Per square foot

How much does it cost to build a new green home?

▫ By Greg McGuffey ▫

Over the 12 years that I have been building in Asheville, this has remained the most frequently asked question that I receive. It is always one of the very first things people inquire about in order to get an idea of what a new home will cost. With this being the case, I thought I would go ahead and answer the builder's most commonly asked question and a potential homeowner's number one concern.

First off, it is very important to understand that just as with many products, you will typically get what you pay for. In addition, when discussing cost with builders, take some time to read between the lines and make sure that you are comparing apples to apples. By this, I mean making sure that when a builder quotes cost per square Foot (CPSF), you know exactly what that number includes.

It has always been quite simple for me. The CPSF should include everything that a finished home requires, excluding two things: land and design fees. Besides those two items, the CPSF should include all land improvements, utilities, labor, management fees, materials, fixtures and appliances for the home.

If someone tells you they can build you a home for $100 PSF, then your home may not come with a stove or a sewer tap. Also, the CPSF should only include conditioned space. If you have 2,000 square feet of conditioned space on top of an 800-square-foot unfinished basement, then it's 2,000 square feet we are talking about.

So let's get to the magic number that everyone wants to know. In and around the Asheville area, its costs roughly between $150 to 200 per square foot to build a new green home. This range will cover most homes ranging in size from 1,000 to 2,500 square feet (anything smaller or larger than this falls outside of the norm, although in many cases these numbers will still apply).

The range of CPSF for a new home depends on a wide variety of factors. The overall design, land topography, location, finish selections, systems, and client-driven changes all play a role in the cost of a finished product. Other factors include the builder's rates, company structure and efficiency. Any good builder should exhibit a competitive range of costs. I should also mention that this range of cost applies to most homes, although certainly not all. High-end custom homes can easily breach $200 PSF because they are not designed with budget in mind. In that market $200 PSF should be considered the baseline of what to expect.

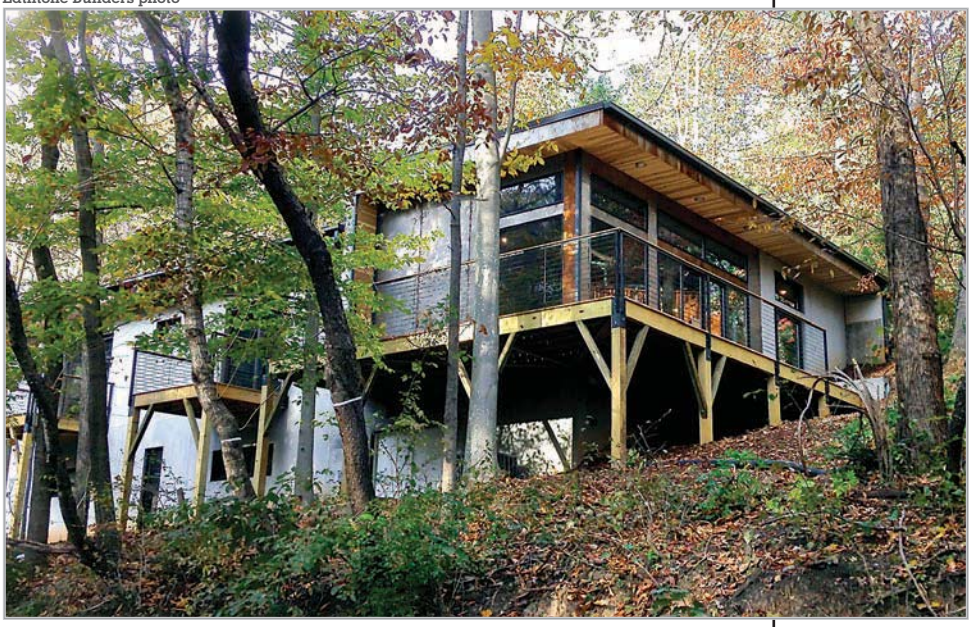
On the contrary, I am sure that there are some who can build for under $150 per square foot. I just don't know how. The new green homes being built today use high-quality materials, insulation, efficient HVAC systems and careful planning. To go under this price you will likely sacrifice the overall quality of the home and its performance. It might meet code, but that is not the standard that I suggest referring to.

Some folks will argue that a green home costs more. While this may be true in some instances, it's only true because you get what you pay for and a green home is typically a better built home. For the most part, a green home does not cost that much more in comparison to its utility savings and resale value.

My best advice for getting the most bang for your buck is to do some research and connect with a reputable builder who is competitively priced. Once you choose a builder you will have the opportunity to get trusted guidance on how to build within your budget. He/she will be able to tell you where to cut back and where to spend in order to get the home you want at a price you can afford. If you do this, then you will be able to build within the range given above without any surprises.

Greg McGuffey is the founder and President of Earthtone Builders. He has been designing and building custom green homes in the Asheville area since 2003.

Earthtone Builders photo



Using the appraisal addendum to increase the value of your CERTIFIED home

▫ By Chuck Perry ▫

I think you would all agree with me if I said communication bridges gaps, improves performance and, in general, good communication usually results in a more positive experience for all parties involved.

When I think of building a home I think of the many opportunities I am given to communicate with the client, the subcontractors, the suppliers, the designers and the sales team. Each communication takes us one step closer to successfully building the homeowner a certified green home they will proud to live in. Imagine if we chose not to communicate enough. How would that experience be? We do not want to go down that road except to ask ourselves who else we could communicate with to improve the experience. The answer is banks and appraisers.

Fortunately we now have a tool to help us communicate with banks and appraisers and speak their language, if you will. That tool is the Residential Green and Energy Efficient Addendum, created by the Appraisal Institute. This AI Form 820.04 is proof that industry is evolving and that valuing green and energy efficient homes is on the appraisal industries radar. It has long been believed that homebuilders and home buyers have zero control over which appraiser arrives to value their home. Likewise, we have been told by the bank that they cannot communicate directly with appraisers. Let's dig a little deeper to see what is possible and identify steps to using this valuable tool in

our favor.

First, we need to understand how appraisers are selected and how to assure the right appraiser arrives at your certified home. The bank does not and cannot decide who appraises a home. This is done by a selection process that is out of their and your control. What they can do is request an appraiser who has experience evaluating green certified homes or who is "competent in the subject matter. This should be step one in our communication with the bank.

So, now that the bank knows we have a simple request the next step is to ensure the selected appraiser really is competent and knowledgeable about certified green homes. This step is real easy, interview the appraiser before the work begins. Trust me, appraisers want to be assigned jobs within their comfort zone and competency level. Once you have found an appraiser with the experience required it is now time to communicate fully with them.

This communication with the appraiser involves completing AI Form 820.04, the Residential Green and Energy Efficient Addendum, and providing a copy to the bank, appraiser and sales team. A few items to note when completing the form are:

It should be completed by a knowledgeable person. As the builder I will often complete parts of it but I send it to the third-party green verifier, home energy rater and/or the solar installer for specific details about energy savings, HERS scores, envelope tightness, azimuth of an array and other technical information requested in the form. I ask them to sign that they have completed the form. This lets they appraiser know that a licensed professional has performed the energy modeling and verification work.

For construction to perm projects or other pre-construction loans be sure to use the comments sections to note "Proposed New Construction" as the work will not be done yet. In this case it is best to provide an "as built" addendum at the end of the project.

Attach the Green Certification and/or the Energy Certification to the addendum.

Attach other forms provided the Home Energy Rater and/or solar installer that share information about the HERS score and annual energy savings.

Use the comments section to identify costs for the appraiser. See an example in Figure 1 below.

The form is not limited to certified homes. It can be used to identify saving associated with solar arrays, solar thermal, water efficiency, etc.

To conclude I want to remind myself and you that this form is no magic potion for insuring we get the proper value assigned to our certified homes. It is, however, one great tool we can use to assist in the process. The Appraisal Institute did a very thorough job in designing this document. The information requested is straightforward and is exactly the kind of information we need to be getting to the appraiser.

Imagine if this form became a standard attachment to every build contract, every set of builder specification, and every home loan. If it was pretty soon bankers, underwriters, and appraisers would know more about green building, insulation types, ACH50, passive solar, HERS scores, energy saving, solar arrays, etc. Isn't this what we all want? Communication is the key to successfully building a great home and it will also be key in continuing to move the market for high performance homes forward. I encourage all high performance home professionals to look to this AI Form 820.04 as a step in the right direction and a valuable tool to helping not only their businesses but our industry.

AI Form 820.04, the Residential Green and Energy Efficient Addendum along with additional information to aid in completion of the form can be downloaded at: www.appraisalinstitute.org/education/education-resources/green-building-resources/

Chuck Perry is the director of the NC Energy Efficiency Alliance (NCEEA), is a North Carolina-licensed general contractor and a certified green builder. The NCEEA, operating out of Appalachian State University, works on topics such as energy codes, high performance building, appraiser and REALTOR training, greening the MLS and supporting energy efficiency in all facets of the construction industry. Chuck can be reached at 828.262.8331, perrycw@appstate.edu or visit www.ncenergystar.org for more information.