

April 2010 newsletter from Building Diagnostics

Welcome to the April newsletter. This month's edition is intentionally late. I couldn't come up with a good April fools joke so I just waited a day. Thanks for the continuing feedback. I hope you will keep letting me know that you are reading it..

I know that you are reading because I was chided twice for my comment about off grid folks snickering at the misfortunes of others during last month's power outages. That was a bit unkind, my apologies to all. For the record, I think you're all pretty terrific no matter where you get your energy! (I get mine from caffeine primarily.)

This Month's Topic: Kids, energy and healthy buildings:

When you talk about kids and energy the first thought is 'they have plenty, thank you'. But even though they seem to be perpetual motion machines they do require lots of energy input to keep them safe and comfortable.

They also require a safe place to be when their parents are at work. That most often is one of the child care centers around the state. DHHS says they license about 1200 centers around the state. I don't know how many children are enrolled in these centers but it is obviously a considerable number.

The reason I bring this up is that the [New Hampshire Community Loan Fund](#) has contracted with me to do building audits on a number of non-profit based facilities around the state. I haven't done a lot yet but I am seeing the same pattern that I have seen in schools at all levels. We put our children in the lowest cost facilities we can get away with.

Please understand, I am not condemning the care providers, they are doing a great job. The providers I have seen in action, from staff to administration, clearly care deeply for the children in their charge. The problem is, drum roll please: funding. At all levels of education we do our best to spend as little as possible on our kids. My decidedly unscientific observation/opinion is that the younger the children the less we spend on their facilities.

The facilities I have been to are kept clean and functioning, but the mechanical equipment is either old or at the lower end of the quality spectrum. This is the result of looking for the lowest first cost, often because of capitol constraints. Sometimes it's because the building

designers or builders made the choices, low priced equipment gets the job done and keeps a few more dollars in their pockets.

The childcare providers typically do not have the knowledge base to make nuanced decisions about building shell and mechanical equipment. Ideally they shouldn't have to, there is a lot of work that goes into running a Child Care Center (CCC) and there isn't a lot of extra cash to go around. The state just cut reimbursement for child care for working parents, further stretching budgets.

So what have we got? A very typical situation where mediocre buildings and equipment lead to higher operating costs. We also have buildings with inadequate ventilation, although they are so leaky it isn't an issue; yet. Marginal combustion safety; naturally aspirated gas water heaters usually in or near the kitchens with commercial range hoods, naturally aspirated heating equipment and no controlled ventilation that is truly functional. We have poor temperature control, we have uninsulated floors and this is where we put little kids. Sounds rational to me.

Most CCCs run year round, many are air conditioned. So the opportunities to reduce operating costs are greater than the typical school. But if you remember from a few paragraphs back, there are funding problems. I am not privy to the operating budgets of these facilities, but it's pretty clear that they seem to be operating with less resources than they need. They fall into the classic trap, low initial investment requires higher ongoing operating costs which sap the funds for future investments. When something breaks the only choice is to buy the lowest initial cost item. You could get dizzy this way.

The good news: The NH Community Loan fund is using the assessments I am doing as the initial step in a [program](#) to provide low cost loans to correct some of these issues. There is a chance that some of these facilities will be able to do deep energy retrofits, including the associated health and safety measures. The major issue is to get the decision makers in these organizations to comprehend and *believe* that this will work.

I am trying to provide clear direction in my reports, but I am just one voice. I expect, and hope, that the leadership in these child care programs will seek additional counsel where they can find it. Unfortunately there is still a lot of "conventional wisdom" (the wisdom part could use double quotes) out there that this type of retrofit doesn't work, or is just a foolish green fad that will pass.

So, I'm asking you, who have some knowledge and expertise to share to provide it to these important nonprofits. If you know someone who operates a CCC or serves on the board, volunteer to review their upgrade recommendations. I'm not suggesting that you do anything more than review and offer a verbal yea or nay. I think that getting additional affirmation

would ease the doubts that a lot of these people will have. Just one center, just once. I think it would make a difference.

If you would like to do this but you don't know who to contact get in touch with me. I'll pass your name along. I can't do this myself for these projects, but if some of you take this on I will do the same for another non-profit that you suggest. I have done this before, the key is to make clear up front that you are not going to be deeply involved (unless you have the time and inclination), you are just going to provide an additional, informed, opinion. It doesn't have take much time, and the personal rewards are great.

Here are the "deal details": You do one each, I'll do two. Whoever does a review gets to suggest an opportunity for me. I'll take the first two presented to me as long as I have no conflicts. Pretty straight forward. I'll keep this process up to date in future issues.

I have to tell you about the kids. They are the reason that all this is so important after all. Nothing is as much fun as being in a room with 20-30 three to five year olds carrying an interesting piece of equipment. An IR imager with pictures of the wall is dull, pictures of the kids is definitely a novelty.

Some random kid things: Cutest: A little girl, very shy, followed me around whenever I was in her area. She never crowded up to see what I was doing, she stayed at the edge of the crowd and watched. At the end of the day when her father came to pick her up I saw her whispering to him and pointing to me. He nodded and she ran over to me. Very solemnly she said "I'll miss you tomorrow, very much".

A four year old boy was fascinated with all the test equipment. He promised that he would work for me when he was all grown up, next year.

What I'm most jealous of: A table covered with shaving cream with food coloring and things to draw in it with. Can you believe my wife won't let me have that?

There are a lot of things that deserve our attention, but shouldn't kids be somewhere on the upper part of our lists?

Energy tips:

Last month I talked about battery rechargers, for those who asked the item was a: BC1HU 110-240V Universal Fast Smart Charger for AA/AAA/C/D/9V Rechargeable Batteries. Search for that on Amazon. I'm still impressed.

The sleeve I mentioned for carrying AA cells is more properly called a rifle cartridge holder. I bought two styles so I can tell which batteries need recharging.

Non energy, money saving tip: Use free software. I live between spreadsheets, word processors and simulation programs. I have used Office for years, like everyone else, but I do not like the latest versions; too much like candy pieces on the page. But I discovered [Open Office](#), a free program with the same modules as Office, except the email program. I like the spreadsheet better than Excel, it doesn't interfere with what I'm doing. Did I mention that it's free?

I haven't found a free building simulation tool that will truly replace the paid versions, although I do use the free E-Quest program regularly. It has a long and steep learning curve and you need to be comfortable writing some inputs as text based code if you want to get the most out of it. But it will get you quick results if you just want to look at simple systems.

Blatantly Commercial Content:

I do have to justify the time spent on this effort, so I am charging myself an exorbitant fee to sponsor this newsletter. I get one ad per newsletter and free coffee refills in the kitchen.

Business update: I continue to do a mix of residential and commercial energy consulting work; I'm looking for more of both. Please visit my website, <http://www.buildingdiagnosticsnh.com/> for information on my capabilities and background.

I haven't had an interesting "sick" building for a while. I'm afraid my diagnostic skills will get rusty. If you know a building that has people scratching their heads give me a call.

Thinking Update Update:

Last month I mentioned my interest in creating or participating in a mentoring program for new auditors. One of my charming and brilliant readers (you all fit that description) suggested the Community College system as a vehicle for that. As it happened I talked to Wes Golomb of the Lakes Region campus and he is in the process of creating a program that would include that. It will take a while to get it up and running, so in the mean time we will have to keep the informal process going.

Closing thoughts:

As mentioned above, I need feedback for this little venture to succeed. I would like to include notices for events that relate to energy, the environment and community building, so if you have any announcements please send them in to newsletters@buildingdiagnosticsnh.com. I also welcome rebuttals and amplifications for anything I write.

Please forward this to anyone who you think would like it, if you don't like it use the email address above to unsubscribe.

Thank you, I'll see you next month.