Healthy Communities
Zero Energy Ready Home Pathway to Decarbonization
Williamsburg, VA | HealthyCommunitiesVA.com

“The DOE Zero Energy Ready Home is the pathway to decarbonization.” Builder

PROJECT DATA

- **Layout:** 3 bdrm, 2.5 bath, 1 fl, 1,869 ft²
- **Climate:** IECC 4A, mixed-humid
- **Completed:** July 2021
- **Category:** Production

MODELED PERFORMANCE DATA

- **HERS Index:** without PV 45; with PV 1
- **Annual Energy Costs:** without PV $1,150; with PV $250
- **Annual Energy Cost Savings:** (vs typical new homes) without PV $1,500; with PV $2,450
- **Annual Energy Savings:** without PV 12,900 kWh; with PV 21,300 kWh
- **Savings in the First 30 Years:** without PV $60,000; with PV $99,400

KEY FEATURES

- **Walls:** 2x6, 24” o.c., panelized, R-24 total: advanced framed. Cavity insulation is either flash and batt 1” open-cell spray foam + R-19 unfaced fiberglass or sprayed-in cellulose. R-3.5 coated OSB sheathing; fiber cement lap siding.
- **Roof:** Truss gable roof: plywood sheathing, self-adhered underlayment, 30-year architectural shingles, ridge vent, storage “cradle” built into trusses.
- **Attic:** Vented, 14” R-49 blown-in cellulose.
- **Foundation:** Unvented crawl space: poured concrete and CMU walls, R-10 EPS on interior, termite inspection strip. Exterior foundation drain. 8-mil poly vapor barrier.
- **Windows:** Double-pane, argon-filled, low-e2, vinyl frame, U=0.28, SHGC=0.22.
- **Air Sealing:** 0.67 ACH50. Open-cell foam in rim bands, over top plates, over garage, in cantilevers. Sill gaskets.
- **Ventilation:** ERV to air handler, MERV 8 or 13 filter. Bath fans humidity sensed.
- **HVAC:** Central air-source heat pump, 10 HSPF, 19.8 SEER. Ducts in crawl.
- **Hot Water:** Heat pump water heater, 50-gal, 3.42 COP.
- **Lighting:** 100% LED, motion sensors, day lighting.
- **Appliances:** ENERGY STAR dishwashers, clothes washer, clothes dryer, refrigerator.
- **Solar:** 6.1 kW rooftop panels. Passive solar design.
- **Water Conservation:** ENERGY STAR WaterSense-certified house, compact plumbing design.
- **Energy Management System:** Smart home system, PV monitoring system.
- **Other:** Accessible floor plan, hallways, doorways, showers. Low/no-VOC finishes, flooring.

CONTACT

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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.