For more information on the DOE Zero Energy Ready Home program, go to http://energy.gov/eere/buildings/zero-energy-ready-home or scan the QR code.

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2022 WINNER

KEY FEATURES

• Walls: 2x4 studs, 16” o.c., R-21.6 total: 2x4 studs, advanced framed. R-15 fiberglass batt, spray foam or XPS in some cavities; coated insulated OSB R-6.6; fiber cement siding.
• Roof: Rafter gable & shed roof: 2x6 or 2x8 rafters, ⅜” OSB; synthetic underlayment, self-adhered membrane in valleys and transitions. 30-yr asphalt shingles or metal roofing.
• Attic: Unvented attic: vaulted ceilings, 7.5” R-30 open-cell spray foam on roof deck.
• Foundation: Sealed, conditioned crawlspace, thermostat-controlled damper on supply ducts. CMU stem walls w/R-10.2 foam cores; 15-mil poly vapor barrier on floors and walls.
• Windows: Double-pane, argon-filled, low-e2, aluminum-clad wood, U=0.28, SHGC=0.19.
• Air Sealing: 0.993 ACH50; crawlspace sealed with 15-mil polyethylene and tape; foundation, sill plates, penetrations, and joints caulked; wall seams and holes taped.
• Ventilation: ERVs in crawl and attic, temp/humidity sensor, MERV 13 and 8 filters.
• HVAC: 2 ducted mini-split heat pumps, 10.8 HSPF, 18.9 SEER (main level) & 17.8 SEER (upstairs); liquid propane 41,000 Btu/h fireplace with battery backup for power outages.
• Hot Water: Heat pump water heater, 50-gal, 3.5 EF, leak detection, pipes insulated to R-3.
• Lighting: 90% LED, motion sensors, large windows and glass doors for daylighting.
• Appliances: ENERGY STAR refrigerator, dishwasher, 4 exhaust fans, freezer.
• Solar: PV ready, conduit in place.
• Water Conservation: Low-flow fixtures; compact PEX plumbing.
• Energy Management System: Smart monitors for energy usage and for indoor air quality.
• Other: During construction: no smoking or fuel burning in house, HVAC registers double sealed, active radon, portable dehumidifier, air filters on electric space heaters.

MODELED PERFORMANCE DATA

• HERS Index: without PV 47
• Annual Energy Costs: without PV $1,300
• Annual Energy Cost Savings: (vs typical new homes) without PV $1,100
• Annual Energy Savings: without PV 13,350 kWh
• Savings in the First 30 Years: without PV $44,800

PROJECT DATA

• Layout: 4 bdrm, 4 bath, 2 fl, 3,630 ft²
• Climate: IECC 4A, mixed-humid
• Completed: February 2021
• Category: Custom for Buyer

Shawn D. Jessup
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"After moving into this home, my sinus problems have gone away." Homeowners

_photos courtesy of S.D. Jessup Construction_