

SBM_BR2_HomeEnergy

Wed, Aug 07, 2024 2:49PM 35:49

SUMMARY KEYWORDS

home, label, energy, builders, program, existing homes, mandatory, process, building, industry, feedback, map, design, city, eric, people, air tightness, property, climate, local



00:00

Perfect. Yeah, thanks for having us. My name is Eric Timmons. I am a corporate environmental specialist overseeing our residential energy portfolio at the City of Calgary, on our climate team. And with me today, I have Liz ascaria, who is our resilient building coordinator from our development business and building services department, and we are going to talk to you today about our home energy label program.



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So to kick things off,



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a bit of background about the program, why we decided to do it, where it came from. So our Calgary climate strategy. This is called Pathways to 2050 This is a document that was approved by council in late 2022 and in there are actions around establishing and disclosing Building Energy labels for all new and existing residential buildings. And that direction is what led to the creation of what we call our home energy label program. So this program is, at its core, designed to empower Calgarians to understand their home energy use, how houses, their homes use energy, and what emissions are tied to them. And in that, we wanted to do a, you know, have a program that would enable comparison between homes, as well as being able to work with industry to provide them with best practice resources how we can take steps to, you know, verify the air tightness of our new homes. And at the time we were designing it, you know, the tiered performance codes of the national building code were announced, but they weren't put into place yet. And this was a way that we could work with industry to help get them prepared for it, also internally, creating a baseline understanding of our homes and home energy performance in the city. This was something we didn't have before. So we have a very large building stock here in the city. And if you asked us, well, how are they doing? How are they performing? We did not have any idea. So this is our first step at trying to understand the energy performance of our building stock. And so in creating the program, we had a number of more specific objectives. How do we do mandatory labeling? We wanted a by law that ensured all new low density residential properties. So this included single detached or single detached, semi detached and duplex homes. And we needed that by law to be something that could be enforceable. We also had to have a strategy for existing homes. And this is where we went

down the digital energy labeling route. And so this is one where we were calculating and mapping digital labels for the remainder of our existing homes. We also had to acknowledge that there was a number of homes in our building stock that would already have the energy labels that we were after, and we had to come up with a means of collecting and displaying those as well. And so we have some voluntary intake programs, as well as any labels that are captured through city programming, like our local PACE program. And then we have to make sure we were able to disclose this effectively, so making this data and our home energy labels available to the public online. And so this is where the development of our home energy performance map that displays both our digital label and our actual home energy labels is coming into play, and that is something we are looking to roll out in the coming months. So where we get to the myth busting part of this? Because I know that's the theme of our gathering here today, and this is, this is a myth in the sense of something we were asked very, quite often in the initial proposals of this is like, I don't think anyone's going to buy into this. I don't think anyone's going to get on board with this internally or externally. And so that was the myth that we were, that we were up against. So there are first step in, you know, quote, unquote, busting that myth was we needed to talk to industry. And so this is where we undertook a year long engagement process, essentially for the entirety of 2022 and so this involved key representatives in our local building industry. So build, which is our local builder and Land Development Association, the National Association of Energy advisors, our local real estate board, our local association of architects and design, as well as local businesses and organizations, local builders, developers, energy advisors, service organizations, anybody who would have a hand in this process was engaged through a series of both in person and virtual engagements over the course of a year where we presented program frameworks to them, solicited feedback and discussion, and everything that we heard was collected and published on in what we heard reports, and really, we utilize a lot of that feedback to optimize our program design. And I would say our first initial takeaway from it was there was actually just general support across all of these sectors for what we were trying to do. We didn't get a lot of just like pushback on, like, the fundamental of like, having all of our new homes have labels. What we got a lot of our feedback around was like, Okay, if you're doing this, these are the things you have to consider in order for it to be successful. And you know, a big one, use an existing labeling system. Don't invent your own, you know, don't come up with something that's super Calgary specific and means nothing outside of the marketplace. Secondly, don't make it extra administrative step for either like an applicant, like a builder or a homeowner, or anything like that. Or the energy advisors, like, if we, you know, have to do all this stuff and then submit something extra, like, that's just extra steps that is really not going to make it as successful. So if you can work it into an existing process, that's preferable lead time, especially around it being mandatory. That we heard that from from the builder side as well as from the energy advisor side. If you're going to do this, we need time to do some internal training to ramp up our respective capacities so that this doesn't act as like a bottleneck going forward, not tied to building code or the granting of occupancy. That was something that we heard internally, as well as very clearly from our province. You know, this is not separate to, this is separate from, from building code and just general transparency about, okay, you're asking us for all this data. You're collecting that data. That's fine. But like, what do you what are you doing with it? What do you want from it? Be transparent with what you're going to do with it. And so those were the major points of feedback that we heard that really led to us being able to, like CO develop a lot of the program frameworks with industry in this way, and just a slight piece of background information, some of you may be very well aware of the undergrad label system. Some of you might not at all. The undergrad rating system is what we chose to go with as a result of our of our engagement. It's the most recognized one in Canada. It's nationally administered by Natural Resources Canada, and we wanted to make sure that what we were doing was comparable, you know, between jurisdictions. I had that national standard for it, for

those that are unfamiliar and enter guide label, this is an official record of a home's energy performance based on a model usage. And allows people to see what their you know modeled energy performance, energy use intensity is how that relates against their peer reference, house and and then breaks down like where in the that house, a lot of the the losses are, or the energy uses are. It also comes in a very like, fairly user friendly format, when it comes in the label format, so people would be able to understand it relatively easily. And so that's where we went there. So once we had gathered all of our internal or sorry, our external feedback about what to do, we now had, you know, a design that we needed to pursue, and this is where we had to switch to our internal myth busting, and where my colleague Liza comes in, who is from our building services team, once we realized that this is a climate initiative that we cannot implement as the climate team without involving our business, our building services department, this is where we turned to collaborating with them. So Liza, I am going to turn it over to you to talk about our internal myth busting and our program implementation design.



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Thanks, Eric. So yeah, as Eric was saying, how building services got involved in this was partly because of the feedback we got from builders saying, Yeah, we are up for an energy label program, but we wanted to be during a process that we're already familiar with. We don't want to add another process in. And the main touch point that builders have in building, obviously, is in the building permit application section. So that's how we decided that was the right way to collaborate. Now, internal myth busting, when we talk about it, was building up internal support from leadership down in this program, obviously, we had Council support, which was great, and the strategy, as Eric mentioned, was approved. So that was fantastic. But there was a bit of a portion of explaining the benefit of the home energy label, once again, and why it was important to industry, really, where leadership was concerned, from building services standpoint, was four things external, I would say, was how a builder is going to react. We did have year long engagement with the builders, and we were, we were sure that, yes, there was going to be support. There were enough builders out there already doing it, so that was okay. There was also concern about codes impact and Okay, is it going to affect your occupancy? We don't want to hold up occupancy, etc. So that was implemented in the program design, as we'll talk about internally as well. We didn't want it to be resource heavy. They were concerned about, say, the inspections team having to go in and look at labels, etc. So we factored that into the design as well, and then obviously housing supply now being probably the biggest conversation around not wanting to add any bureaucracy on that side. So we went, we did have an iterative design process where we went back and forth to try and find a, you know, a system or a program that did meet its intent of getting an energy label and yet not, I would say, impeding the regular flow of business. So if you go to the next slide, how we did this was actually using our existing intake process. So most of our permits come in electronically through E permit, and a builder can apply and upload their documents electronically. So to simplify it for builders, all we did was we added in another additional capacity to upload document, which you see on the right. It's called a layer of intent, super simple. All it does is a builder says, you know, this is who I am, and I have, or intend, to work with an energy advisor to get the energy label done once that's in, that's it that says that they're interested to get into the program. And then that's really all that the building services team has to do. Climate has an agreement with Natural Resources Canada to get that final label at the back end. So administratively, it was like, really simple, straightforward, and as well, we didn't have to follow up with builders after the construction process, we automated as much of the process as we could at screening. You know, the person who screens the applications just has to add a tick mark saying, Yep, they submitted this letter of intent, and this is the intent for how it would

move forward, even when it gets mandatory. And then to the next slide, where we are now is we've already implemented the pilot program. So the pilot program, essentially is a one year program where we have rebates given back to builders who are participating. \$250 rebate per label, up to a maximum of 7500 and so far, I would say, Eric, we're in the plus minus 30% participation rates. Yeah, and we are working collaboratively. So with climate billing services, our law team and community by law standards to finalize. Actually, we're in the final stages of the by law. A draft is ready, and now we are getting ready to get to committee and council, etc. In getting this into a mandatory stage, we've had enough run up from industry to see what are the positives, what feedback they have, and we've seen that it's pretty smooth, actually the process. So yeah, that's what's next for us for enactment in early 2025 when we are looking to make this a mandatory label. So with that, I think I'll hand it back to you. Eric, thanks, excellent.



13:40

Thank you. Lizza,



13:43

yeah. And so with this, as we transition from the pilot stage to the mandatory stage, one of the major things that we have been able to take out of the pilot process is really having local industry trial the process that we are hoping to make mandatory. And by having as many different users from the applicant side, like trial the process and give them that avenue for feedback, we've been able to work that into our, you know, the by law and the final the final design ahead of it becoming mandatory. Having that proof of concept has proven to be quite effective. You know, this feedback and these lessons learned have really helped inform our final bylaw development. The other side of it is really we have a group of like, what we've been referring to is, like our early adopter participants. We have a good group, you know, core group of builders that were either already undertaking this level of, you know, testing and labeling for their properties, or have been very supportive of it, and have gotten on board early. We have our home energy performance map that is coming out in later this year. They are going to be among the first builders to show up on that map, having, you know, and having that transparency around the performance of their of all of the projects that they've been working on. And then the other piece. It was very much our intent. And I would say probably the leading reason why we undertook the pilot was providing that clear signal to industry that this bylaw is coming, and here is the appropriate amount of lead time so that preparation can occur, so that ramp up can occur, so that by the time the mandatory rollout happens, we've allowed that, you know what a fair amount of time for everybody to get, to get prepared, and just to show a bit of a sneak peek of what the map is going to look like and how it's going to function, this home energy performance map is really going to act as our centralized and reliable source of information, and we wanted it to be as open and accessible as possible for all residential properties throughout the city. This is going to provide an ongoing energy performance status for all currently only low density residential properties. But as we do grow the map and grow our program, we are going to see increase in the different property types that are available. So you can see it will be a mix of digital, digitally assigned labels in conjunction with the homeowner guide labels that we have in terms of a few, a few takeaways, like communications and the need for them has has come out, like through our engagements, both both internally and externally, it's been become very clear that adequate communication and adequate education and capacity building opportunities is needed on, you know, energy labeling

generally, the benefits that it offers as well as like, why, why we're doing it, what we hope to get out of it, and why it should be important to to industry as well. We really see this as like a key first step in improving the energy uses of our residential sector and moving towards an increase in demand for more energy efficient properties, you know, more low carbon housing, as we've been referring to it, and really looking to empower Calgarians to better understand their energy use and help people make more informed decisions, especially when it comes to like their energy costs, you know, operational costs of owning the property that you are setting out to buy, or of renting the property or leasing the property, knowing more about it, of what it is going to be like to live there. So with that, we wanted to leave some time for questions at the end. So please, if anybody has any questions, I have not been looking at the chat. So if there's any in there, I have missed them. But if anyone has any questions, please feel free to hop in or to pop something in the chat.

 17:46

Oh, sorry, just This is Laura here, so I'll help manage the chat conversation with you guys for right now. Eric, did you just want to stop sharing your screen so we can see all everybody? Absolutely. So wonderful. Hello. All right, so for me, I just want to start with Cindy's question, do you have any plans to Oh, so many chapters came in. Do you have any plans to expand this program to existing homes? And if so, what are you thinking?

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So simply, the first step in expanding it to existing homes is the is the digital label going past that is going to be more it's just more complicated, because a lot of existing homes don't have regular touch points with the city the way new homes do through the building permit process. So we have a number of other programs around energy efficiency upgrades to different property types that will create those possibly having some rebate programs for them. But you know, just based on the volume of existing homes and you know the ownership structures, that's going to take a much longer, much longer time to do. So, short answer yes. Longer answer is over time, and it's a lot more complicated, but yes, we are hoping to eventually have one for covering a lot of our existing homes.

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Excellent. Okay. Liz, did you have anything that you wanted to share in addition? No, Perfect, good teamwork here. Okay, how are the labels being shared by builders at the houses themselves?

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At the houses themselves, the builders display it on, usually, the electrical panel. It depends on when the label arrives to them in in the building process. So if the builder is still in possession of the house, when the thing comes, they will display it on the on the electric. Circle panel. Sometimes the label arrives after the builder has sold the property, and so at that point they will send it to the to the new owner of the home, and



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as they as they please.



20:16

Hey, great. All right, we have some hands up. Stephen, did you want to unmute and ask your question?



20:22

Yeah, for sure. I wanted to ask. So it sounds like I just want to verify. The energy auditor goes in after the house is completely built, right? And does the labeling at that point, or do they do it based on the plans before it's actually built both. So when you get an enter guide label, it is based on all the physical properties of the home that can be gleaned from all of the design specs, with the exception of the air tightness testing, which is done on site via a blower door test that happens like at the later stages of construction, usually after they're done the board phase of the home, which is like when all the drywall and everything is on so the house is sealed to the level of air tightness that it will be at, but is not finished. In the sense of all of the finishing on site is not complete. That allows them to, if they find a deficiency in the air tightness testing, to pull stuff off and fix it without undoing a lot of the finishing work. So I would say it's about like, you know, kind of near the end, but the house is not fully complete when that lower door testing is done. Okay, thank you.



21:39

All right, we have Dennis, and then we're going to go back to the chat for a question. Dennis, you want? Dennis. You want to unmute and ask your



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question. Do you see this program having an impact on how houses or homes are valued, where energy efficiency becomes part of the kind of valuation process, and I guess in two streams, one sort of city assessments, but also kind of the appraisal process,



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man, I hope so. Dennis,



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really what? Before we hit that point, we have to build the value proposition for Calgary residents. And so that is teaching them what something like a home energy label represents

residents. And so that is teaching them what something like a home energy label represents, and then how it shows the energy efficiency of that house, and what having an energy efficient home means in terms of ownership, and so there is definitely some building to do there, as it relates to our general population generally. Eventually we are hoping to get to a point where there is a value tied to that it will always likely be in the eye of the beholder, type of thing where it's a physical feature of the home that people will value, more or less depending on their own values. But yet, we are eventually hoping that it gets to that point currently, likely not. I mean, it will never be location or square footage. Those things always dictate value above all others. But we are hoping that it starts rising to the top of people's priority list when it comes to it, but you know, there, there definitely is a need for more more education and knowledge building on that, on that front,

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all right? Well, it feels like that feeds right into the next question, which is, do you have partners that communicate and educate the Calgarians?

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Yes, we have come at it a number of different ways. There is a component of educating industry and kind of industry speaking to industry about this, so that's where our local associations have come have been really good partners for us, providing, you know, communication education opportunities directly, directly to industry, allows us to interface with them, but also kind of that peer to peer style communication. And then we also have education and communications to do with the public more generally. So we've gone creating our own content in house, through educational videos and promotional ad campaigns, things like that. We've also utilized other you know, there's a number of like home renovation shows and home and garden shows and things like that style, where we're able to interface directly with the public and educate them, like while you're doing renos, while you're doing updates, this is how it you know you can integrate energy efficiency into that. And then we have a very wonderful Outreach and Communications team here that does a number of local events and presents to a number of local events as a. Good connection with with community organizations, like our local climate hubs, like our local organizations like that, they can help communicate that as well. So we are all of that to say yes, and we're trying to take as broad of an approach to reach as broad of an audience as possible, tailoring our messages appropriately. But yes, knowing that, it will have to be spread across a number of different areas.

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All right, Mike, I see your hand up. Did you want to unmute and ask your

 25:33

question? Thank you very much. Ora, I'd

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also like to thank thank you for your presentation. Liza and Eric, I'm I was wondering if you had any thoughts on self built in tiny homes as potential Whole,

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potentially more efficient ones.

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In terms of thoughts,

 26:04

I would say where that comes is, when we're talking about energy performance of homes, there's your, you know, your overall energy use and how your energy how much energy you use per square footage. So a lot of you know, newer built homes are often bigger square footage wise. While they tend to be more efficient, ie, using less energy per square foot, they do tend to use more energy overall, simply because it's a larger space you know, majority of homes here, their space heating makes up a very large percentage of their energy use. So when it comes to your your question, it's around, well, smaller homes use less energy. So, you know, the city is always looking for, you know, Kent making sure we are incentivizing, promoting buildings that are most energy efficient, be it through the way that they're built and designed, or through like just their square footage? Yeah, I would say we are. We are in favor of all buildings that are energy efficient or use less energy so that would definitely be a building type that we look upon favorably. I favoritely,

 27:24

hey back in the chat for your home energy map, where you have both enter guide and virtual ratings, do you show the confidence of the rating on the map?

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So we were very clear to different shape between what is an actual inner guide label and what is a digital label. And so for like, when the map is launched, the map will be embedded in a web page, and in that web page is where it will so the map, it won't show up on the map itself, but it shows up in the instructions of how to use and interpret the map of being very clear. One is a physical model and the other one is a digitally approximated model baseline of that home. And yeah, so we are, we are being very clear that the two that the two scores are different, and that one is considered to be the closest to the truth that you can get in our industry currently, so yes, to say that it's it's very clear delineation between the two, and the instructions of how to interpret that data are included, but yet not embedded in the map itself, but in the in the instructions that that come With how to use the map.



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Since I do, either of you have any final thoughts that you wanted to share?



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I mean, yeah, no, sorry, Elizabeth, I know I was going to say that. Hey, we just want to wish, you know, groups out here who are trying to get to mandatory or like, you know, implement home energy label programs. It has been a process. I would say, gosh, we started this before it actually came out. It was a year long external, internal engagement. There's a lot of back and forth, but definitely, yeah, worth it. And wish everyone here the best,



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yeah, and I would say that we aren't. We aren't home and cooled yet. We still have to have a bylaw go through committee and council. We're hopeful, but neither Liz or I are the counting our chickens before they hatch. Pipe, I would say we have had a lot of really good feedback by involving industry early and keeping them involved over the entire development process. And the collaboration between building services and climate has proven to be incredibly effective in the sense that I we were not here speaking to you today. If that doesn't happen. So that that, and at the time that we start, first started working on that collaboration, I would say that was a fairly new way to approach program implementation at the city, to be that explicitly collaborating across businesses on like one essentially, is a climate objective, but working with another department the way we have, I think that that has been a key to success, probably the key just the success that we've had so far.



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Great. Thank you. In your time of sharing your final thoughts, we've got another question that jumped up so dawn. Do you just want to unmute and share your question?



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Yeah, I just you shared some great thoughts in our kind of our pre interview thing that I think that might be interesting to the group. Just where do you got, where you got your resources from, and what, what cities you looked for, for inspiration when you were kind of creating these and and the other maps and things that you were doing, if you could maybe shout out to some of those best resources people want to look elsewhere to kind of do some of their own research.



31:03

Absolutely, when we're talking mapping and digital labeling, there are we were very specific with what we wanted. We needed something, a very entry level foundational piece. There are providers in this country that work on creating digital labels that are incredibly robust. They are

providers in this country that work on creating digital labels that are incredibly robust. They are very robust digital models. So if anyone here from a municipality or from the province or anything it would be looking to do this, there are providers that that work, you know, I know, like we've seen other cities go down that road, you know, they've, they've have more specific uses in mind. But you know, the like provinces like BC and New Brunswick, City of Saskatoon, Toronto, Ottawa, these are all places that are, are looking to do this work and undertaking various methods to do it, that is definitely a key takeaway. Like this is a route that we have found works well for us. So far, there is many different ways to go about this that all would be very effective and would provide you exactly what you're looking for. So that would be what I would say there and and something I think is going to become a lot more commonplace as we've gone down this road, we've heard from a lot of other jurisdictions in this country that are either doing this, in the process of doing this, or want to to do this. So it's going to become a lot more commonplace going forward, for similar reasons that we had right. It's like everybody, all urbanized centers, all municipalities, a good proportion of their building stock is residential and usually private property, so knowing what the energy performance is of them is quite tricky. So the digital route is one that provides that baseline that's been missing for a lot of people up until now.



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Yeah, feel that just a question is emergent in the chat about the realtors, did they embrace this program?



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Yes and no,



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it is.



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I would say they haven't been a supporter in the in the sense of like, you know what? There was some education that needed to be to be done there, and some, you know, some communication about what this represented and why we were doing it. You know, the question about, does it impact home values? We heard that already today. It's a fair one, but it basically providing them with the information of this is the information that will exist. This is how you would use it. If you're asked about it. This is how you would, you know, potential sellers, potential buyers. This is how you would communicate it. I would say it's been slow, but over time, I think, you know, they're starting to hear it more from people buying and selling homes. They're starting to hear it a bit more in the marketplace. So I think the tide is turning a bit from like, Oh, this is something new, to like, maybe this is something useful and that we should get more well versed on. And I mean, it's, I would say it's a similar to the other industries. We have our strong supporters and those who maybe aren't as much, but yeah, it's something that requires, like, relationship building over time in order to get people on board, I would say.



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And I would say, like, most of the feedback has been on the existing home labeling more than the new, because the new typically has a different selling process directly from the builders themselves. So not so much on the new home side, yeah. And as Eric said, I don't know, embrace is a strong word. I wouldn't say that we were embraced, but, you know, it's, it's a little bit about the market demanding it eventually. And you know, you take it a step at a time, I'd say once, there's more education out there, which is part of the reason for this program existing. Then consumers know what. You know what this is, what they're looking for. And then once the demand starts, then the market automatically, sort of changes toward it.



35:11

Oh, thank you so much for all of the expertise that you shared. For those people who are attending next week in person session, one of the things you'll get to see is the plans for the map that SBM has been working on. So that's going to be exciting to show you, and to hear your guys's feedback on that. So thank you so much to both of you for your time here today. We have about just over five minutes until the next session, so go grab a drink. There's a little key takeaway questionnaire in the chat, and we'll see you soon. Thank you guys so much. Really appreciate it. Thank you.



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Excellent. Thanks everybody. Bye.