

Speaker 1 00:00:05 Welcome to the Clear Impact Podcast brought to you by PGTI University. Thanks for joining us today. My name is Sherri Connor, and I am your host.

Speaker 1 00:00:19 So I have a question about Energy Star because you see that on the labels and you hear about it and Energy Star, and you wanna meet Energy Star and five star rating and blah, blah, blah. Is Energy Star a requirement? Is it voluntary? What is that? Where does that come from?

Understand energy requirements in less than 15 minutes? Sure you can, because our code compliance team is here to break it all down. We are discussing NFRC, SHGC, U-factor, Energy Star, prescriptive and performance formulas. Energy is an important factor in our industry. And that's what today's episode in windows and doors 201 is all about.

Good morning. We are here on the Clear Impact podcast today, and we are continuing in the series, Windows & Doors 201. And today we're talking about energy and this is a really big deal. Lynn Miller and Lisa Wilson are back in studio with us to help answer the questions that they are most often asked. So welcome back.

Speaker 2 00:01:13 Thank you. It's good to be back.

Speaker 1 00:01:14 Thank you. Glad you're here. And so obviously we are in Florida and we're a very different state compared to a lot of others. Do energy codes apply to those of us in warmer climates? Like those of us here in Florida, or is it different for every state or how is this even enforced? Like tell us about energy codes. I know this could be a two hour conversation, but how can we boil that down into maybe like five minutes?

Speaker 2 00:01:37 Okay, sure. No problem. So before we discuss how it applies to different climates, so probably should give you a little bit of an overview about our energy codes or energy performance requirements for our products. So primarily there are two measuring factors for our windows and doors for energy performance. One of them is a factor called U-factor mm-hmm <affirmative> and another one is solar heat gain coefficient mm-hmm <affirmative>. And so the differences between those, the U-factor, I think of that as a measure of heat loss. So how much heat inside a building is escaping to the outside or the reverse? It's kind of like an insulation factor type of thing. And so this factor is more important in Northern climates mm-hmm <affirmative> than it is in Southern climates, right? And if you think about the temperature differential outside of a building versus inside of a building in Florida, maybe we have 20 degree temperature difference at the most 20 or 30, depending on how cold you like to keep it in your house.

Speaker 2 00:02:23 Whereas if you're up in Michigan or somewhere, you may have a 60 or 70 degree temperature differential in the winter time. And so with that in mind, depending on where you are regionally mm-hmm <affirmative>, you may have different requirements for that U-factor. And so the way the U-factor is measured is the lower, the U-factor rating is the better insulating value that you have for that product so products that are in the north have extremely low U-factors because they need that insulating factor for their homes. Solar heat gain coefficient is a measure of heat gain. It's basically telling you how much heat from the sun - solar. And that's why I say solar heat gain coefficient mm-hmm <affirmative> is entering a building, okay. And so in the Northern climates, you want that heat. You want that heat to come into the building.

Speaker 2 00:03:02 And so those solar heat gain coefficients tend to be higher. So the higher that is the more heat that is allowed into the building and in the Southern regions, like here in Florida, we want that as low as possible, right? Because we want to keep that sun outside in the summertime, right. And not so much that we need it in the wintertime, but in the summer, it's more important for us to keep it out, right, because it gets so hot. And so those are the general requirements for energy performance. And those requirements are rated by an organization called the NFRC, which is the National Fenestration Rating Council. Mm-hmm. Basically, it's an independent nonprofit organization that establishes objective window door and skylight energy performance ratings that's from their website. Okay. So all of our products are rated in some form or another through that organization.

Speaker 2 00:03:42 And Erin Koss, one of our Senior Engineers, handles all of those NFRC certifications, and she's actually a member of NFRC. She actually goes to the meetings and learns about and discusses how products are rated and how to better do that. And so, because of that in Florida. And so, as we mentioned, the U-factor is not as important in Florida mm-hmm <affirmative>. And in fact, when you get into South Florida, Lisa's gonna mention specific regions in a little bit, as far as what the requirements are in different regions. But once you get into South Florida, that U-factor is not important at all. Mm. And down in, you know, Miami and Dade, and Broward counties, and there's a few other counties that it just that solar heat gain, that's all that matters. Right?

Speaker 1 00:04:16 Yeah. Patrick Jameson explains it in his classes around it's like a golf score for us, the lower, the better. So that's how I remember it. Okay. So that's really good information around U-factor and Solar Heat Gain Coefficient. And that totally makes sense. Obviously, we're the sunshine state so we need to keep as much of that out of the house as possible. So how is this enforced? Is this voluntarily? Is it the inspectors? Is it the state? How is this energy code enforced?

Speaker 3 00:04:39 The energy code is part of the building code itself. So it's still gonna be treated just as your structural certifications would be. Okay. So you have to meet certain DPS and certain opening protections. You also have to meet certain thermal values depending on your region. So your inspectors, your permit reviewers will catch this at that time. So yes, it's, it's still enforced just like the rest of the windows need to be enforced.

Speaker 1 00:05:02 Okay. That makes sense. So then does it matter around if it's new construction or a remodel as far as what you have to have, or is there, I know there's some formulas and some different ways that it's all calculated depending on what that is. So can you shed some light on how our dealers can better understand this and how they can meet those requirements?

Speaker 3 00:05:24 Sure. So that's where it gets a little confusing because new construction and remodeling are treated a little bit differently. You can use prescriptive numbers, you can use performance methods for new construction, for remodeling. You're basically gonna use the prescriptive numbers for new construction. When we're talking about performance, there's tradeoffs, you can possibly upgrade your installation in your walls or your flooring, roofing, things like that. Your air conditioning units, where in remodeling, you really don't have all those options available. So that's where the prescriptive numbers pop in. And also for, for residential and commercial, there are different requirements, different U-factors and Solar Heat Gain numbers you need to meet. So there's like four different aspects in that one.

Speaker 1 00:06:06 Okay. And

Speaker 3 00:06:07 You have to know which numbers you're going for.

Speaker 2 00:06:10 I'd just like to mention also one thing about the performance requirements. One thing that's required, if you're going that path for new construction is that you have to have an engineer perform energy calculations on the whole building. Okay. So they have to determine, like Lisa mentioned, if you have a better performing air conditioner or better wall insulation, if they have improvements in those areas, they can actually have a poorer performing window in that application. And sometimes that's the way they maybe save money on a window, but they have to pay for more money on an air conditioner. And so that's, that's what the tradeoffs that we're talking about.

Speaker 1 00:06:40 Ah, okay. So they calculate out the entire building and all the different components. Okay. So that makes sense. And you don't have those options necessarily if you're doing a remodel, okay. That makes sense.

Speaker 3 00:06:50 Right. And also in Florida, we have different climate zones, right? There's climate zone one and climate zone two. So climate zone one encompasses Dade, Broward, Monroe, Palm Beach, Henry, Lee, and Collier County. And for those ones, there's no requirement for the U-factor. But if you're in zone two in Florida, there is. So again, the energy codes can be a little confusing for people. And again, they can always call up. We're happy to help them walk through that with them. It's in the energy code section as well. Okay. They can find information there. And also on the commercial, there is a U factor.

Speaker 1 00:07:27 Okay. Like for a hotel

Speaker 3 00:07:29 Condos yeah. There will be different U-factors and there's a U-factor for fixed fenestration, operable, for doors. So really it's best if you have all that in front of you before you plan something, because they're gonna need that on their projects.

Speaker 1 00:07:44 Right. Okay.

Be sure to tune in for upcoming episodes to help you understand the fenestration industry, what you need to know when buying windows and doors and other related topics, you can find out more about us at pgtiuniversity.com. You can also find us on Facebook and LinkedIn.

Speaker 3 00:08:06 Also for residential replacement. I just wanna throw that out there. This is important while all of this is in the energy code, what you need to meet. There is a Florida declaratory statement. And for this is only for residential replacement. If they're replacing less than 30% of the SS value of the property, they're not requiring you to meet those prescriptive numbers. You have to check with your building department though, to make sure that that's what they're going with. Mm.

Speaker 1 00:08:34 So if they were replacing all of the windows in the house that may come into play, but if they're just replacing like one or two, it might not, depending on the overall value of their home and the cost of what they're working on. Correct.

Speaker 3 00:08:46 Right.

Speaker 1 00:08:46 Okay. Okay. Well that makes sense.

Speaker 2 00:08:48 Yeah. And that declaratory statement is based on a statute that Florida has out. Okay. So that's always been a bit of a controversy over the, the years because the energy code says one

thing. And then the statute says, well, sometimes you don't have to meet this. So it's, ah, that's why we always recommend, even though there's been a declaratory statement, which the Florida building commission puts out, we still recommend that they check with their building departments because some building departments will enforce the energy code and some will not. Mm,

Speaker 1 00:09:12 Okay. So that's a lot of information about Florida. What about outside of Florida? What about other states? How is it enforced? Is it by their state building code or is there like a national thing or like, talk

Speaker 3 00:09:21 About that? I think sure. Because I get so wrapped up in Florida with us being based in Florida. Yes. There is an international energy conservation code in every state is a little bit different on which version they follow. Okay. So depending on what state they're in, they're gonna wanna check and see what version they're on and then they can see what their numbers are for their energy prescriptive numbers or performance numbers that they need to meet.

Speaker 1 00:09:44 Okay. So the bottom line is just check back with the local requirements so that you not just following what we might suggest, because we're in Florida, if you're in Kansas, then you need to follow whatever Kansas says

Speaker 3 00:09:55 Or right. Um, when I say versions, some of them are on different years than, uh, other states are. Right.

Speaker 1 00:10:00 Okay. All right. Well, thanks for clarifying that.

Speaker 3 00:10:02 Oh, thank you. We're bringing that up.

Speaker 1 00:10:03 <laugh> okay. I know in a lot of cases with the state building code, that's like the minimum and then counties and then cities can pile on top of that. Does that happen with the energy codes also?

Speaker 3 00:10:15 Uh, no.

Speaker 1 00:10:16 Okay. So the building code is the standard and then the declaratory statement can override that, but always check with your local jurisdiction. Right,

Speaker 3 00:10:23 Right. Okay. Right.

Speaker 2 00:10:24 Okay. And we always say that with anything that we talk about in code compliance, you know, there's building code requirements, but in any case they're general requirements for the state and their minimums. Right. So every jurisdiction, every county within the state, not just for energy, but also for structural, they may have different requirements into, even though we interpret the code one way the, uh, building official may interpret it a different way. And so it's always, always important to check with them.

Speaker 1 00:10:45 Yeah. And they're the ones that sign off on everything. So they're the ones that really have the say in the matter. Okay. Cool. Well, thanks for explaining that a little bit. So I have a question about Energy Star. Cause you see that on the labels and you hear about it and Energy Star and you wanna meet Energy Star and five star rating and blah, blah, blah. Is Energy Star a requirement. Is it voluntary? What is that? Where does that come from?

Speaker 3 00:11:05 So Energy Star, it's not in the codes - in the building codes. It is a voluntary federal program. Okay. And some people may use this for meeting project requirements. Some local power companies may give credits, you'd have to check with your local power company. And there was a federal tax credit given if products meant energy star ratings right now that is not current, but I've seen it for probably the past five years. They renew it or they change it a little bit. So just because there's not there right now, you still, at the end of the year, you can check and see if they're bringing that back.

Speaker 1 00:11:38 Okay. So it's not a requirement, but there's incentives to try to meet that. Correct. Okay. That makes sense. And I know just from personal experience, if you have an older home FPL can come out and do an energy audit into your house and they'll give you requirements around, Hey, if you do this, you can save money. If you do that, you can save money. And then sometimes they offer rebates too. So I lived in a home one time that needed insulation in the ceiling and the rebate equaled what the cost was. And so it cost me nothing and lowered my bill. And I was like, and it was a free inspection. I'm like, this is genius. Thank you, FPL. <laugh>. So that's a really cool thing that some of the entities are really helping people improve their energy performance. Yeah.

Speaker 3 00:12:15 Yes. And Energy Star also goes by zones across the country. Okay. So there are different climate zones. There's four, there's the Southern, South Central, North Central, and Northern. Okay. And all of Florida is in the Southern zone when people are entering their orders. I'm not exactly sure which is in there, but on some areas, the Southern zone, you'll see an S that stands for Southern, or you might see zone one. That's also standing for the Southern zones.

Speaker 1 00:12:41 Okay. And so that's good to know because we sell product everywhere.

Speaker 3 00:12:43 Mm-hmm <affirmative> yes. And all the zones have different U-factor and solar heat gain requirements. There's also a different requirement for windows than there is for a full light door. So we have that question. Sometimes people will say, well, my windows have this energy star rating. What about the door? And you may have to add an extra option to your units to get the criteria that you're needing to try to meet. You might have to change your frames to vinyl, or you may need to add insulated glass. You may need to add low-E, or argon. So there's different options to get you to meet Energy Star if you need it.

Speaker 1 00:13:16 Right. Okay. That is excellent information. Is there anything else about energy that we need to talk about?

Speaker 3 00:13:21 I think we pretty much covered it.

Speaker 1 00:13:22 Okay. Awesome. All right. Well we are gonna continue this series. Our next conversation is gonna be around design pressure and water performance. So that's a big one. So we look forward to having that conversation next time around. Okay. All right. Thanks guys. That's good.

Speaker 3 00:13:37 Looking forward to it.

Speaker 1 00:13:37 All right. Have a good day. Thank you.

PGTI University is the Customer Education Team for an entire family of brands. We began with the original EZBreeze porch enclosure line, then became PGT, America's leading brand of impact resistant windows and doors. We then added CGI, CGIC, WinDoor, Western Windows, New South Windows, Eco Windows and Doors, and our latest acquisition, Anlin Windows and Doors.

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