Green Phoenix Development

Highland High Performance Home | Weston, MA | GreenPhoenixDev.com

“This home has been created with a focus on... health and wellbeing.” Green Phoenix Development

**PROJECT DATA**

- **Layout:** 8 bdrm, 8 bath, 3 fls + bsmt, 7,491 ft²
- **Climate:** IECC 5A, cold
- **Completed:** May 2019
- **Category:** Custom Spec

**MODELED PERFORMANCE DATA**

- **HERS Index:** without PV 39; with PV 19
- **Annual Energy Costs:** without PV $6,300; with PV $3,100
- **Annual Energy Cost Savings:** (vs typical new homes) without PV $9,900; with PV $13,250
- **Annual Energy Savings:** without PV 41,900 kWh; with PV 58,000 kWh
- **Savings in the First 30 Years:** without PV $414,100; with PV $554,700

**KEY FEATURES**

- **Walls:** 2x6, 16” o.c., R-34 total: 5.5” mineral wool, ½” plywood, 2” foil-faced polyiso, ½” OSB sheathing, self-adhered WRB, rainscreen drain mat, fly-ash-polymer clapboard siding.
- **Roof:** 2x12 rafters, ½” plywood, ice & water shield deck, ½” plywood.
- **Attic:** Unvented attic, R-72 total: 12” R-48 cellulose in roof rafters. Above roof deck: two 2” layers R-24 foil-faced, taped.
- **Foundation:** Insulated basement, R-28 total: 10” poured concrete walls. Exterior: 0.2” waterproofing membrane, 1.2” insulation board. On interior: 2x6 studs 16” o.c.; 5” closed-cell spray foam. Slab: 4” concrete poured over 4” CC foam sprayed on 8” gravel base.
- **Windows:** Double-pane, argon-filled, low-e2, wood double-hung, U=0.25, SHGC=0.25.
- **Air Sealing:** 0.44 ACH 50; all exterior foam seams taped, all joints caulked.
- **Ventilation:** Three ERVs ducted separately from HVAC. MERV 13 filters. Large range hood fan tied to makeup air. Power-vented fireplaces. Garage exhaust fan. Passive radon.
- **HVAC:** Ducted and ductless mini-split heat pumps; 3 outdoor, 6 ducted air handlers, 4 ductless air handlers, COP 3.29, HSPF 10.3, SEER 16.1, EER 11.6. Dehumidifier.
- **Hot Water:** Heat pump water heater, 3.7 UEF, 80-gal + 50-gal tank. 3 recirc pumps.
- **Lighting:** 95% LED; timers, programmable.
- **Appliances:** ENERGY STAR refrigerator, dishwasher, clothes washer, heat pump dryer.
- **Solar:** 14.72-kW; 46 rooftop panels, 2 inverters.
- **Water Conservation:** EPA WaterSense fixtures. Drip and smart irrigation. Leak detection.
- **Energy Management System:** Energy, PV, temp, humid monitors; Wi-Fi thermostats.
- **Other:** Wired for EV. ADA features. Green Guard Gold cert. flooring, cabinetry, doors.

**CONTACT**

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For more information on the DOE Zero Energy Ready Home program, go to http://energy.gov/eere/buildings/zero-energy-ready-home or scan the QR code.