



Stockell Custom Homes

Churchill Downs | Marthasville, MO | StockellHomes.com



Photos courtesy of Stockell Custom Homes

“This is the best house we’ve ever lived in!” Homeowners



PROJECT DATA

- **Layout:** 4 bdrm, 3 bath, 1 fl + bsmt, 3,699 ft²
- **Climate:** IECC 4A, mixed-humid
- **Completed:** June 2023
- **Category:** Custom

MODELED PERFORMANCE DATA

- **ERI:** without PV 54; with PV -24
- **Annual Energy Costs:** without PV \$1,800; with PV \$100
- **Annual Energy Cost Savings:** (versus typical new homes) without PV \$1,900; with PV \$3,450
- **Annual Energy Savings:** without PV 23,500 kWh; with PV 28,020 kWh
- **Savings in the First 30 Years:** without PV \$79,050; with PV \$144,600

CONTACT

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KEY FEATURES

- **Walls:** 2x6 16" o.c. + 0.5" polyiso, advanced framed, R-27 total: R-3 insulated and coated OSB sheathing, netted and blown-in fiberglass insulation, vinyl siding.
- **Roof:** Gable truss roof, vented soffit and ridge vent, 1/2" fir plywood, synthetic felt, ice and water shield, asphalt/mineral/fiberglass shingles.
- **Attic:** Vented attic, 18" R-49 blown-in fiberglass. 14" raised-heel energy trusses.
- **Foundation:** Insulated basement: poured concrete walls, capillary break sprayed on footing. Finished basements, 2x4 interior walls w craft-faced batts set with 1" airspace between concrete and studs; unfinished basement has 2" R-10 rigid insulation under slab and 1" R-5 on interior perimeter.
- **Windows:** Double-pane windows, U=0.33, SHGC=0.33. Fixed awnings.
- **Air Sealing:** 2.10 ACH50; all penetrations foamed inside and taped outside; caulked plates; foam gaskets behind top of drywall; taped windows, doors, exterior sheathing.
- **Ventilation:** ERV, integrated with HVAC.
- **HVAC:** Ground source heat pump with 20.2 EER, 4.3 COP. Variable speed-compressor.
- **Hot Water:** Electric 50-gal tank, 0.93 EF. Uses preheated water from the ground-source desuperheater/preheat tank. Adaptive recirculation.
- **Lighting and Appliances:** ENERGY STAR appliances.
- **Solar:** 26.7-kW PV panels, 16.8-kWh battery.
- **Energy Management System:** IAQ monitoring. Humidistat controls dehumidifier and humidifier in conjunction with the air handler.
- **Other:** All-electric home. Age in place features.

