

Earth Advantage Home Certification Energy Scoring & Cost Effective Package

The Earth Advantage New Home Certification and Remodeled Home Certification both utilize an energy points metric that compares the certified home's estimated annual energy use to an estimated annual energy use benchmark per number of bedrooms per climate as demonstrated through energy modeling software*.

Earth Advantage energy points are awarded based on the certified home's percent improvement over a benchmark "target" home's energy use. A home that meets the target energy use is awarded the total number of energy points required to meet minimum certification (15) in the energy pillar. A home that does not meet the target annual energy use has the opportunity to gain the required energy points through Earth Advantage Points Worksheet measures that recognize energy efficient building practices and products that are not reflected in the energy model. An example of a measure like this would be low flow lavatory faucets.

To generate the annual energy use target benchmark scores Earth Advantage energy modeled a theoretical home with two floors, a bonus room over an attached garage, evenly distributed windows per orientation, a crawlspace foundation, a 9 ft first floor, and an 8 ft second floor. Earth Advantage then utilized the following cost effective package of energy efficient specifications:

Flat ceiling R-value	49 (R-21 @ outside edge)
Scissor truss R-value	38
Rafter roof R-value	30
Wall R-value	23
Framed floor R-value	38
Window U-value	0.3
Window / Floor Area Ratio	21%
ACH @ 50 pa	4
Duct tightness / location / R value	6%, outside, R-8
Furnace AFUE	95%
Heat Pump HSPF	8.5
A/C SEER	13
Gas w/h EF	0.67
Electric w/h EF	0.93
% CFL Light Fixtures	80%
Mechanical Ventilation Method	Exhaust Side - DC fan motor
Dishwasher	ENERGY STAR

With respect to size Earth Advantage created the annual energy use target benchmarks with the following scale created by ENERGY STAR:

1,000 sq ft	1 bedroom
1,600 sq ft	2 bedrooms
2,200 sq ft	3 bedrooms
2,800 sq ft	4 bedrooms
3,400 sq ft	5 bedrooms
4,000 sq ft	6 bedrooms
4,600 sq ft	7 bedrooms
5,200 sq ft	8 bedrooms

Earth Advantage recognizes that smaller homes that accommodate more occupants are more sustainable, our metric awards homes that are smaller than these benchmarks. While this is not a prescriptive path a builder must follow it does provide a guideline for where to start with similar sized homes. Builders and design teams are encouraged to work with an Earth Advantage Green Building Consultant to explore alternative cost effective options through energy modeling.

Contact a Green Building Consultant to learn more.

*New homes use REM/Rate. Existing homes use CakeSystems®.