HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

Standing Committee on Environment and Sustainable Development

ENVI • NUMBER 028 • 2nd SESSION • 41st PARLIAMENT

EVIDENCE

Tuesday, June 10, 2014

Chair

Mr. Harold Albrecht

Standing Committee on Environment and Sustainable Development

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● (1530)

[*English*]

The Chair (Mr. Harold Albrecht (Kitchener—Conestoga, CPC)): I'd like to call to order meeting number 28 of the Standing Committee on Environment and Sustainable Development. We are continuing our study on the management of municipal solid waste and industrial materials.

We have appearing as witnesses today, from the Canadian Renewable Fuels Association, Mr. Scott Thurlow, president. Welcome.

From Enerkem we have Marie-Hélène Labrie, vice-president, government affairs and communications. Welcome.

Appearing by video conference from Toronto, the Canadian Environmental Law Association, we have Theresa McClenaghan, executive director and counsel, and Fe de Leon, researcher. Welcome.

Each of the groups will give a 10-minute opening statement. Once all three groups have given their opening statements, we will have questions from the committee members.

We will begin with Scott Thurlow, Canadian Renewable Fuels Association. Welcome, Mr. Thurlow.

Mr. W. Scott Thurlow (President, Canadian Renewable Fuels Association): Thank you very much, Mr. Chairman.

I am very happy to be here today on behalf of Canada's biofuel industry to talk about waste management and landfills in Canada.

Founded in 1984, the Canadian Renewable Fuels Association is the country's leading advocate for the economic and environmental benefits of biofuels, and represents the full spectrum of Canada's domestic biofuels industry.

Across the country, Canada's renewable fuels plants are generating gross economic benefits in excess of $3.5 billion to the Canadian economy every year, and have created more than 14,000 direct and indirect jobs.

In April CRFA launched our industry's new vision and action plan, “Evolution and Growth”. I believe all committee members received copies in advance of my testimony. This is the first comprehensive plan on renewable fuels in Canada in several years, and it makes six policy recommendations for the continued growth and expansion of biofuels use and production in Canada.

A big part of our plan is making Canada a clean energy superpower and transitioning today's ethanol and biodiesel plants into the biorefineries of the future. This work is well under way. In fact, last week I was at the inauguration of Enerkem's biorefinery in Edmonton.

Municipal solid waste is an environmental issue for everyone and every city around the world. As you know, some cities cart their trash to other cities or other countries, expending both capital and energy to manage a problem that is not going away. There is no doubt that conservation is always going to be the first, best solution, but with a growing population and growing economy, no matter how much we reduce, reuse, and recycle, we will still have municipal solid waste.

CRFA members are already working to divert waste from landfills and create energy simultaneously. As mentioned, Enerkem opened the world's first commercial-scale waste-to-biofuels biochemicals plant last week, and in Varennes, Quebec, GreenField Specialty Alcohols is treating organic waste retrieved from the residential, industrial, commercial, and institutional sectors to produce biogas. An anaerobic digester will be installed on the site of an existing corn-ethanol plant, and will use organic waste from local south shore communities to displace a portion of the plant's natural gas use.

This will provide a new source of clean, renewable fuel and high-quality compost for direct use on agricultural fields. The facility will accommodate the retrieval and treatment of more than 79,000 metric tons of organic matter annually. Construction of this new facility is scheduled to begin in July and is expected to be completed by September 2015.

On the same site, GFSA is partnering with Enerkem to incorporate its thermochemical technology to produce cellulosic ethanol from industrial waste, diverting even more waste from landfills.

It is often said that every challenge is an opportunity. Here we have a garbage challenge, if not a garbage problem, and a renewable fuels opportunity that will reduce municipal solid waste and reduce the impact on the environment of greenhouse gases from fossil fuels. There is a double GHG benefit because, left untreated, the municipal solid waste will in time degrade further and create additional GHGs.

The environmental need is real. The environmental benefits are clear. What we need now is a strategy on how to get there. All municipalities can look to the Enerkem-Edmonton partnership as a model. Instead of paying tipping fees to bury waste, Edmonton chose to make strategic investments, investing capital in technologies that will do away with trash forever by converting it into energy and chemicals.

Any municipality that is spending any public funds to deal with trash, either burying it or carting it away, should take a hard look at how that capital is being deployed. Those fees—a sunk cost—could be invested into technologies that will do away with the trash forever by converting it into energy or chemicals.

Municipalities are only one of the many partners that are needed. The federal and provincial governments have their own roles to play. Specifically, we want to ensure that Canada continues to produce and use more clean-burning and waste-diverting renewable fuels.

Cellulosic biofuels produced from waste are indistinguishable from traditional ethanol made from corn or wheat, but as you can imagine, this type of technology is incredibly capital intensive and the investment risk for these projects is considerable. In Canada this is further frustrated by the fact that other jurisdictions are aggressively pursuing this investment capital and offering aggressive policy incentives. The United States has a volumetric requirement for cellulosic fuels, as well as financial incentives for the production and use of cellulosic fuels, essentially drawing venture capital to the U.S. like a magnet.

To help Canadian producers secure investment and produce these fuels in Canada, we are asking the federal government to remove the excise tax on cellulosic fuels. In the past, tax exemptions for ethanol and biodiesel helped to kick-start those industries in Canada.

A second item, which we believe will go a long way in promoting the use of these cellulosic fuels, is appropriately measuring the fair value of the GHG reductions that they create. Cellulosic fuels reduce GHGs by over 60% compared to petroleum-based gasoline. Ensuring the ability to obtain a fair value for those environmental benefits is key to the success of all renewable fuels. If producers could get a fair value for those emissions reductions, the margin between advanced biofuels and its competition would shrink even further.

Finally, higher ethanol blends need to be available at the pumps for Canadian consumers. The corporate average fuel economy rules, introduced by this government to harmonize fuel economy standards across North America, will require fuel economy improvements, starting in the 2017 model year vehicles. That is not very far away. Original equipment manufacturers, including Ford, General Motors, and Mercedes, are asking for higher octane fuels in order to meet the needs of their CAFE obligations, and there is no cheaper cleaner source of octane than ethanol.

In the past, our fuel infrastructure has not kept pace with technology. Just ask the owners of over three million vehicles on our roads today that can take up to 85% ethanol. Consumers deserve a choice at the pumps, and right now there is no choice at all.

CRFA is calling on federal and provincial governments to make strategic investments in infrastructure, and encourage pump turnover from existing fuel providers, independent retailers, and new market entrants to provide opportunities for consumers to choose these higher-level blends. Those higher-level blends can and should include cellulosic biofuels from waste.

Today is a time of real environmental challenge, but there is also an opportunity. Renewable fuels technology gives us the opportunity to divert solid waste from our landfills, reduce GHGs from our environment, and produce fuels that are sustainable. It's an opportunity that is ours for the taking.

Thank you. I would be happy to answer your questions.

● (1535)

The Chair: Thank you very much, Mr. Thurlow, and thank you for being well under your 10-minute allotment.

I have a question of clarification. You said “79”, yet your notes, on page 1, say, “This will provide a new source of clean, renewable fuel and high quality compost for direct use on agricultural fields. The facility will accommodate the retrieval and treatment of more than 49—

Mr. W. Scott Thurlow: Yes, 49 metric tons.

The Chair: You said “79”.

Mr. W. Scott Thurlow: Oh, my apologies.

The Chair: Thank you for that clarification. I just wanted to be sure.

Mr. W. Scott Thurlow: I always round up.

The Chair: I round down when I'm giving my members time for their questions, and they've found that out.

Thank you very much.

We'll now move to Marie-Hélène Labrie, vice-president, government relations for Enerkem.

Welcome.

[*Translation*]

Ms. Marie-Hélène Labrie (Senior Vice-President, Government Affairs and Communications, Enerkem): Thank you, Mr. Chair. Good afternoon.

Enerkem is a private Quebec company that produces biofuels and renewable chemical products using residual materials such as non-recyclable and non-compostable waste. Using its exclusive technology, Enerkem converts residual material headed to the landfill into added-value products such as biomethanol and ethanol.

[*English*]

Enerkem was founded by two visionary men who are today still part of the senior management team: Dr. Esteban Chornet, a world-renowned scientist; and Mr. Vincent Chornet, a renowned entrepreneur and businessman.

Headquartered in Montreal, Enerkem employs 170 people across Canada, and 30% of them are engineers. The company operates both a pilot facility and a demonstration facility in Quebec, and just last week inaugurated Enerkem Alberta Biofuels, its first full-scale commercial facility. This game-changing plant is located in Edmonton. It is the world's first full-scale facility to convert residential waste into biofuels and renewable chemicals. Enerkem is also developing additional biorefineries in North America and globally, based on its modular manufacturing approach.

The company's next project is a biorefinery facility in Varennes, Quebec, and it will use construction and demolition debris. This first-of-kind facility is supported by the next generation biofuels fund, managed by SDTC.

Enerkem's technology is a breakthrough innovation that uses non-recyclable garbage instead of petroleum to produce liquid transportation fuels and renewable chemicals. It is a true biorefinery. This technology reduces our collective dependence on fossil sources. It is transforming the way that communities manage their waste by offering a sustainable and economical alternative to landfilling and incineration. It is complementary to upstream recycling and composting.

Last week, we officially launched our first full-scale facility, with Mayor Iveson, from Edmonton—

The Chair: I realize that I was maybe a little aggressive when I said 10 minutes. You are probably going quickly because of that.

● (1540)

Ms. Marie-Hélène Labrie: No, maybe it's just my natural pace. Is it too quick?

The Chair: Because of our translators, it would be easier if you would—

Ms. Marie-Hélène Labrie: Would you like me to start again, or...?

The Chair: Just slow down a little bit to give them some time.

Ms. Marie-Hélène Labrie: Should I go back?

The Chair: Don't start over, just slow down a bit from here on in.

Thank you. Sorry to interrupt.

Ms. Marie-Hélène Labrie: Last week, we officially inaugurated our first full-scale facility in Edmonton. This announcement was shared by Enerkem's CEO, Mr. Vincent Chornet, Mayor Don Iveson from the City of Edmonton, and the Honourable Robin Campbell, Alberta Minister of Environment and Sustainable Resource Development, as well as Diana McQueen, Alberta Minister of Energy. The City of Edmonton is a world leader in sustainable waste management, and we're proud to have been selected by the city to help Edmontonians increase their residential waste diversion rate from 60% today, to 90%. Alberta Innovates—Energy and Environment Solutions is also a partner in this project. Their staff served on the steering committee that provided technical input and advice during the selection process.

The facility will have a production capacity of 38 million litres per year, which is enough to fuel the tanks of 400,000 cars annually on a 5% ethanol blend. It is expected to generate net economic spending in the local area of nearly $65 million annually. During the construction, more than 600 direct and indirect jobs were created for the modular manufacturing of the facility's systems and their on-site assembly. You have a summary of this economic impact analysis that was conducted by Doyletech.

The start-up of the biorefinery is just a few days away, and follows a rigorous commissioning plan, which is nearing completion. Biomethanol production will begin progressively during the start-up. A module converting the biomethanol into advanced ethanol will be added during 2015. The completion of this game-changing facility is by far one of the most significant developments the waste and biorefinery sectors have seen yet. Municipalities around the world are looking at what we are doing in Edmonton. We're thrilled that it is becoming a model for many communities and industries around the world.

Enerkem's technologies are homegrown, cleantech innovations. It is the result of more than 10 years of sustained efforts to scale up our technology from pilot and demonstration to now commercial scale.

Disruptive technologies are not overnight successes. They are crafted by like-minded customers, visionary founders, and investors. Pilot and demonstration plants take years to develop and require discipline and sustained efforts. They also require public policies and programs that stimulate private investment, open the marketplace, and help move from lab, pilot, demonstration, to full-scale production.

Enerkem benefited from the support of the federal government, which, through Natural Resources Canada, NSERC, and the Sustainable Development Technology Canada tech fund, has provided support in developing our technology early on, and up to this day has been an essential partner in our success.

The Quebec government has also been involved at every stage of our development and growth, from the early phase of the research at the Université de Sherbrooke to the development of our modular equipment fabrication infrastructure. The Alberta government is also another of our partners through Alberta Innovates—Energy and Environment Solutions, Alberta Energy, and the Climate Change and Emissions Management Corporation.

Policies on renewable fuel standards are at the cornerstone of Enerkem's commercial growth. They have opened the marketplace for Enerkem's biofuels and created the policy certainty necessary to attract private investment. Enerkem has been successful in raising $240 million in private capital since its inception.

According to Analytica Advisors, which has been monitoring Canada's cleantech sector for five years, the Canadian clean technology industry is valued at $11 billion today, and is already on track to grow to a $28-billion industry by 2022. Its success is partly due to its structure. In fact, the industry is composed of about 700 SMEs around the country. Most of them have less than $50 million in revenue, but together they invest $1 billion in R and D, and employ 41,100 Canadians, 20% of whom have not yet celebrated their 30th birthday.

In addition to solving waste management issues at home, Enerkem's clean technology opens the door to export increases. In North America alone, 529 million tonnes of waste are generated every year. More than half of it is landfilled, and it has the potential to be converted into 63 billion litres of biofuels annually with Enerkem's technology.

● (1545)

Given Enerkem's modular manufacturing approach, biorefinery facilities built in the United States and elsewhere can be built in large part in prefabricated modules in eastern Canada where Enerkem has built the major part of its manufacturing infrastructure.

The benefits of converting our non-recyclable garbage into higher value products are significant for Canadians. It reduces greenhouse gas emissions by approximately 60%. It provides municipalities with a cost-effective alternative to landfilling and incineration. It increases energy diversification and greens our energy basket. It helps meet our federal and provincial renewable fuel mandates. It increases domestic production of biofuels and reduces our biofuel imports with locally produced, second-generation biofuels. It creates high-quality green jobs. It implements a new industry, the biorefinery sector. It stimulates regional economies. It contributes to revitalizing our manufacturing sector. It elevates Canada's profile as a leader in clean technology, and it contributes to the advancement of research in advanced chemicals and new biofuels.

To ensure the development of a sustainable waste management sector in Canada, we would like to make four recommendations.

[*Translation*]

First, the federal government should continue its efforts to support the commercialization of Canadian innovation and technology.

[*English*]

A variety of activities can ensure that innovations, which have the potential to profitably solve waste management issues, are supported until they reach the full commercial scale. These policies and programs are essential to attract the private investment necessary to scale up technologies and finance first-of-kind projects until they can be financed in a more traditional way, meaning with the support of banks via debt financing.

R and D tax credits and Sustainable Development Technology Canada are great examples of how the federal government is making a difference.

[*Translation*]

Second, governments should make sure that regulations take into account new technologies and that they be updated in order to reflect these new circumstances.

[*English*]

For example, clean technologies that are waste conversion processes involving the use of heat but not combustion, such as incinerators, can sometimes be forced to follow the same restrictive environmental permitting processes that are imposed on incinerators. These provincial regulations must absolutely be updated as today they are an impediment to the development of sustainable waste diversion projects and end up reinforcing the status quo around the use of landfilling.

[*Translation*]

Third, the federal government must seriously consider initiatives to stimulate the next-gen biofuel sector.

[*English*]

The second-generation biofuels sector has not benefited from the programs that were put in place for the conventional biofuels industry, given the timing of its commercial deployment. Today, only one program exists, and it only allows the financing of one project. This is the next generation biofuels fund managed by SDTC.

Countries around the world have put in place policies to stimulate the development of the second-generation biofuels sector. Some countries, like the U.K., have a double-counting factor for cellulosic ethanol. One litre of cellulosic ethanol counts for two litres, which stimulates refiners to buy this product and investors to finance these capital-intensive projects. In the U.S. the federal government has established a mandate that is specific to cellulosic biofuels and has implemented tax incentives for cellulosic biofuels.

We would like to recommend that the government remove the fuel excise tax on cellulosic biofuels. Exempting cellulosic biofuels from the 10¢ per litre federal excise tax on gasoline would directly contribute to meeting the government's goal of creating economic growth in a fiscally responsible manner, while reducing GHG emissions.

● (1550)

[*Translation*]

Finally, we would propose that biofuels made from waste be eligible for the capital cost allowance tax incentive for clean energy production.

[*English*]

The accelerated capital cost allowance for clean energy generation under class 43.1 and class 43.2 includes a variety of equipment that generates or conserves energy by using renewable energy such as wind, solar, and fuels from waste, such as landfill gas. It does not include equipment like ours, which focuses on the production of liquid transportation fuels from waste rather than stationary energy.

In conclusion, Enerkem's technology and facilities offer Canadians a sustainable alternative to waste landfilling and incineration, while helping diversify our energy mix and making greener everyday products.

[*Translation*]

We sincerely feel that clean technology like ours has the potential to create more wealth at home and to provide a healthier and more sustainable environment for Canadians.

Thank you.

[*English*]

The Chair: Thank you very much.

We'll move now to our video conference and Theresa McClenaghan, executive director, Canadian Environmental Law Association.

Welcome, by video.

Ms. Theresa McClenaghan (Executive Director and Counsel, Canadian Environmental Law Association): Thank you very much, Mr. Chairman.

Thank you for inviting CELA to appear before you today.

As I think many of you know, the Canadian Environmental Law Association is a 43-year-old, not-for-profit environmental organization, formed to use law to advance environmental protection and to advocate for systemic environmental law reform. We're also a legal aid specialty clinic in Ontario. We represent clients. We provide advice. We advocate for law reform, and we provide public legal education.

We have an extensive history at CELA working on both solid waste issues as well as environmental law issues relating to industrial material in matters ranging from local to international scales. For example, we have frequently represented citizens groups and first nations with respect to landfill proposals, recycling and composting facilities, and other waste-handling facilities, often around making sure that those facilities, if properly sited, are also properly designed to alleviate environmental impact.

We've also been involved in many initiatives over the years, both provincially and federally, in respective amendments to waste-related legislation. Federally, this includes of course the Canadian Environmental Protection Act and other pieces of legislation that relate to marine waters, for example, such as the Fisheries Act.

We've also been very involved over the years in initiatives relating to Canada's participation in international conventions, such as the Basel Convention, which deals with the export of hazardous waste; the Stockholm Convention on Persistent Organic Pollutants; the Rotterdam Convention, which requires prior informed consent; and the Minamata Convention on Mercury, which Canada signed last year, to name a few.

Our involvement has, for example, included advocacy for Canada to agree to include asbestos in the Rotterdam Convention. Asbestos is a material of relevance to your study today. We'll make very brief remarks, but we're happy to answer further questions on these conventions. Ms. de Leon, who is with me, works extensively on all these conventions with many other NGOs, internationally and nationally.

CELA has also prepared reports over the years based on the national pollutant release inventory, the NPRI, which was established under the Canadian Environmental Protection Act or CEPA.

Today we wish to focus on some areas of our work that we hope will be of assistance to you in your current study. First, in general, one area we look at is hazardous and toxic materials. In certain cases, such as with asbestos and with mercury, there are extra hazards, and policy-makers have to ensure that we're not creating new problems as we handle those materials. For example, the dangers of asbestos are well known, but asbestos is likely still going to domestic landfill in Canada, in poorly controlled conditions, and the issue of how it's being handled en route also raises questions of public safety. Similarly, mercury and other materials can be released when products become garbage, as in the case of mercury switches in cars, and we'll discuss vehicles more in a moment.

In general, we advocate for cradle-to-cradle solutions, that is, to plan ahead, right from the design stage of production, to reduce the use of materials, to reduce and eliminate the use of hazardous and toxic materials specifically; to increase the reuse of materials and parts; to increase recycling of materials, parts, and substances; and to utilize those same materials, parts, and substances in reproduction. The ultimate aim is to avoid landfilling and emissions to the natural environmental at all. We are, of course, a long way from that ideal today.

To this end, we have examined various proposals over the years to determine whether they are supportive of a cradle-to-cradle materials approach. Energy from waste, for example, can be inconsistent with that approach and we always want to examine it to determine whether or not it's disrupting the kinds of objectives we just outlined in terms of reuse and recycling. For example, we do support anaerobic digesters, which use the methane generated from manure and restaurant waste—Mr. Thurlow mentioned that a moment ago—because it not only decomposes and produces the methane that can be used for energy production, but much of that material is destined to be applied to land as a fertilizer. The anaerobic digesters also reduce pathogens in that material, making it much safer when it's land-applied, avoiding the kind of tragedy we had at Walkerton, for example.

● (1555)

Similarly, where we already have landfills that are generating methane as domestic garbage decomposes, we support installing landfill gas recovery systems and using that methane for energy production. Otherwise, the methane is emitted into the air as a greenhouse gas and has a significant nuisance impact to the surrounding neighbours from the odour. If it seeps into buildings, it presents a significant explosive hazard.

What we don't support is the wholesale diversion of our recycling programs and solid waste programs into burning these materials for energy. If taken, that approach has the potential to seriously disrupt materials reuse and recycling programs, in addition to the potential for hazardous emissions into the air.

In terms of biofuels and biomass, our general approach has been that those processes need to be examined in terms of their overall impacts and to ensure that they're not presenting new problems as they attempt to solve other ones. For example, when we've looked at biomass in the past, questions have arisen to make sure that soil health is maintained as straw is removed from crops and slashed from the forest. It's not a black and white answer to those kinds of questions.

I'll turn to a report that we thought would interest you today, which we conducted with the CAW, in 2011, around improving management of end-of-life vehicles in Canada. This was an in-depth report and is available on our website as CELA publication 784. I can also provide it to the committee, but unfortunately it is in English only.

When we examined the situation with respect to vehicles, we found a great number of existing issues and great opportunities as well. In Canada, 1.2 million vehicles are taken off the road every year. To look at the Ontario situation, for example, we know that of the Ontario portion of those vehicles, 40% or 35% are processed by certified auto recyclers who meet certified auto recyclers standards, but 65% are processed by other auto wreckers. We don't know how many of those other vehicles—400,000, in Ontario, and the rest across the country—are depolluted. I'll speak more about this concept of depollution in a moment.

There is great opportunity in terms of auto parts recovery and recycling, and we would like to specifically acknowledge a researcher, from the University of Windsor, who provided important information for our study. Susan Sawyer-Beaulieu conducted in-depth research on this topic.

As you can imagine, the parts that can be reused and remanufactured include everything from air conditioning compressors right through to batteries, catalytic converters, tires, and everything in between. It's not the case that everything has to necessarily be automatically sent to recycling, as a lot of these parts can actually be reprocessed and reused. That, in itself, presents great opportunities for material and energy savings.

In terms of depollution, the research and studies have shown that in particular, because of the complexity of vehicles, it's important to take a look at making sure that the process of dealing with those vehicles is not presenting new problems for the environment. It's removing all of their batteries, all of the fluids, the tires, the mercury switches, and any ozone-depleting substances, air bags, and so on. The parts are dismantled and separated into their streams, and the remaining parts, in many cases go to shredding, for recovery of metals in particular.

Federally there was a retire your ride program, which offered an incentive to turn in pre-1995 vehicles for recycling. That particular program ended in March 2011. One thing we noted about it, though, is that in order to receive the incentive, it did require that the vehicles be left with auto recycling operations that met certain protocols for dismantling. That's a useful piece to note. Incentives alone, without matching them with a performance standard, might not necessarily solve the problem in the way that it needs to be addressed.

I just want to talk about the—

● (1600)

The Chair: Can you try to summarize in about 35 seconds? Your time is up, but we'll give you a little more time to finish.

Ms. Theresa McClenaghan: The potential for diverting the materials for reuse and recycling and for depollution is in the hundreds of thousands of tonnes per year.

Our research did divide that up across the types of materials. I won't belabour you with the statistics right now, but I will just say that while there is not a bad amount of metal recycling, the potential is still much greater. Also, the plastic recycling is very underutilized in terms of what's going on in Canada. As well, batteries, fluids, and the other hazardous materials need much more attention than is currently taking place, because of the fact that we saw that 65% of the vehicles are not necessarily going to certified recyclers.

Thank you for the opportunity to present to you today. As I indicated at the outset, if the committee has questions on some of the other specific areas of our work, we'd be happy to provide that, but we thought it would be useful to focus on a really specific sector that we had studied in depth.

The Chair: Thanks, Ms. McClenaghan. If you did run out of time on the things you wanted to say, you may have an opportunity to weave those into your responses to our committee members during their questioning.

We're going to begin now with you, Mr. Carrie, for the opening question. You have seven minutes.

Mr. Colin Carrie (Oshawa, CPC): Thank you very much, Mr. Chair.

I want to thank the witnesses for being here as we are looking at the study of technological innovation.

I was extremely intrigued, Mr. Thurlow, when I was reading through your précis. One of the parts you noted was that you can convert agricultural waste, forestry residue, and even solid municipal waste into advanced biofuels, chemicals, and other valuable co-products.

I wonder if you can give us an idea of how the process actually works with the innovation of these new technologies. How is it working? Can you walk us through the process?

Mr. W. Scott Thurlow: I can't do it personally, but my members certainly can.

There are two different types of technologies. One is thermo-chemical based. The other one is biologically based. I'll let Marie-Hélène talk about her process.

The other type, quite frankly, is to create an environment whereby agricultural residues or any source of carbon can be broken down through enzymatic means at a molecular level and converted into something that, as a chemical building block, can be forwarded on to anything else. It doesn't necessarily have to be fuel.

There are two important steps. The first is that the feedstock has to be pre-treated in such a way that it can easily be digested by either the thermochemical or the biological process. That step is incredibly capital intensive. The second what I'll call “issue” is getting the feedstock, whether it's biomass, municipal solid waste, corn stover, or whatever, to the facility in a way that's economical.

Do you want to be more specific, Marie-Hélène?

Ms. Marie-Hélène Labrie: On the thermochemical side, this is a process that breaks down the solid material into a synthesis gas that is composed of carbon monoxide and hydrogen. The process then uses catalysts to convert that syngas into a liquid.

In our process, we first convert this syngas into methanol. Then, through carbonylation and hydrogenolysis, we convert that methanol into ethanol. From the solid waste to the ethanol, our process takes four minutes. The biological process will be a bit longer, as it involves enzymes.

Biological or thermochemical are the two main pathways that you find around the world for second-generation biofuels.

● (1605)

Mr. Colin Carrie: Looking at what you have and what I see in front of me, I think it's phenomenal.

Just a little lower down in the document, Mr. Thurlow, you say that compared with fossil fuels, biodiesel has 99% fewer greenhouse gases and ethanol has 62% fewer greenhouse gases. Especially when you're looking at municipal waste for biodiesel, I've heard that they actually use waste cooking oil or something for that. Could you walk us through the process of how that's being done?

Mr. W. Scott Thurlow: Yes, certainly. Used cooking oil right now is probably the most popular feedstock because it is the least expensive. Canola oil is another one that's used a lot, but because of the price of canola right now, it's not as attractive as a feedstock.

Every company is going to have a process that's unique to them, but ultimately it's about finding the way to crush the oilseed into a consumable methodology that would allow for the chemical conversion from whatever that oil source or the lipid source of fats is, and that then can be converted into a renewable diesel.

We have technology that can use rendered animal parts as well, which has the greatest GHG potential, because instead of that going into another product and then further decomposing, which would release other GHGs to the atmosphere, we're putting those carbon molecules into a fuel form that can be stored in a much more energy-efficient way.

There are literally dozens of different types of feedstocks, but in Canada your most important ones are used cooking oil, soybean oil, canola oil, and then the rendered animal product.

Mr. Colin Carrie: These different technologies sound really great. Are they economically sustainable on their own, or do you need government assistance? What are you seeing as these roll out around the world?

Mr. W. Scott Thurlow: This is a point that I really enjoy talking about.

Government support is really about making a strategic investment at the front end of the technological process. These are business risk management tools that financial institutions look to in order to make those investments safer.

For the most part, as Marie-Hélène said, these are disruptive technologies. At the outset, they're not as proven as other displacement fuels that they would be offering to stand in place of.

Lenders need that security, and operating incentives are a form of that security.

Our member companies currently receiving operating incentives will be ready, based on their business model, when those operating incentives expire, as they are supposed to naturally in 2016-17. They will be ready to stand alone at that time.

They are not operating incentives that are needed to make the business viable. They are lending mechanisms.

Mr. Colin Carrie: What is the interest at the municipal level now? I understand, Marie-Hélène, you're opening your first one in Edmonton. How much interest in your technology are you seeing from other municipalities?

Ms. Marie-Hélène Labrie: We are in discussions with several groups. Many municipalities that have optimized recycling and composting are looking at the next step. Right now the options they have are either landfilling or incineration. We're an alternative to these two options, and we're complementary to all these upstream activities by municipalities. We're in discussion with several groups in North America as well as in the Middle East, Europe, and China.

The City of Edmonton is also attracting a lot of international visitors and municipalities. They have developed a group called RE-solutions, which provides consulting services to municipalities in developed countries to help them further improve their waste diversion activities, and they are promoting that public-private partnership. The City of Edmonton has integrated state-of-the-art technologies and has partnered with the private sector for their kind of ecosystem, where they optimize the new innovative technologies to increase their waste diversion rate.

The Chair: Thank you.

Thank you, Mr. Carrie. Your time is up.

Madame Freeman.

Ms. Mylène Freeman (Argenteuil—Papineau—Mirabel, NDP): Thank you, Mr. Chair.

[*Translation*]

Ms. Labrie, I know that Natural Resources Canada is one of your partners. How does this department contribute to your activities? How does Canada's involvement compare to the United States?

● (1610)

Mrs. Marie-Hélène Labrie: Natural Resources Canada is a partner for our research and pilot projects mainly.

We were not able to benefit from the ecoENERGY initiative for biofuels because the timing of our commercial production was such that we could not apply under this program. We do receive funding for a research project on airplane fuel under the ecoENERGY initiative for innovation.

Ms. Mylène Freeman: Your activities are quite focused on research, are they not?

Mrs. Marie-Hélène Labrie: Yes, absolutely.

Ms. Mylène Freeman: How do the American and Canadian governments compare in terms of their involvement in this area?

Mrs. Marie-Hélène Labrie: The United States regulates cellulosic ethanol production. Refiners must include a specific percentage of next-gen biofuel in their mix, whereas Canada does not have a position on this type of biofuel. That commitment stimulates investment even further. The United States also gives tax incentives. For every gallon of cellulosic ethanol that is produced, they allow a capital cost allowance of one dollar, as well as an accelerated capital cost allowance.

Ms. Mylène Freeman: That is interesting. Those are the kinds of things that make a difference.

I read that the Fonds de solidarité FTQ and the Fondaction CSN invest in your company. How do these kinds of investments help you?

Mrs. Marie-Hélène Labrie: Enerkem is a private company and is not publicly traded. We are supported by private investors. Some of those investors are Quebec investors, for example Cycle Capital Management, a clean technology fund. We also have investors from the Cleantech Group fund, in New York.

Ms. Mylène Freeman: Is the idea to create jobs in Quebec?

Mrs. Marie-Hélène Labrie: These are investments in the company and in job creation. Approximately six years ago Enerkem had 25 employees and there are now 170.

Ms. Mylène Freeman: I read in several articles that there are some questions about how profitable your process and finished product is. Can you talk about what kinds of complications there have been with this technology, and can you tell us where you stand today?

Mrs. Marie-Hélène Labrie: You are probably referring to an article written by the reporter Hélène Baril, and unfortunately this was used in a smear campaign against Enerkem by 3 of the 189 suppliers with deal with.

These suppliers would like to be paid extra. These construction businesses use dishonest practices. I would like to first put this in context. These people are pipefitters and they were saying that there was a fouling problem in one of our pipes. The problem was caused by a method that we used in our demonstration plant but we have changed methods. The purpose of a demonstration plant is actually to make those last checks before building the plant on a larger scale. That is what the supplier was referring to. Unfortunately, the article led to some confusion.

The key to success for any breakthrough industrial innovation like this one lies within a rigorous approach to scaling up. Enerkem went through all the stages: pilot project, demonstration plant, and hours of validation. We are supported by Sustainable Development Technology Canada's Next-Gen Biofuels Fund, and they did a thorough technical review.

It is very important to go through this process in order to get to the last stage. No stages should be skipped. Sometimes people want to go too quickly. We take the time to go through each stage. We have a very solid team. Many of our people have petrochemical expertise, which is very important to us. We think a rigorous approach is the key to success.

Ms. Mylène Freeman: Yes, research is very important. That is what was stated in the beginning.

Could you tell us again how the Government of Canada could support you so that you will be in a position to increase your profitability and help the sector grow?

● (1615)

Mrs. Marie-Hélène Labrie: There are several important aspects to this.

First, there has to be continued support for the commercialization of innovation. It is very important to be involved, and not only at the research and development stage. It is very important to make sure that those innovations that have the potential to be profitable be able to get through what we call in finance the “valley of death”. The venture capital sector in Canada has not always been very strong. It is therefore important to complement and stimulate private investment at all stages. This is very important.

Second, we would like the government to create a 10¢ excise tax exemption for cellulosic biofuels, as a way of supporting the second wave of growth in Canada's domestic biofuel industry. The second wave is going to come from these new technologies that can take on a large variety of biomass types, including municipal waste. It is important to provide incentives and to be competitive with other jurisdictions in the world, otherwise the plants will be built elsewhere. Biofuels will then be exported and greenhouse gas emission reductions will also take place elsewhere, outside Canada.

My last point would also be that there is currently a tax incentive in the renewable energy sector but it focuses on the production of renewable energy for electricity, and excludes biofuels. I am referring to the accelerated capital cost allowance.

Thank you.

[*English*]

Mr. W. Scott Thurlow: Could I just add one sentence to that?

Marie-Hélène's point is very well taken as it relates to the differences between the types of ethanol that are out there. Right now Canada imports one billion litres of American ethanol. We do that because it's very inexpensive. By removing the excise tax on the cellulosic fuel, we'll be shrinking the differences between that American imported product, which is coming all the way from Iowa, Kansas, or further, and replacing it with a homegrown product.

Very small incremental steps can make a difference, but when you're buying at 10 million litres at a time, that will make a very big difference.

Ms. Mylène Freeman: Do I still have time?

The Chair: No. Good try, though....

Mr. Sopuck, you have seven minutes.

Mr. Robert Sopuck (Dauphin—Swan River—Marquette, CPC): Thank you, Mr. Chairman.

Ms. Labrie, you talked about the four recommendations that you are making to government. Have you estimated the fiscal impact of those recommendations to government?

Ms. Marie-Hélène Labrie: The first one is about stimulating cleantech innovation. I think the expert in this is probably Céline Bak from Analytical Advisors. She has been following the sector for more than five years.

I think the return on job creation is enormous. In terms of the export potential, it's also great. So the idea of stimulating private investment so that our innovations go beyond the R and D level and actually become commercial and generate the revenues, I think we can actually see that happen. If it stays at the R and D level, it does not create the jobs so the returns aren't there directly.

If I look at the 10¢ per litre, I think we've estimated that would be about $5 million to $8 million—

Mr. W. Scott Thurlow: Less than that based on current production....

Mr. Robert Sopuck: How much?

Mr. W. Scott Thurlow: That's $5 million to $8 million based on current production.

Mr. Robert Sopuck: Per year...?

Ms. Marie-Hélène Labrie: Per year.

Mr. W. Scott Thurlow: But that is based on creating an acceptable market for foreign investors to come and infuse their capital into Canada to attract investment for the future.

Ms. Marie-Hélène Labrie: And on retaining that biofuel so that we can generate the reductions here in GHGs rather than in the U. S....

Mr. Robert Sopuck: Ms. McClenaghan, you made the comment that you and your organization do not support producing energy from waste. Why have you come to that conclusion?

Ms. Theresa McClenaghan: No, what I was trying to communicate is that it is not a black and white question. There are many kinds of energy from waste that we do support.

What we don't support is incineration of domestic garbage. Some of the technologies that my friends have been describing are things we would support. I'm not sure if they all are, to be honest, because we'd have to look at the specific technology. But the general point of following the hierarchy of reusing, reducing, recycling, I think I have heard the other speakers support that as well. I gave you some examples of some types of energy from waste that we definitely do support because of the co-benefits. For example, Mr. Thurlow's description of the restaurant waste would absolutely be something we support.

● (1620)

Mr. Robert Sopuck: Thank you, I appreciate that.

Mr. Thurlow, I was very interested in your comments and Ms. Labrie's as well on how far cellulosic ethanol has come in the last few years. The last time I had been involved with this, just peripherally, the technology was a long way off. So from what you've just described, there have obviously been dramatic improvements in the production of ethanol from cellulose.

Can you talk about what's been happening in the last few years?

Mr. W. Scott Thurlow: I'll talk very generally. With Enerkem coming online, we now have a globally competitive commercial-scale waste to biofuel facility, the first one around the world.

I know that DuPont and POET will be opening cellulosic facilities this summer in the United States. That's technology that will be exported around the world as well.

Like any technology you can't just invent it. You have to run it through the rigours that Marie-Hélène described in terms of making sure that your scale-up is appropriate. The reality is that what happened in the first decade of this century was that there was a whole bunch of people that had a lot of really great ideas and then the global economy crashed, so venture capital tightened up incredibly quickly and they did not have the money made available so that they could advance those technologies. Now the economy is starting to pick up and there is a market for these products, as Marie-Hélène described, both in the United States and in other parts of the world. So you're going to see those technologies move forward.

But you are absolutely correct. A lot of those what I'll call "unproven technologies" have gone to the wayside and you now have true industry visionaries like Enerkem, DuPont, POET, GreenField Specialty Alcohols, ICM technologies, that are all able to create a cellulosic product that is cost-competitive with other products in the marketplace.

Mr. Robert Sopuck: How does the development of shale gas in North America and indeed around the world, which has significantly dropped the price of natural gas worldwide, affect your industry?

Ms. Marie-Hélène Labrie: I guess it's cheaper for us, given that this is one of the sources of energy we use even though an important part of our process is energy self-sufficiency. But we're not competing with natural gas as we are really producing a replacement for gasoline instead of producing electricity. So it's not the same as you find with biogas production, which is competing with natural gas. We are really in the fuel space, so we are not competing with natural gas. It does not really impact our industry.

Mr. W. Scott Thurlow: I'll put my corn ethanol hat back on for a second and say that the crush margin for ethanol is very tightly linked to the prices of commodities. The availability of more energy is overall a good thing.

I'll switch hats back again and say that those variables for that cost competitiveness.... I mean, ultimately the goal of renewable fuels is to reduce the impact on the environment. We have a challenge where the availability of the cheaper petroleum product to fuel our plants does an end run around some of the environmental benefits that may accrue through the advanced use of our product.

It's something that we watch very closely. The first website I go to every morning is the Chicago Board of Trade's to find out what the various prices are—and to find out who will be mad at me and call me to fix those things, which I can't do, despite what they may believe. But it is absolutely something that we're watching.

Mr. Robert Sopuck: One thing I'm very interested in, although this is a little bit off topic, is the fact that in Canada there's a lot of fragile land that is currently being farmed. What's exciting about cellulosic ethanol is that producing ethanol from grass that can be sown on fragile land will have incalculable conservation benefits.

Have you been talking to the agricultural industry about those developments in the future?

Mr. W. Scott Thurlow: Absolutely we have.

First, let me put out clearly, for the record, that soil organic carbon, and making sure that level is maintained in a way that's good for the environment, is incredibly important. Our partnership with farmers as the stewards of the nitrogen, the phosphorous, and the carbon that go back into the soil is incredibly important. They have done a fantastic job, over generations, of preserving the soil organic content of that.

On the marginal lands/fragile lands question, absolutely; if there is an opportunity to grow specific purpose-grown crops that will revitalize those lands and contribute to the economy at the same time, we're very much in support of that. It's fantastic work.

The Chair: Thank you.

Mr. Robert Sopuck: We need to talk—again.

Voices: Oh, oh!

Mr. W. Scott Thurlow: Yes.

● (1625)

The Chair: Thank you very much.

Mr. McKay, you have seven minutes.

Hon. John McKay (Scarborough—Guildwood, Lib.): "I have some marginal land for you", I think is what he's saying.

Mr. Thurlow, your second point had to do with measuring GHGs. You say there's in the order of a 60% reduction in GHGs.

If you have to measure it, don't you have to cost it? As far as I know, there's no costing mechanism to GHGs. Are you recommending that the Government of Canada cost GHGs?

Mr. W. Scott Thurlow: What we've done is we've recommended that all governments, federal and provincial, find a mechanism that will allow for the recognition of the GHG reductions that accrue through the use of our fuels. Not all petroleum-based fuels have the same GHG impact. Not all renewable content fuels have the same GHG impact.

We look at these fuels from a life-cycle basis. My friends in Toronto said cradle to cradle; it's well to wheel in our industry. We absolutely would like to see mechanisms put in place that will ensure a fair value for those GHG reductions, because—

Hon. John McKay: Right now you're not getting anything for your GHG reductions.

Mr. W. Scott Thurlow: Currently, under the federal regulations, there is not a mechanism in place.

Hon. John McKay: So there has to be some pricing mechanism in order to be able to level the playing field vis-à-vis ethanol versus other fuels.

Mr. W. Scott Thurlow: Where you say "price", I'll say "fair value". I don't think it's incumbent on government to establish what that price should be and put that out there as a bulkhead. What I want to do is make sure that where GHG reductions happen, there is a mechanism that allows for individual commercial entities to negotiate that into the—

Hon. John McKay: One way or another, it has to go to the bottom line. It has to be a dollar or a cent value somehow or another, whether you call it value or price.

Mr. W. Scott Thurlow: I can tell you anecdotally that some of my members are now putting that GHG value into the price for sale of their products—

Hon. John McKay: For which they're getting zippo.

Mr. W. Scott Thurlow: That's not true.

Hon. John McKay: No?

Mr. W. Scott Thurlow: But it's because of provincial regulations.

Hon. John McKay: Okay.

The second point is with regard to the excise tax. Your big thing is to get....

Now, it seems to me that the excise tax is 10¢ on a litre. Isn't that correct? Eliminating 10¢ a litre on fuel at the pump is, (a), a huge drop of revenue, but (b), it's a huge competitive advantage for ethanol.

Are you actually advocating for the total reduction or a percentage reduction?

Mr. W. Scott Thurlow: We're advocating for a total reduction on cellulosic ethanol. Right now, ethanol that's blended into gasoline is taxed at the same rate as the petroleum fuel component. Just like in the 1990s, we had the first exemption for ethanol, and just like when we had the same exemption for biodiesel, these very limited targeted tax exemptions will do exactly as you just said—create that advantage to allow the industry to kick-start itself.

Hon. John McKay: When I'm looking at a fuel pump, and I'm pumping—I don't know whether it's 5% or 7% ethanol—you want the percentage of that excise tax.

Given the price sensitivity, i.e., that Canadian consumers will drive miles in order to be able to get a cent reduction—

Mr. W. Scott Thurlow: Let's hope they drive to Enerkem.

Hon. John McKay: —doesn't this in effect give you an enormous competitive advantage?

Mr. W. Scott Thurlow: Yes. But the point is that right now we're at an enormous competitive disadvantage.

Hon. John McKay: I buy that, but I want to tease out the whole thing.

The Chair: For clarification—Mr. McKay, I think I'm following your line—is the 10¢ that you're removing just on the ethanol part of what's in that litre, or the whole litre?

Mr. W. Scott Thurlow: It's just on the ethanol part, and just on the cellulosic part.

The Chair: It's going to be like 0.03 cents a litre.

Mr. W. Scott Thurlow: I'm pretty sure that Mr. McTeague would notice and drive right across the country.

But, yes, that is correct; it's just on the cellulosic part and it's just on the ethanol part.

Hon. John McKay: He'll have to put that on his website.

Ms. Labrie, what's the price of that plant?

Ms. Marie-Hélène Labrie: We've invested about $100 million.

Hon. John McKay: So that's a $100-million plant.

● (1630)

Ms. Marie-Hélène Labrie: That's private investment, so it's not the city buying it. It's not a technology that we sell, because sometimes for waste management the model is to sell the technology that then needs to be upgraded by the municipality.

Hon. John McKay: What's your revenue source? Does the City of Edmonton pay you for every tonne of stuff you take away from them?

Ms. Marie-Hélène Labrie: The business model is a biorefinery. We sell value-added products, ethanol or biomethanol.

Hon. John McKay: Don't they pay you a tipping fee?

Ms. Marie-Hélène Labrie: Because we're taking municipal solid waste in this case, we get a tipping fee from the municipality. Usually municipalities have to pay a tipping fee to landfills. We're providing them with a competitive value proposition. Instead of landfilling, they actually pay us and we then invest, create those jobs —

Hon. John McKay: You're comparing apples to apples. Edmonton is driving a truck down the road, dumping it in a dump; they pay you the same thing to dump it at your place. Okay.

Ms. Marie-Hélène Labrie: It's very similar—

Hon. John McKay: I see. Then you have a stream of revenue that comes out of the products that you get out of that.

Ms. Marie-Hélène Labrie: Exactly.

It's really a biorefinery using waste. We have a competitive advantage over our competitors, who have to pay for the feedstock—

Mr. W. Scott Thurlow: But understand, if Edmonton wasn't doing this with Enerkem, they would be filling up landfill number one and then landfill number two, and on and on.

Ms. Marie-Hélène Labrie: And paying a tipping fee.

Hon. John McKay: I want to tease that out a bit. It's not just the immediate tipping fee; it's that you have to find something else down the road.

What I don't understand is why Toronto, which is the worst poster child of all, is running stuff to Michigan when they could be paying you the same thing.

Is it that the tipping fee for Michigan is so cheap that you can't compete?

Ms. Marie-Hélène Labrie: I think municipalities are all going through their strategic planning and the next steps for them. They have already had to deal with how to optimize their recycling, what they do with food waste. Many of them are looking at the next steps.

The City of Toronto is doing the same. They are now going through that strategy and vision for the next wave of solutions to increase their waste diversion rates. Toronto is doing that as we speak.

Many municipalities are now looking at what is beyond their recycling and composting or biomethanization activities. That's why to date they have not had that opportunity, but many of them are looking at solutions—

Hon. John McKay: It's bad news for everybody if the tipping fee is too low.

Ms. Marie-Hélène Labrie: Yes, but that is not the case; it's quite high.

On average, based on the *Waste Business Journal*, in the U.S., for example, it's about $45, and that does not include—if I remember it well—the transportation costs. In many municipalities, when you look at the total cost, it's above $80 or $100 per tonne.

Hon. John McKay: Finally—

The Chair: Finally, Mr. McKay, we may have an opportunity to come back.

We're moving along very well. Thanks for your cooperation.

Ms. Leslie, you have five minutes.

Ms. Megan Leslie (Halifax, NDP): Thank you.

Hi, everyone. I'm excited to ask questions.

Mr. Thurlow, I'm going to start with you, and then hopefully I'll have some time to chat with the folks at CELA.

I'm looking at your recommendations here. They're well laid out. I had some of the same issues as my colleague around value for carbon versus price on carbon, but I think we're speaking about the same language.

I want to tease out your third recommendation a bit, because you talk about putting renewable diesel into other sectors, such as marine, rail, mining, and power engines. You also talk about upping the percentage from 2% to 5%. That is clearly something that fits under federal jurisdiction. It is also clearly something that's easy, I think, because the 2% already exists, so it's just about upping a number.

I guess I'm at a loss as to why we're not doing it. You don't need to answer that question, but is there something about this that I'm missing that would be difficult? Or is there some kind of barrier here that I'm not seeing?

Mr. W. Scott Thurlow: First of all, thank you for the question.

Other jurisdictions are starting to pull away from Canada as it relates to what renewable content is required in the diesel pool. Starting on July 1 in Minnesota, in the summer months they'll be blending at 10%.

Ms. Megan Leslie: Ten per cent? I didn't know that.

Mr. W. Scott Thurlow: Yes, at 10%. Now, that has a lot to do with the soybean industry in Minnesota, but the reality is that today's automotive vehicles that are taking diesel fuel can run in the summer months on higher-content blends.

In the winter, Minnesota runs at 5% all the time and has never had an issue with operability. That is in a report to the governor and the legislature on an annual basis. It involves the petroleum sector, the trucking industry, and the agricultural sector. They put in a joint report to talk about operability issues.

This morning, we put out a release with the Asthma Society of Canada. The Asthma Society joined with us to call for the 5% increase for two basic reasons. On the asthma side of the equation, obviously, the removal of particulates from the environment is a good thing for human health, period.

Secondly, we now have more production in Canada than we have mandated demand under the regulations. It's actually the exact opposite issue to what we have with ethanol, where our producers now have to go and find a new market for their product. I think that product should be upgraded at home. I think that product should be consumed at home. I would also like to point out, given the trouble we've had this winter on the rails as it relates to moving farm and agricultural products, that if we had a higher mandate in Canada, that canola and that soy wouldn't have had to go anywhere. It could have been upgraded and consumed right here in the country.

● (1635)

Ms. Megan Leslie: Okay. So how does this relate to home heating fuel?

Mr. W. Scott Thurlow: Home heating oil has been exempted from the federal renewable fuel standard—

Ms. Megan Leslie: I remember reading about you in the media when that happened.

Mr. W. Scott Thurlow: We vociferously disagreed with that approach. The City of New York has a 3% home heating requirement for renewable content, and their heating oil market in the City of New York is bigger than Canada's, period.

We don't agree with a lot of the underpinning assumptions that went into the decision to remove home heating oil from the market, but ultimately it is a very small percentage. It's one of those things where we hang our head and say that we believe the government made a mistake, but let's move on and increase the total content requirement for the renewable diesel requirement.

I would point out, however, that even though the home heating oil volume is now exempted from the renewable fuels regulations, oil and gas companies absolutely are using home heating oil as the way to input more renewable content into the diesel requirement.

Ms. Megan Leslie: Is there any exception there?

Mr. W. Scott Thurlow: There are some exceptions, but it really comes down to the individual obligated parties. There are some that will choose to use home heating oil because they sell a lot of it into a very specific area, and there are some that won't. That flexibility is important. We support that flexibility, but we disagreed with the exclusion.

Ms. Megan Leslie: It's fascinating to me that we used to have a requirement and now that requirement has been taken away.

I would like to chat with the—

The Chair: You'll have to be very quick.

Ms. Megan Leslie: Hopefully I can come back, because I have some questions. Mercury and cars made me think about a 2013 report from Environment Canada that talked about the fact that we weren't prepared for the onslaught of CFL light bulbs and their proper disposal, and how that the mercury would end up in our domestic landfills as well. I was wondering if I could get an update, but perhaps the update can come after.

The Chair: If you can do the update in 20 seconds, I'll let you proceed, or maybe you could wait until there is more time to respond to that.

Ms. Megan Leslie: We'll probably have two more rounds.

The Chair: Let's wait.

Ms. Megan Leslie: I can come back.

The Chair: You can make note of the question and be prepared to respond.

We'll move to Mr. Toet for five minutes.

Mr. Lawrence Toet (Elmwood—Transcona, CPC): Thank you, Mr. Chair.

Mr. Thurlow and Ms. Labrie, you both made a comment about commercialization of technology being important, about how funding should be there not just for R and D but actually for commercialization, to bring a product to the marketplace. How important is that, especially in light of the industry sectors that you're in and the government's support of that?

Ms. Marie-Hélène Labrie: It's critical.

If you look at second-generation biofuels, those are really breakthrough technologies that are being developed as we speak. Without the support of government to really have the policies in place to attract private investment, it wouldn't be possible to take those technologies from R and D to a commercial stage.

When we talk about the government's support, we talk about a series of public policy tools and programs. I see, really, three pillars.

One is the regulatory environment that opens the marketplace with the renewable fuel standards. This was really key for us to track private investment. We were able to raise $240 million in private capital to grow the company, to scale up our technology, and to invest in our first full-scale plant.

Next are the capital programs, such as the SDTC's next generation biofuels fund. This one is helping the other project we're developing in parallel to the Edmonton one. It is in Varennes, on the south shore of Montreal, and it will take non-recyclable construction and demolition wood to produce ethanol. This is really key to helping bridge the gap in finance, since banks are not supporting projects at that stage because those are new technologies. Until they become fully commercial and have been used for more than three years—that's usually the rule of thumb—you're not able to finance in a really traditional way.

The third pillar is operating or fiscal incentives that can really help on the operational side during the first years of operation.

Those are the three pillars that are key to supporting the commercialization of our innovations.

● (1640)

Mr. W. Scott Thurlow: I would just add one very simple point to that.

As I said in my response to a previous question, these are lending mechanisms. These are providing surety to financial institutional lenders that this is going to be able to get up off the ground, and then, at a certain end point, it will absolutely be viable on its own.

The only thing I would add is that it's not limited to our industry. It's any new advent of technology. The government has done an excellent job, across several political parties that have been in charge, of fostering that investment in Canada.

What I would like to see in the future is an understanding that for these innovations to continue to happen in Canada, you need to see those types of strategic investments. In our report, we detail how the Government of Canada's investments in our sector actually create a two-to-one return. Every dollar you put in gets two back.

Ms. Marie-Hélène Labrie: You talked about lending organizations. I just want to mention that in the case of a new company with a new technology, you don't even have those organizations. If you're a mature organization and you're doing an innovation, then that's different. You also have those supporting lending organizations. But for a small company like ours, a private company, developing a breakthrough technology, those lending organizations are not there yet to really support you.

Mr. Lawrence Toet: They haven't been for a long time. I think back to my business days of having a mortgage on my house because we were doing something outside the box that nobody liked. But, yes, I understand where you're going there.

I think it's important. We have also made strides in 2014 in our budget to actually direct some more finances to support commercialization. I'm glad to hear that industry sees this as very important to Canada's economic growth and to our competitiveness in the world. It's good to know we're heading in the right direction with that.

Mr. Thurlow, you said that with Enerkem, Canada has the first waste energy facility in the world.

Mr. W. Scott Thurlow: For waste biofuels and biochemicals, it's the first on a commercial scale.

Mr. Lawrence Toet: I found that very interesting. Some of the things I've heard today, as we've gone through the testimony, have been that we face all these challenges, that we're behind, and things like that, yet we're the first in the world to do this particular process. So something has to be working in the right manner.

Mr. W. Scott Thurlow: I'll defer to Marie-Hélène because it's her innovative global leading company that made those investments and put themselves out there as the first company to do this.

But you're right, and one of the reasons I am so proud to work in the industry is that we're willing to make these strategic investments for the good of both the environment and the economy.

The Chair: I'd love to defer to Marie-Hélène as well, but Mr. Toet's time is up.

I'm sure she'll have an opportunity to work that in.

Mr. Choquette, you have five minutes.

Ms. Megan Leslie: No, it's me.

I'm going to start, if that's okay.

The Chair: That's fine, but we have Mr. Choquette on the list .

Go ahead. You're much better....no.

Some hon. members: Oh, oh!

Ms. Megan Leslie: Be careful.

I would like to ask CELA if there's any update about where we are with those CFL light bulb disposal regulations.

Ms. Theresa McClenaghan: I don't have an update for you on those specific regulations.

Earlier you were asking about the preparedness of domestic landfill and waste programs to take the CFL light bulbs. I can speak specifically to the Ontario situation. There is a combination of take-back programs through retailers, working in part through stewardship programs that are mandated by the province. As well, most municipalities have hazardous waste programs, either operating routinely or on certain days a year. With a certain amount—probably not enough—of public education and outreach that people shouldn't be putting those straight to landfill, people will typically take their batteries and CFL light bulbs to those take-back days.

● (1645)

[*Translation*]

Mr. François Choquette (Drummond, NDP): You spoke about your report on mercury, with respect to cars. You could send this report to the committee and it would be translated and consulted. I think it would be worthwhile because you did speak about it during your opening remarks.

On the subject of mercury, do some aspects fall under federal jurisdiction? For example, you referred to the Canadian Environmental Assessment Act and the Canadian Environmental Protection Act. There may be other federal laws or regulations given that we are talking about federal jurisdiction.

What do you think is important in this report? Would you have any recommendations to make to us?

[*English*]

Ms. Theresa McClenaghan: We did look at the other jurisdictions, specifically at the European Union and Japan, both of which are also big vehicle manufacturing jurisdictions. In general, we found that most countries that have large vehicle manufacturing industries do have legislation specifically governing end-of-life vehicles and the rules around how that should work safely, except for the U.S. and Canada, interestingly.

They generally set targets specifically around overall volume, as well as specific components, like mercury. They have increased their recovery of both hazardous and recyclable materials considerably, so that was one thing we learned.

In terms of jurisdiction, of course, in Canada we do have CEPA. We do have sectoral regulations under CEPA, particularly when we're talking about things that are destined for export or shipping across the country. There is more room for exercising jurisdiction, but provinces share jurisdiction too, and they can be important pieces of the puzzle as well.

Ms. Fe de Leon (Researcher, Canadian Environmental Law Association): Can I add one comment with regard to the Canadian Environmental Protection Act?

It does have jurisdiction in terms of managing chemicals. Some of the chemicals that are being detected in end-of-life vehicles, and certainly the design of vehicles, include chemicals like brominated flame retardants and perfluorinated chemicals, which the government has regulated on, and continues to regulate on. It speaks to the issue around designing for the environment and designing for products or parts that go into vehicles that may not necessarily have to contain these types of toxic chemicals.

[*Translation*]

Mr. François Choquette: Given that this is your report, you must be quite knowledgeable in this area.

Would you have a recommendation to make to the federal government about mercury and recycling car parts?

[*English*]

Ms. Theresa McClenaghan: We had quite a few recommendations in the report. We will provide it.

We did specifically talk about recommending a law similar to the European Union end-of-life vehicle directive. In addition, as Fe mentioned, it's a big part of the approach the federal government can take under risk management decisions made on those components that are deemed toxic under CEPA. But even better is maybe to use different materials and follow green chemistry approaches, instead of using those same old materials. The recommendations are contained in the report.

The Chair: Thank you very much.

We move now to Mr. Woodworth for five minutes.

Mr. Stephen Woodworth (Kitchener Centre, CPC): Thank you very much, Mr. Chair.

My thanks to all of the witnesses for a very interesting session.

Hello, especially to Ms. McClenaghan, my old colleague from Kitchener. I'm happy to see you again. In fact, I'd like to ask you some questions, if I may, Ms. McClenaghan, because I am interested in the cradle-to-grave approach, which I think was a phrase you used.

In fact, it reminded me of another bit of evidence that we had earlier in this study regarding "extended producer responsibility", which I took to be a kind of cradle-to-grave process. I have since discovered that in 2009 the Canadian Minister of the Environment, together with the other national ministers of the environment through the Canadian Council of Ministers of the Environment, actually published a Canada-wide action plan for extended producer responsibility. That came out I think in October of 2009.

Would it be all right if I asked you some questions about that? I'd like to get some further details if you are familiar with it. Are you familiar enough with it to answer some questions for me?

● (1650)

Ms. Theresa McClenaghan: I don't know if I'd be able to answer specific questions. We definitely did note in the end-of-vehicle report that the CCME had taken a number of steps, including that one and including a specific national code. We can see what your questions are and we'll see if we have the level of detail you're looking for. Also, the piece we're advocating is "cradle to cradle".

Mr. Stephen Woodworth: Oh. Thank you.

Ms. Theresa McClenaghan: We used to say "cradle to grave", but we all decided that cradle to cradle was a better idea, because we don't want to just landfill the material. We actually want to put it back into the next vehicle down the road.

Mr. Stephen Woodworth: I agree. It's sort of like the big bang theory. It just keeps going.

To go back to that extended producer responsibility piece from the Canadian Council of Ministers of the Environment, the definition that was adopted for extended producer responsibility is this, "an environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of its life cycle."

That seems pretty straightforward to me. Is it an acceptable definition from your perspective? You are nodding your head, "yes", and as you remember from your court days, you have to say it out loud.

Ms. Theresa McClenaghan: Yes.

Voices: Oh, oh!

Mr. Stephen Woodworth: Thank you.

I see also that the Canada-wide action plan for extended producer responsibility, which our Minister of the Environment and others came up with, had a phase 1, which included operational extended producer responsibility programs within six years of the adoption of the plan. It included a number of products, and specifically automotive products. I think you just referenced that. Are you aware of that?

Ms. Theresa McClenaghan: Yes, that's right.

Mr. Stephen Woodworth: In addition, the jurisdictions, within two years of the adoption of that program, would identify a more detailed phased implementation plan for those products. Have you sort of kept up with that? Do you know how they're coming? Six years from 2009 would be 2015. These plans are sometimes so ambitious that it's hard to actually grasp the nettle in its fullness and meet the deadlines, but can you give me an idea of where this stands right now?

Ms. Theresa McClenaghan: For Ontario, we can. We don't follow all of the provinces in the same detail, but earlier this year Ms. de Leon put in a submission to Ontario's proposal specifically on end-of-life vehicles.

You can speak to that, Fe.

Ms. Fe de Leon: Yes.

There was an Environmental Bill of Rights, or EBR, registration for a regulatory proposal to deal with end-of-life vehicles in Ontario, which just ended in May. The Ontario government is proposing to create a regulation that will allow for facilities that engage in dismantling and depolluting exercises involving end-of-life vehicles to continue the work they need to do and to prescribe the needs for permits and approvals to conduct that work.

We certainly submitted our concerns related to that approach, such as the scope of depollution efforts that would be covered under that regulation as well as concerns relating to impacts to the communities that would have these facilities located in their neighbourhoods. That includes concerns around noise level and the types of technologies used to operate the machines that are involved in end-of-life management.

● (1655)

The Chair: At this point, we will need to conclude. I know that Mr. Woodworth wants to get clarification, but we'll try to get that in some other way.

Mr. Choquette and Ms. Leslie will be sharing the time.

Go ahead, Mr. Choquette.

[*Translation*]

Mr. François Choquette: Thank you, Mr. Chairman.

I would like to go back to the polluter-pays principle. I think this is very important to talk about within this study.

Mr. Thurlow and Ms. Labrie, at first I didn't know exactly where this study could fit in federally, but it's starting to become clear, thanks in part to the recommendations that you have made to the federal government. They are very interesting and very relevant.

Ms. de Leon, do you have recommendations to make to the federal government about the polluter-pays principle or the laws referred to earlier, that is, the Canadian Environmental Protection Act and the Canadian Environmental Assessment Act?

I know that the Canadian Environmental Assessment Act was recently amended. Would you recommend that this legislation and regulations be strengthened, amended, or more strictly enforced?

Please go ahead.

[*English*]

Ms. Theresa McClenaghan: In terms of CEAA, the Canadian Environmental Assessment Act, your question is about how polluter pay can be incorporated. When we do environmental assessments in federal projects or projects that fall under CEAA, they're not always looking at the economic impacts of those projects necessarily. Often they defer to the other sector in that case. They do look at cumulative effects and they do look at the precautionary principle.

It is an area that we could improve in terms of incorporating polluter pay. We do have Supreme Court support for polluter-pay principles. We just saw the other day, through your sister committee, explicit incorporation of polluter pay in proposed Bill C-22. We do absolutely support incorporation of polluter pay, and making it explicit.

Ms. Fe de Leon: I would just add that under the Canadian Environmental Protection Act, there's an explicit reference to the principle of polluter pay. Certainly in the context of managing, say, chemicals that are found in products that may end up in the municipal solid waste stream, there is some concerted effort, at least on our part, to incorporate that into any submissions we write. We state our concerns around the way in which chemicals are managed in Canada, particularly those that end up in consumer products... [*Technical difficulty—Editor*]...in terms of regulation-making.

[*Translation*]

Mr. François Choquette: Thank you very much.

I am going to give the floor to Ms. Leslie.

Ms. Megan Leslie: Thank you.

[*English*]

To Ms. McClenaghan and Ms. de Leon, in addition to polluter pay, what do we need to do to make sure that such things as asbestos or mercury aren't ending up in our domestic landfills? Is it just polluter pay? Is it doing something under CEPA? Is it penalties or incentives?

What is the best federal legislative solution here, or regulatory solution?

Ms. Theresa McClenaghan: When we're talking about whether things are ending up in landfills, the federal role definitely has to be in conjunction with the provinces because landfills are pretty much entirely within provincial jurisdiction.

That being said, through the powers of CEPA to control toxics, it definitely can be used for sector-specific regulations or for controlling specific chemicals that are designated as toxic. That's where the risk management plans come into play around the specific substances.

It's one of those things where you have to look at the actual issue. Mercury, at least in the past, and probably still now to some extent, was an issue, and dental amalgams going into sewers. You need to have a take-back program or some way to recycle that product in order to have a mechanism for the dentists to deal with it properly, instead of having it end up in sewers.

It's a combined approach with whatever sectors: using the material, finding alternatives, applying green chemistry, and then having your regulation as the backup.

Ms. Megan Leslie: Thanks. That's helpful.

I think I have only 30 seconds.

The Chair: You have 28 seconds left.

We'll move to Mr. Strahl, for five minutes.

● (1700)

Mr. Mark Strahl (Chilliwack—Fraser Canyon, CPC): Thank you very much, to all of the witnesses. I'm a visitor on this committee.

Ms. McClenaghan, you did pique my interest when you talked about incineration.

I am from Chilliwack, British Columbia, in the Fraser Valley, and there is a proposed incinerator in metro Vancouver. I'm not sure if you've been made aware of that project, but certainly the people in my area, and the municipal politicians, are very opposed to that project. I think it's because of a lot of the unknowns about the technology, and concerns with additional air pollution in an already stressed airshed, the toxic fly ash, etc.

The proponents of the incinerator in metro Vancouver say that this is all fearmongering and that the science is on their side. Could you maybe explain in a little further detail why incineration in certain situations is a bad idea?

Ms. Theresa McClenaghan: When we have a case like this, we typically retain expert witnesses who are toxicologists to look at the particular facility, its proposed emissions, how those will relate to the community around it, and how they'll meet the relevant provincial standards or other applicable standards.

We're certainly not the engineering and the toxicology experts. However, those are the kinds of things we examine. We then take those to whatever tribunal or decision-maker is looking at whether that facility should be licensed.

In some proposals the argument is made that it's a greener solution because of greenhouse gas reduction impacts, or other solutions, like alleviating landfill. We talk about the fact that you need to look at the whole picture. If you're trading off for emissions that have health impacts, that might not be a good trade, especially, as you say, if it's an area that already has a lot of other emissions happening in the mix.

It's a technology-specific analysis that needs expertise applied to it.

Mr. Mark Strahl: Okay.

The proposal for the Fraser Valley Regional District and its member municipalities has been to move towards a zero waste approach as a goal, to get 90% of the solid waste diverted from landfills.

I note that you've done work on zero waste, or you are familiar with that proposal. I think they're saying that 49% of solid waste is currently going into municipal landfills. Are you aware of the zero waste goals, and of mixed waste recovery facilities? That is something they've proposed to recover valuable materials and to get the recycling and composted materials that people are still throwing into their black garbage bags out of the stream.

Are you aware of any jurisdictions where that has been implemented, and could you point us to some successes there?

Ms. Theresa McClenaghan: Again, when it comes to site specific, we're more familiar with the Ontario situations. Toronto has a big green bin program—they take materials to big composting facilities—so they're trying to keep all of that kind of biological degradable waste out of their landfill.

Guelph was a pioneer in terms of mixed waste recovery and separation, and it's still headed in that direction.

Ontario ran a whole consultation on the concept of zero waste about four or five years ago, which we did support. It's a devil-in-the-details kind of thing.

When we spoke earlier about not having landfill and emissions—and we know we're a very long way from that—in an ideal world, you would see all of the components that are going into our waste stream being recovered and put back into some sort of productive use and never landfilling again. That would be the ideal. But we certainly don't want to trade that off by saying let's burn it all and have energy recovery, if it means that the emissions have health consequences. That's where we need to do that analysis, case by case.

The Chair: We'll move ahead to Mr. Woodworth, and Mr. Toet if there's time.

Mr. Stephen Woodworth: Thank you very much, Mr. Chair.

I'll just pick up where I left off with apologies to Ms. de Leon. I didn't mean to get too far down into the weeds about your recommendations to the Ontario government, but I just wanted to get a sense of whether or not we're moving in the right direction.

I notice from the Canada-wide action plan on extended producer responsibility that the first phase, that six-year phase, also requires the adoption of measures in relation to mercury-containing lamps, other mercury-containing products, household hazardous and special waste, and automotive products.

I want to get a sense from you whether or not that initiative is heading in the right direction. The idea is to end up with consistent and harmonized methods with maximum impact across the national marketplace to shift the responsibility for end-of-life management of products to manufacturers or importers.

Are the Minister of the Environment for Canada and the other ministers heading in the right direction with this?

● (1705)

Ms. Theresa McClenaghan: Yes. We support extended producer responsibility. We have the paper in front of us. It is the right direction, and of course the thing that then happens is that when each jurisdiction starts to move ahead to put it in place and design it, it becomes "how well is it working, are there unintended consequences?"

Unfortunately we saw that in spades in Ontario with the way some of the stewardship programs were working in the eco-feeds and this kind of thing. Ontario, for example, has been engaged in a process of trying to reintroduce and reshape its waste legislation, which just died on the order paper here with our provincial election.

It's generally the right direction, but it's a matter of "is it getting done?", and "is it getting done in a way that's avoiding unintended consequences and wrong incentives while they design the programs?"

Mr. Stephen Woodworth: But at this point you haven't done a review of what progress has been made under that Canada-wide action plan?

Ms. Theresa McClenaghan: No.

Mr. Stephen Woodworth: Thank you. Taking into account that provinces have concurrent jurisdiction in these areas, do you agree generally with the approach the Government of Canada is taking through the Council of Ministers of the Environment to lead everybody together to try to harmonize their efforts in a way that will have maximum impact across the country? Is that the right way to go?

Ms. Theresa McClenaghan: We always hope the Canadian Council of Ministers of the Environment will take strong leadership in all their initiatives and lead to the best possible practices. At the same time if one of the jurisdictions is ahead and is willing to go further from the point of view of environmental sustainability, we're all for that too. We wouldn't ask that jurisdiction to wait for everyone to catch up.

Mr. Stephen Woodworth: Thank you. I'm going to turn over any time I have left to Mr. Toet.

The Chair: Mr. Toet, you have a minute and a half.

Mr. Lawrence Toet: Thank you, Mr. Chair.

I wanted to quickly address the investments. Ms. Labrie, you mentioned you had brought in $240 million of private investment to your facility. Obviously that was brought in before your request for this removal of the excise tax. You wouldn't have brought on investors based on getting rid of this particular thing because you don't know what's going to happen.

What's the ROI for your investors, and what's the timeframe they are looking at for a return on this, and what affect does the excise tax exemption have on that ROI? I'm looking at it from an investor's standpoint who wouldn't have invested in you if they didn't believe in what you're doing without this.

I'm trying to wrap my head around what the big need is on the excise tax.

Ms. Marie-Hélène Labrie: As we explained, it's not as much on the profitability side. What is key here is that when investors decided to invest in our company, there was an operating incentive available to us, the eco-energy for biofuels initiative, but we ended up not having access to it because of the timing of our first full-scale facility coming online. So intrinsically there was this incentive that all of a sudden ended up not being accessible to us. If you look at it on a level playing field with conventional biofuels, this is something we don't have access to.

As a breakthrough technology, it has more risk, and from a capital investment perspective it is a bit more capital intensive. From a profitability perspective, the returns are there, but in the first years of operation, you have your ramp-up. This is a totally new technology, so this really helps from an operational perspective in the first years of operation. That really has an impact on the investors. They are expecting that, because when they invested, there was an operating incentive.

Since we discovered we had no access to that operating incentive, we've been trying to work with the federal government to find a solution to that. So there is this expectation from the investors that have invested in us.

Secondly, I would like to add that from an industry perspective, we believe we need to stimulate investment in the second-generation biofuels sector as we did for conventional biofuels. We need to have incentives to really support and stimulate private investment, because it's not only for one facility.

Also, we need to retain the biofuels here. Right now we have offtakers, companies interested in buying our fuel to export it to the U.S. If it is exported there, then all the greenhouse gas emissions reductions will not occur here. So if we want to invest, we should also be able to use that domestically and locally. We invested in this so we could sell it locally and not have to transport it with the additional costs involved in selling it in the U.S. They also have those incentives, and they recognize the additional benefits of second-generation biofuels.

So there are a series of elements that are very important for this ask.

● (1710)

The Chair: Thank you. We need to move forward.

We'll hear from Mr. McKay for the last question in this round, and then we have two questions following that. I'm going to take the chairman's prerogative of asking one quick question prior to that last round.

Hon. John McKay: I'd like to direct to Ms. McClenaghan a question related to what Mr. Thurlow said with respect to the feedstock for cellulose.

I take it you wouldn't be quite as enthusiastic about using corn and other kinds of that feedstock for the production of ethanol.

Ms. Theresa McClenaghan: Well, the issue with using corn and soybeans for that purpose is the possible impact on food and food prices. There were good environmental and operational reasons for having ethanol as a component of fuel, just from the point of view of how well the machinery worked. When we started to see a lot of programs encouraging higher amounts of ethanol, at the same time we saw a lot of disruption in grain prices worldwide. So that's a concern.

I don't have an analysis about that, but it is an important thing to keep in mind. If we have vast tracts of our food-producing territory producing fuel, are we making sure we are also meeting the food needs of our communities globally?

Hon. John McKay: I'm sure Mr. Thurlow wants to get back in on that one, but before I let him do that, there's something I don't understand. In your testimony you said 65% of the auto wreckers aren't certified to depollute a vehicle. I find that astounding. How can this be in the year of our Lord 2014?

Ms. Theresa McClenaghan: It is kind of astounding, but I can confirm that when that particular sector was examined provincially, it was found that a huge amount of education was needed in terms of them knowing what their requirements were for removing liquids and hazardous materials like the mercury switches. So there was an effort to do a lot more education, and I think the numbers of those who do comply are up a lot compared with where they were seven or eight years ago. But not all of them have moved up to the level where they are certified.

Then the question is, if another review of the whole sector were done, would they meet the standards even if they were not certified? When they are not certified, it's hard to know. So that's the difference.

Hon. John McKay: So those standards keep on moving. That was astounding to my mind. I would just assume that people were meeting standards.

Mr. Thurlow, I hate to give you the opportunity to respond to that. Before I do, I want to expand with Ms. Labrie.

What is your CCA ask? Are you trying to make your writeoff equivalent to other fuel industries?

● (1715)

Ms. Marie-Hélène Labrie: The ask is that we include also equipment, renewable energy equipment, for biofuels. Currently, when we look at the list of eligible equipment, there is biogas included, waste to gas, but there is no waste to biofuels. We believe that we should also have access to this incentive as well.

Hon. John McKay: The writeoff is slower than it should be. Is that your argument?

Ms. Marie-Hélène Labrie: Exactly. It's accelerated depreciation.

Also, at one point in this there's a flow-through share. This is, I think, 43.2. The ask is really to be included in the eligible renewable energy equipment.

Hon. John McKay: In the 15 seconds I have left, Mr. Thurlow wants to peel himself off the ceiling.

Mr. W. Scott Thurlow: I'm far too polite to interject.

I would say to the critics of our industry, who complain about the price of food going up as a result of biofuels production, there is absolutely no evidence that supports that claim. Our industry has made note of the fact that the primary driver for food prices has always been the price of energy. Our industry is actually helping to make energy cheaper, and more plentiful, and more sustainable.

We only remove the starch from the corn. We return everything else to the feed industry. The dried distillers grains, which are a co-product of ethanol, go right back into creating meat for butchers and for Canadians. Cows and pigs absolutely love it.

The one thing I will close on is that the existence of the ethanol industry has created the demand for the grains that allows for farmers to get a true return on the investments that they make to their lands. As a result, they can in turn invest in technology, which will increase their yields. In Canada that yield increase has doubled in 10 years.

The Chair: Thank you, Mr. McKay.

I have one quick question.

Over the course of the last number of witnesses we've heard three terms. One is “incineration”, another is “gasification”, and the one you used today is “thermochemical processing”.

Could you in a minute differentiate the difference between those? I think it's important that Canadians understand we're not talking about putting stuff in a barrel and burning it, incinerating. The gasification and thermochemical processing, to me, is a big difference. If you could you just summarize that in a minute, it would be great.

Ms. Marie-Hélène Labrie: The gasification process is a process that allows the breaking down of solid material into a gas, which is composed of carbon monoxide and hydrogen. There's not enough oxygen to burn it, so we don't produce CO_2. We produce CO. That's really key.

It's what we call partial oxidation. It's really just enough. It's like when you want to use a stove with your wood. If there's not enough oxygen, you're not going to be able to get a fire out of your fireplace. That's the basic principle of gasification.

There are different ways of doing gasification. Plasco here in Ottawa is doing plasma gasification. This is very high temperature, 4,000 to 5,000 degrees Celsius. We have a unique gasification process that we developed that operates at low severity, below 1,000 degrees Celsius.

Thermochemical is a combination of gasification up front, but then with other chemical processes that allow the transformation of that chemical-grade syngas into liquid products. Plasco can only basically burn its syngas to produce electricity. In our thermo-chemical process there are various steps after the gasification to make that chemical-grade syngas into liquid products.

The Chair: Thank you very much.

We're moving back into seven-minute rounds; however, we won't be able to do all of them. Since the Conservatives were given quite a bit of extra time on the last question, I'm going to give them five, and go back to Mr. Choquette for seven.

So five and seven, Conservatives, NDP....

Mr. Robert Sopuck: Generous as always.

The Chair: Go ahead, Mr. Carrie.

Mr. Colin Carrie: Quick questions, then, Madam Labrie.

Could you repeat your second recommendation quickly?

[*Translation*]

I am referring to the second recommendation to the government.

[*English*]

Ms. Marie-Hélène Labrie: This was for provincial governments.

● (1720)

Mr. Colin Carrie: For provincial governments...?

Ms. Marie-Hélène Labrie: Yes. This one was more about provincial regulations. They are provinces that are basically imposing the same environmental permitting process to waste conversion processes that are not combustion, that are not incinerators. But because they use heat, they fall under the same kind of environmental permitting process.

Mr. Colin Carrie: So it's not federal?

Ms. Marie-Hélène Labrie: No, it's provincial, but I wanted to raise that issue.

Mr. Colin Carrie: I have a quick ask. With your technology, is there a size? Can you increase or decrease the size of your facilities? Is this a possibility for smaller communities? How big a community do you need for your feedstock?

Ms. Marie-Hélène Labrie: Our standard module is based on 100,000 dry tonnes per year. In the case of the City of Edmonton, for example, they already have achieved a 60% waste diversion rate, so we will be able to increase that 60% to 90%. You don't need such a large city, but a metropolitan centre of this size is suitable. We're developing a project in rural Mississippi. We're actually going to be serving seven counties that are working together.

It really depends, but we can also double the capacity by installing a second module. It's flexible, in that we can add modules, but the minimum is 100,000 dry tonnes per year.

Mr. Colin Carrie: In my last question, I wanted to talk to you again, Mr. Thurlow, about how you confront the misinformation about your industry. As Ms. McClenaghan rightly pointed out, there was an observation that the cost of corn went up, and some people, without any scientific information, said that it was due to your industry and that's why we should get rid of biofuels.

I've seen this misinformation about your technology. Is it clean? Could you let us know? Do you have the NOx, the SOx, and the CO_2? Does it smell? Is there a net increase in greenhouse gases? Also, does it explode?

Voices: Oh, oh!

Mr. W. Scott Thurlow: I'll go backwards on those. As a fuel, it is designed to work with gasoline in order to combust to create momentum in a vehicle. That's its design. It is very different from crude oil, however, in that it is biogenic. It will evaporate. It will degrade naturally. It's alcohol, so it does not have the same flammability characteristics that crude oil would have.

On the NOx and SOx side, absolutely, you see a huge reduction in particulate emissions as a result of advanced biofuel blends and higher biofuel blends. I think that was the point of our partnership with the Asthma Society. They recognize that.

On the GHG side, it ranges from anywhere between 60% compared to petroleum all the way up to 99% compared to petroleum. It's a GHG reduction that contributes to the economy and creates jobs, as opposed to critics who would say that GHG policy only takes away from the economy. I think the government should be lauded for the creation of the renewable fuel standard, which did in fact create jobs, particularly in rural areas.

Finally, on combatting the myths, I could, as a full-time job, just go from person to person and combat the myths that I've heard about our industry, all the way from teen pregnancy increases in North Dakota.... It is ridiculous—

Some hon. members: Oh, oh!

Mr. W. Scott Thurlow: Yes, it is ridiculous, the number of things I have heard, but let me be really clear. We are partners with farmers, and farmers will feed people first. That has always been the role they have taken upon themselves as the stewards of our breadbasket.

We contribute to the agricultural economy by providing them business risk management solutions for extra crops as our yields increase, and they will continue to increase, as they have consistently over the last 10 years. We need to find new avenues for that fibre, which we create on an annual basis, to be returned back into the economy. Right now, we are growing more food in Canada on less land than we did 10 years ago.

Mr. Colin Carrie: Does your technology smell? Does it have a stink or something to it?

Mr. W. Scott Thurlow: I actually think it smells kind of good—

Voices: Oh, oh!

Mr. W. Scott Thurlow: It smells kind of like beer, to be honest.

Also, certainly from more than 10 feet away, you couldn't smell it.

The Chair: Mr. Choquette, you have the last word.

[*Translation*]

Mr. François Choquette: Mr. Chairman, I would like to first thank all the witnesses who appeared today. It has truly been very interesting. We now see a little more clearly what role the federal government can play.

Ms. Labrie, I would like to go back to your recommendations.

You spoke first about supporting innovation. This is a recommendation that you made to the federal government. The recommendation on regulations is directed to provincial governments. The third recommendation, to stimulate next-gen biofuels, is directed to the federal government. I forget what the fourth recommendation was about.

Is it directed to the provinces or to the federal government?

● (1725)

Mrs. Marie-Hélène Labrie: It deals with the capital cost allowance tax incentive.

Mr. François Choquette: These are very practical recommendations for the federal government.

Mrs. Marie-Hélène Labrie: Yes.

The first recommendation deals with the commercialization of innovations. We can't just stimulate innovation, we also have to commercialize it in order to create wealth and jobs.

Mr. François Choquette: Very well.

According to the table before me, 60% of waste is recovered and recycled. In Drummondville, our landfill site will soon be completely full and we will have to think about finding an alternative. Several stakeholders in our region are using Enerkem technology and have been in contact with you. I know there have been discussions in this area.

People try to recycle their kitchen waste for black soil and compost. It was pointed out earlier that this leaves 30% of unrecycled waste. Could you give us a few examples of objects that cannot be recycled or turned into compost and that might be appropriate for your technology?

Mrs. Marie-Hélène Labrie: That is a good question.

Recycling and composting can cover up to 60% of waste economically, but municipalities have not found a solution for the remaining 40% of waste.

We can deal with 30% of the waste and thereby reach a percentage of 90%. This waste may be textiles, leftover lumber, plastic food packaging, old pairs of shoes, pizza boxes with leftover tomato sauce or old non-recyclable plastic toys. There is a large variety of material that can be turned into ethanol.

Mr. François Choquette: We spoke earlier of the value on carbon or the price of carbon. We all agree on the notion, no matter the term used. We have to take carbon pollution into account. Your operations greatly reduce greenhouse gases and it's very positive.

Is the current regime sufficient enough to be competitive or must we set a price on carbon?

Mrs. Marie-Hélène Labrie: If we want this industry to flourish, we have to make sure that the rules are fair. It is only through a price on carbon that businesses will contribute to reducing greenhouse gas emissions. In the current environment, that is a very difficult thing to do.

[*English*]

Mr. W. Scott Thurlow: One of the things I would point to—and again, it's one of those things where there are several different formulas that renewable fuels regulations around the world have taken—is that we have asked the federal government, as Ms. Leslie pointed out, to increase the renewable diesel mandate from 2% to 5%, but there are also the threshold approaches for GHG reductions, which is what the Province of Alberta has implemented for its renewable fuel standard. British Columbia has a low carbon fuel standard, which will differentiate within the actual fuel streams from a GHG perspective. Ontario very recently has put in a mechanism that will allow fuels that have a lower GHG profile to be worth more inside the compliance unit mechanisms than others, so various different mechanisms can be used.

We would support anything that would allow for the fair value of the GHGs to be measured and effectively translated into a contract.

[*Translation*]

Mr. François Choquette: There is a lot of talk about reducing pollution at the source. In fact, I just tabled a motion in the House of Commons that deals with energy efficiency to help reduce pollution at the source.

If we were to implement your technology in Drummondville, would it not create a need that would require constant feeding? The people in my region are worried about that. What can you say to them to reassure them?

● (1730)

Mrs. Marie-Hélène Labrie: Municipalities have very clear rules to follow. They must respect the hierarchy of the 3R-RD principle, a principle that they need to implement. Municipalities thus cannot decide to simply do as they please, which is a very good thing. For our part, we wholeheartedly agree with these principles.

When people in communities speak to me about their concerns in this regard, I tell them that we have a certain flexibility. It is possible that in 20 years, a number of new technologies will allow us to increase recycling even more and reduce the quantity of matter in our processing plants. We can help a good many sectors, such as the commercial and industrial sectors, along with those sectors that deal with construction lumber waste and plastics in cars, even waste from car shredding. Why not? There's also forestry or agricultural waste in that region. Obviously, in that last case, we have to consider what needs to stay on the soil to fertilize it.

So there's great flexibility and a huge variety of waste matter that we can use in our process. We can also use, as a complement, resources found in the region. When we make investments today and for the long term, we always take into account that people will eventually be recycling even more than today.

[*English*]

The Chair: Thank you very much. We are pretty well at the end; we went a little over.

I want to thank our witnesses for being with us today. Thank you to Ms. McClenaghan and Ms. Fe de Leon for appearing by video. Thank you to Mr. Scott Thurlow and Ms. Marie-Hélène Labrie for your input today.

The meeting is adjourned.