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Chair

Mr. James Maloney

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● (0850)

[*English*]

The Chair (Mr. James Maloney (Etobicoke—Lakeshore, Lib.)): Good morning, everybody. Thanks for joining us today.

We have two witnesses this first hour. From the Forest Products Association of Canada, we have Derek Nighbor and from the Canadian Wood Council, we have Michael Giroux.

In case you're not familiar with our process, we give each of you up to 10 minutes to make a presentation, and then we open the table up to questions. You have earpieces there if you need translation services. You probably will get questions in French and English, and, of course, you're free to deliver your remarks or answer questions in either official language.

Mr. Nighbor, we'll start with you.

Mr. Derek Nighbor (Chief Executive Officer, Forest Products Association of Canada): Thank you, Mr. Chair and members of the committee. Copies of my remarks are available for committee members.

Bonjour. My name is Derek Nighbor, and I'm the chief executive officer at Forest Products Association of Canada. I'm pleased to be here today to discuss Mr. Cannings' Bill C-354 and to talk about why it's important that wood be given every consideration as part of the federal government's procurement strategy.

I would like to thank Mr. Cannings for his diligence for being a strong and thoughtful voice for our sector not only in his community, but throughout British Columbia.

My colleague Bob Larocque appeared before this committee a couple of times back in November and again in February on the secondary supply chain work this group has been doing. In his remarks, Bob shared a fair bit of information about the importance of our sector to the Canadian economy, especially as it pertains to the over 600 communities across rural and northern Canada that depend on forestry. I see Mr. Harvey and others here who can attest to that in a personal way.

Not only economic benefits, but also real environmental benefits are derived by the way in which we manage Canada's forests, because wood products lock in carbon and therefore are a key solutions provider in our fight to reduce greenhouse gas emissions. I won't go into a lot of detail on that information, as I know all of you are well aware of the importance of our sector to communities where, more often than not, the forest and mills jobs are among the best in town.

I want to thank the members of this committee for their focus on forestry over the past number of months. We're a sector that has not been without its challenges. Although many of the headlines tend to be about the Canada-U.S. trade disputes we're kind of stuck in the middle of, I know I speak for FPAC members and the broader industry value chain when I say it's very important for us to focus on the things we can control.

One of those things is the acceleration of innovation in forestry. In the forests, at the mills, and through the carbon-storing products we make, our sector holds promise to deliver on 13% of the federal government's overall GHG reduction goals under the Paris Agreement, but we need the ongoing support of federal and provincial governments to help us make that happen. Predictable and reliable access to wood fibre, a competitive tax regime, a skilled workforce for tomorrow, and a reliable transportation network to get our goods to market are all central to our future success.

I want to speak more specifically now to the role we believe wood should play in the federal government's procurement plate per Mr. Cannings' private member's bill. We view this bill as an opportunity to give wood the recognition it deserves as a material of high value and choice in construction.

Similar bills have come before the House in the past in the same sphere as this bill. I know former Bloc Québecois MP Claude Patry from Jonquière tabled the bill back in 2009 and then again a couple of years later. What has changed since 2009 when Monsieur Patry tabled his bill for the first time is quite simply innovation in wood construction, a greater awareness, and a heightened worldwide understanding of the benefits building with wood can bring.

You heard on Tuesday from federal officials about the examples of wood construction projects in Canada and the growing chorus of engineers and architects who are turning to wood as a safe, resilient, cost-effective, and environmentally friendly material of choice.

Eight years ago when Monsieur Patry tabled his bill, there was less enthusiasm among federal officials regarding changes to procurement approaches. Changing that is the big opportunity that's before us here with this bill and this discussion today.

In passing this bill, the government will send a clear signal that governments around the world have already recognized wood is a safe, durable, and high-performing material that fares well against competing materials in building construction and, in the past, has often been overlooked.

The built environment accounts for a significant portion of greenhouse gas emissions, so if Canada wants to make real headway in reducing GHGs, a procurement strategy focused on reducing the carbon footprint of construction materials represents a real opportunity. We have already seen countries like Germany, the Netherlands, Switzerland, and others make moves to advance green building procurement, so there are many examples and ideas to draw from.

Here at home we have seen provincial procurement strategies rolled out in Quebec and British Columbia in the same vein as Mr. Cannings' bill, and the B.C. story, which I know my colleagues from Forestry Innovation Investment Ltd. will speak to in greater detail in the next session. We have seen B.C. emerge as a market leader in the design, manufacturing, and construction of wood products and systems, largely in part to B.C.'s focus on wood building.

In addition to Mr. Cannings' bill, I would be remiss if I did not highlight the leadership from other members of the House in this space like Halifax MP Andy Fillmore in the tabling of Motion No. 45 that motion supports the greening of infrastructure projects over $500,000 funded by the federal government and the greening government initiative that has been led internally by Vancouver Quadra MP Joyce Murray.

● (0855)

Innovation has changed how procurement should work. It's no longer about using the same materials and the same forms we've traditionally turned to. We believe it's important to ingrain this in Canada's procurement strategy.

To the point about how things have changed, earlier this week researchers at Purdue University spoke to the opportunities that microscopic wood nanocrystals fused in concrete can bring to support an even stronger bridge they plan to build in California. While some are trying to position Mr. Cannings' bill as favouring one material over another, we view it as a bill that sends a signal that the game has changed. This bill rightly profiles the growing role wood can play as a leading green option in building construction, and therefore that should be reflected in federal government procurement.

Let me be clear. We support fully and expect that thorough life-cycle assessments will and should rule the day when it comes to the evaluation of materials in procurement decision-making.

Experience in Canada and from around the world tells us that when it comes to the carbon question, wood-based materials perform very well against other materials. I'd encourage the committee to look at the Athena Sustainable Materials Institute as a leading not-for-profit research collaborative that's supporting a lot of life-cycle analysis work in building construction.

Mr. Chair, thanks for the opportunity today.

[*Translation*]

Thank you for your attention. I welcome your questions.

[*English*]

The Chair: Thank you very much.

Mr. Giroux.

Mr. Michael Giroux (President, Canadian Wood Council): Good morning, standing committee members. *Bonjour à tous*.

Thank you for this opportunity to speak to you about Bill C-354 and the Wood Council's reaction to it.

I do apologize. I have a bit of a speech impediment at this time, but I'll work my way through it. It only affects me when I try to say anything with three syllables or more.

I'll tell you a little bit about the Canadian Wood Council. We are a national industry association. We represent more than 90% of the wood product production in Canada, so that means lumber, panels, and engineered wood products. Unlike in the case of other structural materials, our members are almost exclusively Canadian-owned, proudly so, which means that they not only produce in Canada but also that they have interests in growing the markets in Canada. They are totally invested in this market.

The CWC's mission is twofold. The first part is to ensure that current and innovative new products and building systems are fairly represented in the building codes, because what gets represented in those building codes gets built. They are regulatory tools, which is a very important point. The second area our mission talks about is the area of education. In that area, we support students and professors in their curricula as well as the continuing education of practitioners, including architects, engineers, and builders.

I'd be remiss if I didn't give you a couple of quick facts about building codes, which will be relevant a little later on.

The first thing is that building codes and related standards take about five years to develop. There's a five-year cycle ingrained in all of this. You might think that's long, and it is, and you might think that it impedes innovation, and it does, but it ensures that the codes actually meet the objectives as stated by the Canadian Commission on Building and Fire Codes. So, yes, Canada has objective-based building codes, and their targets are energy and water-use efficiency, fire and structural protection, fire and structural safety, as well as health and accessibility, but there's nothing in there that speaks to carbon or greenhouse gas, and there is nothing in there that speaks about the use of wood, although that would be really nice.

Why is this information important? Since the mid-1900s, before the advent of sprinklers and protection systems or what we call encapsulation, concrete and steel products in building systems kind of ruled. They were the only game in town. These were used in institutional, commercial, and industrial applications, as well as in multi-family residential applications. Much has changed.

Earlier on, the codes were prescriptive. An example of a prescriptive code would be, for a firewall, something like a firewall must be made with masonry blocks. That's prescriptive. It tells you what to do. A change took place about 10 years ago when the National Research Council's codes centre embarked on the development of an objective-based code. Because of those objectives which I stated earlier, codes then became a little more objective-oriented. Instead of, for something like that firewall I just mentioned, that it must be built out of masonry blocks, it now says that a firewall must have a two-hour fire rating. This allows for an increased use of innovation in the solutions. There are some wood solutions associated with drywall on them that can be used now. It also has allowed us to move further into the codes with mid-rise provisions of five and six storeys. It allows us to look at tall buildings, but in the end, it's the 2025 move by the National Research Council towards performance-based codes that will allow us to really get more into the market of these tall buildings.

This is important because, as slow as the building codes are to get updated, and there's that cycle, the federal real property and Public Works purchasing practices are also. They are sometimes updated, but we don't know this. Those updates are not transparent.

● (0900)

It is for that reason, and that reason primarily, we support Bill C-354. At the end, they will update these as the result of this bill action, either through the bill itself or an act, or a policy developed from this will cause the Public Works department to actually take action and consider wood more equally. That doesn't mean they have to win on a first costs basis, but at least there will be a balance.

At the end, the solution is to update those practices to make them product neutral and greenhouse gas savvy or, as Bill C-354 suggests, to force Public Works, through an act or policy, to consider wood use with that carbon metric. In this way, the federal government can catch up to B.C.'s Wood First Act or Quebec's *Charte du bois*, or wood equally policy.

I'll say a few words about costs and reductions in greenhouse gas. The first is something that is no surprise to me, particularly in our innovation. Wood does not always score first when it comes to costs, especially new wood building systems, but because of the work of some of our funders and research partners, including FPInnovations and the NRC, we see an increase in new solutions that are helping us to evolve these building systems. If you look at Brock Commons, it's the tallest contemporary wood building in North America, well, in the world really, at 18 storeys. You can look at that building and say that it did not win on a first costs basis, but when you look at the construction practices that evolved from it, that building came under budget. Future buildings of that nature will do very well.

In terms of greenhouse gas tools, Derek mentioned that the Athena institute has tools of this nature, life-cycle assessment tools that not only look at greenhouse gas but at other environmental impacts. The Quebec government, working with Cecobois, which is associated with the Conseil de l'industrie forestière du Québec, also has a tool in development that will help them in policy judgments associated with carbon or greenhouse gases. For them, it's not just a question of “wood equally”, as in the *Charte du bois*; it's also to compare or to look at that extra metric. That is the tool that's being developed. That tool is now being co-funded by the Province of Ontario. B.C. is interested, and the American Wood Council is interested as well. There is an opportunity to take this to governments for policy support.

Is the greenhouse gas metric important? Yes, obviously, to meet government policy objectives. A more rapid adoption considering embodied or avoided energy or greenhouse gas is really important, because early action compounds over time. I would encourage that we consider or look at embodied energy in the products, as well as the operational side, the whole life cycle. Early action is really important in order to meet those life-cycle goals.

Are wood products or wood building systems the final solution here? In my view, maybe, but really, speaking practically, down the road we will see hybrid systems evolve that will use wood, concrete, all those products. Think about the problems we want to solve, including the seismic situations in B.C., for instance. We saw this in Christchurch, New Zealand, particularly. An earthquake happens, the building shakes, the building survives, and people get out. It meets code. However, the buildings are damaged in such a way that they are not reusable. Wouldn't it be nicer to have lighter buildings that could move on their podiums? That area, that lightness, is important. Wood products, and wood fibres in, for instance, concrete, could serve us well into the future.

Mr. Chair, those were my opening remarks. I do have some other comments, if I have another minute or so.

● (0905)

The Chair: Sure.

Mr. Michael Giroux: This will address more of the comments that we sometimes hear when bills like this are being addressed.

Often it is asked whether Bill C-354 picks sides. Really, this is a Public Works real properties act or policy and in the end, should wood not be treated or considered equally? It is a structural material much like concrete or steel and should be considered equally.

The spirit of this bill causes that to happen. Our experience with the private sector is that builders love a third choice. If nothing else, it forces everybody to sharpen their pencils and you get better value for your investments. That's a terrific acknowledgement right there.

Are jobs affected? I would say not likely. Most wood buildings are in fact hybrid wood, concrete, steel buildings. Given the expansion of the infrastructure sector and the work in that sector right now, I don't think any material is suffering job loss. Now, there's been a shrinkage in the U.S., so maybe an industry that shipped up to 30% of their product into the U.S. might have some losses as a result of that, but not because of the Canadian market. A lot of what we do is expanding the market, allowing for cost-efficient solutions to happen now rather than later.

The question I would like to address is whether wood buildings are unsafe or not durable. That comment is often made in respect to a code plus discussion. In the end, durability is by design. Climate change adaptation or durability are by design. We can design wood building systems that meet any requirement of the future. We can put our minds to it, and we have great research institutions that will allow us to get there. All that to say that I don't buy that argument at all. What's most important in this situation is that codes and requirements are kept performance based, which allows all materials to act on these solutions independently or in their own right.

Those are my comments. Thank you very much.

● (0910)

The Chair: Thank you.

Ms. Ng, you're going to start us off.

Ms. Mary Ng (Markham—Thornhill, Lib.): Thank you very much, Chair. Thank you to both of you for coming in today and sharing your perspective with us. It's very helpful.

I have two sets of questions, so maybe I will ask you, Mr. Nighbor, and then you, Mr. Giroux. They are two different sets of questions. One is more economic based, and the other one is on your advice which delves a little further into what you've already stated.

Mr. Nighbor, can you talk to us about what the implementation of this bill would look like in terms of jobs across the forestry sector across this country?

Mr. Derek Nighbor: I'd hesitate to put a firm number on that, but we've seen from the B.C. experience.... I think the folks at FII can talk a little more about the specific experience in B.C. in terms of market leadership and some of the benefits, and the Structurlam. I believe Ms. Rudd has also visited that further advanced manufacturing facility in B.C.

We see significant opportunity. We're seeing market share growth around the world. There's a real renaissance for wood products. We view this bill as being an opportunity to move us into the modern age. This is a modernization of procurement. This is about not doing things the way we used to do them. This is about tapping into some of the innovation that we and other sectors have been doing.

This is about opening up and getting into what is possible as far as procurement goes. As I said, the shift we're seeing now is greater awareness about what is possible. I think the focus around GHG opportunities is really going to profile this. That's why we're strongly in support of the bill.

Ms. Mary Ng: I'll pick up on that. I don't know if you have data or your members have a perspective on this, but with regard to increasing the use of hardwood lumber as a building material, do you have any sense of the trickle-down effect? I know it's a limited experience here in Canada, but is there any information about the benefits of that in other jurisdictions?

Mr. Derek Nighbor: We're seeing two opportunities. There definitely is a domestic opportunity to see more Structurlams come to be in Canada.

The other thing we're seeing is the international opportunity around export opportunities, not only exporting products but exporting technologies and Canadian know-how. Michael Green, an architect in Vancouver, is world renowned, and he's travelling the world. They're turning to him, so it's not only been in B.C. We're now looking at demonstration projects in Asia and other opportunities, so it's not only the domestic job opportunity but the opportunity to sell Canada to the world.

Ms. Mary Ng: That`s great. If the market share of wood building and the products were to increase, what would we need to do to increase that supply of technical expertise or trainer skills? You both talked about it a bit. Can you talk to us about that?

Mr. Derek Nighbor: I will defer to Michael on that because he's been doing a lot of work with those groups.

Mr. Michael Giroux: There are two sides to that. One is the continuing education of our professionals. We have programs and seminars and wood solutions fairs that are structured around that focus on the new opportunity.

More important at this time for our students and for professors, we are in the midst of an update of our curriculums for those programs. In engineering, as an example, we would have one-third, one-third, one-third. We would provide a module that would support a basic engineering program. We would have several modules that would support a full course. Then we would have another one where a school would want a full program, a wood program, or a centre of excellence. We're working on that and we should see something in the next year.

Ms. Mary Ng: I'm going to have you delve a little further into what you talked to us about around the need for procurement rules and practices to change or be modified. As this piece of legislation makes its way through, and should it become law, the government, etc., will need to turn their minds to how to do the application, how to begin enabling implementation.

You touched on the need to modify the rules and practices and so forth. Let us look at where some of those stumbling blocks are and what needs to happen on the federal government side and perhaps with others around code changes. Can you talk to us about what some of those challenges might be so we are attuned to them and where some of the opportunities might be that might lead to an ease of implementation?

● (0915)

Mr. Michael Giroux: For many years the Wood Council in our woodworks program has tried to discuss this point with real property practices to see what those practices are and to see if they're fair. It's not a very transparent opportunity.

One of them, in the absence of an act like this or a policy would be to review those policies to make sure they are product neutral and greenhouse gas savvy. That's clearly one option that's available.

We see opportunities in B.C. and Quebec, but in Quebec, the *Charte du bois* is basically there. They say in public works you must show that you've considered wood, so on paper you have to show it. They have a committee that verifies these things down the road, but then it goes further. They say you must also do a greenhouse gas calculation. The decision is made on that. I don't know exactly how they balance cost and greenhouse gas, but that is what they do.

The wood first policy is not unlike that. It's more an act as well.

Ms. Mary Ng: You talked about the opportunity that exists for wood material to get into other material so that it really does innovate the way these materials will be used down the road. Is there any advice you might offer whereby incentives could be created or how to accelerate or enable that in some way?

Mr. Michael Giroux: When you establish a vision, a carbon or a net zero future—and a lot of work has been done in that area—then you want your new and existing products to merge into the building of the future, whatever that looks like.

We really don't know yet where this is going to go, but we do know for sure there is a lack of investment in the building level systems R and D, whether that's with the National Research Council or FP Innovations. This area is really important when we're trying to achieve those net zero buildings. A single product will not get us there.

Ms. Mary Ng: Thank you.

Mr. Derek Nighbor: I'll quickly add that on the nanocrystal example I shared, there are huge innovation opportunities emerging but the markets are still being developed. One of the things we want to see is a balance in that investment in the science projects to understand what's possible, but also investment in building and developing those markets.

There is a bit of a disconnect there, and I think we can do a better job on the latter.

The Chair: Thank you.

Mr. Schmale.

Mr. Jamie Schmale (Haliburton—Kawartha Lakes—Brock, CPC): Thank you very much, Chair.

Thank you, gentlemen, for your comments today. They were great presentations. We enjoy the work done by the members you represent in the wood industry. We respect and appreciate all of that.

Both of you mentioned in your presentations about believing it's not picking one side or the other. The problem the official opposition has with this bill is that we believe it does. There is no doubt that there is great innovation and technology happening in the wood industry. We have been studying this for quite some time now. We've heard from a wide range of people in the industry, and I think we can all agree with that 100%.

The wording here in this bill that we have the issue with is, “the Minister shall give preference to”. I agree that if wood were on an equal playing field, that would be much better. Had the bill read, “the Minister shall give equal preference”, or something to that effect, I don't think we'd have as much issue with that.

I think, Mr. Giroux, although you said that the spirit of the legislation is this, we think by the way it's written that is not necessarily the case.

● (0920)

Mr. Derek Nighbor: I'll defer to the members of the House in terms of amendments they might want to present or discuss, but I will say that what Mr. Cannings has brought forward is about modernizing the procurement strategy for Canada, giving profile to a material that many around the world are turning to. People love wood not only for a whole host of environmental and economic opportunities, but also just for the more social and health-related opportunities that being in a wood building can bring to bear.

I won't get into an amendment conversation or changing words, but for us it's really important that the spirit of what Mr. Cannings is trying to get done here gets done.

Mr. Jamie Schmale: I agree with you. I agree people in the world are turning to wood and other options, but that is actually happening organically. That's happening naturally. They're seeing the benefits of this. That building we all talk about that was built in British Columbia, that happened for a reason, right? It may have been partly to do with the B.C. legislation, but it was moving in that direction anyway. The technology on how you can make buildings more energy efficient and airtight is developing because of technology innovation in the marketplace.

My concern is that when you pick winners and losers in the industry, you're also building a wall between those looking to start up. If you're giving preferential treatment to wood, what if there is this new magical product that comes forward that's even better than wood, but you have built a wall saying the government is giving preference to wood? If you're the winner it's great, but if you're the loser it kind of sucks.

Mr. Derek Nighbor: The government has an opportunity to catch up with the times. You know, there is the 18-storey building at UBC that you talked about, and a 13-storey building in Quebec. A lot of that has been driven by movements in those provinces to support those projects. We're seeing a couple of wood buildings at U of T and George Brown College in Toronto.

We believe federal procurement plays in this space. In terms of the materials of choice, it has fallen behind the times in innovation and technology, and we view this as an opportunity to catch up.

Mr. Michael Giroux: I think, Jamie, you're agreeing that wood is safe, strong, sophisticated, and renewable.

Mr. Jamie Schmale: Absolutely, 100%.

Mr. Michael Giroux: I get that, but when we sit around the codes table and try to make sure that wood is fairly represented in the codes, you wouldn't believe the opposition from other interests. Sometimes it's hard to get to a point where the playing field is equal, and you need a hammer to try and get there. That hammer could be the update of the real property practices, which probably makes sense anyway, right? The other hammer is something like this.

I agree with you that future innovation needs to be left open. Maybe we look at a carbon-first approach or at a more neutral...but we're just going to do damn well in that case anyway.

Mr. Jamie Schmale: Right. That's what I'm saying. We asked the officials from Public Works Canada whether, if this legislation doesn't pass, it would stop their movement toward wood as their preferred model for building, and they said no. That's what I'm saying. If they gave equal preference or something like that, I think what you're saying is correct: wood would stand out on its own, on its own merit, because of the technology and innovation.

By contrast, I just don't like saying we'll give preference to one industry over the other, because it can also halt innovation. In the wood industry you might say, well, we're getting preference anyway, so we don't need to get any better because steel and concrete don't get that, so we'll stop innovating. Then, if you've left it to the market choices, concrete might come up with something that does even better than wood. I don't know. I'm just saying they have a chance to innovate and compete in an equal marketplace.

Mr. Michael Giroux: Until that happens I'd like to see Bill C-354.

Mr. Jamie Schmale: Right, and rightfully so. You're the industry, right? Absolutely, I get that.

Mr. Derek Nighbor: I don't think we've seen evidence to date of federal procurement seriously looking to wood, and I believe this bill really profiles that, so that's why we're where we are.

Mr. Jamie Schmale: Well, based on the conversations we had with the officials who were here last, they are moving in that direction already. That's already happening because of what you're saying now. But then if you're building that wall, concrete.... Even if they did innovate and became better than wood, it doesn't matter because you're giving preference to wood. It sucks if you're the loser.

Mr. Michael Giroux: My only response is that if that's the case, let's not have the other terms in the real property practices. Let's make them neutral.

● (0925)

Mr. Jamie Schmale: I'm on your side. I agree with what you're.... What your product is saying is great.

I agree. I'm just saying that if you're building walls, picking winners and losers, it doesn't work out always because it stops the innovation and it stops others from competing, and competition makes everything better. You, the industry, have reached the point where you are because of competition, because you had to compete with the others and show you can play on this field. If we level the building code and make everything equal, fantastic, but saying that we give preference to one group or the other, that's where the rub....

Maybe that comes at the amendment stage, but that's where our heads are anyway, or mine is. I don't know; they probably don't want to associate with me, but that's where our heads are at the moment.

How much time do I have, Chair?

The Chair: You're all done, unfortunately.

Mr. Jamie Schmale: Okay. I'll let Ted ask a question.

The Chair: All right, Mr. Cannings, over to you.

Mr. Richard Cannings (South Okanagan—West Kootenay, NDP): Thank you.

Thank you both for being here today.

Perhaps both of you could answer this. We heard in our other study on value-added industries in the wood sector from Michael Green and Bill Downing about how the B.C. Wood First Act has helped in British Columbia to change that culture of looking to wood.

At least what I haven't really heard myself around this table is how the Quebec wood charter, the *Charte du bois* has changed things in Quebec. I wonder if you could comment on that.

Mr. Michael Giroux: I'm familiar with the *Charte du bois*. It had several layers.

One layer was that you must consider wood equally in public works in purchasing policies. Another level was that there was a greenhouse gas metric. Another level was a requirement to create *des grappes*. These are innovation clusters.

What's interesting about it—and it's moved forward very nicely, and there was an education component as well—is that it was a policy, nothing forced.

What's been interesting, and the same thing happened in B.C., is that it attracted the attention of the institutions, both educational and public, and we saw a groundswell of interest. Now we see buildings being built of wood all over the place because there is a renaissance driven by the acknowledgement of the importance of the industry and of an approach.

I would argue right now that Quebec is competing dramatically with B.C. to take first place on the innovation cycle in terms of wood products and building systems, and it's becoming very interesting not only in Canada but from a demonstration perspective for abroad.

Quebec is well ahead, for instance, on the commercial side, demonstrating the value of commercial buildings, and B.C., for a long time, was well ahead on mid-rise buildings. We've gone from zero five-storey and six-storey mid-rises to well over 500 across the country now.

Mr. Richard Cannings: Right.

Mr. Derek Nighbor: The only thing I'd add is that there is the 13-storey project as well, which been a big part of the Quebec leadership.

Mr. Richard Cannings: Right.

There's another question I'll ask both of you, and perhaps Derek. I'm not sure who would have more experience with this. One concern we've heard about the bill, especially from the government side, is about exposure to trade litigation when you start prescribing that you have to look at wood and some regions may not be producing wood, and so they would feel that there is a bias against them.

Have there been any examples you know of, from the experience of either B.C. or Quebec? I know that in Europe there are various policies out there. Have there been any examples you know of where there is—

Mr. Derek Nighbor: There was heightened sensitivity, given the current trade environment, but for the B.C. wood first policy which I would say is wood first versus carbon first to maybe simplify it, we have not seen significant challenge, but I'd defer to my colleagues from B.C. next to talk about if there's any historical...

Mr. Michael Giroux: I see wood product envy sometimes, particularly in the Atlantic provinces where they have 5% of the construction markets, through the Wood Works program, we talk about building taller, differently, more massive timber, but they don't produce it in those provinces. What's going to happen is when the requirements increase, we will see production in those provinces start up. That's the only thing that I've seen or I've heard, more product envy.

● (0930)

Mr. Richard Cannings: I know, we heard from Irving that they were going to Europe to look at these techniques and I assume they're thinking of—

Mr. Michael Giroux: Nordic structures is shipping shipping into the U.S. now. It is seriously looking at eastern Canada. It's coming because there is more demand, therefore, people are considering that entrepreneurial approach.

Mr. Richard Cannings: Speaking of exporting into the United States, you mentioned Michael Green exporting know-how. He testified here that he's providing know-how to an American group that's going to build a big engineered wood plant in Washington state. Is that something you're concerned about? Is Canada losing its...

Mr. Michael Giroux: Yes, bring it on. The more missionaries, the better.

Mr. Derek Nighbor: I don't think we're losing, but I think we're.... We were at an event in Toronto, and there was another architect from Blackwell's who was talking about a lot of the opportunity and some of the global experience. I think time will tell, but we're not concerned that we're falling behind per se.

Mr. Michael Giroux: The other thing too is that, in an area where we may have limited percentages of wood that can go into the U.S., the solution in that case is to grow the American market. The more you grow the American market, the more you can bring all sorts of product into it. That's what it's about. That's why we work very closely with the American Wood Council and WoodWorks USA. It's to really grow that market. That concern really shouldn't be one.

Mr. Richard Cannings: Okay. Perhaps you could comment on how you feel. We've heard from representatives of the cement industry that they consider there are new ways of doing cement that would score very well in these greenhouse gas emission tests. I'm just wondering how you see wood competing against that. They make claims that perhaps wood is overrated in that regard. I'm wondering if you want to comment on that.

Mr. Derek Nighbor: You can get into the code specifics, but I think this is where the technical and science work must rule the day. The example that was mentioned by that sector at this committee was an apples and oranges comparison, comparing a newer concrete structure to a 1980s wood home. That's simply not the reality.

There's this discussion about hybrids and all materials fitting and making a way, but wood has made such progress lately. There's a $20-million anti-wood campaign started by one competing material sector out of the U.S. I think we need to step back from the emotion of a lot of that stuff. Let's focus on the science and the technical work. That's why the code process needs to be pure and it needs to be focused on the technical work and the science, and the government procurement strategies to follow.

We're very confident, and that's why we're happy to talk about life-cycle analysis. We're happy to talk about science-based testing for GHGs and all that good stuff, because we know most days of the week we're going to win. That's the confidence we have in our systems and products.

The Chair: Do you have a quick question?

Mr. Richard Cannings: Do you think those life-cycle analyses and the tests needed are in place? Would that be a big thing?

Mr. Michael Giroux: Yes, there are tools in place. To that concrete versus wood thing, there are new standards in place at the ASTM level that force the comparison of similar buildings. The standards are in place. They're always being upgraded or updated, but they're in place and the tools are increasingly in place. We're not worried.

Mr. Derek Nighbor: There's a lot of experience to draw from in Europe on LCA, life-cycle assessment.

Mr. Richard Cannings: Thank you.

The Chair: Mr. Tan, go ahead.

Mr. Geng Tan (Don Valley North, Lib.): Thank you, Chair.

I'm going to share my time with my colleague, Nick Whalen. He may have one or two questions.

Mr. Nick Whalen (St. John's East, Lib.): Thank you very much, Mr. Tan. *Xiè xie*.

Mr. Geng Tan: I'm going to ask a couple of general questions of both of you.

The committee learned that buildings contribute 23% of Canada's overall greenhouse gas emissions. My understanding is that this number refers not only to the building material itself but also the human activities in the building and other items that are used in the buildings. We know that Canada's R and D in the area of wood products is driving innovation. For instance, it has enabled the creation of large and tall wood building structures. In our search for more and more applications for the wood products, we must not limit ourselves to the building construction materials. We must also consider the materials that are used inside the building. This includes furniture and other household items.

How can your council best support this kind of R and D of other items, not just building materials?

● (0935)

Mr. Derek Nighbor: A big need in our industry for the economics of it...you think of the lumber mills. They need to sell their chips and sawdust, whether it's pulp mills or other facilities that are going to turn those residuals into value-added products. We see significant opportunity on the innovation side related to the cellulose fibres and some of the innovative products those can get into. In some cases those will touch building materials. We're seeing other opportunities, as you mentioned, wood furniture, other value-added products.

The other opportunity we see in terms of GHG savings is that even just the prefabricated nature of the Structurlams can basically ensure that there are fewer trucks on site, less disruption in neighbourhoods, and faster construction. There is a huge amount of environmental benefit that comes with that as well.

Mr. Michael Giroux: There are a couple of impact levels that you're talking about. You're talking specifically about the operational level of these buildings, including what's in them. There is also the avoided carbon that's associated with the choice of materials. There are two parts, and when they're put together, you end up with a life-cycle analysis, a complete one that includes embodied and operational energy.

What's interesting right now is that you need a database of elements to support those types of decisions to move that forward. That database is called a life-cycle inventory. That is now under consideration at the National Research Council, and hopefully it is going to be properly funded. When you have that in place, you can make a decision relative to all those types of materials in the future. It's not just wood or steel.

Mr. Geng Tan: Thank you.

Mr. Giroux, you mentioned in your statement the need for updating building codes to allow more access to wood and wood products. I agree with that, but quite often the public perception is, I would say, nine-tenths of the reality.

What do you think it will take to convince the Canadian stakeholders, for example, firefighters and other industries, or even the government, that engineered wood or mass timber buildings are just as safe as concrete or steel buildings?

Mr. Michael Giroux: There is nothing that beats demonstration. At the end of the day, for some of these buildings, for instance Brock Commons and more buildings in the future, the fact that we have government funding partners who are willing to step into that demonstration world is really important, because once we show that it can built, once we bring those firefighters and the public into those buildings, they see it very differently. That's the opportunity, and we've been very fortunate with funders like NRCan, like BCFII, like MNRF in Ontario in the future, like Quebec. It's happening, we're demonstrating it, and it's being seen. It's also important for abroad too. We demonstrate here, and it becomes safe for consideration abroad by Canada Wood and other groups.

● (0940)

Mr. Geng Tan: Thank you.

Mr. Nick Whalen: Thank you very much, Mr. Tan, and thank you, gentlemen, for coming today. It's very informative.

At least from my perspective, I'm beyond the point of wondering whether or not we should support wood and other materials that reduce greenhouse gas consumption. I'm already there. Now I want to look a little more at the language.

Mr. Nighbor, you suggested that you don't want to get into amendments, but I need to. I'm looking at what I consider to be the spirit of the bill. I heard you say, Mr. Giroux, that the spirit of the bill is equal treatment for wood and not showing a preference. Can I get agreement from you guys that...

Okay, so when I look at what has been proposed to us, maybe I agree a little with Mr. Schmale on this that it goes a little bit beyond —

Mr. Jamie Schmale: Just a little bit.

The Chair: We're not in camera here you know.

Voices: Oh, oh!

Mr. Nick Whalen: The very first part of the proposed legislation focuses on the awarding of contracts.

I've heard a lot of people say that a great benefit to wood would be building codes and standards. Maybe RFQ requirement statements that are proposed by the ministry for a particular design or construction is a stage at which, if we demonstrated a requirement for wood and the means by which wood could be or should be required, it maybe would prevent a view that we're going to look at it at the contract award stage. That's when the lawyers in the room are thinking they might be able to make some money.

I know for wood guys for every problem the solution might be a hammer. I'm wondering what your thoughts are if instead of focusing on contract award we focused on the requirements. Would that meet your industry's needs? Would it be better balanced for equality? Do you think that would be within the spirit of the bill? Our changes need to be within the spirit of the bill.

Mr. Derek Nighbor: The short answer is yes.

Mr. Michael Giroux: Wood has to be considered early in the process, and must be shown to have been considered.

Mr. Nick Whalen: I have another very small question, if there's time.

The Chair: A very small one.

Mr. Nick Whalen: When I look at the B.C. act, I see that the spirit of the B.C. Wood First Act is to create a wood culture. It's very clear when I look at the language. The language of Mr. Cannings' bill isn't necessarily quite as broad. He appears to be more focused on wood being better at greenhouse gases, and we want to make sure that greenhouse gases count toward the consideration of wood so that wood is properly treated equally.

In your reading of the bill, I wonder if you would consider that it's really the focus on the greenhouse gases and not necessarily a global creation of wood culture as being within the spirit of the bill.

Mr. Derek Nighbor: Yes. I think it's two things. I think the two tests Mr. Cannings has in his bill around the LC, life cycle, the environmental, and the economic pieces are bang on. I think the profile that he's given, to Michael's point about ensuring that wood is thought about early in the process, to us is the spirit of the bill. That's why we would support it.

Mr. Nick Whalen: I share your view.

Mr. Michael Giroux: I'm less apologetic. Yes, that's probably where it should go, but I'd like to say that wood production is the only structural material that is exclusively Canadian owned and operated. At the end of the day, we have no foreign ownership of this or multinationals. I don't think we should be apologizing for wanting to support something that's Canadian, and proudly so. That's the balance.

Mr. Nick Whalen: I think east coast folks can make cross-laminated timber. I think we'll be okay on the east coast.

The Chair: Mr. Whalen and I have a different definition of a very small question.

Gentlemen, thank you very much. We're going to have to stop there. We appreciate your taking the time to join us today. Your evidence is interesting and incredibly helpful for us.

We'll suspend for a few minutes and then we'll get started with the second hour.

● (0940)

(Pause)

● (0945)

The Chair: We have two witnesses this hour.

We have Forestry Innovation Investment Ltd. with Michael Loseth and Sonya Zeitler Fletcher.

From FPInnovations, we have Mr. Martel, who I know has appeared before this committee before. He is joined by Mr. Lavoie.

Thank you, all, for coming.

For the benefit of those who haven't been here, and you heard me say this earlier, each group will have up to 10 minutes to make their presentation and then we'll open the table for questions with very strict time limits, I'm going to emphasize, just so everybody's paying attention.

Mr. Martel, you're the veteran, so why don't we start with you.

Mr. Jean-Pierre Martel (Vice-President, Strategic Partnerships, FPInnovations): Actually, he'll start first.

Mr. Michael Loseth (President and Chief Executive Officer, Forestry Innovation Investment Ltd.): I'd like to thank the standing committee for the invitation to appear today.

I'm Michael Loseth, the president and CEO of Forestry Innovation Investment. My colleague Sonya Zeitler Fletcher is our vice-president of market development.

Forestry Innovation Investment, or FII, is a crown corporation of the province of British Columbia tasked with developing and diversifying markets for B.C. forest products and with fostering innovation in the use of wood.

We're happy to appear before the committee to represent our perspectives and the experiences of Forestry Innovation Investment. It goes without saying that we're not here to speak on behalf of the provincial government of British Columbia.

In British Columbia and across Canada, forestry matters. In B.C., forestry is the largest economic sector. Thirty-six per cent of manufactured exports come from forest products. More than 60,000 people in B.C. are employed in the forestry sector, of which 12,000 are employed in value-added activities. Forestry supports over 7,000 businesses across British Columbia. These employees and companies are not just in rural communities. There are forestry jobs in virtually every community in B.C., from Vancouver to Vanderhoof and from Prince George to Penticton.

I believe it is fair to say that the 20th century was one that favoured concrete and steel. At the time, it was new. It allowed larger buildings to be built, longer distances to be spanned, and new architecture and designs to be realized. This was also a period of conspicuous consumption, often with little regard for the environment. Whether it was the buildings we built, the materials we used, how we insulated and heated those buildings, or the gas-guzzling cars that we drove, carbon emissions and the environment were typically not part of our thinking.

I also believe that in the 21st century we will do things differently, and we already are. In fact, we know that roughly 30% of our carbon emissions in British Columbia come from the built environment, and that has to change. We need more energy efficient buildings. We need to look beyond fossil fuels for the energy to heat them. We need to pay attention to the products that we use to build them. In so doing, why wouldn't we want to use a product from one of our greatest natural and abundant resources? Wood grows naturally from the sun, absorbs and stores carbon dioxide, and releases oxygen back into the atmosphere. Wood use in construction extends carbon sequestration beyond the forests and into the products and buildings that we make with wood.

In any discussion of or accounting for environmental footprint, we need to look at both embodied energy and operating energy, ideally using life-cycle assessment and scientific tools. The operating energy relates to the environmental impact of the heating, cooling, and operation of the building over time. Embodied energy relates to the environmental impact of the products that go into the building. The science is clear, and there shouldn't be a lot of debate. The important take-away is that both embodied and operational impacts matter and need to be considered.

We're not here today to encourage you to ban using concrete and steel or plastic and petroleum-based products. However, we do encourage this committee in its consideration of this bill to take a step forward in establishing a new and responsible lens to procurement decisions for federal buildings, a step that will help commercialize new innovations in wood and showcase those to the world.

As you may be aware, in 2009, British Columbia passed the Wood First Act. I quote:

> The purpose of this Act is to facilitate a culture of wood by requiring the use of wood as the primary building material in all new provincially funded buildings, in a manner consistent with the building regulations.

In our experience, the passage of this act did not eliminate the use of non-wood building materials. However, it does require government procurement officials and their design teams to ask themselves if they can use wood. Sometimes the answer is “no”, but often it's “yes” or “in certain applications”. In so doing, in British Columbia we have expanded the use of wood, not only in schools, universities, and government office buildings, but also in post-disaster facilities and first responder buildings where wood buildings are safe and resilient, meeting and exceeding the strictest fire and seismic requirements.

In British Columbia, the aspirational steps taken through the Wood First Act continue to make a difference today. Sure, some may grumble, but what I typically hear is that it doesn't hurt to look at wood and consider how it can be used. Use the right product for the right application, but look at all the alternatives, including wood. If it costs significantly more, or won't work for some reason, fair enough. However, projects should at least consider wood and the exciting innovations that are possible today.

In FII's world, fundamentally we work towards two key things. First, we work to help diversify markets for B.C. forest products, with a strong focus on expanding markets in Asia. Second, we work to foster innovation in how we use wood at home. In our experience, those two things are fundamentally and inherently linked. It's typically by first advancing innovation, using wood here at home, and demonstrating its potential that we then have the technical information and, frankly, the credibility to introduce those same innovations into our export markets. As those export markets consume more of our products and access our leading expertise, it creates more jobs for Canadians.

● (0950)

Therefore, how do we support innovation in the use of wood in British Columbia? It includes advancing building codes and regulations to recognize today's modern wood products and the engineering and performance capacity that those products and building systems have. It includes educating and sharing knowledge with the design and construction community on what is possible with wood.

We support technical research and demonstration to overcome any impediments that may exist and to advance the business case for new products and building systems, and we showcase what is possible to help commercialize new products and construction technologies. Because of our Wood First Act, that includes showcasing wood use and innovation in publicly funded projects.

Our programs and efforts in B.C. are closely aligned with federal government programs. Most of the activities I just mentioned collaborate with, share costs with, or draw on the support of existing federal programs, and those federal programs are extremely helpful. What the federal government is not doing, however, is actively showcasing the use of wood and new innovations in government-funded buildings. In our view, that's a lost opportunity.

If you go to our naturallywood.com website, we have a sampling of more than 80 projects in British Columbia where the government's commitment to support innovation has been put into practice, and buildings have been built. If you look closely, you will see glass, concrete, steel, and a range of building products in each of those buildings.

As I mentioned earlier, in our experience, it's not about excluding other materials; it's about putting wood on an even playing field and showcasing what is possible with modern products, modern design, and modern engineering.

In the couple of minutes I have left, I'd like to quickly look at a few examples.

"The use of wood honours our local culture and heritage. It also confirms our commitment to the use of sustainable resources," said the school superintendent responsible for Westview Elementary School. Six hundred and five tonnes of CO2 are sequestered in the wood in the building, which is equivalent to taking 128 cars off the road for a year.

Built to meet LEED silver-level certification standards, the design intent was to create a welcoming space that would be incorporated into the urban fabric of the city and would contribute to a positive profile for the RCMP.

While not a huge building, 835 tonnes of CO2 are sequestered in this building, the equivalent of taking 177 cars off the road for a year. In first responder buildings such as this, resiliency and performance during and after natural disasters is a key consideration. Wood can meet or outperform other options.

The design is focused on creating a warm, natural facility to reduce the stress of the experience for patients as well as on meeting rigorous building performance standards.

"The use of exposed wood in a project is one of the ways that we can improve conditions for our patients. Wood conveys a sense of warmth and comfort that supports the healing environment and improves the overall patient experience," said the VP of capital projects for this building.

It is not just about large medical buildings. Wood is used in small community facilities, like this first nations health centre. Universities are also embracing wood. After all, they are the brain trusts of today and are setting trends and training the leaders of tomorrow.

In addition to meeting regulatory requirements, this project minimized the environmental impacts by incorporating energy and water conservation elements as well as durable, non-toxic, low embodied energy materials, earning a LEED gold-level certification. This building is also designed to function as a post-disaster operations centre after a major seismic event.

We spoke a little about my last slide with some of the earlier speakers. Brock Commons Tallwood House is a mass timber hybrid student residence at the University of British Columbia, which at 18 storeys is the world's tallest contemporary wood building. Not only did this building allow for significant innovation, but it was built for less cost than a comparable concrete building. With advanced engineering and technology throughout, it's probably one of the safest buildings in the country today.

Canada has one of the largest forest resources in the wirld, and it is a resourcethat is managed in a fully sustainable way. Those healthy forests produce world-class forest products, which are then replanted for future generations. Although as Canadians we have a reputation for saying sorry don't believe that promoting one of our largest economic sectors to advance innovation and showcase what is possible using a sustainable and renewable building product is anything to apologize for. It's quite the opposite. I believe we should be bold and proud of how we lead the world in the use of wood.

Thank you.

● (0955)

The Chair: Thank you. That was right on time.

Mr. Martel.

Mr. Jean-Pierre Martel: Thank you, Mr. Chair, and members, for the invitation to present as a witness to this group. Our organization has presented a few times on other topics. We want to maintain our role as being kind of a third party, factual and science-based organization.

I believe everybody has a copy, French and English, of the brief. I will start in French and finish in English.

[*Translation*]

Good morning, Mr. Chair. Thank you once again for inviting me to testify before the Standing Committee on Natural Resources.

My name is Jean-Pierre Martel. I am vice-president, strategic partnerships, at FPInnovations. I am accompanied by my colleague Patrick Lavoie, our senior researcher, sustainable development. He is one of our researchers, one of our experts on life cycles and on the subjects we were talking about earlier.

At FPInnovations, our vision is of a world where products from sustainable forests contribute to every aspect of daily life, including housing and infrastructure. Our vision is for the long term, and we are working with all the various sectors to move that vision forward.

FPInnovations is a public-private partnership seeking to improve the competitiveness and accelerate the transformation of the Canadian forest sector. FPInnovations has 170 member companies. We have an annual budget of around $75 million and 450 employees in five laboratories, including one located in our headquarters in Montreal. There is another one in Quebec City. There is a big lab in British Columbia on the UBC campus. There is another in Thunder Bay, working on bioeconomics. The final lab is in Hinton, Alberta; it conducts research into forest fires.

● (1000)

[*English*]

On the next slide, slide 4, sometimes scientists make things complicated when we talk about carbon and the carbon cycle. The U. S. EPA some time ago developed a kind of common approach to try to explain how carbon works and how CO2 works. They call it the bathtub approach.

The bathtub is basically the atmosphere, and we're trying to achieve some level of concentration within the atmosphere. The faucet is basically what we put in. Emissions from the use of fossil fuels or deforestation contribute to bringing in more carbon or CO2 into the atmosphere.

With regard to dealing with it, one solution is to reduce the incoming, so turn off the faucet a bit. The other way is to deal with the drain. Drain comes from the absorption of CO2 by the ocean and by the land, of which the forest is a key part.

When we think about a bill like this, we take into account the role of the forest and forest products. It's important to consider where it fits in the global solution around climate change and CO2 mitigation.

For the next part, I'll leave that to the experts to talk about the forest carbon cycle.

Mr. Patrick Lavoie (Senior Researcher, Sustainable Development, FPInnovations): Thank you, Jean-Pierre.

Thank you, committee, for taking the time to hear this presentation. I hope to speak to the scientific argument under discussion, and hopefully we'll get more into the details in the question period.

If you look at slide 5, you will see a slide that's very similar to what Michael presented earlier with the forest carbon cycle. What's important to understand is that carbon by weight is made about 50% from carbon, and that carbon comes from the atmosphere. It's being drawn from the atmosphere. If you look at the top, carbon dioxide goes into photosynthesis, ends up in the material, and gets stored for a short-, medium-, or long-term period, depending on whether we use it in buildings, in fuels, in panels, or in pulp and paper. We do have some feedback cycles where, if the material reaches the end of life, it can be recycled into panels, and it can be used for energy recovery, so there are multiple feedback loops. It's that connection between the forest and the forest products that really can help make a difference in terms of the mitigation of climate change, as Jean-Pierre pointed out.

Turning to slide 6, there are a few levers of action that can be used to mitigate climate change. Essentially, I've identified three main ones, one being forest management. We can manage forests sustainably, as we do right now in Canada, and even more, intensify the forest management to increase the productivity of the forests, generate more lumber and more products from the forest, but also increase the forest carbon stocks. Research shows that it can be done, and it has been done elsewhere. Right now it's being more and more considered. In B.C. they have an approach to do that, and the same in Scandinavian countries.

There is one way to play on the carbon concentration of the atmosphere through the forest. We can also store some carbon in products. Buildings are an excellent example. Most buildings will last anywhere between 80 to 120 years, and that carbon doesn't go back to the atmosphere until we send it back there, either in the form of energy recovery or decomposition in landfills. There are multiple ways carbon is going to make its way back to the atmosphere and then re-enter that cycle again.

Finally, the last way we can make a difference in terms of concentration of GGs in the atmosphere is through the substitution of fossil or high embodied emission products, such as concrete, steel, and other building materials that are not renewable.

Those are the ways we can act and make a difference on climate change through both forest and forest products. As some of the previous presenters have mentioned, a positive side effect of that is that in doing that, we're generating revenues and jobs in Canada, because our companies are largely based in Canada.

I think it's important to point out, as I mentioned before, that carbon composes about 50% of wood's mass, which means there's actual carbon being stuck in the material. What's important to understand is that, when we harvest from the forest, most of that carbon is not in the material itself; it's in the soil and it's in the litter on the ground. It's being cycled in the ecosystem, so really, what we're doing when we're harvesting wood is taking some of the interest, but most of the capital stays in the forest. That's an important point to make that sometimes gets missed.

Slide 8 is a very good example of a life-cycle assessment, a life-cycle analysis, a case study of two functionally equivalent buildings. They are in the same area, and they are two very similar designs. One is a building made from concrete and steel, and the other is a CLT building. What the graph essentially shows is that the emissions that are generated in manufacturing the products that go into both buildings are significantly lower, 40% lower, in the wood building.

● (1005)

Jean-Pierre was referring to the faucet aspect. This is where that faucet is being turned off, so reducing emissions. The important point to make is that this is definitely not a building that has been optimized and is 100% wood. There are a lot of materials in this building, such as steel rebar, concrete, rockwool, and there is room for more optimization for biogenic and biosource products to enter those types of buildings in the future, as we continue to innovate.

Slide 9 shows two buildings representative of the buildings being built today. Those buildings are using common and standard products, yet more and more are working toward new generation biomaterials, insulation products, decking products, so all kinds of new wood solutions that will integrate more wood into our building systems in a safe manner, which is also code compliant.

I'll skip slide 10 and go directly to slide 11.

The results I have shown for building comparison is based on a very extensive scientific data collection. As Michael Giroux mentioned earlier, there are tools available today for industry practitioners to benchmark their buildings and do an assessment of the embodied emissions. The Athena impact estimator and the Canadian Wood Council and Cecobois have tools which are also quite good and very practical. It just goes to show that the information is there and the tools are there. It can always improve, but those are very good pieces.

I just want to leave you with something said by the IPCC, the Intergovernmental Panel on Climate Change, which essentially encapsulates what the main statement of the presentation has been. The biggest difference we can make in fighting climate change is by maintaining and increasing forest carbon stocks and at the same time producing a constant yield of products and materials. It's by adding those two elements that we can make the biggest difference.

I will leave it at that. Thank you.

● (1010)

The Chair: Thank you very much.

Go ahead, Mr. Harvey.

Mr. T.J. Harvey (Tobique—Mactaquac, Lib.): Thank you, Mr. Chair.

First of all, I want to thank all the witnesses for being with us today and sharing testimony on this important issue. It hasn't been lost on the committee regarding the importance of this conversation we're having around diversifying the way we look at structural opportunities, both in the public sector and private sector going forward, and how government can help shape the way that future looks.

My first question builds on some of what we heard from my colleague Mr. Schmale around the actual wording of the bill.

Bill C-354 puts the onus on the government to almost give preferential access to wood over other traditional building methods. I can start with FPInnovations or the Forest Products Association, but I want to get your take on whether you think that's the appropriate strategy. I also want to know whether you believe it needs to be identified as another building opportunity or another measurable way of doing construction, but not given preferential access, or if you think that maybe that increased onus should be based on a matrix that takes into account the total carbon sequestration over the life of the project.

Mr. Jean-Pierre Martel: You can start, Michael.

Mr. Michael Loseth: I can at least speak from my experience in British Columbia. The Wood First Act in British Columbia is fairly strongly worded around requiring the use of wood and developing the wood culture.

I don't know that I have a lot to offer you in wordsmithing. I think there are a lot more experienced people in developing legislation than I am, and whether it's “requiring” or “encouraging” or “providing preference for” or “an initial consideration of”, I think I'll leave to others. However I do think it's important in whatever this bill moves forward to still have some strongly worded direction. In my experience in British Columbia, there were a number of unintended impediments that we identified after the Wood First Act was put into place I can give you an example.

Without some strong pressure and some clear direction to government ministries and public works, these may or may not all be addressed. For example, in British Columbia when we looked at schools.... I showed you an example of a school. The Ministry of Education started to look at what building products were being used in B.C. schools. They found there was a lot of concrete and brick and steel and such, so they started to ask the question, why aren't we seeing more wood buildings?

Building codes allow for the vast majority of school types, and the size and shape and what have you, but it wasn't happening. It wasn't until the ministry was forced to go back and really start to peel it back that they identified their costing models and the project planning systems that they had with the individual school districts were all developed and based on building a concrete school.

When those school districts went through the process and provided all the required information back to the Ministry of Education, of course, more often than not they fell back to the concrete buildings, which was how the system had all been designed and set up. It wasn't until they started to change that and opened it up to be far more product-agnostic , and to look at wood to see where wood was being unnecessarily excluded from the process, that it changed.

Now we're starting to see a far better balance. Not every school in British Columbia is 100% built with wood, but there are more that are being built with wood, and those unintended impediments that existed in the system are being dealt with.

Mr. Jean-Pierre Martel: Our role as FPInnovations is basically providing science and facts to support decision-makers, designers, and architects, and so on in terms of what they're going to do. We don't get into the policy and the amendments as such. I think I'll leave that to you, the experts, to do that. What we're trying to do is really provide facts and develop new products.

One of the realities as well is that because of new building systems, because of new building materials, such as cross-laminated timber, now wood is being used in other.... It used to be only residential low-rise, and now, because of new systems and new building products, it opens the door to all kinds of new applications such as residential and non-residential, mid-rise, and tall wood. Our role is making sure that it meets all the specifications and also meets the requirements in terms of safety, acoustics, structure, and so on. Our role is really to provide that support.

We believe that because of those changes that have happened over basically the last 10 to 15 years, we get into those markets where people see competition where there should not be competition. Driving a culture of wood, I think, is what we're basically supporting by providing facts and data and science as supports.

● (1015)

Mr. T.J. Harvey: Based on the data and knowledge that are out there already, where would you identify the biggest potential growth opportunity for the use of these types of alternative structures—in federal and provincial procurement opportunities for government buildings, large-scale commercial, or tall wood residential structures?

Mr. Jean-Pierre Martel: I don't have all the most recent data. When you look at the potential for growth in Canada and also in North America more broadly.... We talked about mid-rise in terms of volume, but I believe that governments have a *devoir d'exemplarité*. I am not sure how you translate that, but as an organization you need to act by example—maybe that's the translation—and show what's possible and open the doors to some of those potential new buildings and new applications. Once again, we believe strongly that wood should stand on its own merit because we have facts to support it in terms of structure, in terms of fire protection, and so on.

I think the government has *un devoir d'exemplarité*. The role of the government is to act by example and demonstrate value.

Mr. T.J. Harvey: Based on that, quickly, before I run out of time, Chair—

The Chair: I'm just going to leave that.

Voices: Oh, oh!

Mr. T.J. Harvey: I have a really quick question based on what he said about governments leading by example.

Have you found in British Columbia that there's a social licence factor to this, to the use of alternative structures with wood, in terms of society buying into that concept? Is that something that's been measurable?

Mr. Michael Loseth: Absolutely—

The Chair: You're going to have to answer that in 30 seconds, and I'm serious.

Mr. Michael Loseth: If you look at British Columbia, you'll see that 95% of the forest lands are owned by the government and, frankly, are a public resource. Producing more products, advancing innovation, using wood in interesting and expanded ways, and generating greater value out of that resource of course generates greater value for the public resource and provides additional dollars for hospitals, schools, highways, and all that fun stuff.

Mr. T.J. Harvey: Perfect.

Mr. Michael Loseth: There's a definite link, absolutely.

Mr. T.J. Harvey: Thank you.

The Chair: Thank you.

Mr. Falk.

Mr. Ted Falk (Provencher, CPC): Thank you, Mr. Chair, and thanks to all our presenters for their presentations this morning. They were insightful, thoughtful, and passionate.

Mr. Loseth, I think you had a very passionate presentation, and that's why I'm going to start with you. I think you've earned it.

A lot of the presenters we've listened to seem to base their presentation and their rationale and argument on the fact that wood absorbs CO2 and greenhouse gases. Just as a matter of clarity—because if you build with wood you're going to be absorbing and sequestering all this carbon—does wood continue to absorb carbon once it's been used in a building?

Mr. Michael Loseth: Yes. Let me just back up a minute—

Mr. Ted Falk: Yes? The answer was—

Mr. Michael Loseth: The product that is in the building does not continue to sequester carbon. The carbon is sequestered during the growth of the tree, and then it continues to be stored in the products that are used in the building. When forests are harvested in Canada, they're replanted and regenerated, so those new healthy trees are continuing to sequester new carbon out of the atmosphere while the previously harvested products continue to store the carbon from previous periods.

Mr. Ted Falk: See, if I want to take the advocate position here.... A lot of the presenters have almost given the impression that wood is going to absorb all this carbon and that's why you need to use wood, but I would say that once you shoot the cow, it doesn't produce milk anymore, right? That kind of works for me. I understand that. If I were to argue the position of sequestering and absorbing carbon, I'd say to leave the forest intact, and it would actually work against your argument.

I see that Mr. Martel is eager to respond to that. That's great, because—

● (1020)

Mr. Michael Loseth: I would like to respond to you quickly before that.

I'm not a scientist and I'm not a forester, but the basic fundamentals are fairly straightforward. As a forest grows and ages, like all living things, of course, trees will eventually die. When they die naturally in the forest, they will decay, and they will emit the carbon that was stored during their lifetime. If you harvest trees before that, as they're reaching the end of their life, you take the product, produce wood products, put them in buildings or other applications, and you continue to sequester the carbon that was in those original trees.

What you are doing, as I've said, is that you're replanting the next forest. Young healthy forests sequester a lot more carbon than old dying forests. It's not just one cycle. It's a continuous cycle. That's one of the strong reasons the forests in North America and around the world are such an important element of sequestering carbon and in our carbon action requirements.

Mr. Ted Falk: Good. You've done a good job of articulating that. Thank you. I wanted to give you the opportunity to do that today.

You've also shown in your presentation here that the buildings that have been constructed using structural timber, mass timber, or laminated timber, whatever you want to call it, are all government buildings. One of the comments you made about the Brock Commons facility is that it actually came in cheaper than a traditional concrete and steel building. Why do we not see the private sector using wood structure buildings like this if that's really the case?

Mr. Michael Loseth: We are. The images I showed you today were really focused around public buildings in British Columbia because that was the focus of the bill in front of this committee. I could easily have shown you a number of other examples that are being driven by cost, performance, versatility, and aesthetics where the private sector is using wood.

Here's one example for you. In 2009 British Columbia changed the building code to allow five- and six-storey residential construction. Since that time, there's been a significant growth, commercial growth, in using wood for five- and six-storey construction, and it's because of affordability concerns, costs and savings, and environmental performance. Last year, more than 80% of five- and six-storey buildings in British Columbia were using wood, whereas in 2009 it was zero—

Mr. Ted Falk: Good. Thank you.

I have to cut you off because Mr. Martel wants to weigh in on this. I'd be curious to listen to him, but it's important that the committee note that wood should be able to compete on its own. From the testimony you're giving, you say that wood can and will compete on its own. When we look at this bill, some amendments are definitely needed in order for us to all get on the same page to support it, where it's a fair competition for concrete, steel, and wood and the benefits of each need to be considered. As Mr. Cannings in his bill has said, there needs to be that analysis.

Go ahead, Mr. Martel.

Mr. Jean-Pierre Martel: First, I'm a forester by training. Your explanation was very good, so I don't have to repeat it. You did very well.

Actually, people look at forests more as a straight Polaroid picture than a video. Nature is a living ecosystem. It goes up in fires, has insects, and whatever. They are not static ecosystems; they are living ecosystems. That's one thing.

A second part of your question was about wood standing on its own merit and whether there are private buildings. We referred earlier to two buildings: one in Quebec City, a 12-storey building, and an eight-storey building that is one of the largest projects in downtown Montreal, in Griffintown. Both are private investments. Both actually sold out pretty quickly, especially the one in Montreal, because they marketed the aspect of wood, carbon sequestration, a different type of living, and the numbers show that they are also competitive in terms of cost.

One thing, though, that we need to be careful not to forget when we talk about Brock Commons, the first wood building in the world that is that tall, is that when the builder looked at this, he saw it was a new system and he needed a premium in order to get ready, but once more and more of those systems were in place, the cost would go down significantly.

We have to make sure we compare oranges with oranges and apples with apples. In this case, when you have a new system in place, the first one will be more costly. As you get more experience, the cost will go down for sure.

● (1025)

Mr. Ted Falk: Good. Thank you for that.

It is important that we recognize there's a place for all our natural resources. Whether in the building trade or elsewhere, we need to value and protect them. There is a place for wood, and it can earn its way into the competition, just as concrete and steel have over the past.

Last week I sat in a timber frame restaurant. It was beautiful. I was sitting with three other couples and my wife. There was a loud noise, and we asked what it was. The timber frame was cracking. Apparently it does that once in a while. When the timber cracks, it sounds like a high-powered rifle going off. There was discussion, then, around the safety of wood construction from a structural perspective.

Do you want to address that at all?

Mr. Jean-Pierre Martel: I don't know the specifics of that, nor the restaurant, but in terms of the quality of the product, in drying wood, wood is a living material as well. We try to dry it down to a certain level. After it gets into an environment, things change, and when you look at the structural side, that is taken into account. I would not be that concerned, actually, but when living material is being tested, we understand that it's living material.

I haven't seen too many wood buildings that have collapsed.

The Chair: Thank you. We're going to have to stop there and move on.

Mr. Cannings.

Mr. Richard Cannings: Thank you for being here today.

I'm going to start with Mr. Loseth.

First, as a comment about the concrete schools you mentioned, fairly recently in Penticton they demolished my old high school, Princess Margaret Junior Secondary School, and rebuilt it as the most depressing looking concrete building—with all due respect to Mr. Falk and his aggregate business. The school looks like a prison, and I don't know what the students who go to good old Princess Margaret think these days, but this is only a few hundred metres away from Structurlam's plant. Why they couldn't have built a beautiful wood school, I don't know, but I would just make that comment.

I want to pick up on trade. You were talking about international trade. First of all, I've been asking various witnesses about the concern around exposure to international trade litigation if certain products are specified in a project. Are you aware of any problems that British Columbia industries have encountered with that because of B.C.'s Wood First Act or any other issue?

Mr. Michael Loseth: As the committee will notice in B.C.'s Wood First Act, it speaks to placing a priority on the use of wood; it doesn't say B.C. wood products or wood species. I understand that there are interprovincial and WTO requirements where there are limitations on specifying a particular jurisdiction's wood. In British Columbia, that's not the case, and to my knowledge there has been no formal legal challenge on anyone against trade rules and this act.

There are other jurisdictions that also have similar policies. There is Japan's act for the promotion of wood in public buildings. There are wood encouragement policies in various states in Australia, in Tasmania.

I'm not aware.... I'm not involved directly in the international trade relations group, but there's nothing to my knowledge.

Mr. Richard Cannings: You spoke of other use of wood promotions in other countries. Have British Columbia industries, and specifically around mass timber technology, been able to take advantage of those? In Japan, I know they are talking about building very large buildings. Is British Columbia seeking opportunities?

Have British Columbia industries, and specifically around mass timber technology, been able to take advantage of those? In Japan, I know they are talking about building very large buildings. Is British Columbia seeking opportunities?

Mr. Michael Loseth: Yes, very much.

We in British Columbia have very active programs to promote wood products in various markets, in Asia, China, Japan, Korea, India, for example. The innovations that we invest in at home in British Columbia are absolutely critical to the work we're doing to try to advance wood use and expand opportunities for B.C. companies internationally.

As I mentioned briefly in my opening comments, we're able to demonstrate what is possible. We're able to use public projects and other projects to showcase and demonstrate the opportunities to use wood and build credibility. We can go to China and say, “Take a look at how we build five- and six-storey wood buildings. Take a look at how we built this 18-storey wood building in British Columbia. You have very specific needs around increasing densification of housing and such. Why don't you look at these things?”

We often get a very open response saying, “I would like to come to British Columbia. Would you show me what you're doing? Can you take me through? Can you introduce me to the architects and engineers and design and construction teams that have built these projects? We would like to learn more, and then in turn we would like to start doing that. We will use your engineered wood products or your lumber products to help us to build these kinds of projects in China or Japan or what have you. It's very important for us.”

● (1030)

Mr. Richard Cannings: Thanks.

I'd like to move on to Monsieur Lavoie and pick up on some of the questions that Mr. Falk had around the sequestration of wood. You have your pie chart on page 7 showing that the tree biomass is a small part of the carbon that is sequestered in forest.

I am wondering if you can comment on some concerns that I hear. I am an ecologist by trade. People are concerned about the forest harvest process disturbing the soil organic matter and the litter, and then the burning of dead wood and scrap material after the forest harvest has taken place, negating some or a significant part of the sequestration that then takes place.

I wonder if you could comment on that concern.

Mr. Patrick Lavoie: Sure.

The representation that Michael presented on carbon cycle plateauing I think is very accurate. What happens is that when we take out some of the biomass in the forest, it is going to buildings, but that doesn't mean that the 80% in soil and that organic matter or litter are untouched. There are some emissions that are related to forest activities in terms of ecosystems.

What the science shows is that after a period that ranges between 20 and 30 years, that small carbon debt that results from disturbing the environment locally and pulling the biomass is payback. After 20 or 30 years, and understanding that forests are harvested over long periods of time and grown over 75 to 80 years, we do have that 50-year period where we are increasing that capital, that carbon that's present in the ecosystem.

Mr. Richard Cannings: Are there forest practices that would shorten that period, and are they part of the...? We always hear about the forest certification process. Are we moving toward better practices that will minimize that loss?

Mr. Patrick Lavoie: In Canada we're moving to regulations on forest activities that are very strict compared to those of most countries in the world. It's one of the most strict in legislation. The kind of research being done both at FPInnovations and the universities we partner with, that I'm aware of, is we're looking to use better species, species that grow faster. We're not talking about gene manipulation. It's just natural selection of trees, better management practices around pre-commercial and commercial thinning, just to make sure that the forest is growing healthier and that the trees are grown as efficiently and quickly as possible. That allows for the production of the maximum amount of lumber while leaving other areas protected and untouched. Most of our forests in Canada are managed forests.

Mr. Richard Cannings: Thank you.

The Chair: Thank you, Mr. Cannings.

Mr. Serré, and then when you're done we're going to go in camera.

Mr. Marc Serré: Thank you, Mr. Chair.

I want to go back to Mr. Falk's comment. I've been in concrete buildings that had a big gap in the foundation, cracks. If it's not built properly, if it's not engineered properly, whether it's wood or concrete, it's a problem.

● (1035)

Mr. Jean-Pierre Martel: Yes, it has to be done properly in both aspects.

Mr. Marc Serré: I want to talk about innovation clusters, but first I have another question.

[*Translation*]

I would like to talk about the National Building Code and the supply system.

Mr. Canning's Bill C-354 talks about a preference. The idea of preference seems to be a problem. Other witnesses have alluded to fairness in terms of steel and concrete, as you have yourselves. But wood currently does not enjoy the same fairness in the National Building Code and the supply system.

Could you give us some examples that involve those two materials and tell us how we ensure a balance?

Mr. Jean-Pierre Martel: I feel that my colleagues from the Canadian Wood Council would be better able to give you an answer on that, because they take care of the interface with the national building code.

We provide the information needed for wood to be recognized for use in 10- or 12-storey buildings. We work in co-operation with the National Research Council of Canada on structures and on fires, and we provide the arguments to support the performance of the buildings.

So, as for the code, I feel that my colleagues from the Canadian Wood Council would be better able to answer your question.

Mr. Marc Serré: If there were a better balance between the national building code and the supply system, you would be better placed to achieve fairness without the need for preference, and you would be able to compete more fairly in the private sector and in other sectors. That is essentially what you are saying.

Mr. Jean-Pierre Martel: Yes. The thing is that, in some sectors, wood is not accepted. Instead of evaluating the performance of wood as a material in construction systems, they prefer not to consider it. So I feel that the value of the bill lies in the fact that it will make wood a very competitive material once again, one that is also positive in terms of the environment.

Mr. Marc Serré: For Mr. Cannings' bill to get more support, there is talk of grouping companies into clusters. You talked about centres of innovation in Vancouver, Hinton, Alberta, Thunder Bay and Quebec City.

In Budget 2017, our government invested $39 million in the Green Construction through Wood program, GCWood, and the centre in Thunder Bay has signed on. Do those initiatives help you with innovation and competitiveness, as they have helped other sectors in the past?

Mr. Jean-Pierre Martel: Absolutely.

In research and development, it is all about the financing, pure and simple. If you want to make a sector competitive and to transform it, you not only need research and development, you also have to be able to roll out a new process, a new product, and to reduce your risks in the marketplace. Investment from the federal or provincial governments, in partnership with the industry, is important not only in order to develop new products, but also in order to bring them to market, to eliminate the risks, and to work with possible users, such as architects, designers, and promoters, wood promoters in this case.

About a month ago, we opened a pilot plant in Thunder Bay, TMP-Bio. It uses an enzyme process that allows us to make sugars out of cellulose. From the sugars, we produce biochemical products that will replace fossil fuels. We are opening a very different market, a huge market, where biosourced products will play a role in the future. However, it will not happen overnight. We will have to show that the process can work and to reduce the risks that those new products may pose on the markets.

Mr. Marc Serré: When we talk about business clusters, we are talking about areas of research and development, innovation and production, and commercialization. Take Cosia in oil production, for example. This is currently one of the best clusters in the country in product diversification.

In your case, what can be done in terms of commercialization, to encourage the wood products industry?

Mr. Jean-Pierre Martel: Some already existing programs, including those run by the Canadian Forest Service and by Natural Resources Canada, really allow us to eliminate the risks that these products might pose, to open a pilot plant, to develop a laboratory process, to produce it and to eliminate the risks that might accompany it. There are already programs that help us in that regard. An example is the Investments in forest industry transformation, IFIT, program.

They have also launched a program called the clean growth program that will help to eliminate the risks that some technologies pose, and to smooth the path to commercialization. If we are all about innovation, we are going to have to reach the commercialization stage in order to have an economic and socio-economic impact on employment and to create economic activity. Besides, the role of governments is often to eliminate the risks associated with those technologies and those new products.

● (1040)

Mr. Marc Serré: I only have one minute left. Have you given any thought to the role of women, and of indigenous people, in the non-traditional trades? Have you any examples of the ways in which women and indigenous people can be encouraged to become architects and engineers in the industry?

Mr. Jean-Pierre Martel: I feel that my colleagues from the Forest Products Association of Canada could talk more about that. It is about the workforce, and diversifying the workforce in order to bring people to work in our sector, which is considered a traditional one. But it is not traditional. In terms of new product development, we are dealing with cellulose nanocrystals, cellulose filaments, sugars and new construction systems. It is attracting young people with a lot of potential.

We have had a program providing technical support for indigenous people for 10 years. Our Indigenous Forestry Program was launched in British Columbia and allows us to work directly with the communities to discover business possibilities. We are trying to eliminate the risks and to provide technical support to that development.

We have had a lot of success. We could provide you with a presentation completely on that topic if you wish. It would be our pleasure. We have had a lot of success and we are trying to extend those investment principles and technical assistance across the country. We have already talked to the people from the Standing Committee on Indigenous and Northern Affairs and to the Canadian Forest Service. We are trying to disseminate our very positive experience with the communities and to extend the principles, the program and the success to other provinces.

Mr. Marc Serré: Thank you.

[*English*]

The Chair: We're going to have to cut it off there, unfortunately.

Thank you to our witnesses for joining us today. It was very helpful, very interesting, very educational, but that's all the time we have, unfortunately. It's the nature of what we do here. We run too short of time too often, so I apologize for that.

We're going to go in camera for some very brief committee business. We'll just wait a moment until we clear the room, and then we'll get going.

[*Proceedings continue in camera*]