



Photos courtesy of Imery Group

“Despite extremely energy-efficient design, there was no compromise on aesthetics and only a reasonable cost premium.” *Home owner*



PROJECT DATA

- **Layout:** 3 bdrm, 3 bath, 1.5 fls, 1,863 ft²
- **Climate:** IECC 3A, mixed-humid
- **Completed:** October 2018
- **Category:** custom buyer

MODELED PERFORMANCE DATA

- **HERS Index:** without PV 46; with PV -13
- **Annual Energy Costs:** without PV \$1,250; with PV \$100
- **Annual Energy Cost Savings:** (vs typical new homes) without PV \$1,050; with PV \$2,150
- **Annual Energy Savings:** without PV 8,200 kWh; with PV 19,500 kWh
- **Savings in the First 30 Years:** \$91,600

CONTACT

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KEY FEATURES

- **Walls:** 2x4 24 in. o.c., staggered on 2x6 plates; advanced framing; R-24 total: ½" drywall, R-21 cellulose; R-3 taped coated OSB sheathing, ⅜" rigid rainscreen, fiber cement cladding.
- **Roof:** Gable roof; ½" drywall, taped coated OSB sheathing, flashing, 1x4 furring strips, standing seam metal roof, ENERGY STAR Cool Roof certified.
- **Attic:** Vented attic, 15.5" R-50 blown cellulose, 6" R-21 open-cell spray foam on rim bands and knee walls, 8" to 10" raised energy heels.
- **Foundation:** Raised slab 8" concrete-filled CMU stem wall, compacted dirt base, 4" #57 stone, 1" R-10 rigid foam under slab and on perimeter, poly taped at seams, 4" concrete slab.
- **Windows:** Triple-pane, argon-filled, low-e2, vinyl casement frames, U=0.19, SHGC=0.23.
- **Air Sealing:** 2.69 ACH 50.
- **Ventilation:** ERV with humidity sensor, MERV 8 filters, condensation sensors on bath fans.
- **HVAC:** 3 ductless mini-split heat pumps to 1 outside compressor, 1 ducted mini-split to 2nd compressor shared with a split-system water heater, 10 HSPF, 20 SEER; dehumidifier.
- **Hot Water:** Prototype split-system 80 gal. heat pump water heater shares HVAC outdoor condenser, est. EF=3.5; compact plumbing with PEX piping.
- **Lighting:** 90% LED, 10% CFL, motion sensors and timers.
- **Appliances:** ENERGY STAR refrigerator, dishwasher, ceiling fans, and bath fans.
- **Solar:** 8.2-kW PV system; inverter can disconnect from grid, battery storage.
- **Water Conservation:** WaterSense-labeled fixtures, drought-resistant landscaping.
- **Energy Management System:** Internet connected appliances, HVAC, PV tracking.
- **Other:** Wider doors, zero thresholds in bathroom, low-to-no-VOC products.

