed:** February 2023
- **Category:** Custom

MODELED PERFORMANCE DATA

- **ERI:** without PV 33; with PV 10
- **Annual Energy Costs:** without PV \$1,600; with PV \$500
- **Annual Energy Cost Savings:** (versus typical new homes) without PV \$1,100; with PV \$2,200
- **Annual Energy Savings:** without PV 12,380 kWh; with PV 23,660 kWh
- **Savings in the First 30 Years:** without PV \$46,700; with PV \$91,300

CONTACT

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KEY FEATURES

- **Walls:** Double wall, R-48 total: 2x4 16" o.c., 2" gap, 2x6 16" o.c., filled with dense-packed cellulose, gypsum sheathing, house wrap, 3/8" rain screen, steel lap siding.
- **Roof:** Gable truss roof with cathedral ceilings, plywood, asphalt shingles.
- **Attic:** Vented attic and vented cathedral ceiling. Attic R-91 total, 1.5" spray foam + 25" blown cellulose. Cathedral ceilings R-88 total, 20" dense-packed cellulose under soffit-to-ridge 1" ventilation chutes. 16" and 24" raised-heel energy trusses.
- **Foundation:** Slab on grade. 8" EPS below slab, 5" EPS between slab and stem walls.
- **Windows:** Triple-pane windows, U=0.17, SHGC=0.23.
- **Air Sealing:** 0.63 ACH50; caulked all bottom plate, panel, and sill joints. Sealed all mechanical, electrical, plumbing penetrations with foam, caulk, and/or window flashing tape. Pre-drywall blower door test.
- **Ventilation:** ERV, integrated with HVAC, bathroom boost button.
- **HVAC:** Central air-source heat pump, 9 HSPF, 16 SEER. Electric resistance back up, zone controls, fresh air intake. Sealed-combustion wood fireplace with outside air intake.
- **Hot Water:** Heat pump water heater, 50-gal, 3.85 UEF. Adaptive recirculation.
- **Lighting and Appliances:** ENERGY STAR appliances.
- **Solar:** 11.9 kW, no battery.
- **Energy Management System:** Heat pump monitored through Wi-Fi.
- **Other:** Electric vehicle charger. Recycled asphalt driveway. Locally sourced steel siding and cellulose. Excavated rock used for retaining wall.

