

EARTHCENTS HOME QUALIFICATIONS

Single Family / Multi-Family / New / Existing

Minimum Required Features:

1. HVAC Equipment (Verified using the [ARI Directory www.aridirectory.org/index.html](http://www.aridirectory.org/index.html))
 - a) 14.0 SEER and 8.2 HSPF Heat Pump **OR**
 - b) 14.0 SEER Air Conditioner with a 90 % AFUE Gas Furnace **OR**
 - c) 13.0 EER @86°ewt Geothermal Closed-Loop Systems

**** HVAC SIZING CRITERIA - Units must be sized according to the latest editions of ACCA “Manual J”, ASHRAE Handbook of Fundamentals, or an equivalent load calculation procedure; in addition to the appropriate HVAC Equipment Manufacturers Specifications. Equipment performance must be no less than calculated cooling sensible and latent loads @ local design conditions, and not more than 15% over calculated loads. In specifying equipment, the next available size may be used. In addition, indoor and outdoor coils shall be matched in accordance with ARI standards.**

2. Insulation for Ceilings and Walls
 - a) R-38 Ceiling Insulation & R-13 Wall Insulation Minimum **OR**
 - b) R-30 Ceiling Insulation & R-19 Wall Insulation Minimum **OR**
 - c) R-19 Roof Deck Insulation/Foam Sealed Attic Construction & R-13 Wall Insulation Minimum
3. Floor Insulated to R-19 (*off-grade homes*). Floor framing should be completely filled with insulation or insulation should be installed to maintain permanent contact with the sub-floor decking.
4. Double Pane Windows Low E with U-Value $\leq .4$, and SHGC $\leq .4$
5. Water Heating – High Efficiency 50 - 80 Gallon Tank Minimum
 - a) Heat Recovery Unit - 25% to 40% savings on hot water (Geothermal System Only) **OR**
 - b) Heat Pump Water Heater - 50% to 60% savings on hot water **OR**
 - c) Solar Thermal Water Heating - 50% to 70% savings on hot water (80 Gal. Minimum) **OR**
 - d) Energy *Select* program participation
6. Lighting – 25% Fluorescent or other High Efficiency lamps installed in all hard wired fixtures.
7. ENERGY STAR Appliances (3) – Dishwasher + 2 more ES-rated appliances such as: Clothes Washer, Refrigerator, Microwave, Ceiling Fan, etc.
8. Master Suite must have a separate return or a transfer grill to the return zone. All Rooms must maintain the proper pressure balance per the Florida Energy Code.
9. Infiltration Package – Per the Florida Energy Code
 - a) Seal all penetrations in walls & ceilings including recessed lights, A/C boots, and exhaust fans.
 - b) Thermal By-Pass Check List must be completed and verified by appropriate parties using ENERGY STAR guidelines.

Minimum Required Performance Testing:

1. HERS Index Score – ≤ 80 (The HERS Index must be calculated in accordance with the RESNET Mortgage Industry National Home Energy Rating Standards).
2. Duct Leakage – ≤ 6 cfm to outdoors/100 sq. ft. of conditioned floor area (ENERGY STAR guidelines http://www.energystar.gov/ia/partners/bldrs_lenders_raters/downloads/PerfPathTRK_060206.pdf).

Additional Energy Efficiency Recommendations/Options: (not required)

1. It is highly recommended that all EarthCents Homes have less than 25% glass to floor area as calculated in square footage.
2. EarthCents Homes with more than 2,500 square feet of conditioned space, multiple levels, isolated living areas and/or convoluted footprints should include multiple HVAC systems or a single HVAC system with multiple zoned duct controls.
3. Energy *Select* – Residential Service Variable Pricing that could save up to 15% on your total bill.
4. Perimeter Insulation – rigid foam insulation applied directly to the exterior slab. Perimeter insulation should terminate well above finished grade.
5. Gasket Weather-Stripped Exterior Doors per the Florida Energy Code
6. Ridge Vent combined with soffit venting (for ventilated attics only)
7. Blown-in wall insulation – superior coverage, completely fills gaps & voids that often occur with improperly installed batt insulation.
 - Blown-in fiberglass
 - Blown-in Cellulose
 - Blown-in expandable foam
8. Duct System -- Fabmesh & Mastic on all joints, seams and connections.
 - Return: Filter grille properly sized at 150 square inches per ton minimum. Chamber lined and sealed.
 - Supply: Mechanical closet sealed. Branch-line dampers for airflow balancing. Curved blade supply air diffusers.
9. HVAC Upgrades
 - Higher Efficiency Air Source Dual Speed Heat Pumps – 15+ SEER
 - Geothermal Closed-Loop Systems - highest efficiency available – 14+ EER @86°ewt
10. Whole-House ventilation per ASHRAE standard 62.2 is recommended for homes with extremely low natural infiltration rates.
11. Separate whole-house dehumidification is recommended for homes with extremely low natural infiltration rates.
12. Water and Energy Conservation:
 - Save energy by insulating all hot water lines from water heater to fixture stub out.
 - Conserve water using an ***On-Demand*** hot water recirculation system – no continuous or timer-based whole-house hot water recirculation systems allowed.