Habitat for Humanity of Catawba Valley

Julia II | Hickory, NC | HabitatCatawbaValley.org

U.S. DOE ZERO ENERGY READY HOME 2018 WINNER Housing Innovation Awards

Photos courtesy of Habitat for Humanity of Catawba Valley

"High-performance homes that are not only affordable to purchase, but also affordable to operate and maintain."
Derek Ross, Habitat for Humanity of Catawba Valley

PROJECT DATA

- **Layout:** 3 bdrm, 2 bath, 1 fl, 1,240 ft^2
- **Climate:** IECC 4A, mixed-humid
- **Completed:** September 2016
- **Category:** affordable

MODELED PERFORMANCE DATA

- **HERS Index:** without PV 49; with PV NA
- **Annual Energy Costs:** without PV $800; with PV $NA
- **Annual Energy Cost Savings:** (vs typical new homes) without PV $1,100; with PV $NA
- **Annual Energy Savings:** without PV 6,700 kWh; with PV NA
- **Savings in the First 30 Years:** $49,000

CONTACT

Derek Ross
828-328-4663
derek@habitatcatawbavalley.org

KEY FEATURES

- **Walls:** 2x4 16-in. o.c., advanced framed; R-15 blown-in fiberglass, R-10 rigid foam with taped seams, OSB sheathing, 2x4 furring strips, engineered wood lap siding.
- **Roof:** Architectural shingles, taped coated OSB sheathing.
- **Attic:** Vented attic with R-50 blown fiberglass.
- **Foundation:** Unvented crawlspace, CMU walls with interior R-10 rigid foam.
- **Windows:** Double-pane, low-e, vinyl frames; U=0.30, SHGC=0.22.
- **Air Sealing:** 3 ACH 50.
- **Ventilation:** ERV; MERV 8 filter.
- **HVAC:** Ductless mini-split heat pump, 26.1 SEER, 11 HSPF.
- **Hot Water:** Heat pump water heater, 3.39 EF.
- **Lighting:** 100% LED.
- **Appliances:** ENERGY STAR refrigerator, dishwasher, clothes washer, clothes dryer, ceiling fans, and bathroom exhaust fans.
- **Solar:** Solar ready.
- **Water Conservation:** EPA WaterSense fixtures.
- **Energy Management System:** None.
- **Other:** Universal design features.

PNNL-SA-137705 September 2018