



Mandalay Homes

Overlook at the Dells | Prescott, AZ | MandalayHomes.com



Photos courtesy of Mandalay Homes

“These homes run off solar and stored sunlight energy 80% of the day, only drawing about 5 kW of late-night energy from the grid.” - E3 Energy



PROJECT DATA

- **Layout:** 3 bdrm, 2 bath, 1 fl, 1,962 ft²
- **Climate:** IECC 4B, mixed-dry
- **Completed:** May 2017
- **Category:** production

MODELED PERFORMANCE DATA

- **HERS Index:** without PV 47, with PV 20
- **Projected Annual Energy Costs:** without PV \$1,450, with PV + battery \$490
- **Projected Annual Energy Cost Savings:** (vs typical new homes) without PV \$900, with PV + battery \$2,130
- **Annual Energy Savings:** without PV 4,100 kWh, 420 therms; with PV + battery 18,100 kWh, 20 therms

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KEY FEATURES

- **Walls:** 2x6 24" o.c. studs, advanced framing, R-15 spray foam in cavities plus R-5 continuous rigid foam exterior=R-20 total wall; coated 7/16" OSB taped at seams plus house wrap; stucco siding.
- **Roof:** 7/16" coated OSB decking taped at seams, felt, battens, tile roofing.
- **Attic:** Unvented attic, R-25 open-cell foam on underside of roof deck; raised heel trusses.
- **Foundation:** 2" R-10 foam at slab edge to 24" deep on interior of stem wall on conventional slab.
- **Windows:** Vinyl-framed, dual-pane, argon-filled, low-e, U=0.29, SHGC=0.23.
- **Air Sealing:** 0.64 ACH 50; spray foam, taped coated sheathing, house wrap, aerosol sealant.
- **Ventilation:** ERV.
- **HVAC:** 2-stage heat pump, 9.6 HSPF, 17 SEER AC, unit and ducts in conditioned attic.
- **Hot Water:** 50-gal heat pump water heater.
- **Lighting:** 100% LED with dimmers and automated lighting controls.
- **Appliances:** All ENERGY STAR appliances and ceiling fans.
- **Solar:** 3.64-kW PV plus 10-kWh battery storage.
- **Water Conservation:** All WaterSense fixtures; central manifold home-run plumbing; smart-timer-controlled drip irrigation; drought-tolerant landscaping.
- **Energy Management System:** Automated control of the HVAC, ventilation, lighting, security, and entertainment systems.
- **Other:** Livable Design, gold seal certified, no-/low-VOC finishes, and flooring. Tested new whole-house spray sealant product. Prewired for electric car charger.

