



Mandalay Communities

Jasper Zero Energy | Prescott, AZ | MandalayHomes.com



Photos courtesy of Mandalay Communities

“...the industry has recognized DOE builders as innovative.” Homeowner



PROJECT DATA

- **Layout:** 3 bdrm, 2.5 bath, 1 fl, 2,772 ft²
- **Climate:** IECC 4B, mixed-B
- **Completed:** May 2020
- **Category:** Production

MODELED PERFORMANCE DATA

- **HERS Index:** without PV 45; with PV-6
- **Annual Energy Costs:** without PV \$1,600; with PV \$200
- **Annual Energy Cost Savings:** (vs typical new homes) without PV \$2,100; with PV \$3,450
- **Annual Energy Savings:** without PV 11,300 kWh; with PV 22,500 kWh
- **Savings in the First 30 Years:** without PV \$86,900; with PV \$145,100

CONTACT

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KEY FEATURES

- **Walls:** 2x6, 16" o.c., R-21 total: 4.5" open-cell spray foam, ½" OSB sheathing, house wrap, 1" EPS foam, drainage plane, siding/stucco.
- **Roof:** Truss shed roof: OSB sheathing, double-layer underlayment, 50-yr shingles, ENERGY STAR Cool Roof certified.
- **Attic:** Unvented attic: 8" R-30 open-cell spray foam under roof deck, 5.5" raised heel trusses.
- **Foundation:** Slab on grade 1.5" closed-cell spray foam on slab edge, 2.5" closed-cell spray foam perimeter, 12" along slab edge.
- **Windows:** Double-pane, argon-filled, low-e, vinyl-frame, sliding, U=0.29, SHGC=0.23.
- **Air Sealing:** 0.60 ACH 50, aerosol acrylic sealant.
- **Ventilation:** ERV, MERV 12 filters.
- **HVAC:** Central two-stage heat pump, 9.6 HSPF, 17.0 SEER. Flex ducts in conditioned space.
- **Hot Water:** Heat pump water heater, 3.42 EF, 50-gal. Smart recirculation pump.
- **Lighting:** 100% LED, wireless, integrated with energy management system. Daylighting.
- **Appliances:** ENERGY STAR dishwasher, refrigerator, clothes washer, clothes dryer.
- **Solar:** 6.3 kW; 20 315-W roof-mounted panels. 10-kW battery storage.
- **Water Conservation:** EPA WaterSense fixtures. Smart irrigation, xeriscaping.
- **Energy Management System:** Smart thermostat, smart light switches.
- **Other:** Electric vehicle charging station, low/no VOC cabinets, carpets, flooring, paints, caulks, and glues.

