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From: **eric whetzel** (zewt@hotmail.com)  
Sent: Wed 12/09/15 2:44 PM  
To: mark@zenplusarchitecture.com (mark@zenplusarchitecture.com)

Hi Mr. Miller,

I'm reaching out to you today because I saw you listed on the Passive House Institute US website.

My wife and I are trying to build a Passive House in the Chicago suburbs and we would like to have it be a single-storey residence, roughly 48' x 34', but we are wondering if, in your experience, there is an "energy penalty" in terms of the PHPP software for doing so? If there is a penalty, how significant would you expect that penalty to be?

Our current builder is suggesting it would be a 33% premium over and above the standard 10% upfront premium to build to the Passive House standard. In our specific case, that comes out to an additional \$100,000 to reach the Passive House standard (what the builder is describing as "additional Passive House components").

Does this seem reasonable?

My wife and I are rather desperate, since we were not prepared to expect these kind of numbers, and we're just looking for some kind of guidance on the matter.

Anything you could tell us based on your experience, or if there is someone else you think we should reach out to, would be greatly appreciated.

We would also be happy to meet with you in person to discuss the matter in detail, if you believe it would be helpful.

Thank you for your time.

Best regards,

Eric Whetzel  
1105 N. Claremont Dr.  
Palatine, IL 60074  
cell: 630-842-7715

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From: **Mark Miller** (mark@zenplusarchitecture.com)  
Sent: Wed 12/09/15 3:05 PM  
To: zewt@hotmail.com

Hello Eric,

Thank you for reaching out and providing some background to your situation. May I ask who the builder is you are working with?

Is the home already designed and the builder is working off blueprints for these costs?

Smaller square footage homes are going to have a bit lopsided cost/sq. ft..

What's your budget?

Mark

On Dec 9, 2015, at 2:44 PM, eric whetzel wrote:

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From: [zewt@hotmail.com](mailto:zewt@hotmail.com)  
Sent: Wed 12/09/15 4:04 PM  
To: Mark Miller ([mark@zenplusarchitecture.com](mailto:mark@zenplusarchitecture.com))

Hi Mark,

Thank you for getting back to me so quickly --- it really means a lot.

We have been working with Evolutionary Home Builders (formerly Weiss Building and Development). I initially reached out to Brandon in June, 2014, and then we signed a Design-Build Agreement in September, 2014 (this document had preliminary budget numbers laid out for us).

I brought in a floor plan I created on [roomsketcher.com](http://roomsketcher.com) that was 40' x 40' and then their in-house architect, Patrick Danaher, changed it to the current 48' x 34' layout. So the home is already designed (there are plans), however, we didn't receive a build budget until a couple of weeks ago (11-20-15).

I want to stress, we are very happy with the changes Patrick made to my original floor plan, but what is distressing is only now are we being told about a significant "energy penalty" for building a single-storey structure. In financial terms, the jump in cost is really staggering (\$205 sq. ft. to \$288 sq. ft.), and we feel misled --- either their current numbers were padded for some reason, or else they are being honest and they really didn't know there would be an energy penalty and, therefore, budget implications for building a single-storey structure. Either way, it no longer feels like a transparent process, and now we're not sure what to do.

Our total project budget (cost of the lot, fees, permits, direct build costs) was \$535,000.00. The lot was \$125,000 (it is 60' x 190', with nothing on it). But we were ready to pay additional out-of-pocket costs to implement a pretty extensive permaculture plan for the landscaping (after the build, and perhaps over a 3-5 year period as money accrued in savings).

If we can't make things work with Brandon, then we're prepared to walk away with nothing (including the copyright for the plans) and start all over with someone else. Because this would mean also walking away without our \$30,000 fee (for signing the Design-Build Agreement), this would obviously have budget implications for whatever we decide to do next.

If you have more question, I'd be happy to answer them.

Again, any advice you can offer would be greatly appreciated. And thanks once again for even taking a look at this. I really do appreciate it.

Thanks,

Eric

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From: **Mark Miller** (mark@zenplusarchitecture.com)

Sent: Thu 12/10/15 12:41 PM

To: zewt@hotmail.com

Hi Eric,

Both Brandon and Patrick and I are board members to the Passive House Alliance Chicago Chapter. I can tell you, you are in good hands and working with the best Passive House builders in our area. My advice is to stay the course with the good team you have as they will build you an excellent home.

From reviewing the story you have shared here it sounds like a few things have happened:

1) The initial cost/sq. ft. given to you may not have been for a well defined project, but more in general which set up a big contrast to where the actual costs were coming in after plans were done, materials speced and details now surfaced. This set up disappointment. Unfortunately, this happens alot in the industry.

2) EHB was able to change some strategies to reduce costs to better help meet your budget. This is common practice and done all the time. I don't think, knowing this team, that they had alot of "fat" in the numbers. Most likely they swapped certain less expensive materials for one's currently speced. Made some changes to save on some labor as well. Maybe asked subs to squeeze their numbers to make sure they got the job. So i feel this is legit, no one is being mischievous.

3) It is true, your small home is harder to make meet the PH standard than one with more bedrooms and more square feet. IF this is the case, I would encourage you to forget about hitting the exact standard, and just enjoy the fact that you are basically building a passive house, you just aren't able to hit the numbers. BUT you will still be enjoying all the benefits of PH construction i.e. high performing windows; thermal bridge free construction; low energy consumption; super insulation, etc. etc. As you can see, there are many variables between costs, quality, timeline, and energy programs that need to be juggled, and many times the variables won't allow all wish list items to be satisfied, so you have to compromise somewhere. In your case, you may not hit the numbers for the PH plaque, but your home will out perform 99.5% of all the homes being built today. I'd say that's a pretty great accomplishment and one you can be proud of.

So, if you can shift perspective just a little with this insight, I feel you can get just about all of what you are hoping to achieve, less the PH Plaque to hang on the wall. You can still brag to your friends/family on what a smart home you were able to build.

Hope this helps,

Mark A. Miller  
CPHC/Architect/Bulder