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Mr. John Aldag

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● (1535)

[*English*]

The Chair (Mr. John Aldag (Cloverdale—Langley City, Lib.)): Good afternoon, everyone. Welcome to our guests. Thank you for coming to our session.

We are in the middle of a study on clean growth and climate change in Canada. The area of focus that we're looking at right now is forestry, agriculture and waste.

There are three groups. Biological Carbon Canada, Bon Eco Design and Forest Products Association of Canada.

Each group will have 10 minutes for opening comments. Next, we'll move over to our rounds of questions and answers. Pretty much every member will get six minutes.

I have these handy cards. When we're down to the last minute in your time, I'll hold up the yellow card. That's just to signal that you have a minute left. Then when you run out of time, I'll hold up the red card. That's for the members as well. You don't have to stop dead in your tracks, but wind up your thoughts and then we'll move on to the next set of questions.

Welcome to Ms. Stubbs and Mr. Nuttall, who are replacements here today, and to Mr. Casey, on the Liberal side.

Biological Carbon Canada, we'll get started with your 10 minute opening comments.

Mr. Nevin Rosaasen (Chairman, Biological Carbon Canada):

Thank you very much, Mr. Chairman.

[*Translation*]

Good afternoon, everyone. Thank you for this opportunity to talk to you today.

[*English*]

Mr. Chairman and committee members, our presentation is along the lines of Biological Carbon Canada's perspective on the questions before the committee. We would like to concentrate on adaptation and emission reduction strategies.

Biological Carbon Canada is an Alberta-based, multi-sector, non-profit society working to deliver real carbon reductions from Canadian forests, farms and ranches. We seek to be the conduit and facilitator in connecting business and research. Alberta has the innovation and the skill to scale what we know can be done across all of Canada.

Our members have been working to reduce greenhouse gases since the Government of Alberta created the first North American compliance carbon price regulation and offset in 2007. Alberta farms and businesses are leading Canada in reducing carbon emissions. Since Alberta's offset system was implemented in 2007, we have created, serialized and sold 14.7 million tonnes of CO2 equivalents, with half of this through our members.

Why are we here? Simply, Ottawa, we have a problem. Canada, we have a problem. We, as Biological Carbon Canada, along with our members here today, have a solution.

Canada has agreements to drop emissions by the year 2030. Canada needs to remove 89 million tonnes from large final emitters, and through provincial measures. Canada also needs to remove another 86 million tonnes from coal-use elimination, clean-fuel use and energy use in light industry. The last 44 million tonnes that you wish to remove, and that we need to remove, is targeted to come from technology improvements and carbon sinks.

Biological systems in Canada and carbon markets are part of this solution. We're here to help.

We believe that with biological offsets, a Canadian carbon market and new expanded protocols, the biological and unregulated business sector in Canada can deliver between 42 million and 45 million of those tonnes by 2030. Because of the soils, 37 million tonnes will actually come from western Canada.

We believe that if the reductions from biological systems are achieved, the economic stimulus is estimated to be $33 billion in new GDP and 308,000 new jobs.

Our members reiterate that we can adapt. We're going to elaborate a bit more in the area of the carbon sequestration potential for 2030.

We know that we can capture 29 million tonnes with advanced protocols covering smart cropping production. We know that we can capture 1.5 million tonnes with advanced protocols covering smart livestock production, and that we can capture 15 million tonnes with advanced protocols covering smart land and sinks—but I digress.

First and foremost, I'm a fourth-generation food and fibre production engineer from eastern Saskatchewan. My family has been farming since 1904, and I want to describe to you a little bit of what you see in regard to production systems across western Canada and the prairies.

We are using precision-guided equipment with GPS satellite technology to ensure that we have less than an inch of overlap. It's down to an inch of precision. You hear about autonomous vehicles and cars. We've been living in that environment for the last 10 to 15 years. All of our equipment is precision-guided.

What does that allow us to do? It allows us to eliminate that overlap and that duplicity of applying nitrogen twice. Not only does the GPS-guided equipment we're using eliminate overlap, but our machines—our air seeders and our planters—now have the ability to shut off individual sections at the five-foot level, so that you're not.... When you come into a wedge-shaped triangle, or you're going around trees, we have what's called sectional control technology. We can get that down to the single opener that lifts out of the ground to reduce the draft requirements on the tractors, resulting in more emission savings.

When the boot or that seeding tool is in the ground, that fertilizer is being placed so precisely, an inch below and to the side of the seam, that the pearl of fertilizer is being used to its maximum efficiency. Couple that with the soil sampling we're doing.... You look at how we look at fertility requirements, much like you would do in livestock operations. For specific plants, we're able to match that fertility right to the plant's needs.

We're going to get into this more, with regard to how, with precision cropping, we can change rates on the fly, using software with prescription mapping. This is commonplace. It isn't adapted all across, but this is what we're referring to when we talk about smart cropping systems.

To fully capture the 29 million tonnes that Canadian agriculture needs to capture, we need funding to develop and refine the evolving science, and carbon markets. To accomplish this, we will also need to update the direct seeding, or conservation cropping protocol, to cover all of the soil zones across all of Canada. The robust nutrient stewardship protocol also needs to have some expansion done. This is called the NERP, the nitrous oxide emission reduction protocol, or the 4R nutrient stewardship system.

We will also need the people and the science to integrate this new science into these protocols, and increase satellite imaging technology to assist in verification of measurements. We're also going to need to invest in the people, the science and adapting this new science.

With that, I'm going to share the remainder of my time with my colleague, Don.

● (1540)

Mr. Don McCabe (Director, Biological Carbon Canada): Thank you, Nevin.

Hello, members of the committee.

The Chair: There's no translation.

Okay.

Mr. Don McCabe: My name is Don McCabe and I'm here as an Ontario farmer, the third generation on the place that we call home right now, and five generations in our time in Canada.

The Chair: I'm sorry to interrupt, but for anybody who may need help with translation, I'd encourage you to use your devices because we will be back and forth in French and English somewhat today. If anybody needs help, just raise a hand and we'll make sure you get the assistance.

Please proceed.

Mr. Don McCabe: Third time's got to be the charm.

The Chair: Absolutely.

Mr. Don McCabe: I'm Don McCabe and I'm a farmer from Ontario.

The reality is, as Nevin has pointed out, Canada has a problem and there are solutions on that landscape. That landscape can be used to a maximum efficiency, but it's also animal production. I know that cattle, in terms of greenhouse gases, have been nailed for being terrible and we shouldn't be eating beef and all the rest of it, but I'm here to offer a different story.

We feel there is 1.5 million tonnes that can be brought to marketplace if it existed to address that. The reality with those ruminants is that their first stomach does enteric fermentation. They are able to take cellulosic material, as in grass. They have four-wheel drive and they can go up the sides of hills that I can't go up with a tractor and bring that cellulose back. By the time it's back it's been turned into protein and milk that I want to use. We can reduce that enteric fermentation with technology that's now emerging in the marketplace.

At the same time, there is some stuff that comes out the back. The bottom line is it's sometimes labelled as waste. I'm here to tell you agriculture doesn't have waste. We only have underutilized, underpriced opportunity, because waste usually means it's useless. Those are nutrients and an energy source which again, we can harness to go to the future.

In the process of moving through all these different processes that Nevin has touched on and I've highlighted on the livestock side, we need to extend further into the issues of the yield of our crops, which are expanding rapidly. I will give you Ontario stats, because they are what I'm most familiar with, but they are also a symptom within the country.

Between 2011 and 2016, we were losing in Ontario 350 acres a day, according to the census—and before that there were higher rates of land loss—due to urbanization. If it had not been for the yield increases that we are now seeing, whether it's canola or corn, wheat or soybeans, or all the plethora of crops, we would not be able to do what we do in Canada.

With those yield increases, it has brought us more residue. From the issue that we've harvested, first, the crop, now we have the leftovers, and there's too much residue there. That means it's a problem for the farmer. Society doesn't know and doesn't care. It's our problem to solve and we wish to offer you a solution.

That solution will be using those residues in the forms of bioproducts. We can cascade down through from composites, to chemicals, to fuels, to methane, and finally, if we make an electron, we've blown the energy system and we've got to return to it all.

You, with the power that you have, can give us an opportunity to get a framework and bring a greater 30% contribution to our intended nationally determined contribution that will be discussed in Poland next week.

Canada is embarrassing itself by not harnessing biological systems that we have in place. We're here to offer you this opportunity with a bit of ingenuity.

Thank you for your time.

● (1545)

The Chair: Thank you so much for those opening comments. I look forward to the discussion that will follow.

We're going to move now to Bon Eco Design.

You'll have 10 minutes for your opening comments.

Ms. Carolyn Butts (Co-Owner, Bon Eco Design): Hello, my name is Carolyn Butts. I'm here with my partner Hans Honegger.

Thank you for inviting us to join you at this table to tell you about our experience in exposing value in waste materials. I believe that this is how we will change our minds about garbage.

I'm an artist with a business degree, and I would like to show you how we apply art and design to turn waste into profit. It is in this pursuit that we have been a witness to the cycle of consumption and the industries that mitigate and support it.

In 1990, a massive tire fire at Hagersville, Ontario woke me up to our waste crisis. Some of you may remember the footage of black smoke drifting for kilometres over a mountain of burning tires for 17 days. It was my call to action and my immediate response was to take my own used car tires and turn them into art. This tragic event ignited my imperative to search for value in discarded materials.

In 2005, restoration architect Hans Honegger and I joined creative forces together in rural Ontario, located between Ottawa, Toronto and Montreal. Together we own and operate Bon Eco Design, a small but growing business in Tamworth, north of Napanee. In Tamworth, we found an affordable historic building stock to restore and renovate at a pace that we could keep. The vacated Tamworth hardware store became our home and workshop.

We named our business Bon Eco Design, an ecological twist on the famous Bon Echo Park close by. With this reference, we understood we were setting a standard to consider our iconic Canadian wilderness when making business decisions. To this end, our design business makes material matter.

We have dedicated the past 13 years to researching, sourcing, educating ourselves, and transforming waste into valuable art and design products while changing perceptions on the concept of waste. Here are a few examples of our work.

This is a tire art piece commissioned by Eastman Chemical Company in Tennessee.

An hon. member: [*Inaudible—Editor*]

Mr. Hans Honegger (Co-Owner, Bon Eco Design): Why not?

Ms. Carolyn Butts: Pool filters, which are normally sent to landfill, become an indestructible animal enrichment device for a captive primate study. We have a few.

Last year, I searched for one or two refugee women to help fabricate one of my products and in the process, helped them settle into Canada and earn an income. This initiative turned into a social enterprise of eight women. We are currently applying for our articles of incorporation for a working co-operative. The Begin Again Group represents new beginnings for the women and the material. I have a rubber bag sample here you can take a look at later.

Bon Eco Design is expanding to include other restored historic buildings in Tamworth into a complex of spaces for collaborative design work and accommodation for others interested in joining our pursuit of discovering creative solutions for our waste problem. In 2012, I was encouraged to join a local concerned citizens committee to help increase the resistance against a proposed mega landfill. The site was located next to a closed, yet leaking, landfill in Greater Napanee near the 401, which is upstream from the Mohawk territory. The relentless researching by the committee exposed inadequate monitoring of the closed site and negligence by the waste company to determine the extent and the threat of the contamination. On top of this, I discovered the practice of collecting and depositing of landfill fluid, called leachate, through municipal water filtration plants. Thousands of chemicals and heavy metals make their way into our waterways and onto our fields as septic sludge fertilizer.

Being a witness to the garbage industry enlightened me to the extremely lucrative business and questionable practices of land-filling. Waste disposal is essentially a trucking operation. I have been privileged to the tactics of waste hauling companies to bribe, wait out and wear down small communities, but communities are fighting back. These companies are finding themselves up against intelligent and tenacious citizens, proving that their practices contaminate air, land and water, thereby destroying their economy and living conditions for many centuries.

In summary, the decades following the Hagersville tire fire saw the introduction of provincial regulations. As a result, most tires are now collected with a payment incentive, recycled into landscaping products, roads, flooring or sold abroad. I've been a witness to this cleanup effort since 2005. I don't believe our tire disposal issues are solved completely, but progress has been made.

Since 2005, I have visited local manufacturers in the region looking for waste materials, hoping to intercept them before going to landfill. To my relief, I found some examples of corporate stewardship with incentives in place to achieve zero waste, in order to be awarded with a high industry standard. However, there are many small, medium and large enterprises filling dumpsters of valuable waste and locking them up. I received some landfill insider information of a shipment of brand new children's snowsuits that didn't sell that season and another attempt to deposit several train cars' worth of boxes of cereal with too many raisins, which was a production error.

Landfilling and burning are unsustainable solutions to our waste. Both are loaded with carbon emissions. Starting with the extraction of non-renewable—

● (1550)

[*Translation*]

Mr. Joël Godin (Portneuf—Jacques-Cartier, CPC): I'm sorry. The interpreter informs me that the sound is intermittent in the booth. Is it possible to check?

[*English*]

The Chair: Okay, we'll suspend for a second. I'm stopping the clock, so we get the translation.

Mr. Joël Godin: For me, it's very interesting.

Ms. Carolyn Butts: Okay, good. Thank you.

● (1550)

(Pause)

● (1555)

The Chair: It looks like we're ready to go. We think we've solved the problem.

I'll start the clock. You still have about three minutes and 20 seconds for your concluding comments.

Ms. Carolyn Butts: Okay.

Do I need to repeat anything?

I was mentioning boxes of cereal with too many raisins. Did you get that? It was really important.

Landfilling and burning are unsustainable solutions to our waste. Both are loaded with carbon emissions, starting with the extraction of non-renewable resources. The proposed mega landfill in Napanee expects an average of 100 trucks a day arriving from Toronto. Let's all consider the energy use and human resources of manufacturing. I'm not sure if capturing the greenhouse gas emissions for energy or the joules of combustion balance this carbon equation. Nevertheless, it is a non-renewable source.

I believe there are employment opportunities at all levels in a new waste economy. Collection, sorting, market development, depots, brokering, design and manufacturing will all need access to our waste streams. We need to break up the cloaked and controlled corrupt industry of collecting and burying waste. I believe when we recognize that waste materials have value, there will be a greater interest in redirecting them and finding new markets.

“Bon Eco” means good ecology, a respect for the relationship between life and the physical environment. Our innovation challenge right now is closing the loop on our consumption. It will take all the science, technology, engineering, art and design we can direct towards it.

This is Bon Echo Park.

The Chair: Thank you so much for those opening comments.

I think this is the first testimony we've heard on the waste part of the study, so it was very interesting to hear what you had to say.

Now we'll move to Forest Products Association of Canada.

Are you both going to speak?

Mr. Robert Larocque (Senior Vice-President, Forest Products Association of Canada): It will just be me, but it will be bilingual. I'll be switching between French and English throughout the opening remarks.

The Chair: Whenever you're ready, you'll have 10 minutes.

Mr. Robert Larocque: Thank you, Mr. Chair and members of the committee. Copies of my remarks have been made available to the clerk if you need them after.

My name is Robert Larocque and I am here today with my colleagues Kate Lindsay, our vice president of sustainability and environmental partnership, and Étienne Bélanger, director of forestry. We are very pleased to be here to represent the Forest Products Association of Canada as part of your study on the implementation of the pan-Canadian framework, relative to increasing carbon stores and reducing GHG emissions, and to the role of the forest sector.

[*Translation*]

The Forest Products Association of Canada is the voice of Canada's wood, pulp and paper producers nationally and internationally in government, trade, and environmental affairs, as well as the topic we will be discussing today, namely the implementation of the Pan-Canadian Framework for Clean Growth and Climate Change and our sector.

[*English*]

Let me give you a quick snapshot of how important the forest products sector is to Canada's economy. It is a $69 billion a year industry that represents 2% of Canada's GDP. The industry is one of Canada's largest employers, operating in 600 forest-dependent communities from coast to coast. We directly employ 230,000 Canadians across the country.

The sector is also important when it comes to the Canadian environment. As custodians of almost 10% of the world's forests, we take our responsibilities as environmental stewards very seriously. There is no better testimony to the seriousness of our commitment than to have the most independently certified forests in the world, 170 million hectares or about 40% of all the certified forest. Forest certification is a third party verification of voluntary measures that go above and beyond current regulations. In fact, repeated surveys of international customers have shown that the Canadian forest products industry has one of the best environmental reputations in the world.

Climate change is emerging as the signature issue of our time. Forest product companies have stayed ahead of the curve by aggressively reducing our carbon footprint and running more efficient facilities. In fact, pulp and paper mills have reduced greenhouse gas emissions by an impressive 66% since 1990, the equivalent of nine megatons or a million tonnes of CO2 per year. The sector does not use coal anymore and we barely use any oil, less than 1% of all the energy we need. We now have more than 30 facilities that generate green electricity, which is enough to power the city of Vancouver, from biomass residue at the mill sites.

Following Canada's commitment under the Paris Agreement, the forest products industry pledged in May 2016 to remove 30 megatons a year of greenhouse gas emissions by 2030. That's about 13% of the government's emissions reduction target. We call this initiative the “30 by 30” climate change challenge. We are very proud to be part of the solution and there is no question that the Canadian forest products industry is an environmental leader.

● (1600)

[*Translation*]

The effects of climate change will have an impact on our sector, whether it is negative consequences, such as forest fires or insect infestations, or positive effects, such as speeding up the transformation of the sector to produce biofuels, biomaterials and tall wood buildings.

Today, I would like to focus my comments on the management of our forests, the potential innovation of using new products and the positive and negative impacts related to our mills.

[*English*]

Canada's forests are truly an astonishing resource. They represent 348 million hectares of our forest land. The forest absorbs a tremendous amount of carbon dioxide, and by doing so, helps regulate the world's climate system. In 2016 forest lands managed for timber production were a sink in Canada of 20 million tonnes of carbon, or 20 megatons. That's according to the “The State of Canada's Forests” report for 2018 from Natural Resources Canada.

Therefore, as Canada faces the challenge of transitioning to a low-carbon economy, we're very pleased the pan-Canadian framework on clean growth and climate change mentioned the need to increase the carbon sinks from forests, wetlands and agricultural lands. There is a great opportunity for the federal, provincial and territorial governments to work with industry to increase the implementation of forest carbon mitigation strategies. For example, harvesting more efficiently by collecting more wood per hectare harvested commercially and using it for products thereby reduces the amount of harvest waste that is left on the forest floor to decay and be burned. This would reduce greenhouse gas emissions from decaying and burning of wood.

We could also strive to increase the growth rate of trees above current levels through various techniques like planting improved seeds or tree species, or fertilization. This will capture carbon from the atmosphere more rapidly because the trees would grow faster.

Finally, more could be done in reallocation or reforestation. We could plant trees in areas recently affected by insects and fires where trees are growing poorly. As it stands, the industry does regenerate all our harvested areas; however, no one is really responsible for regenerating areas that are affected by natural disturbances where trees can sometimes take longer to come back. Such a strategy would capture carbon from the atmosphere more rapidly through faster regeneration.

The forest sector is also collaborating with academics, government and groups such as Ducks Unlimited Canada to better measure and conserve carbon stores in wetlands and peatland complexes. These areas hold enormous amounts of carbon, but we need more research to quantify their storage.

Climate change effects, such as increased forest fires and pest infestation, have a significant impact on Canadians, our communities and the forest industry. We also believe that more can be done to make our forests more resilient and ensure long-term sustainability. Another word would be adaptation.

We must continue research of long-term potential climate change impacts, such as modelling, implementing climate resilient solutions such as FireSmart communities, and work with our provincial counterparts to modify our forest management activities to allow for selecting and planting trees, based on the changing climate conditions.

[*Translation*]

A new forest bioproduct such as a wood fibre composite can replace plastic, for example, in a console of a Lincoln model by Ford. This contributes to a low-carbon economy in two ways. First, it replaces plastic from fossil fuels and, second, it reduces the vehicle's weight, which reduces its fuel consumption.

The forestry sector can also produce pyrolysis oil, a product recently announced by Canfor and Licella, which will replace oil produced from non-renewable sources. We must also remember that wood stores carbon in our homes and buildings in the long term.

Canada has an opportunity to make changes to the National Building Code to allow the construction of tall wood buildings, such as the 18-storey residence at the University of British Columbia. In fact, this afternoon, at about 3:30 p.m., I believe, Sidewalk Labs will be announcing a solid wood building in Toronto, which is a positive step in the fight against climate change. Each cubic metre of wood used represents nearly one tonne of carbon removed from the atmosphere and stored over the long term.

● (1605)

[*English*]

As I mentioned earlier, the forest products industry has already reduced their GHG emissions at the mill site by 66% since 1990. It will be challenging to reduce the carbon footprint at the facilities, but we believe we can reduce our emissions further. We can continue to improve our energy efficiency, looking at our mill operations. We can "fuel switch" using mill waste to displace fossil fuel, for example, biogas from our waste-water treatment system to replace natural gas. We can reduce our transportation emissions by bringing the trees to the mill or shipping our products to our customers, for example, looking at increasing the use of rail versus trucks.

We believe our efforts provide an excellent example of how industry and government can co-operate to tackle climate change on behalf of Canadians, but these opportunities will require capital investment. With that in mind, we do applaud the immediate capital investment tax reduction that was announced in the fall economic update, particularly related to clean energy, the writeoffs for clean energy, and the accelerated investment incentive.

While the sector does support a price on carbon, it is very important that carbon pricing revenue generated by governments should be revenue neutral and returned to the industry in some form, like a technology fund.

I would also like to highlight that our sector is a significant exporter of goods. Seventy per cent of what we produce gets exported, and it's a value of $37 billion. Our competition for wood products is Russia and the United States, and for pulp and paper it's the United States, Asia and South America. This globally competitive landscape has made it imperative that a carbon pricing scheme considers competitiveness. As a trade-exposed industry, our suppliers—chemicals, fuels, electricity and transportation—pass on the cost to our sector, but our sector has to absorb all the cost, and we cannot change the international commodity prices.

[*Translation*]

In conclusion, the world is facing an urgent need to address climate change and reduce carbon emissions. We will have to work together to develop innovative ideas and ensure that effective policies and programs are in place. The Canadian forest products industry is committed and willing to contribute to the transition to a low-carbon economy and to work with governments to achieve the objectives of the Paris Agreement.

Thank you for your attention. I would be happy to answer any questions you may have.

The Chair: Thank you, Mr. Larocque.

[*English*]

With that, we'll get into our rounds of questions now. There are eight different rotations of six minutes each. Again, we'll use the yellow card, which means one minute left, and the red card, which means wind up your questions.

First up is Mr. Bossio.

Mr. Mike Bossio (Hastings—Lennox and Addington, Lib.): Thank you, Chair.

Thank you so much for being here today. It was, as always, great testimony and very informative.

Of course, I'd very much like to welcome my good friends, Hans and Carolyn, to our committee meeting today. I have to say that in the 15 years that I've known you, I can't believe what you have accomplished in taking vast amounts of waste and turning it into incredible art, and not just art, actually. You've repurposed structures. You've created structures. You've built structures from waste. I guess that's where I'd like to go.

We've had this conversation numerous times, this cradle-to-cradle concept of not looking at consumption just as something being made, consumed and then going to a landfill. We need to think at the very beginning of that process of the reuse of that. I guess maybe I'd like to get your comments and your thoughts around the cradle-to-cradle concept.

Ms. Carolyn Butts: I believe that design is a large part of consumption. There are waste products that are recycled. We know about the PET plastics that are turned into garbage cans and fairly rudimentary, cheap products. I think that design needs to be at the table along with science and technology. We buy with our hearts. I sell my products because people like them. It's not because they're recycled.

Definitely, cradle to cradle there's the design portion into that. Also, in making products, when you recycle a product like a plastic bottle, for example, it should be into something that does not have a cheaper competition. We need to look at the properties of the materials that we are recycling and make new products with them, give them properties that nothing else has. That is science and technology research as well. I think we need a lot of research around waste, and design needs to be there to help these scientists, technologists, to discover what it can then become after it's been used.

I think that's what you're talking about, Mike.

● (1610)

Mr. Mike Bossio: In the past, we've talked about how we'd like to see the three Rs changed to reduce, repair, reuse and upcycle.

As you mentioned, when people think of recycle, they think it's downcycle, so they think it has less value than what it did when it was originally made. If we look at it from an upcycle standpoint, from the very beginning of the design process, then we see more value in that material after use than we did at the beginning of the process.

There's Herman Miller chairs, and a number of other companies out there that are using this philosophy and it makes them more profitable. For you guys, the profit that you're earning from stuff that you're basically getting for free is fantastic.

It goes beyond that though. Once again, the buildings that you guys have created and you've now repurposed into Airbnbs and other things, you're using recycled materials—upcycled materials, sorry—in those buildings as well, right?

Ms. Carolyn Butts: Yes, we've loaded our rooms with tires, but you can't smell them and they make very interesting textures and functional products.

For example, this purse that's made from inner tube, I don't know if you caught that, but this is agricultural and bicycle inner tubes. It's an incredible material. It's better than leather, but this inner tube makes it into landfills. Where I live I can get this for days. There's so much of it in agriculture. I'm sure you've seen it. It's more durable than leather. I think there are properties too that we have to discover and maybe we can look at the products that we make and break them down or reuse them.

In our business, we don't have a lot of input costs. We don't grind down. We don't want to pollute our water or our air, so I like to take material and keep it as honest as possible. I don't know if that's entirely possible with everything that we create in our consumption society, but I think we have a long way to go. I think that we need to innovate our way out of landfilling and burning.

Mr. Mike Bossio: Even Hans himself, as well, built a tiny home on a trailer that was being discarded. He took that trailer and then took materials that were being discarded and built a tiny home with them. It sits on the property down by Salmon River, which is rented out as an Airbnb to artists, who go down there because it's such a beautiful setting.

Hans, I think you'll agree this is another example of what we can do, instead of just throwing things in the landfill. It's really part of that circular economy that we need to pay more attention to.

Ms. Carolyn Butts: We're throwing out money. I'm a business grad. I just see this as more material and it's great material.

That's how we change. We have to demonstrate that this garbage has value, so then people will not want to throw it out and we will repurpose it.

Mr. Mike Bossio: Thank you both.

The Chair: Next, I have Monsieur Godin.

[*Translation*]

Mr. Joël Godin: Thank you, Mr. Chair.

I'll continue with you, Ms. Butts. I find that very interesting.

I'm very interested in forestry and Biological Carbon Canada, but I will come back to that.

● (1615)

[*English*]

Ms. Carolyn Butts: I'm sorry. I don't have....

Hans will speak.

[*Translation*]

Mr. Joël Godin: Okay.

Actually, I just want to congratulate you. The creativity of what you have demonstrated to us today is interesting. That's impressive.

I would like to inform you that, in my constituency, I have set up a circular economy committee. I find it interesting that you have recovered tires, pool filters and other products. You said it's waste, but it's not. It is a residue that has become a raw material for another company. Waste is unusable whereas a residue is recoverable.

A company in my riding makes pastry for pies, but the leftovers are very expensive to dispose of and transport. A farmer on that committee had the intuition to propose to recover the pastry, even if it meant figuring our how it could be processed, instead of transporting it for miles from the factory. He offered to take the pastry home to turn it into food for his animals. It's sort of the same principle, but it's much more *[technical difficulties]* on your side. The idea is to recycle. You work with elements that already exist.

Around this table, we all agree that we must work in the interests of the environment and take measures to reduce the environmental footprint. I think everyone has to do their part.

You have been creative, you have found solutions and you are doing extraordinary things. Does the solution really lie in a carbon tax?

Mr. Hans Honegger: Not necessarily.

[*English*]

Ms. Carolyn Butts: Where would you put the carbon tax?

[*Translation*]

Mr. Joël Godin: Actually, the carbon tax is a tax on consumption. All citizens would pay taxes on consumer products, and that money would be used to help them. I think that, with a budget of $300 billion, the government can find money without imposing an additional tax. It's a matter of philosophy. The government must promote initiatives such as yours and the thousands that are being launched in this great country, and give you the tools to help you with recycling.

Later, I will have questions for the other witnesses about the most effective ways to reduce GHG emissions. That is why I am asking you whether the carbon tax is a good solution. I have an answer, but I would like to know what your thoughts are on it. From your reaction, I think you agree with me.

[*English*]

Ms. Carolyn Butts: I don't know if I can support a tax on this. The way I see it as a business person is that the materials are free. Right there, if you're a manufacturer, you're saving money. I would expect manufacturers that make the materials that I would use and keep using, such that I'd keep going back to that source, to start charging me for that material so that they would have another revenue stream.

I don't think about taxes so much as just opportunity for materials. I think it's a win-win because, if you're not manufacturing new materials and you're using old materials, there's a carbon savings. I don't see a tax, personally.

[*Translation*]

Mr. Joël Godin: Thank you very much, Ms. Butts. I really like your philosophy.

: I will now quickly address the representatives from the Forest Products Association of Canada because time is running out.

Mr. Larocque, in your testimony, you talked about the various opportunities in the world of forestry to reduce the environmental impacts. I found that interesting. However, something in your comments bothered me. I'm not sure whether the interpretation was accurate, but you often used the conditional tense of “to be able to” when talking about techniques, the management of our forests, reforestation, and so on.

You yourself said that the planet must react. Is the industry committed to taking concrete action now? If so, what tools should the government provide to that end?

● (1620)

Mr. Robert Larocque: I will be honest with you, there are two possibilities.

This transition will be made, but it must be accelerated. The perfect example would be to have government assistance to open up markets, such as high-rise buildings.

Then there are provincial policies related to forest management.

In addition, research has to be done on biofuels and bioplastics. We know that we can remove molecules in order to replace fossil fuel, much like in agriculture, but we still have to work with end-users to ensure that they are able to accept those products.

Mr. Joël Godin: Thank you very much. Unfortunately, my time is up.

Thank you, Mr. Chair.

[*English*]

The Chair: Thank you.

Mr. Stetski, you have six minutes.

Mr. Wayne Stetski (Kootenay—Columbia, NDP): Thank you for the very interesting testimony.

This morning I attended the Canadian Parks and Recreation Association breakfast. One of the giveaways they had was a really artistic key chain made from a recycled skateboard.

I really admire and appreciate the work that you're doing. Is there currently any innovation funding to help small businesses get started to do the kind of work that you're doing? If you're not aware of any, should the government be providing that kind of funding?

Ms. Carolyn Butts: It's funny that you ask that.

I just went through the list. Right now, there's an initiative with money for women. There's huge support out there. There was money for innovation in the waste and energy sectors. I don't meet the qualifications, but I think it's out there.

My reaction to the grants or funding available was that it didn't really understand—I can say for myself—women in the industry that it was directed towards or people in the industry.

To answer your question, yes, there is funding available. I wouldn't qualify for it. I'd like to think there are people at the grassroots doing this work. We have not had funding.

We have done this because we are using free materials. I keep coming back to that. I make money out of free materials, essentially, because I can.

Mr. Wayne Stetski: There's funding, but perhaps do the qualifications need to change, in terms of being able to access it?

Ms. Carolyn Butts: For me they do.

Mr. Wayne Stetski: We're looking for recommendations for the government to help reduce the carbon footprint and help the economy.

Ms. Carolyn Butts: I would like to be involved in that, if you want recommendations. Off the top of my head, I can't think of exactly—

Mr. Wayne Stetski: We welcome written submissions. If you would like to follow up on how we can help you be more successful, that would be great.

Ms. Carolyn Butts: Thank you. That's terrific.

Mr. Wayne Stetski: I'll move to forestry.

We know that shipping raw logs out of Canada ships jobs out of Canada. Have you looked at carbon in relation to raw logs and its overall impact on greenhouse gas in general, in a global sense?

Ms. Kate Lindsay (Vice-President, Sustainability and Environmental Partnerships, Forest Products Association of Canada): I don't think we've looked at that in detail.

You will have heard from Dr. Werner Kurz and the Canadian Forest Service. They do look at land use and land use change emissions. They account using a carbon budget model based on forest products that come from Canada.

I'd have to get back to you or follow up with Dr. Werner Kurz to see if they account for all of the products, in whatever form, whether it's unmanufactured or manufactured, globally.

Mr. Wayne Stetski: I also have a quick question around encouraging bioenergy.

I was mayor of Cranbrook for a few years. We had a tremendous fire year and had the winds been a little different, we would have been in really serious trouble. We also worked to create a grassland ecosystem around my part of British Columbia. There are thousands of piles of wood that have been cut, piled and potentially could be burned or will be burned at some point.

When you look at fireproofing those communities, it also potentially provides opportunity for recreation. You can put a network of trails around the community.

However, trying to get a long-term secure source of fibre for burning to create bioenergy was a problem because the forest companies didn't want to give up any of their allowable cut.

If you've looked at that problem, what sort of recommendations do you think could help make bioenergy from waste wood more successful in Canada?

● (1625)

Mr. Robert Larocque: Personally, I think that on the bioenergy side there's been a lot of recent policy that will make a huge impact. Carbon pricing is one of them. There's another clean fuel standard, including one, the renewable energy, in British Columbia, that will make another one.

I would challenge the committee that right now on the carbon, and I'll call them incentives, it's only on bioenergy. If we put all that wood into a tall wood building, there's no carbon credit, but if I burn it and make a biofuel out of it, we get a carbon credit. I think the long-term play here is to make bioplastics, make biomaterial that lasts for a long time, generation and generation. I think the policies are there for biofuels. You're going to see a significant change in biofuel in Canada.

Personally, I think we should be putting those products in a table like here, and I think that's a gap that's missing right now in the policies at least for the next five years. I think we need to address that.

Mr. Wayne Stetski: We appreciate that recommendation.

Just quickly, I get to teach a class at College of the Rockies every year in Cranbrook, one of my two great colleges, the other being Selkirk. The last time I went to the class, the professor said to me, now that you're a member of Parliament, how are you doing with your carbon footprint? Of course the answer is, embarrassingly bad.

What advice might you have for us to appease our consciences a bit about the fact that we are very much contributing to greenhouse gases as members of Parliament because we fly back and forth all the time?

Mr. Nevin Rosaasen: I'll take a stab at this one, since it isn't specific to this.

Absolutely, carbon markets work and price signals are needed for the reductions to be achieved. As members of Parliament, it's important to recognize that you're doing important business in having input and crafting legislation, informing other members in regard to what we can do as a collective. But you're always going to have the outliers who need to travel. The face-to-face meetings cannot be replaced by webinars.

I, myself, work from home. I use webinar. I have been paperless, other than today, since graduate school in 2010. I covered carbon markets, and the important thing to know is that we're already making so many changes in mitigation technologies. You've heard from all three members in our testimony; we're all working toward the same end goal. Again, it would be a shame if we don't take this low-hanging fruit and capitalize on the bioeconomy that Canada has to offer.

Don, do you have any comments?

The Chair: We're out of time here, but if anybody wants to pick that up, they can do that in a future round.

Now we're going to jump over to Mr. Amos for six minutes.

Mr. William Amos (Pontiac, Lib.): Thank you to all three of our witnesses.

I'm going to be fairly clipped in my questioning because really what I'm trying to do is get evidence on the record for the purposes of our study. I wanted to get a clear answer from Ms. Butts first.

Are you in favour of a price on pollution?

Ms. Carolyn Butts: Yes.

Mr. William Amos: Thank you.

For the Forest Products Association of Canada, my understanding is that not only have your members been doing a number of great things across the range of carbon emissions reduction possibilities, but FPAC as an organization is not in any way opposed to pricing carbon or creating a market for carbon emissions. Is that the case?

Mr. Robert Larocque: You're right that we're not opposed to pricing carbon, but I just want to be clear that it needs to come with consideration for international trade-exposed industries.

Mr. William Amos: Okay, thank you. Is it your understanding that the federal government's policy of pricing pollution comes with considered treatment for trade-exposed industries?

Mr. Robert Larocque: For the current intent, I would say yes, but we're still waiting for final details that should be released, I'm assuming, before January 1, 2019.

● (1630)

Mr. William Amos: Okay, thank you.

Mr. Rosaasen, again I have a very simple question. Is your organization in favour of pricing carbon pollution?

Mr. Nevin Rosaasen: Yes, very much so, with the caveat that we need to understand that this is all in regard to a carbon cycle. If you're going to price pollution on one hand, or carbon, you need to give credit where you're sequestering carbon, whether it's in forestry products that are used in building materials, whether it's agricultural products that are exported around the world. We're also a trade-exposed industry in agriculture. In the province that I represent for my day job, in Alberta, 85% of the four major crops that we produce are for export destinations. We still remain the breadbasket of the world out in the Prairies. So yes, absolutely it would be....

We would be remiss, though, if we did not include all of the ecosystem services that we do provide with everything we're doing, from the type of conservation tillage practices that have been adopted and the mitigation strategies. To give you an indication, we've gone to producing three times as much food with the same amount of inputs in less than 25 years.

Mr. William Amos: Thank you for that. I appreciate the detail.

I'd like to turn back to forest products, and go more specifically to next-generation forest products that can not only help the forestry sector but also help our society shift towards more sustainably produced products. A case in point would be that of next-generation industrial sugars, which new-generation forestry companies are looking to produce.

Could you comment on the helpfulness of the fall economic statement, particularly with regard to accelerated capital cost allowances, clean energy tax writeoffs and machinery and manufacturing tax writeoffs, which stimulate this kind of investment? Will they be helpful for the forestry industry?

Mr. Robert Larocque: The devil is in the details, but from what we heard in the fall economic statement, they will be helpful. We are seriously looking into the tax writeoff on clean energy as well as the one on machinery. I can't discredit all of the government support in the last ten years relating to.... We couldn't make those bioproducts if we hadn't done research 10 years ago, for example.

There have been some programs regarding commercialization and market access, like the Canada wood export program, and the kind of program around the building code. Yes, this one helps, but we can't forget about all the other work that has been done in the last 10 years.

Mr. William Amos: Other supports are important as well.

I'm running out of time. Do you feel that the necessary support has been provided by entities such as Natural Resources Canada or the National Research Council, to enable next-generation forestry products to hit market in Canada?

Mr. Robert Larocque: I think we're 75% of the way there. One of the gaps I'm seeing is in bioproducts and biomaterials. We're missing a huge opportunity to incentivize that kind of stuff. It's only on biofuels.

Number two is the value chain. The support has been there. We can make the sugars. I totally agree with you. We could do that tomorrow morning in a mill in Quebec, but can someone in Europe buy it? That's the next wave—working with the “Exxons” and the “Shells” and all of that. Their value chain is different from ours, and it's about expanding those value chains.

It goes a little bit towards what they were saying also—to get support. The Government of Canada could be a leader in promoting that, through procurement purchases, for example. That would help open up those markets.

Mr. William Amos: That's very helpful. Thank you, all six of you.

The Chair: Thank you.

Mr. Nuttall, we'll go over to you next.

[*Translation*]

Mr. Alexander Nuttall (Barrie—Springwater—Oro-Medonte, CPC): Thank you, Mr. Chair.

Thank you for your presentations today.

Before I ask my questions about the presentations, Mr. Chair, I would like to know where Ms. McKenna is.

There is $500 million in the Supplementary Estimates, but Ms. McKenna is not here.

● (1635)

[*English*]

We have not seen her. We've been demanding over and over again, meeting after meeting, that she show up, but she hasn't. The supplemental estimates will basically affect everything within this department and within this committee. Therefore they are always able to be discussed, but the minister has been in Ottawa—she represents an Ottawa riding—swimming at the YMCA during committee meetings or around committee meetings. There are a whole bunch of different things we have on the record, but we cannot get the minister in here to discuss $500 million in supplemental spending within this department. If there is a reason that these dollars need to be spent, it is up to this committee, this Parliament and this procedure to hold this minister to account.

Second—and I'm going to follow up on some questioning by my colleague Joël earlier towards Ms. Butts—there was a question regarding the carbon tax and the need for a carbon tax when you are reusing products that are garbage, and then not applying a carbon tax at that point because it's not really production of a new product. You're actually stopping the waste, and so on.

Ms. Carolyn Butts: You could give them a rebate.

Mr. Alexander Nuttall: A rebate: You're talking my language.

Don't you think that's something this committee should study? Should we not study where and how the carbon tax should be applied? There are entrepreneurs like you who are doing these amazing feats, who are going above and beyond, and who are able to create a business out of what other people see as nothing but garbage, and at the same time preserving our environment.

Don't you think we should somehow get that information in this room, so we can report it back to Parliament and they can then influence carbon tax policy going forward?

Ms. Carolyn Butts: Absolutely. My experience with the waste industry is that it's cloaked. There's a lot of study that needs to be done, but it's getting behind the cloak.

Mr. Alexander Nuttall: It's interesting that you say that, because there's a company in my riding.... I try not to talk just about my riding, but this happens to be a thing we actually have. It's called Barrie Metals. I don't know if you ever heard of Barrie Metals, but they sold for hundreds of millions of dollars a couple of years ago.

They take all your electronic waste and put it in a machine they've created that basically will pull out elements like silver, gold and what have you. They then sell off all of these different things, and the waste is almost nothing at the end of this process. It's actually incredibly reused, the plastic and everything. Nobody knows about them. Nobody realizes they're there, yet they are a gem internationally, trademarked all over their machinery to be able to do this.

That's on a very large level, but there are very small portions of this all over the place that we see in all different sectors. However, we don't know what you're able to do to help us, because we can't get a study on the carbon tax and on what's actually happening out there to prevent taxing in the wrong places or perhaps providing incentives in the right places, which is how I like to speak as a Conservative. The fact that we can't get there is a major issue for this committee.

Certainly, it sounds as though you'd like to hear that information.

Ms. Carolyn Butts: I would. I would like to be part of it.

Mr. Alexander Nuttall: We'd love to have you back, if our friends would allow us to do that.

Ms. Carolyn Butts: Sure. I've tried to investigate. I have visited many recycling depots to find out where their markets are. As I said, I've been to companies and tried to intercept their waste. I've done my digging, but I could get only so far. I don't know if I need some kind of a guise or something to help me get that information out of people.

Mr. Alexander Nuttall: It's interesting. There's one other thing. I have a minute, but I won't take the whole minute. There was one other really interesting one that I heard about. My aunt proposed something like this in Barrie, but I think she wanted me to do it and not her, which always makes a good aunt.

In Sweden, they have entire malls of things basically going to landfills and they take out everything that's usable. Artisans, colleges, and everybody work together and then they have the finished products. There are entire malls doing this—

● (1640)

Ms. Carolyn Butts: Yes, I've heard of that.

Mr. Alexander Nuttall: —and they have severely reduced the waste in the landfill. Can you envision something like that happening where you are? Would you need upfront funding to do it, or do you think it's something that can be done without?

Ms. Carolyn Butts: Absolutely, I can envision it. I think funding for research is where we need to start. I would love to go spend my time knocking on doors, but I also need to support myself and we need to work. I could see funding for research.

Mr. Alexander Nuttall: It could be an incentive to avoid carbon production by taking products that are already there and engaging them in a new process.

Ms. Carolyn Butts: We can't take waste out of landfills right now. We're not allowed. There are a lot of problems we have to deal with.

Mr. Alexander Nuttall: That's interesting.

Okay, thank you.

The Chair: Now Mr. Peschisolido, you have six minutes.

Mr. Joe Peschisolido (Steveston—Richmond East, Lib.): Mr. Chair, thank you. I'd like to welcome the witnesses and thank them for their testimony.

I'd like to begin with the Biological Carbon Canada group.

Mr. McCabe, I was fascinated by your presentation. You're talking about husbandry. You're talking about a change in the agricultural system. If we want to go from one type of economy into a low type of economy, we need to do what Mr. Rosaasen talked about. We need to adapt.

You talked about technological innovation and the need for the federal government to invest some monies. Can you elaborate both on the type of technological innovation you were referring to and on the type of investment you would be looking for from the federal government?

Mr. Don McCabe: Well, when it comes to technological innovation, the farmer is going to look for opportunities to incorporate that technology into a system of action. It can be the need for seeds that have been researched and brought to bear for markets. It can be research for what we do with that product when it's done. It's a complete continuum, as our friends from forestry have pointed out. It has to be a continuous cycle.

The technology innovation chain we're now on is so rapid in agriculture. As Nevin pointed out, we had opportunities for our equipment to run autonomously long before Cadillacs were sexy with their tools. Now, where we are today and where we're headed to next with satellite imagery, drone activity and remote sensing will allow individuals to manage their acres with much more precision and much less work. The sensors that will be able to be deployed in fields will pick up on pest management opportunities and other opportunities to manage.

This is the tip of the iceberg. I can go on about it all day long. At the same time, it's also important to make sure there are educated individuals who can come and back us up. The farmer is the manager of the whole thing, but he needs people with expertise in given subject areas to be able to figure out the nitty-gritty.

Mr. Joe Peschisolido: I don't recall who mentioned the concept for our nutritional systems, but can one of you elaborate a bit on that?

Mr. Nevin Rosaasen: Sure. Thank you.

What we call 4R nutrient stewardship is based on the reduction of nitrous oxide emissions. It's also referred to as the NERP protocol. It's based on using the right amount of fertilizer, at the right rate, in the right place and at the right time. By doing that, we have huge opportunities to reduce greenhouse gas emissions that are currently accruing through fertilizer use. We can also reduce volatilization, runoff, etc.

It's basically matching up the exact prescribed plant nutrients that you need. That can change depending on whether you're at the top of a knoll, as we say in agricultural soils, on a mid-slope, or down at the bottom. We have the software, technology and variable-rate application so that you can change the rates all throughout. It's already pre-programmed before you get into that tractor and start driving.

It's an amazing technology. It's being implemented all around the world. It was designed and created, of course, here in Canada. It's time for us to recognize that these protocols exist. They need to be continually updated with the science, as our science evolves, but it represents just one opportunity that we've already employed in the agricultural systems. We just need to actually recognize it.

We're part of the way there. We just need to give credit where credit is due, and recognize that this is a carbon cycle. When it comes down to pricing carbon, absolutely, people respond when you hit them in their wallets. As we are trade-exposed sectors working on small margins, we need to actually look at where all of these advancements have been made. Absolutely, we're part of the solution.

● (1645)

Mr. Joe Peschisolido: Ms. Butts and Mr. Honegger, perhaps you don't get into this, but you didn't talk about how you've restructured structures. Do you get into that? Do you simply provide goods that you put in houses or condos?

Ms. Carolyn Butts: I'd like Hans to speak to this. He is one of Canada's notorious, well-known restoration architects. He's worked across Canada.

Mr. Joe Peschisolido: That's what I thought, but you really didn't talk about that much.

Mr. Hans Honegger: My background is in community revitalization. I was co-director of National Trust for Canada's Main Street program. For most of my life I've been with organizations that have approached creating sustainability and rural scapes. We're still engaged in that.

I'll get back to the question.

Mr. Joe Peschisolido: No, please go ahead.

Mr. Hans Honegger: Our strategy for existing is low overhead. That liberates us to pretty well design our own lives. In rural Canada, in most places, you can pretty well do that. I designed the restoration schemes for Nelson, British Columbia—I was resident coordinator of that project—and Perth, Ontario. My life has been with old buildings, but I'm not against demolition, which is a harsh thing to say, as long as what replaces it is better than the existing. That's the directive in most cases. Buildings have to earn their keep, and to that end, mixed use is always considered.

Mr. Joe Peschisolido: Thank you.

The Chair: Next we have Monsieur Godin.

[*Translation*]

Mr. Joël Godin: Thank you, Mr. Chair.

My next questions will be to Mr. Rosaasen and Mr. McCabe.

Mr. Rosaasen, you mentioned in your opening remarks that a system was put in place in 2007.

Can you tell us more about that system?

[*English*]

Mr. Nevin Rosaasen: In 2007, within Alberta, we had what's commonly known as the SGER, basically the overhang of emissions that were resulting in large final emitters, so the specified gas emission reduction protocol.

Under that protocol came the opportunity to devise different types of offsets in the carbon market. Those offsets allowed large final emitters to either pay the tax, which was set in Alberta back in 2007 at $15 a tonne, or use a carbon offset to offset their emission overhang. Over the course of that time, just through the conservation cropping protocol—which refers to direct seeding or no-till farming or zero tillage—we managed to not only sequester but also have third party verification that this indeed was taking place, and to serialize, which means to actually put a serial number on that carbon credit that was generated on the registry in Alberta. It was the equivalent of 14.7 million tonnes, and that would be the equivalent of every single pickup truck that was sold in 2017 within North America.

There's huge potential when that potential is recognized. There have been some hiccups and bumps along the way. When you have changes in government and regulation and policy going forward, it's an unpredictable policy environment. We've had certain changes, of course, that have allowed large final emitters to use only 30% of their emission overhang as offsets, so in essence that somewhat crashed or resulted in big discounts from, say, that $15 a tonne down to much lower.

There's huge potential. We know we can capitalize on it. We know we're already adopting a lot of these mitigation technologies, not only in agriculture but also in forestry and even in waste management with methane capture for some of those landfills that don't have other options.

Don, I know you would like to add to this.

● (1650)

Mr. Don McCabe: The Alberta system was a very early system that led the way for the rest of the country to explore more opportunities. Here in Ontario, when we had a Liberal government, we had a cap-and-trade program that was brought into place. It was brought into place in theory. We had a cap, but unfortunately there was no trade for the agriculture and forestry industries to offer offset solutions.

We're now headed to an Australian-type system. I haven't had a chance to study that system yet to find out if there will be opportunities for revenue in there for us at agriculture and forestry. Again, I have to reiterate, we are at the end of the cycle or at the front end of the cycle or the start of the circle—however you want to describe it—because we buy it retail, we sell it wholesale, and we pay the trucking both ways.

Be careful how you use your language. I accept that there has to be a price on carbon. A carbon tax is destructive to us in resource industries. Cap and trade has to be fully operational with the trade portion, and it will be the least cost-efficient way for us to address things, but if you don't frickin' recognize it at the international level, I don't know why we're wasting airfare to Poland to talk about nothing.

[*Translation*]

Mr. Joël Godin: Thank you.

For my own benefit, could you tell me who was in power in Alberta in 2007?

[*English*]

Mr. Nevin Rosaasen: It was a Conservative government.

[*Translation*]

Mr. Joël Godin: Thank you.

What I understand from your answer is that the industry disciplined itself and started paying attention to the environment in 2007.

The environmental issue is not new, it has not just appeared. The process has accelerated, perhaps because the environmental community has done what it needed to become involved. We will probably not be able to go backwards, actually, because we must build for the future.

In your presentation, you talked about problems in Canada, but you also talked about solutions. It is interesting to see that there is hope, that there are organizations and companies regulating themselves and proposing solutions in order to be even more respectful of our planet. That's encouraging.

Mr. Rosaasen, you said earlier that you were in favour of a carbon tax.

I think you're suggesting the carbon tax as a way to achieve the same ends as I and everyone around the table want, which is to protect our environment.

Can you explain your reasoning to me?

[*English*]

Mr. Nevin Rosaasen: Again, price signals work, right? Even in the absence of regulation or a carbon tax, all industries will improve their efficiencies to reduce their overall costs. Even in the absence of regulation in the province I hail from, Saskatchewan, producers there were first movers in adopting no-till technology. They continue to do that and to innovate. It's very important to recognize that climate sense and economic sense go hand in hand.

[*Translation*]

Mr. Joël Godin: Thank you.

[*English*]

The Chair: Thank you.

We're now going to Mr. Fisher.

Mr. Darren Fisher (Dartmouth—Cole Harbour, Lib.): Thank you very much, Mr. Chair, and thanks, folks.

I'm going to go to you, Carolyn and Hans. I'm fascinated by the upcycling. In turning waste into treasure—one man's garbage is another man's treasure—you're turning what many consider waste into reusable products, and really cool products. Congratulations on that.

It's not totally comparable, but in Dartmouth—Cole Harbour there's a company called Dan-x. Long before anyone saw an issue with or value in used light bulbs, they were taking in used light bulbs, recycling them into four or five different products and selling every one of them. The most difficult one to sell was one that they had to almost create a market for, which is the phosphor powder.

I'm a little bit all over the place with this. I'm thinking about extended producer responsibility. We think that when you buy a tire, you pay four bucks a tire up front and that covers its end of life. What about having not just a cost up front but maybe making waste available to artists or upcyclers?

You talked about the snowsuits. Maybe that producer has to come up with a plan if they have unsellable product.

● (1655)

Ms. Carolyn Butts: Yes.

Mr. Darren Fisher: I'm just trying to think outside the box. I doubt very much that we're going to get to the position where a landfill is going to be a big flea market for upcyclers, but certainly there are things that don't go to landfill and do go to recycling facilities. There's probably a veritable gold mine at some of those recycling facilities.

Ms. Carolyn Butts: Yes. Now, it is a dirty business, right? We have to deal with that, quite literally. I have been to recyclers. The success of a recycler has to do with markets; they have to find markets. Someone like me would be a producer. A recycler could take in inner tubes and I could go and buy them, if that's what you're alluding to. If there is a clearing house or a place not just for art.... I apply art and design, but I think that art and design can be in creating base materials, not just in creating art pieces. I think what I do is demonstrate that there is wealth in waste. There is money in waste.

Mr. Darren Fisher: It's another tool in the diversion tool box.

Ms. Carolyn Butts: Yes, and as my colleague here says, money talks. If we can expose the value, such as breaking down products like light bulbs, that's brilliant. For anything we make, we have to think about how it comes apart. We do a terrible job of that right now.

I like the idea of researching. This industry is so ready for exploration, but there is a lot of money to be made in landfilling. It's very corrupt. I mentioned the trucking business.

You have to deal with that. You have to sell the value. You have to expose the value in the landfill business. We are throwing out valuable materials.

The environment is definitely my motivation. It should be everyone's motivation, but to have that material develop cradle to cradle, the next product material should be a good material. It shouldn't just be “that'll do because it is recycled”. It has to be beautiful. I've dealt with fabrics that have been recycled from post-consumer wastes that were beautiful and with some that were not so beautiful. I know that the beautiful stuff is selling. That's the design component that we need to have in our materials.

I think about this a lot, and I have researched it. We need a lot of work.

Mr. Darren Fisher: As we think about garbage, we've known for quite some time that garbage is cash, wasted cash, whether it's alternative energy and waste-to-energy, of which there are several different types, or upcycling a piece of one person's garbage. Congratulations on that. I think that's fascinating.

Ms. Carolyn Butts: Thank you.

Mr. Darren Fisher: I don't know if I have any time left, Mr. Chair.

The Chair: You have a minute and a half.

Mr. Darren Fisher: I'm going to pass that last minute and a half on to Mr. Bossio.

Mr. Mike Bossio: I think there's one quick aspect here, and there are two quick questions I'd like to ask.

One is that if we had producer responsibility around stewardship so that those who are producing the products in the first place were responsible for that cradle-to-cradle aspect, do you agree that far more of them would actually create greater value in the consumed product at the end of the day? Therefore, it would provide you with good materials that could be used in creating that value, potentially. Or they could reuse the consumed products again in a new product, moving forward in the cradle-to-cradle concept.

Ms. Carolyn Butts: We all know the standards I'm talking about whether it's LEED or ISO 9001, the corporate standards. I've been to companies that do absorb their own waste. They can't give me anything because it goes right back into the manufacturing. That's how we have to think. That's low-hanging fruit—

● (1700)

Mr. Mike Bossio: I'm sorry to cut you off.

There's one final question I want to ask, and that is for you, Mr. Rosaasen. On the advancements that have occurred in agriculture in Alberta, which are phenomenal—and I commend the producers there for being able to achieve these great emissions reductions—do you feel that they would have occurred if the incentive had not been there through this pricing mechanism that was created in 2007 by Alberta? That clear pricing signal I think was the incentive that really drove a lot of the advancements and innovation that occurred.

Mr. Nevin Rosaasen: Very quickly, because I see we're out of time, the price signal was only to the large final emitters. The producers were already adopting this. Also, they're adopting it all across Canada, from coast to coast. It wasn't the price signal that in the first place moved producers to minimize the number of passes they made over their land, to go to direct seeding and to adopt autonomous or precision GPS guidance. That's all happening in the absence of regulation.

The point is that, yes, price signals do work, and producers will continue to adopt and innovate. However, you need to understand that we have a huge potential in biologicals and we need to recognize that our soils have a huge buffering capacity, as do our forests. It's imperative to know that we can drive that innovation so much further.

Mr. Mike Bossio: Thank you so much.

Thanks to all of you.

The Chair: Wayne, before we go to you, we would normally be at the last question for three minutes. Given the time, we can add in one six-minute round for each of the parties. Do you want to take your six minutes and save your three minutes for the very end? Or do you want to go with your three minutes and get your six minutes at the end? We're flexible here.

Mr. Wayne Stetski: I'll go for three minutes to start with.

The Chair: Okay.

Mr. Wayne Stetski: Hans, I want to thank you for the work you did in Nelson. It's a lovely town that values its heritage and its heritage buildings. Thank you for your part in it. I very much appreciate that.

This is a question for Robert or Kate. One of the suggestions we had when we were doing our study on reaching 10% marine area protection and 17% land protection was that 50% of the boreal forest potentially should or could be set aside for conservation purposes. I'd be curious to hear your view. It's interesting to think of forests in terms of the value of carbon sequestration compared with the actual timber value of a tree. It has value either way. What do you think of that concept of conserving 50% of the boreal forest from both an economic and a climate change perspective?

Ms. Kate Lindsay: It's an interesting question. I sat on the Pathway to Canada Target 1 committee, which looked at ways to get to 17%. One thing I would start with is that I think there's more conservation taking place within working landscapes than currently gets credit or gets counted. When you look at the forest sector, significant portions of our managed land are in some form of conservation right now, whether it be riparian areas, wildlife management areas, or so on.

I think you want to recognize what you were probably hearing from folks at the Canadian Forest Service around the systems approach. The real benefit of wood and storing carbon is that the tree stores the carbon, but the product stores the carbon as well. If we look at it in terms of full systems, we want to make sure we're utilizing the wood that we are extracting from the forest. We're replanting those forests and getting trees growing again and storing carbon. We want the products we make to be long-lived so that things like tables and tall wood buildings are storing that carbon for decades and centuries. You're really maximizing the benefit of using wood products as well as regrowing those forests, keeping forests in a working landscape so that it can do both. It can provide conservation benefits and it can provide carbon storage benefits.

● (1705)

Mr. Wayne Stetski: One of the concerns that come to me from my constituents is about whether or not we're keeping up with reforestation. I mean, it's hard to see little trees, but what's your sense of how we're doing in Canada with reforestation?

Ms. Kate Lindsay: That's a very good question. It's legally mandated to regenerate after harvest. I think what we're seeing, particularly in B.C. and now in Alberta, is that when we have big fires and pest outbreaks, we need extra efforts on behalf of government, industry and others to get those areas re-established and regrowing faster. That will take more efforts on behalf of government and industry.

The Chair: Thank you, Mr. Stetski.

We'll jump over to the Liberal members. You can split up your six minutes however you like.

Mr. Mike Bossio: It's great to have another opportunity to discuss this.

One thing I would like to point out, for those around the table who may not know this, is that Hans Honegger is one of the people who actually helped design our committee rooms and tables—the set-up of the whole operation. I have to throw that out there. He's a remarkable individual who has had an influence in many different ways. He also used the copper from the old Centre Block roof in innovative ways. He maximized the materials to the utmost benefit. I just want to get that out there.

On the forest side, I know that in the construction sector we're talking about being able to build bigger structures by using wood. What are some of the other engineered products? Is there the possibility of our using more and more wood in our construction sector instead of things like drywall and the like? We're using chipboard and stuff like that on the other side of buildings, but what about inside in the construction of residences and commercial spaces?

Mr. Robert Larocque: There's tremendous opportunity. On that one we're leading, I think, with the European countries. Fibre insulation, for example, is a huge, huge opportunity.

Mr. Mike Bossio: Especially the waste product, I would assume?

Mr. Robert Larocque: Exactly.

Number two, for example, is that even on the OSB now we're seeing two conversions in Canada. Swan River is one example, and there's another one in B.C. The old OSB now is called the siding business. This lasts 50 years. It's just a panel. You can paint it. It's on the outside.... There are a lot of opportunities to modify or tweak existing technologies, such as flooring and whatever, and make it value-added to last longer. We're looking at all of those.

I think the technology is there. Cross-laminated timber is another one. Glulam is another. That's using wood chips and waste to make panels and particleboard. There are some investments that have to be made. The last conversion to OSB, for example, was $75 million.

Mr. Mike Bossio: I'll be happy to pass the rest of time over to Mr. Casey.

Mr. Bill Casey (Cumberland—Colchester, Lib.): Thank you very much.

We've seen developments in Nova Scotia with vertical farms. They're basically hydroponics farms. What is the energy comparison between a vertical farm and a traditional farm? What are the impacts for the environment?

Mr. Don McCabe: Well, I'm not trying to avoid your question, but it depends on the boundary conditions and how many opportunities you are trying to achieve in that vertical farm. I know of a vertical farm in the Netherlands with a dairy operation, aquaculture and hydroponics. There are about seven commodities being produced in that farm.

First of all, depending on what you put in your vertical farm, the energy will vary. It will dramatically decrease the land footprint. We can draw from the example of the greenhouse industry in southern Ontario right now what this is capable of doing, because tomato production within a greenhouse can be two to four times higher in yield than it is off the landscape. I want you to check me on that figure, because I'm not a tomato producer—I'm a happy consumer of ketchup.

As we move forward in the innovations we're looking at, if you were to put a vertical farm within the city, I think that would be a wonderful use of old school gymnasiums or whatever; if there's a school pool there, why isn't it filled with tilapia? You can shorten the distance for local food. I don't know what “local food” is, because people are going to be darned hungry if they rely on something being grown within 100 miles of Toronto; I don't think you've found anything yet that resembles soil, to get away from the pavement. The sarcasm there is intended.

The reality is that still again you have to define your system a little bit more tightly to be able to properly answer that question. The landscape right now is continuing to bring us more and more because the innovations are being used on that landscape to maximize their potential.

● (1710)

Mr. Bill Casey: Thanks very much.

I think I'll switch to tires now. I looked at that big pile of tires on the screen earlier and I wondered how many wall plaques you can make out of those. Is that a realistic use to recycle many tires?

Ms. Carolyn Butts: They are being recycled now—many are—and resold. Our tire industry is another one. We need tires to get around, but we make a lot of them. I couldn't make enough tire art pieces at this stage. Everyone on the planet would have one, I'm sure, because I made four out of my own tires.

Things are being done with tires, with reusing tires. Our tires are being sold abroad, the ones that are still pretty good, but not for our winters, perhaps; I know they get resold. Again, it's tire stewardship. I'm not sure what they're doing now. I have mats made of tires. I like stair treads made of tires.

Mr. Bill Casey: I don't—

The Chair: I'm sorry. I think we're out of time. Thank you so much.

We'll now go to our Conservative colleagues.

Monsieur Godin.

[*Translation*]

Mr. Joël Godin: Thank you, Mr. Chair.

Mr. Bossio, thank you for letting us know about this artist.

As artists, you are unfortunately very humble and discreet, but I think you deserve to be recognized for your talent. Mr. Honegger, I'm happy to work on that. It's very effective.

Earlier, Ms. Butts, you said you were working to sell your products and that people were buying them with their hearts. That is certainly a constraint.

To facilitate your research, could the government not establish a registry of residues? This could allow you, other artists and other companies to see which residues are available. These products could be used to protect our environment.

[*English*]

Ms. Carolyn Butts: May I ask you a question?

[*Translation*]

Mr. Joël Godin: Of course.

[*English*]

Ms. Carolyn Butts: How could you see that happening? How do you see a registry being built? How would you get that registry?

[*Translation*]

Mr. Joël Godin: Every company that has residues should register them with either Natural Resources Canada or Environment and Climate Change Canada. It would simply be a matter of managing that data. They could be made public and published on a website. That would be a very simple, quite elementary solution. It is the kind of thing I tried to introduce in Portneuf—Jacques-Cartier. Do you know what my problem was this summer? I had a budget to hire a student to make a list of it all, but we ran into a manpower shortage. That's another problem.

Could a tool like that make your research easier?

[*English*]

Ms. Carolyn Butts: Absolutely, but I agree with you that it would take a lot of labour to get that in place.

On incentives, also sometimes businesses throw away toxic waste, things they don't want people to know about.

● (1715)

[*Translation*]

Mr. Joël Godin: You're right, but there's also the fact that companies pay a lot of money to dispose of residue. The wheel keeps spinning. I still think we have a way out. It is not the only solution, but it is one solution. As I say in my riding, it is a matter of doing one little thing at a time. I think we should invest funds to encourage the public to take action and force our companies to take very significant steps. That is the end of my comment.

Thank you very much.

I will now ask Mr. Larocque a question about the world of forestry.

Mr. Larocque, you said in your presentation that the world of forestry had made a commitment for 2030 and that it had been made in 2016.

In concrete terms, what has the industry done since then to improve its environmental performance?

Mr. Robert Larocque: We have invested about $200 million in processing bioproducts. They may not be on the market yet, but we are in the process of building plants. There have been reductions at the plants. We started with the easiest targets. I would like to point out, with regard to the next step, the 30 megatonnes, that half of that is in our forests. It is taking a little more time and work. For the other half, 15% comes from our plants. The rest is from new products, and for that, we are waiting for the carbon policies.

Mr. Joël Godin: I am familiar with wood being used for high-rise construction. The material absorbs carbon. In the Quebec City area, we have done pilot projects. At that time, my work was with the provincial government. Wood has been shown to be effective and even more fire-resistant than other materials. I find that things are moving slowly and that the problem is not being addressed in the right way.

Given that we know the positive impacts of the technologies, materials and some solutions, should we not ask our governments to accelerate the acceptance? I don't know what you think, Mr. Rosaasen and Mr. Larocque. Everyone has shown that there are solutions. We have talked about technologies. We have expertise in Canada. Shouldn't we move faster to accept this material and adjust the market so that we can reduce our carbon footprint?

I proposed the registry solution to Ms. Butts and I have one that your industry may be interested in as well.

Mr. Robert Larocque: We are hoping for a 2020 timeline for the National Building Code.

Mr. Joël Godin: Okay.

Mr. Robert Larocque: We are 14 months from that date, but we expect that, in 2020, the National Building Code will allow us to build up to 12 floors in Canada. That will be a big change.

Mr. Joël Godin: Do you understand why I don't believe in a carbon tax?

Thank you very much.

[*English*]

The Chair: Thanks.

Wayne, you have the last six minutes.

Mr. Wayne Stetski: Thank you.

I want to talk about agriculture for a minute, Mr. McCabe. You talked earlier about the opportunities in agriculture to use waste products for biofuel and bioenergy. I couldn't help but reflect on how historically the early settlers burned buffalo chips to keep warm in the winter, when we had bison across the land. We're going back to where we started from, I guess, in some ways. I wonder if you could talk a little bit about the opportunities you see for using waste agricultural products going forward.

Mr. Don McCabe: First, with due respect, sir, we don't have waste in agriculture. We have opportunities.

Mr. Wayne Stetski: Fair enough.

Mr. Don McCabe: I'm going to pick on a corn plant and take you through the harvest of a corn plant. We have been harvesting corn for many years now. In 1975, if I had gone into a restaurant—I would have been in grade 9—and told someone I had 100-bushels-to-the-acre corn, I would have been told I was a liar and a snot-nosed brat and to get out. The reality is that here we are, heading rapidly towards 2025, and in Ontario I believe the average yield of corn this year will be very close to 180 bushels to the acre.

The significance of this is that we are generally harvesting only the corn kernels. That means there's the corncob, cornstalk, corn leaves and all the rest of that kind of stuff. We harvest those corn kernels and we send them off to be livestock feed or to be sugars used for humans in the production of a plethora of products. The reality is that all that other stuff remains. The problem with that stuff that remains now is that it's in excess of what the soil needs for its continued existence. We have soils in Canada that desperately need LIDAR and a national application of that or to get the soil survey information done.

Let's go back to the residue for a minute. If all that residue is left there in the spring, I can't plant. So I'm now harvesting some of that residue, leaving most of it there, so that the residue can go to a plant and they can extract sugars out of that cellulosic material—not grain corn, but cellulosic material. That's why nothing about the language we're using here reflects reality, in some cases. I can't offer you second-generation ethanol, because I don't know what it is. I know that I grew corn to sell at the Chicago Board of Trade for a profit. I know that if your parents didn't have kids, you probably won't either. That means if I don't grow the corn to make a profit someplace, I'm not going to give you cornstalks.

Those cornstalks now are not waste. They are, again, another portion or another turn on that circular economy that can go to be sugars, chemicals, fuels or natural gas. We can move it down through the system. Sarnia, Ontario, is the starting point for that.

● (1720)

Mr. Wayne Stetski: In terms of our study, then, how does that all relate to our carbon footprint and a better future?

Mr. Don McCabe: The carbon footprint issue is that off that same acre of land that in 1975 was producing 100 bushels.... You can do the math; it's 56 pounds a bushel. You can crank out how many tonnes and all the rest of it. Essentially, we've doubled the yield on that one acre of land in this period of time. That means we reduced our environmental footprint in an overall fashion.

We're also pulling back now the ethanol to take it to the transportation sector, and allowing that to be lowering our emissions. We've taken the other transportation fuels, such as from Nevin's canola or from soybean, for biodiesel. That's if we could get this stuff up; we have a 30-megatonne ask coming at us from the federal government to make fuels a reality, but the bureaucracy has stalled that program from going forward. We don't know where it's going to be. It's back to the point that without clear policy, we can't move this stuff. You can't invest without clear policy.

Mr. Wayne Stetski: I want to bring it back to the federal government's role, which is of course why we're here. What do you think the federal government should be doing better, or more of, in order to help your industry—again, particularly focusing on greenhouse gas reduction and a better future?

Mr. Don McCabe: Number one, we need the base data for the long term. That means we have to get the LIDAR and a clearer understanding of our soils.

Two, we need to have clear signals in policy, and that means a price on carbon. I'm not referring to a carbon tax and I'm not referring to cap and trade, because those are mechanisms for putting on a price. I would prefer a cap-and-trade approach. It's probably not going to happen, because politically that is not the best route when you're looking at 2019.

Finally, invest in your natural resource sectors. We are the base of this country. We are leaders in the world with our opportunities. We have the area. Please unharness us to go ahead.

● (1725)

Mr. Wayne Stetski: Thank you.

The Chair: That concludes the time we had scheduled for today. I want to thank all six of our guests today for being here and for their testimony.

This has been perhaps one of the less spirited conversations we've had in the last bit. I appreciate everybody on all sides of the table really squeezing good information out of our witnesses today.

To the witnesses, if you have any additional thoughts you would like to submit to us, or if you have any follow-up you want to provide, you can do that through the clerk. He'll get that information to the analysts. We would ask you to keep it to 10 pages, or up to 10, just for translation purposes.

With that, have a great weekend, everybody. If you're going home, safe travels. We'll see you again on Tuesday.

The meeting is adjourned.