ZERO
ENERGY READY HOME
U.S. DEPARTMENT OF ENERGY

Beazer Homes
Hampton Hills | Ellicott City, MD | Beazer.com

U.S. DOE
ZERO
ENERGY READY HOME
2024 WINNER
Housing Innovation Awards

Photos courtesy of Beazer Homes

"[This home is] 40 to 50% more efficient than a typical new home." *Beazer Homes*

PROJECT DATA

- **Layout:** 6 bdrm, 5 bath, 2 fl+ bsmt, 5,047 ft^2
- **Climate:** IECC 4A, mixed-humid
- **Completed:** August 2023
- **Category:** Production

MODELED PERFORMANCE DATA

- **ERI:** without PV 36; with PV 4
- **Annual Energy Costs:** without PV $2,300; with PV $400
- **Annual Energy Cost Savings:** (versus typical new homes) without PV $3,500; with PV $5,450
- **Annual Energy Savings:** without PV 25,230 kWh; with PV 39,010 kWh
- **Savings in the First 30 Years:** without PV $147,450; with PV $228,000

CONTACT

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KEY FEATURES

- **Walls:** 2x6 24″ o.c., R-31 total: Advanced framed, R-12.5 loose fiberglass blown-in blanket, R-18.5 closed-cell spray foam, ⁷⁄₁₆″ OSB, house wrap, vinyl siding with masonry accents.
- **Roof:** Gable truss roof, 24″ o.c., ⁷⁄₁₆″ OSB roof sheathing, synthetic roofing underlayment, integrated solar roof tiles.
- **Attic:** Vented, 20″ R-60 blown-in fiberglass in 2nd floor attic. 16″ raised-heel trusses.
- **Foundation:** Insulated basement, poured concrete walls, interior framed wall with R-19 faced fiberglass batts, ½″ sheetrock.
- **Windows:** Double-pane windows, U=0.28, SHGC=0.25.
- **Air Sealing:** 1.09 ACH50; traditional air-sealing practices and aerosolized acrylic whole house air sealant.
- **Ventilation:** ERV, integrated with HVAC that monitors IAQ; ECM motors; MERV 8 filters.
- **HVAC:** Central air-source heat pump, 8.1 HSPF, 16.7 SEER; compact duct design, variable speed compressor and inverter system.
- **Hot Water:** Heat pump water heater, 80-gal, 3.45 COP. Central hot water distribution design with the water heater centrally located.
- **Lighting and Appliances:** ENERGY STAR appliances.
- **Solar:** 10.08 kW PV, 27 kWh of batteries.
- **Energy Management System:** Wi-Fi thermostat can control IAQ monitoring, HEPA filtration, UV purifier, and whole-house dehumidifier.
- **Other:** Electric vehicle charger.