

Sareth Builders

U.S. DOE

ZERO

ENERGY READY HOME

2019 WINNER

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The Oberlin ZERH | Lorain, OH | SarethBuilders.com













PROJECT DATA

• **Layout:** 3 bdrm, 2 bath, 1 fl, 1,814 ft²

Climate: IECC 5A, coldCompleted: Completed

• Category: custom spec

MODELED PERFORMANCE DATA

• **HERS Index:** without PV 36

- Annual Energy Costs: without PV \$1,250
- Annual Energy Cost Savings: (vs typical new homes) without PV \$1,000
- Annual Energy Savings: without PV 9,000 kWh, 100 CCF
- Savings in the First 30 Years: \$48,700

CONTACT

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KEY FEATURES

- **Walls:** 2x6 24" o.c. advanced framing, R-33 total: 5%" drywall, 6" stud at 24" o.c., 7%" taped OSB, 2" XPS, stucco wrap, vinyl siding and stone cladding.
- **Roof:** Hip roof; OSB sheathing, synthetic underlayment, ice-and-water shield, fiberglass asphalt 50-year shingles, soffit and ridge vents.
- Attic: Vented attic, 16" R-60 blown cellulose, 2" closed-cell spray foam over ceiling drywall seams, 14" to 24" raised energy heels.
- **Foundation:** Prefab concrete panels with R-20 EPS foam; added R-20 XPS on slab shelf; 2" Poly-iso at slab edge and under full slab, topped with #57 stone and vapor barrier.
- Windows: Double-pane, argon-filled, low-e, vinyl casement frames, U=0.26, SHGC=0.28.
- Air Sealing: 0.47 ACH 50. All seams and penetrations caulked, taped, and/or foamed.
- **Ventilation:** ERV, continuous ventilation; continuous 50-cfm bath fans with humidity and occupancy sensors for 80-cfm boost setting; whole-house dehumidifier; MERV 15 filter.
- **HVAC:** 1 ducted and 3 ductless mini-split heat pumps to 1 outside compressor; insulated buried ducts, dehumidifier, passive solar design.
- Hot Water: Gas tankless, 97% efficient; compact design, PEX piping.
- Lighting: 100% LED, daylighting, ENERGY STAR ceiling and fans.
- Appliances: ENERGY STAR clothes washer, gas clothes dryer, dishwasher, refrigerator.
- Solar: Solar ready.
- Water Conservation: EPA WaterSense fixtures and toilets.
- Energy Management System: Programmable thermostats.
- Other: Aging-in-place design, wide doors, halls, baths, and entries.





