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Chair

Mr. Leon Benoit

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● (0905)

[*English*]

The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)): Good morning, everyone. It's great to be back continuing our study of the status of the ecoENERGY program—or programs, I should say, because there are several of them. Today we are dealing with the biofuels. There was a lot of interest by members of this committee in biofuels.

We have two panels today. We have in the first panel, from the Canadian Renewable Fuels Association, Jeff Passmore, the past chair. The current chair, who was going to attend today, I understand isn't feeling well and couldn't be here. We have as well, from the Coopérative forestière Haut Plan Vert, Valérie Patoine, who is a forest engineer, and Lise Dubé, who is an agronomist; and from the Forest Products Association of Canada, Catherine Cobden, who is the vice-president of economics and regulatory affairs.

It's great to have you all here. The clerk has talked to you about the length of the presentations. We normally take the presentations in the order in which they appear on the agenda.

If you're ready, Mr. Passmore, to make your presentation to the committee, we will start with you. So go ahead, please, and then we'll move to questions and comments by the members of the committee.

Mr. Jeff Passmore (Past President, Canadian Renewable Fuels Association): Thank you very much, Mr. Chair and members of the committee, and our apologies. Gord Quaiattini, the president of the Canadian Renewable Fuels Association, came down with the flu last night, so I'm here, and happy to be here.

Thanks very much for inviting the Canadian Renewable Fuels Association to be part of this hearing. We welcome the chance to be here and tell the story of the Canadian biofuels sector, which includes, of course, ethanol, biodiesel, cellulosic ethanol, and large, advanced biofuels.

The story is one of new jobs, economic growth, energy diversity, environmental benefits, and rural opportunity, and it's a story that continues to be written each and every day. With the recent announcement of the regulations that put the renewable fuels standard into effect, there could hardly be a better time to share with you the remarkable contribution our industry has made and to help chart the still greater opportunities that lie ahead.

All this is possible thanks to a successful partnership between the government and the industry. Parliament has led and ethanol and biodiesel in Canada have delivered.

I want to acknowledge the strong support our industry has received from the federal government and from this Parliament. That began more than a decade ago with the ethanol expansion program and continues to this day with smart new policies that create the conditions for commercial success. I would encourage you to regard the renewable fuels standard, coupled with the ecoENERGY program, as levers that help open market access and deliver private sector financing for the commercialization of new plants. These tools have worked and they continue to work.

Today, there are 14 ethanol plants and eight biodiesel plants in operation across Canada. A further two ethanol plants and three additional biodiesel facilities are currently under construction. Collectively, these refineries represent a total annual production capacity of 1.95 billion litres—just under two billion litres of renewable fuels—and provide employment to thousands of Canadians, most of them in rural communities.

Indeed, if there were a single phrase that best describes Canada's renewable fuel sector, it would be “delivering results”. These are results that have generated a positive return on investment, have helped advance the priorities of this government and this Parliament, and have directly benefit Canada and Canadians.

Allow me to begin by talking about jobs and growth, particularly in the context of a still recovering world economy, probably one of the most vital priorities of all. The biofuels industry has already become a valued engine of economic opportunity, particularly for rural Canada, where our plants are usually built to ensure proximity to feedstocks.

The benefits could not be more clear: the creation of new employment from facility construction through to operations, indirect employment and economic spinoff benefits, a broadened tax base for local and regional governments, and higher incomes and earnings for farmers.

In March of this year, Ottawa-based Doyletech Corporation did an independent survey, the first of its kind, dedicated to measuring the economic impact of Canada's biofuel sector. It detailed the following: 12,616 new direct and indirect jobs have been created since 2006 to support the construction of new production facilities, and each year, as many as 1,400 new jobs are created to support ongoing operations. In economic activity from plant construction, $2.8 billion has been generated, and approximately $700 million in economic activity is generated annually from ongoing operations of these same facilities. Nearly all of this is in rural Canada.

With regard to tax revenues, combining both construction and operating phases, the biofuels sector helps to widen the tax base and pay for valuable services at local, provincial, and federal levels. This has represented more than $82 million for municipal governments, more than $500 million for provincial governments, and nearly $700 million in tax revenue at the federal level.

These aren't projections or estimates. These are real facilities built with bricks and mortar, creating real jobs, generating real economic activity, and drawing in real tax revenues.

We now turn to the environmental benefits. As you know, the transportation sector accounts for a little more than 25% of Canada's overall GHG emissions. As a consequence, there are few more effective ways to shrink our carbon footprint than to reduce our reliance on fossil fuels. That's precisely what renewable fuels do.

Here are a few key facts. The federal renewable fuel standard alone will cut carbon emissions by 4.2 megatons, the equivalent of removing a million cars from our nation's highways each and every year. The IEA reported in late 2009 that by 2015, grain-based ethanol will have increased its GHG reductions compared to those for gasoline by 55%.

Ethanol helps to reduce tailpipe and toxic emissions as well.

Finally, according to Natural Resources Canada, ethanol production uses as much as 40% less energy than does the equivalent fossil fuel production, a figure that goes to 90% when we talk about cellulosic technologies.

● (0910)

Notwithstanding these facts, we know that some continue to question the net environmental benefits of renewable fuels. Skepticism, in some cases advanced by interests that see our industry as a threat to theirs, has been in large supply. So I'd like to try to set the record straight.

Just last November, the most comprehensive and thorough report yet examined the environmental benefits of Canadian renewable fuels. Conducted by Cheminfo Services Inc., the study came to some definitive conclusions. It found that Canadian-produced ethanol, and I'm speaking here of first-generation ethanol using corn and wheat as feedstocks, reduced GHG emissions at a rate of 63% compared to traditional fossil fuels. For Canadian biodiesel, using animal fats and waste grease as feedstocks, the results were even more impressive. Greenhouse gas emissions fell by a rate of 99% compared to gasoline. These are the facts. They're contemporary, they're clear, and they are the consequence of independent expert analysis. To those who suggest otherwise, I would ask that they table their studies that assess actual Canadian facilities of their plants and submit their methodology to independent assessment. When it falls to making policy decisions, they should be based on the same intellectual rigour as renewable fuels.

In summary, whether we're talking about jobs, economic growth, GHG reductions, energy balance, or creating new opportunities in rural Canada, the conclusion is indisputable. The partnership between government and industry is delivering results and achieving tangible benefits.

In conclusion, allow me to make one final point. I've been talking deliberately and have placed the emphasis on the story to date on the results we have created and are delivering now. But there is an even more compelling story to be told: the story of where we are headed and of the commercialization of so-called advanced biofuels. While sometimes struggling to keep pace with massive investments the U. S. federal government is undertaking, Canada is nevertheless ideally positioned to seize the role of leadership. Provided we maintain our focus and extend our partnership, Canada can compete and win in this increasingly important international sector. New renewable fuels that build on first-generation know-how to create even greater gains in environmental technology and economic terms are being developed as we speak. Demonstration plants are up and running, using waste wood in Quebec and British Columbia, discarded corn cobs, and other agricultural residue in Ontario. The technology works. The opportunity is proven.

The Chair: Mr. Passmore, I'll ask you to go just a little bit slower because the interpreters are having a difficult time keeping up.

Mr. Jeff Passmore: I beg your pardon.

The Chair: Thank you.

Just continue, but a little bit slower.

Mr. Jeff Passmore: The technology works. The opportunity is proven. The challenge is ours to take on. We already know what this means to our alternative energy, transportation, and agriculture sectors, but I would like to pause for a minute and speak also about the forestry sector and the tens of thousands who rely upon it for their livelihoods. Listen to the Forest Products Association of Canada. Advanced biofuels represent a new lease on life for this industry, and that equals new hopes for communities across Quebec, northern Ontario, much of New Brunswick, and much of the west. We can unlock the green fuel potential of waste wood and by-products. We can create new fuel and more jobs from what is currently discarded as forest residue. This is not only sustainable financially, but environmentally as well.

So let's build upon the partnership we have built together, government and industry. In the process, we can ensure Canada's international standing, not only as an energy superpower, but as a green energy superpower.

Thank you again, as parliamentarians, for your leadership and vision.

● (0915)

The Chair: Thank you very much, Mr. Passmore, for your presentation.

We will continue in the order that the groups appear on the agenda, so we go now to Coopérative Forestière Haut Plan Vert and Valérie Patoine and Lise Dubé. So whatever order you have it planned, go ahead, please.

[*Translation*]

Mrs. Lise Dubé (Agronomist, Club de gestion des sols du Témiscouata et Ferticonseil, Coopérative Forestière Haut Plan Vert): Thank you. Mr. Chairman, ladies and gentlemen. Good morning.

I am Lise Dubé, agronomist, and this is Valérie Patoine, forest engineer. First, we want to thank you for inviting us to present our ecoenergy development project to you.

Three Témiscouata organizations, the Coopérative forestière Haut Plan Vert, the Club de gestion des sols du Témiscouata and its agent, Ferti-Conseil, and the Club d'encadrement technique en acériculture, have been working together for three years to develop an agricultural biomass energy production project. The cooperative here is the project lead.

Agricultural biomass is defined as combustible pellets manufactured from agricultural perennial plants, switch grass. A local energy system is characterized by production cultivated and consumed locally.

In the regions, we have the support of agricultural producers, maple producers, forest workers, a number of decayed municipalities and a few provincial departments. Through the development of abandoned farm lands, we want to revitalize our rural areas through the production of energy that the community can use to meet its needs.

Agriculture is declining in rural regions such as Témiscouata. There is a significant observed decay in the rural municipalities and a decline in land areas under cultivation. The abandonment of stock production and the lack of profitability of small grain and hay production over small areas have led owners to abandon those fields or to request that they be reforested. On a provincial scale, MAPAQ estimates that there is an approximate total of 100,000 to 150,000 hectares of fallow or marginal land that could become available for energy plant production. In Témiscouata, an estimated 10,000 hectares of cultivated land was lost between 1997 and 2004 in four municipalities within a 20 km radius of each other.

The Lower St. Lawrence is the second largest producer of maple syrup in Quebec, with some eight million taps and 20 million pounds of maple syrup annually. Témiscouata alone has five million taps, nearly 7% of total Canadian production. It takes an average of 0.6 gallons of heating oil to produce one gallon of syrup. In the Lower St. Lawrence, we use nearly four million litres of oil for maple syrup production alone every year. In Témiscouata, that's 2.5 million litres of heating oil.

Together, energy crops on fallow land and maple producers' energy needs can become a force for regional and local development. The first impact is revitalization of the rural community by creating a new economic activity. The cultivation of switch grass on fallow lands would enable us to produce an energy pellet that would be used by maple producers locally to evaporate their maple sap.

In addition, a number of studies confirm that the energy balance and greenhouse gas balances are positive in the production and utilization of perennial plants as energy pettets. An innovative, renewable green energy system is born.

In our region, we have been experimenting over the past three years with the cultivation of switch grass over an area of 10 hectares. The results have encouraged us to continue on a larger scale. Planting 2,000 hectares with switch grass would make it possible to supply all maple producers in Témiscouata.

● (0920)

Mrs. Valérie Patoine (Forest engineer, Coopérative Forestière Haut Plan Vert): This project offers a number of economic benefits. Land owners will receive new income streams. For the communities, this is a new economic activity. Ultimately, it is a local solution to an income crisis for agricultural producers. A 20% to 40% reduction in energy costs for maple producers will make this activity economically cost effective. Those costs will be more stable and better known.

Furthermore, this short circuit affords significant environmental benefits. A number of studies show an 85% to 90% reduction in CO2 emissions in the combustion of switch grass pellets instead of natural gas or fuel oil. The replacement of three million litres of heating oil annually by a renewable green energy source is not negligible. It will no longer be necessary to transport those heating oil quantities from the major centres. We will also be eliminating the risk of heating oil spills in sensitive natural areas. While it grows, switch grass captures the equivalent amount of carbon emitted during its combustion. This is a virtually greenhouse emission-neutral energy form.

The natural elements for this project to succeed have been combined. The region has fallow land and market potential. We have the basic knowledge of crop techniques. The pelletization technology is well known. The local energy circuit project offers economic and environmental benefits for agricultural and maple producers and will have the effect of revitalizing the community. We have the human resources and the energy necessary to put it in place. This is a great way to address the energy crisis by guaranteeing maple producers a stable price. It is a simple method for offsetting the decaying regions and our declining agriculture. Once again, it is an excellent way to reduce both atmospheric and land pollution.

However, the balance of this development remains a major challenge. No structure of its kind has yet been established. Securing the supply of quality biomass, transforming and distributing it over a maximum radius of 100 km is the issue.

Land owners must invest approximately $1,200 to $3,500 per hectare and wait three years before making a sale. In the short term, we can't guarantee them that their future harvest will be purchased, since maple producers do not yet have the appropriate evaporators. The technology for using the pellets in the evaporators does exist, but maple producers will have to renew their evaporators and storage reservoirs. That's an investment of $20,000 to $60,000, depending on their production.

The idea is to obtain the financial support to carry out the action plan that we are proposing to you here: to encourage and facilitate the switch from oil to biomass among maple producers; to provide the agronomic expertise to agricultural producers; to significantly increase the number of hectares under cultivation and to improve knowledge of the agronomic factors in regions such as ours; to reduce the risks related to coordinating the markets of the various players in order to facilitate decision-making and accelerate the achievement of economically viable production volumes; to implement the processing stage; and, lastly, to support agricultural producers in converting to energy crops.

In closing, we want to thank you for lending your ear. The fact that you have invited us already lends us additional conviction. This journey has stimulated our desire to move forward. Together, we are convinced we will find the ways to make our marginal lands a promising economic and energy contribution for everyone and, it goes without saying, for Canada.

[*English*]

The Chair: Thank you, Madame Patoine and Madame Dubé, for your presentations. We'll get to questions later.

We have as our final witness, from the Forest Products Association of Canada, Catherine Cobden, who is the vice-president of economics and regulatory affairs.

Thank you very much for being here. Go ahead with your presentation, please.

Ms. Catherine Cobden (Vice-President, Economics and Regulatory Affairs, Forest Products Association of Canada): Good morning all, and thank you very much, Mr. Chair and members of the committee, for inviting the forest industry to speak to you about this important topic today.

I'd like to start with a little bit of economic context for you. I'm sure you're well aware, but the forest industry has been confronted with serious economic challenges in the global marketplace for a variety of reasons, not to mention the basic collapse of our major trading partners economically.

I want to impress upon you that we have not sat still in the face of these economic challenges. Indeed, we have put significant effort into improving our productivity. I believe we now outpace our American counterparts, and I believe we're the only Canadian sector to do so in productivity.

We have worked very hard to expand our markets. No more can we simply rely on the U.S. as a major trading partner, but we're building our global markets, particularly in Asia. We are now the largest exporter to China, for example.

We continue to push forward on our green agenda. We are working hard and striving to increase our environmental credentials so that we can also be the preferred supplier in terms of the green marketplace.

In addition to all of this, our sector is seized with the need to transform our business model. We were quite interested in and were quite taken with what opportunities exist to extract more value out of the wood-based resource. With that, we launched in early last year what we call the Future Bio-pathways Project. This is a comprehensive study that looks at three complementary objectives. Number one, how do we transform the forest sector back to profitability? Number two, how do we protect the 270,000 rural Canadian jobs that the forest industry currently has? Three, how do we support Canada's unique opportunity to be a renewable energy and a clean energy powerhouse in the global economy?

You do have a copy of the Future Bio-pathways report. It has been circulated in advance, and I urge you to read it, but in the meantime I would like to highlight some of it for you. It was not prepared in isolation, and the forest industry recognized that a lot of the leadership in this area was happening outside of our silo. So we invited experts in to support us, and through the course of the project we've had at least 65 experts heavily engaged in this report. They represented the federal government; provincial governments; academics, some of the brightest minds in the country on this stuff; the Canadian technology providers, who are doing fantastic developments; our own members, who really needed to understand the technological, economic, and social implications of these things; and, as importantly, the investment community. This project was in fact led by Mr. Don Roberts, who is currently vice-chair of CIBC.

What did we do? We analyzed 27 technologies, both traditional technologies and emerging technologies. Then we ran them through a whole slew of models to figure out “What if we did it this way?” and “What if we did it that way?” We assessed them under hundreds and hundreds of configurations. We assessed the economic, the social, and the environmental implications of these different technologies. The results were very interesting, and I'd like to share with you at a high level what we found.

Indeed, some segments of our industry are rock-solid and have very sound business fundamentals the way they are. Even though we feel the pain currently, the lumber segment, for example, has sound business fundamentals and will return to its fullest. But we do recognize that some of our other segments do need to transform, that the status quo is simply not good enough. What we found by running these various models is that the integration of bioenergy and bioproduct production into an existing forest operation is economically very significant. Not only that, but it also generates five times more employment than if we were to only do bioenergy products on a stand-alone basis. So what you see is a solid win-win economically, as well as socially, and in addition you get the environmental benefits of the sustainable forest management practised by the industry for the long term.

● (0925)

Essentially integrating a bioenergy/biofuel operation and tacking it on to a pulp mill or a sawmill or a paper mill dramatically increases the economic returns. That's for both, by the way. There's the host operation—the forest industry operation—and the bioenergy operator. We looked at it from both directions and in both cases the return on capital, for example, was increased.

A specific example in terms of biofuels is that we absolutely assessed biofuel technologies in and among the 27, and we did determine that this is a critically important pathway for the industry's transformation. Biofuel opportunities combined with forest operations are economic home runs. There's just no other way to put it.

I'll give you an example. If you combine a pyrolysis plant—one of our typical biofuel technologies, it's one of the examples we studied—with a sawmill in Quebec, you will see the economic returns jump to 24%. That's significantly better than the sectoral average across the country, which is running about 3% to 4%. So the economic returns are, as I said, a home run for our sector.

So the question then becomes, with these sorts of economics, what's the role of government funding? Why do you need us? What's the point? Obviously if those are the numbers you can produce, the investors will flock to you. Well, absolutely, but the role of government is in the short term. This is a question of accelerating the adoption of these technologies. Simply put, the technologies are not quite yet at commercial readiness. We very much request that governments consider promoting things like ongoing R and D—there's no question that has been a tremendous opportunity for us—pilot project funding, and first commercialization movement.

The fact remains that these are the high-risk pieces of this technology adoption. To be the first mover in commercialization of a technology, you are bearing a tremendous economic risk, significantly greater than say the third or fourth adopter. So we really do look for opportunities to see that adopted. Other incentive instruments, like producer incentives, also help accelerate the adoption.

We're not saying that those aren't good, but we're saying what we're really looking for in this industry is to get the first commercialization of these technologies. We really do believe that this model we're suggesting—bioenergy integrated with the forest industry—will have the economics to stand on its own two feet in the long term and will not be looking for financial support from the government. We can do it on our own; we just need to get the technology well into the marketplace.

I want to recognize that the federal government sent a very strong signal that they both understood and supported our biotransformational strategy in the last budget. Budget 2010 established the next-generation renewable power initiative. It certainly appears to us that this is an expression of commitment to our sector and our transformational vision. We really do believe that this will begin and further us on this agenda.

Mr. Chair, from our position as quite a potential player in this area, we do offer the committee a number of suggestions as you take forward and review the funding mechanisms that are available in this area. For example, as mentioned, we would suggest that you focus on adoption, really moving technologies through the developmental continuum from R and D all the way through to first commercialization. That you can do either through direct funding approaches, as mentioned, or through production incentives and that sort of thing. All of these things move the adoption of technology.

As much as a possible, we urge you to take a broad focus to these funds: more of a market-based focus as opposed to a technology or feedstock focus. It is our very significant principle that these funds should be technology neutral and feedstock neutral. Why is that? Because our analysis has shown us that you may think you have a technological winner and an economic winner, but it's a snapshot in time. As some of these other things develop through the continuum, they may indeed become the better economic opportunity. It's really a question of not picking the winners or the losers too early in the development process.

Where relevant, we would suggest you craft your approaches to encourage the integration of the forest industry with these bioenergy opportunities.

● (0930)

I will say it again. What we have discovered is that this is an economic home run for the industry but also for the emerging bioenergy sector. Combining these two things shows that on basic economic metrics, as well as on jobs and employment, you're much better off with a combined scenario.

Finally, and this is of critical importance to the sector, we must ensure that whatever we do in this area ensures ongoing, sustainable resource extraction practices and that we do not get to a point where we're putting so much pressure on the resource that we're into a mode of needing, as our environmental friends say, to hoover up or vacuum up the forest floor.

The forest industry in Canada stands firm on the need for sustainable forest management practices. Our commitment to this has really differentiated us in the marketplace. It is critically important that anything we do in bioenergy and forest fibre does not bring us backwards in terms of that agenda.

Mr. Chair, I hope those remarks are helpful to you. Once again, thank you, on behalf of the Forest Products Association.

● (0935)

The Chair: Thank you very much, Ms. Cobden.

We go now to questions and comments. We'll go to Mr. Regan, for up to seven minutes, please.

[*Translation*]

Hon. Geoff Regan (Halifax West, Lib.): If you understand both languages and simply want to listen to the speaker's language with the device, it's the third channel, isn't it?

[*English*]

Thank you very much, Mr. Chairman.

I'm going to begin with Mr. Passmore.

You mentioned that Canada is struggling, compared to the U.S., in terms of the funding governments provide for the promotion and development of biofuels. I'd like to ask you how Canada ranks in relation to other jurisdictions, such as the U.S., in that regard.

Also, we keep hearing that new American initiatives or incentives are providing certainty and stronger incentives and that they're therefore attracting investment and are putting Canada at somewhat of a disadvantage. I'd like your comments on that as well.

Mr. Jeff Passmore: I guess our big neighbour to the south is pretty aggressive with respect to its renewable fuels mandate and targets. The so-called revised renewable fuel standard, the RFS2, from 2007, I believe it was, established a 36-billion-gallon target for renewable fuels by 2022. Thirty-six billion gallons, just to put that in perspective, is about three and a half times Canada's total gasoline consumption. It's about 30% of U.S. gasoline consumption. So it's an aggressive target. To achieve that target, a number of policy instruments have been put in place.

I should say that right now there are approximately 14 billion gallons of grain-based ethanol—between 12 billion and 14 billion gallons—produced in the U.S. That's in excess of Canada's total gasoline consumption. We consume about 10 billion gallons of gasoline in this country.

To achieve that goal of 36 billion gallons, they have put in place a host of policies. There is a production tax credit. There are grants. There is, of course, long-term support for research, development, and demonstration. There are loan guarantee programs. There are a host of policy initiatives.

I think through the passage of the renewable fuel standard and the regs and this 5%, on average, mandate that's coming into effect in September 2010, Canada has really caught up, not only to the U.S. but to the rest of the world. The whole world is going towards biofuels. Brussels has targets as well for 10% renewable fuels by 2020.

So this is a good step Canada has taken to require 5% by September 2010. I think it puts us on the world stage.

Hon. Geoff Regan: Thank you.

In terms of funding, you were talking about absolute numbers. I didn't really mean in absolute numbers, obviously. I'm not surprised that we consume less oil in Canada in total, by far, than the U.S., obviously. But in terms of per capita, we keep hearing that the U.S. is spending far more per capita than Canada is.

Ms. Cobden, you're nodding. Do you have any comment on this?

Ms. Catherine Cobden: I do, actually.

Our industry's perspective is that it's really never going to be possible I think to compete dollar for dollar with the U.S. treasury in this area. They're aggressive and they have deep pockets. We see that.

What we're suggesting is that we need to look at our natural advantage. What's the strategic Canadian advantage, and how do we do this smartly to ensure that we are strategic global players in this area? We should not look at it as a dollar-for-dollar competition, but instead stand back.

This is partly why we've been calling for a clean energy strategy: we need to do that review of the world. I would say that from a global perspective, our track record needs improvement to attract energy investment to Canada. Thinking about how we can do this and use our natural advantages is important.

● (0940)

Hon. Geoff Regan: Thank you.

[*Translation*]

My next question is for Ms. Dubé and Ms. Patoine, and also for Ms. Cobden.

Budget 2010 proposes a $1 billion program over three years for the processing of pulp and paper. Based on your experience, what degree of complexity do you expect when it comes to filing an application for this kind of program? What are your recommendations for improving the efficiency of this kind of process, to avoid problems in application filing?

Mrs. Lise Dubé: Access for small groups, above all, is what poses a problem. We are small groups and we act locally. For us, it's really access that's lacking. In the past few years, we've been working and we've found nothing to support us, even with this program. It's probably because we're small that we don't have access to these funds. So I recommend that this be made as accessible as possible. Perhaps the process should be simplified. Our recommendation would be to give groups such as ours access.

We were talking about local production, local crops, local consumption. We think this model could be applied across all rural regions in Canada. If there are other groups like ours in other places, they must be experiencing the same difficulties. One of the recommendations would be to facilitate access to this funding to groups like ours.

[*English*]

Hon. Geoff Regan: Madam Cobden, how complex or how cumbersome do you foresee this application program will be, based on past experience?

Ms. Catherine Cobden: If you mean the pulp and paper green transformation program, it's actually worked surprisingly well to date. We're very pleased with the program. I say “surprisingly” because it's a lot of money to move in a fairly short period of time.

I want to say for the record that we think this was a very good response. Keep in mind where the program came from. It was a direct response to a competitive distortion that was happening immediately in the U.S., where our competitors were gaining access to a lot more than a billion dollars. I think at last count they were up to about $8 billion. What Canada did was figure out how to bring this back to a level playing field before all the pulp mills in the country closed. This is what we were up against.

It might not be perfect and it might not have all the right applications for every situation, but it was critical, and it certainly is doing the job.

The Chair: Thank you, Mr. Regan.

We go now to the Bloc Québécois. Monsieur Guimond, you have up to seven minutes.

[*Translation*]

Mr. Claude Guimond (Rimouski-Neigette—Témiscouata—Les Basques, BQ): Thank you, Mr. Chairman.

Good morning, witnesses.

Thanks in particular to you, Ms. Dubé and Ms. Patoine, for leaving your beautiful Témiscouata to come and give us a picture of what you've been doing in the past few years, which is highly innovative and very different. You explained it very well in your presentation earlier. We can even say that this is really the basis of sustainable development.

I'd like you to clarify some matters for my colleagues around the table. You talked about revitalizing agriculture. You talked about producing bioenergy for maple producers. However, what is the real line between agriculture and biodiesel production for maple producers? What is the situation in Témiscouata with regard to that, and why have you gotten to the point in the past three years where you are reflecting on a project such as this one?

● (0945)

Mrs. Lise Dubé: It was a lengthy process of reflection. I've been an agronomist in this area for 20 years. My analysis is horizontal, but we have observed an increase in the amount of fallow land. Also, with regard to farmers, it has to be said that they are 50 years old on average, that there are no new farmers and that they have abandoned stock production, both dairy and cattle. So they find themselves with land, and grain and hay production are profitable over small land areas. To give you an order of magnitude, the largest operations—there are a few—are 600 acres. That's very small for an operation; there's a lack of profitability, a lack of new farmers. People are slowly abandoning this activity and letting the time go by until they retire.

The cultivation of energy plants can be done on lands that these people leave abandoned. This cultivation is quite similar to that of grain; so there has to be a slight knowledge transfer. They can use the equipment that are on the farms, they can plant with that equipment, they can harvest; so that doesn't require a lot of investment. What people are looking for is a crop that will enable them to earn a better income, that requires few inputs, little labour, because there is no farm labour. That's the benefit and the interest they see in it. These are small local areas where there are one or two farmers per village, and when one disappears, it's like losing 100 businesses in a medium-size or large city.

This has a big impact for us. We're talking about the survival of schools, the post office, basic institutions in a village—which will vitalize it. When we talk about revitalizing a rural area, the idea is to put those areas back into cultivation, which will create employment. People will cultivate, buy and stay there. Those people who are at the end of their careers, after giving up dairy production, nevertheless have a lot of experience behind them. They want to use it to move toward a crop that can make things interesting for new farmers, make it possible to establish a new generation of farmers at an affordable price. These are elements that increase interest in agricultural producers. As for maple producers, I'll leave it to Ms. Patoine to answer.

Mr. Claude Guimond: You mentioned that you have been working on this matter for three years; so try to explain to my colleagues the extent of the work involved for a very small group such as yours, in a remote area.

Did you find any help or people to support you? In the past three years, how have you gone about achieving the results you have today?

Mrs. Lise Dubé: I have to say I am supported by 100 producers. They support me. I've put in the time, in the past few years, in meetings, and I've put the energy into it. Of course, we had some producers convinced. Among others, one producer was convinced that he had to go into the energy field in agriculture. That really helped. Obviously, when we spoke to governments, local development agencies, we had to convince people that revitalizing a rural area had to be done through agriculture and through local consumption. That's the main challenge because this is a completely new concept. Producing and consuming locally is something very new for a number of people. We have to convince all levels of government of that principle.

● (0950)

Mr. Claude Guimond: Three years later, what are your real needs? What do you need to be able, starting tomorrow, to carry out your project, and perhaps other projects, I hope, in the region, in Quebec and across Canada? As you mentioned, this is possible in all rural regions of Canada. So what are your real, specific needs? What must the government do to give you adequate support?

Mrs. Valérie Patoine: We need financial support for farmers enabling them to convert to green energies, to renewable energy crops. We also need financial support to permit the transfer of necessary knowledge to cultivate this renewable energy and financial support to establish a consumption, production and local sales system.

Mrs. Lise Dubé: We have to put in place all the links in this chain, production, processing and consumption. We need incentives enabling farmers to convert to these crops because they aren't eligible. They aren't like grains or hay. We know of no agricultural financial support program for these crops. They have to be encouraged to convert these land areas for processing purposes. Incentives for maple producers and pellet stoves would also enable this type of circuit to start up.

The Chair: Thank you, Mr. Guimond.

[*English*]

Mr. Atamanenko, do you have questions?

Mr. Alex Atamanenko (British Columbia Southern Interior, NDP): Yes, I do.

The Chair: Go ahead, please, for up to seven minutes.

Mr. Alex Atamanenko: Thank you very much.

Thank you very much to all of you for having come here today.

Just a couple of quick questions, Madam Cobden, for you initially. I didn't quite understand what you meant by pyrolysis in the sawmill. Could you explain that?

You also mentioned that funds be technologically neutral. I didn't quite understand that.

Because what you were talking about was quite interesting, innovative, and exciting, I'm also wondering if you have examples in other parts of the world that you folks are using as you develop this new technology.

I'll stop there and then move on to some other questions.

Ms. Catherine Cobden: Pyrolysis is simply one of the 27 technologies we studied. It is a type of technology—I think this is truly intriguing—that converts a solid wood product into a liquid fuel in under two seconds.

Mr. Alex Atamanenko: Can I stop you there?

You could theoretically use a pine beetle-killed solid wood to do this?

Ms. Catherine Cobden: Yes.

Mr. Alex Atamanenko: Okay.

Ms. Catherine Cobden: That's the technology. I presume we don't want to get into more of the why or wherefore of that.

Technology neutral means please do not identify technologies that a fund is going to cover and not cover. We looked at 27; there were tens more—I want to say 30 or 40 more—that also had lots of opportunity, but we couldn't assess them because we didn't have enough good solid data. Over time we will get good data and we'll see that those technologies may be quite valuable.

The idea is do not prescribe in a fund the types of technologies you will fund, but instead talk about the end product you're after. Does that help?

Mr. Alex Atamanenko: Yes.

Ms. Catherine Cobden: What have we done globally? The interesting thing, when we launched this project...I had not totally appreciated this, but we have had feedback from our colleagues internationally, and we continue to get asked to go around the world to articulate our findings, because no one else in the world has done this. This is a unique study that captures the economics and some environmental benefits of this opportunity with the forest industry, and even to our surprise, we had no idea of the leadership course we were charting in this globally. I'm heading to France next month and to China to talk about this, because people have not yet done their homework. Again it goes back to our earlier point of having some advantages. We need to figure out how to grasp them.

● (0955)

Mr. Alex Atamanenko: Yes. Thank you.

For my next question, Mr. Passmore or maybe all of you could answer this. There have been studies in the United States and Europe by our Canadian government that have called into question not only the cost effectiveness of crop-based biofuels but also whether their net environmental impact is actually positive or negative. I understand it's been a boon in rural Canada as far as jobs are concerned. I don't think there is a question about that whatsoever, and I thank you for that.

In our biofuels act, in section 140, it calls for a comprehensive review of environmental and economic aspects of biofuel production a year after this act was enacted and every two years after that. I am wondering if you believe that's a good idea and what your comments are on that.

There was an article in *The Vancouver Sun* that questioned the cost side of biofuels. I don't think I need to quote from it because your president has refuted it in his article. Also, in your presentation, Mr. Passmore, you mentioned a study done by an independent company that had very good results with regard to greenhouse gases, 63%, and 99% for biodiesel. As we move into this cycle and the whole biofuels area and we're looking at secondary development, should we be doing a comprehensive review? I would like your comments on that.

Mr. Jeff Passmore: First of all, with respect to the environmental benefits of first-generation or grain-based ethanol, let's just say that especially if you're looking at Canadian plants...there may be some U.S. midwest plants that are getting their power to run their facilities from coal, and therefore their greenhouse gas emission reductions are probably modest, but in the Canadian case, where you're talking about natural gas-fired green ethanol plants, you're looking at greenhouse gas emission reductions north of 40%, compared to gasoline. That's the Canadian picture.

With respect to the cost-benefit analysis study that was done, it's important to remember that this is a draft, and as you saw, we had an article refuting some of the facts and figures, but basically it looked primarily at the cost and didn't really look at the benefit side. It had some flaws in it that we intend to address with Environment Canada, such as the $58-a-barrel long-term price for oil and failure to take into account the $2.8 billion of new investment from the renewable sector in the jobs that have been created. It also gave a price for ethanol that was the opposite of what is actually happening, which is that gasoline has been more expensive than ethanol over the last three years, and it had assumed the reverse.

Obviously, we'll be responding to that study, and hopefully once it's past the draft stage and into its final form, it will be assessing some of the benefits rather than just the cost.

As to a comprehensive review, we welcome that. We think that would be a great step in the process.

Mr. Alex Atamanenko: Thank you.

Are there any other comments?

The Chair: Any other comments will have to be very brief because your time is almost up.

Mr. Alex Atamanenko: Thank you.

The Chair: Is there any short comment?

Ms. Dubé.

[*Translation*]

Mrs. Lise Dubé: On that subject, I'd like to mention that these are perennial crops, crops that require few inputs. This is very promising from an environmental standpoint. The perennial crop, switch grass, grows on its own. It will be planted there for 10 years or more. This is very positive environmentally. One tonne of switch grass can remove up to 22 kilos of CO2. Since it uses few inputs and controls soil erosion, it is a highly accepted crop from a social standpoint.

[*English*]

The Chair: *Merci*, and thank you, Mr. Atamanenko.

We will go now to the government side, to Ms. Gallant, for seven minutes. That will end the questioning and comments on this panel, and then we will go to our second panel.

Go ahead, Ms. Gallant.

Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC): Thank you, Mr. Chairman.

It's good to hear that we are catching up with the United States. We had a long way to go when we first took over government. It's also encouraging to hear that the government's commitment to investment in biofuels has been effective in encouraging the renewable fuels in Canada.

Does Canada have enough domestic supply to meet its mandate of having, in gasoline, an annual average renewable content of 5%? Just yes or no is good.

● (1000)

Mr. Jeff Passmore: Yes.

Mrs. Cheryl Gallant: Is that yes across the board? Okay.

How close is the industry to converting wood to either diesel or ethanol? Are we at the production phase yet, or are we still in research?

Ms. Catherine Cobden: We are at the final stages of pilot demonstrations. So we're much past R and D and much closer to first commercialization. One of the results of our study is that the forest industry is looking very seriously at full-scale pilot demonstration projects to take the technology to the next step. It's in that vein that we need some assistance.

Mrs. Cheryl Gallant: Is there a government program to help with that pilot project?

Ms. Catherine Cobden: The ecoENERGY biofuels program would have been the project, and that has probably already been allocated for it. The question then becomes what will the next opportunity look like.

Mrs. Cheryl Gallant: Very good.

Mr. Jeff Passmore: It's also important to distinguish between hardwoods and softwoods. Some technologies are better used with hardwoods and are closer to the commercialization end of the spectrum. Others are better directed toward softwood, such as the pine beetle infestation in British Columbia. The University of British Columbia is working hard at the research and development stage to figure out a solution to that problem.

Mrs. Cheryl Gallant: Okay.

Ms. Catherine Cobden: There are many different ways you can get to this endpoint. In our study of 27 technologies, we looked at five technologies that can get you to ethanol. We looked at three or four technologies that can get you to biodiesel. So it is fair to say that there is a continuum within that.

We were excited to learn that some of these are fairly close to commercialization.

Mrs. Cheryl Gallant: I have a quick question on ethanol use in fuel. It's my understanding that a litre of pure gasoline has more mileage than gasoline plus some ethanol. Is there a difference in how far a car can go with that blend?

Mr. Jeff Passmore: Ethanol is 35% oxygen, and there's no oxygen in gasoline. As a result, ethanol has a lower BTU content than gasoline. But in a 5% or 10% blend, there is no mileage difference or mileage penalty. You would notice more of a mileage penalty if you had improper tire pressure in your tires on the car.

Mrs. Cheryl Gallant: On octane equivalents, is there anything being done in that regard? Is there a problem with the NOx, and that sort of thing?

Mr. Jeff Passmore: Pure ethanol has an octane of about 113. As you know, regular gasoline has an octane of 87, so it's a high-octane fuel. Race car drivers love using it. If you were talking about a flex-fuel vehicle where you could change the compression ratio and run on 85% ethanol, you could take advantage of that additional octane.

I should point out that I drove here in a flex-fuel vehicle today fuelled by 85% cellulosic ethanol. I've been driving on E85 since 2004.

Mrs. Cheryl Gallant: What is the price differential between what you drove here on and what we would get at the pumps?

Mr. Jeff Passmore: In an E5 or E10 blend, there's no price differential. Ethanol right now is selling at a lower price than gasoline.

Mrs. Cheryl Gallant: Very good.

Is any butanol research being done in Canada for the purpose of fuel?

Mr. Jeff Passmore: I'm not aware of any.

Mrs. Cheryl Gallant: Okay.

Can the industry distinguish between biodiesel and ethanol? We need to understand the challenges between—

Mr. Jeff Passmore: Ethanol is added to gasoline and biodiesel is added to diesel fuel.

Mrs. Cheryl Gallant: So on the research and where we are, we have enough to provide for the demands of those sectors in terms of the blends that are required.

Mr. Jeff Passmore: Right. We've spent a lot of time talking about the 5% by September of this year, but there will be a 2% biodiesel mandate brought in some time prior to 2011. I believe your next panel has some speakers who know more about biodiesel and can answer your questions more fully.

Mrs. Cheryl Gallant: What about the difference in costs associated with producing cellulosic ethanol and other kinds of ethanol? Is it far more expensive one way or the other?

Mr. Jeff Passmore: We have the opposite problem—and when I say “we”, recognize that I also work for a company that's in the cellulosic ethanol business. Generically speaking, cellulosic ethanol has a higher capital cost but a lower operating cost. Grain ethanol is the reverse. It has low capital costs for building the plants and a higher operating cost because you're using a non-agricultural residue as your feed stock.

Getting over the high capital cost is certainly a hurdle to having the first few plants built. Once the product comes off the line—the ethanol molecule—we'll have to be competitive with current ethanol pricing.

● (1005)

Ms. Catherine Cobden: I want to also point out that on the cellulosic ethanol side, not all technologies are created equal. We did see a significant economic disparity between the five different types of production processes we looked at. It's very important to keep in mind that it really does matter which specifics you're talking about.

Mrs. Cheryl Gallant: Okay.

First-generation biodiesel uses feedstock such as soybean, palm, and canola. Second-generation uses non-food biofeedstock such as jatropha. Third-generation uses feedstock such as algae.

When will we see third-generation biofuels being produced commercially?

The Chair: A very brief answer, please—if you have one.

Mr. Jeff Passmore: You'll see that probably after you see cellulosic ethanol being produced commercially.

Voices: Oh, oh!

The Chair: Thank you very much.

Here is an unpaid public announcement by Mr. Harris, to use the last of the time.

Mr. Richard Harris (Cariboo—Prince George, CPC): Thank you, Mr. Chair.

I know that FPAC has been to UNBC in Prince George, and they know that our university is playing a leading role in new technology for the alternate use of the pine beetle wood.

I know that Mr. Passmore just forgot when he said UBC. He meant to include UNBC.

Mr. Jeff Passmore: Yes. Thank you very much.

Ms. Catherine Cobden: We're both partners in this project.

The Chair: Mr. Anderson, do you have something?

Mr. David Anderson (Cypress Hills—Grasslands, CPC): I just want to ask one short question, Mr. Chair.

You talked about trying to get this all to commercialization. Has the SDTC played a role in bringing some of that technology to commercialization? Has that been an important...?

Ms. Catherine Cobden: We would hope so.

Mr. Jeff Passmore: They're very anxious—

Mr. David Anderson: To play a role.

Ms. Catherine Cobden: We really hope so.

Mr. David Anderson: They have not in the past?

Mr. Jeff Passmore: With respect to NextGen?

Mr. David Anderson: Yes. The new technologies that you're talking about bringing to commercialization—has SDTC been part of that in the past?

Mr. Jeff Passmore: There is a $500 million fund for the commercialization of NextGen technologies. That fund has been made available. It hasn't been used, or not at the moment, but that's not SDTC's fault. They're ready to help contribute. It's just a matter of the proponents getting all their ducks in a row.

Mr. David Anderson: Thank you.

The Chair: I'd like to thank you all very much for your presentations here today. They've been very helpful to us in our study.

We will suspend for two or three minutes as we get the video conference set up and get the next witnesses to the table.

Again, thank you very much.

● (1005)

(Pause)

● (1010)

The Chair: We will resume the meeting now with the new group of witnesses.

I'd like to welcome all of you here. First, from the Canola Council of Canada, we have JoAnne Buth, president; from Enerkem Inc., Marie-Hélène Labrie, vice-president, government affairs and communications. Not at the table, but at the back, we'll have Bliss Baker, president of Bentham and Associates, and if anyone wants to direct questions to him, that could be handled, I believe. And from Resource Efficient Agricultural Production, or REAP Canada, we have Roger Samson, executive director.

Welcome.

We have, by video conference as an individual from the University of California in Davis, California, Professor Daniel Sperling.

Welcome to you by video conference, Professor Sperling. Can you hear us all right?

Professor Daniel Sperling (Professor and Director, Institute of Transportation Studies, University of California, Davis, As an Individual): I can hear very well. Thank you.

The Chair: It is great to have you with us. I understand you got back from a trip to China, so you may be a little jet-lagged, but welcome.

Prof. Daniel Sperling: I am a little bit, and it's a little early in the morning here too.

The Chair: All right. We will have the witnesses in the order that they appear on the agenda, starting with the Canola Council of Canada.

JoAnne Buth, please go ahead with your presentation.

Ms. JoAnne Buth (President, Canola Council of Canada): Thank you very much to the standing committee for the invitation to the Canola Council of Canada to provide our perspective on the ecoENERGY for biofuels initiative and the federal biofuels policy and programs.

Overall, the biofuel story in Canada is a very positive one, with very good environmental and economic development benefits. We believe ecoENERGY is playing a key role in establishing a sustainable biofuels industry.

There is a notable exception: so far the level of development in canola-based biodiesel has not kept up to expectations. While we believe ecoENERGY is helping to establish a sustainable biofuels sector, we believe the federal government can take concrete steps to ensure that sizable-scale canola biodiesel projects move ahead.

First of all, the government can ensure that canola biodiesel projects are supported in the final round of applications for ecoENERGY, which is under way right now.

Secondly, changes that the industry has recommended to the Department of Agriculture and Agri-Food's ecoABC initiative should also be implemented to facilitate investment in biodiesel production.

Before going into more details on biofuels and the ecoENERGY and ecoABC programs, I'd like to provide some background information on canola and the work of the Canola Council of Canada.

Canola is the world's only made-in-Canada crop. Developed in the early 1970s, canola is unique in the world for its nutritional profile for food. Low in saturated fat, with an excellent balance of polyunsaturated and monounsaturated fats, versatile and light in taste, canola oil is the oil of choice for consumers, food processing companies, and restaurants.

Canada is a leader in canola production. In 2009, about 50,000 Canadian farmers produced 11.8 million tons of canola. It is Canada's most valuable crop, generating $4.9 billion in farm cash receipts. Canola is crushed into oil at 11 processing plants in four provinces. The economic activity following from Canada's canola sector generates almost $14 billion annually to the Canadian economy.

The Canola Council of Canada is a value-chain organization that promotes the production and promotion of canola. The council includes seed developers, growers, processors, handlers, and exporters. Our primary focus is canola for food. However, the interest in biofuels is also a huge opportunity for Canada and for canola growers. It's of great interest to the canola sector because of environmental benefits, economic benefits, rural community support, and better returns to growers.

Biofuels provide the opportunity to lower Canada's harmful greenhouse gas emissions from transportation fuels. Detailed modelling of the impacts of biofuel production and use in Canada shows that two billion litres of ethanol per year would reduce greenhouse emissions by 2.8 million tonnes of CO_2 equivalent, and 500 million litres per year of biodiesel would result in greenhouse gas reductions of 1.4 million tonnes, the combined equivalent of removing one million cars from Canada's highways each and every year.

Approximately 30% of Canada's climate change gases come from transportation. We see Canadian-made canola biodiesel as a smart green transportation fuel that will reduce greenhouse gas emissions.

Life-cycle analysis shows that canola biodiesel can reduce GHG emissions by 75% to 85%. It has the energy balance of any commercially available liquid fuel, providing over three times the energy output than the inputs required to produce it.

There are also reductions in particulate matter and hydrocarbons. Canola growers also use less tillage, which means less carbon released. Importantly, canola does not require irrigation for production.

We also know that canola is the best feedstock for biodiesel. With its exceptional cold weather performance and improved engine lubricity, canola is the feedstock of choice for Canadian-made biodiesel. This is related to the saturated fat content of canola that is made into biodiesel.

Biodiesel blends using 2% canola-derived renewable diesel have been proven effective in formal cold weather testing in Alberta and many years of road use across Canada. Blends using 5% to 20% of canola-derived biodiesel have been effective in spring, summer, and fall in numerous applications.

Biodiesel blends of 5% to 20% are approved for use by engine equipment manufacturers, and canola biodiesel meets stringent ASTM, EN, and CGSB biodiesel specifications.

● (1015)

In terms of economic benefits, the economic stimulus impacts of implementing the 5% and 2% renewable fuel standards are considerable. So far there are 14 ethanol and 8 biodiesel plants in operation and more are being built. Together, these refineries are employing thousands of Canadians, mostly in rural communities.

The industry has expanded in recent years to build capacity in anticipation of the Canadian renewable fuel standards being implemented. There are more projects in the planning stages, and they are relying on Natural Resources Canada's ecoENERGY for biofuels initiatives and also Agriculture and Agri-Food Canada's ecoABC programs to assist with start-up support.

Renewable fuels present exciting opportunities for higher incomes and more stable prices for Canadian farm families. Canada is the third-largest producer of canola and rapeseed, with about 20% of the world's production, but we account for 80% of global trade. We are highly dependent on often unpredictable international markets. We are vulnerable to borders shutting down because of tariffs and non-tariff trade barriers.

Like the professor, I also recently returned from China, where I was accompanying Agriculture Minister Ritz, because last fall China blocked canola exports due to a non-tariff trade barrier.

A canola biodiesel industry in Canada will provide fundamental, long-term support for the rural Canadian canola sector by creating inelastic demand that's needed in our trade-dependent commodity. Made-at-home canola biodiesel will stabilize seed demand and expand the value-added activity in Canada in anticipation of increased use of canola in North America.

Canada's canola production is growing year over year. From a production level of 9.1 million tonnes in 2006, Canadian farmers have increased production to 12.6 million tonnes and 11.8 tonnes in the last two years respectively. We expect that growers will continue to grow the profitable crop on more acres with more production.

The canola industry's Growing Great strategy has a target of 15 million tonnes of sustained market demand and production by the year 2015. The 15 million tonnes is an important goal for us because it is a large enough amount that we'll continue to attract investment in the crop. Of that 15 million tonnes, we anticipate that 2.5 million tonnes will be used for biodiesel.

We are encouraged by the Government of Canada's progressive policy on biofuels development as a way of lowering unhealthy emissions from conventional transportation fuels. We welcome the recent gazetting of our vast regulations, a necessary step to the implementation of the renewable fuel standards. However, the biodiesel industry is still waiting for cabinet to set a date for the 2% mandate specifically for biodiesel or other renewable diesel fuels. We encourage the government to address this outstanding matter.

The primary benefit of the ecoENERGY program so far is to reduce the price risk inherent in volatile commodity markets. It also addresses the competitiveness of Canadian production with imported biofuels and further allows Canadian production plants to get established and position themselves to compete successfully in the global markets after incentives disappear.

Agriculture and Agri-Food Canada's ecoABC program is also important. It offers repayable capital contributions to biofuel projects that secure a minimum level of farmer investment. This program is critical to address tight equity capital and debt markets and address competitiveness for the emerging Canadian biofuels industry. The program has been underutilized by the biodiesel industry to date. Only 2% to 3% of program funding has gone into the biodiesel sector, and none of this has supported canola-based biodiesel plants.

The Canola Council and many industry colleagues have asked the Minister of Agriculture and Agri-Food to review the program criteria to make sure ecoABC robustly supports canola-based biodiesel projects. While ecoENERGY and ecoABC have served to encourage investment in biofuels production, they have not led to the significant build-out of biodiesel production capacity. Since the announcement of the eco programs in March 2007, no new moderate-scale—by that I mean greater than 40 million litres per year—biodiesel plants have been commissioned. Indeed, biodiesel production capacity, approximately 100 million litres per year, remains well below the industry and government expectations and far below the volumes required to fulfill federal and provincial mandates of approximately 700 million litres per year. This means greater reliance on imported biodiesel.

● (1020)

While several small-scale animal fats-based biodiesel plants have been built in the past few years, no global-scale—greater than 114 million litres per year—vegetable oil biodiesel projects have moved from planning to construction.

In short, the ecoENERGY and ecoABC programs have yet to create the domestic biofuels production capacity necessary to meet our industry's goals for canola utilization. This represents a significant gap in program results, which still needs to be addressed.

Right now we're in the final phase of building Canada's first-generation biodiesel production capacity. EcoENERGY closed its final application window on March 31 of this year, and there are canola biodiesel projects in the queue. These projects are counting on ecoENERGY to provide the necessary support.

Looking several years out, no future projects will be able to compete against plants that receive the ecoENERGY contribution. This is a time for important decisions.

The Ministry of Natural Resources Canada is working through the final application review procedure. We understand that in this final review the department has sufficient remaining funds and allocation for renewable diesel to support the full spectrum of biodiesel development and to rectify the imbalance in program utilization to date.

Specifically, we wish to ensure that the spirit of the ecoENERGY program changes that were recommended by the Canola Council of Canada and our industry colleagues, which were announced in December 2009, will be reflected in these final allocation decisions. We encourage the Government of Canada to support projects that can be competitive in the long term and sustainable in a post-subsidy global market, that can produce high-quality biofuels that meet the harsh Canadian climatic conditions, and stabilize and support utilization of one of Canada's most important domestic crops: canola.

To summarize, these are our observations and recommendations for the committee. The ecoENERGY initiative is playing a key role in establishing a sustainable biofuels industry. There is a notable exception: canola-based biodiesel production. To address this shortcoming, the government should ensure that canola biodiesel projects are supported in the final round of applications for ecoENERGY that are under review right now and also review the program criteria to make sure that ecoABC robustly supports canola-based biodiesel projects.

There is no doubt the focus of our industry will continue to be food. However, we have a unique and immediate opportunity to develop a biodiesel market for canola utilization, and there are very important reasons for doing this.

Market access for canola is currently challenged in the U.S. in terms of meal, in China in terms of seed and oil, and in the EU in terms of seed and oil and meal.

Now is a time for deliberate action. Canola biodiesel is right for the environment. It provides a new value-added market opportunity. It supports rural economic development, and it provides long-term market stability for the farmers of Canada.

I'd like to thank you for the opportunity to be here today.

● (1025)

The Chair: Thank you, Ms. Buth.

We go now to Marie-Hélène Labrie, vice-president of government affairs and communications for Enerkem Inc.

Please go ahead with your presentation, and really try to keep it to eight or 10 minutes.

Mrs. Marie-Hélène Labrie (Vice-President, Government Affairs and Communications, Enerkem Inc.): Thank you, Mr. Chair, and thank you, members of the committee.

[*Translation*]

Thank you for this opportunity to be with you here today.

Enerkem is a world leader in the development and production of new generation transportation fuels.

[*English*]

The company manufactures, owns, and operates advanced biorefineries based on its proprietary thermochemical technology developed in-house in Quebec since 2000.

Enerkem's unique technology converts residual material, such as non-recyclable municipal solid waste, forest residues, and agricultural residues into second-generation cellulosic ethanol. It is the only Canadian company that is able to produce ethanol from municipal solid waste.

[*Translation*]

Enerkem is a growing Quebec company that now has 70 employees. It was founded in 2000 and currently operates two plants in Quebec: a pilot plant, since 2003, which is used to test technology with more than 20 types of raw materials, and a commercial plant in Westbury, near Sherbrooke, which uses telephone poles as its raw material.

[*English*]

Enerkem will soon start the construction of the world's first municipal waste-to-biofuel commercial plant in Edmonton, Alberta. The company has signed an agreement with the City of Edmonton for this project. The company is also developing a similar project in Mississippi, where the company has received $50 million from the U.S. Department of Energy.

In addition to meeting our renewable fuel standard and reducing greenhouse gas emissions, Enerkem contributes to reducing waste landfilling and provides a great opportunity to transform our forest industry by using forest residues to produce clean transportation fuels. By using a wide variety of feedstock, Enerkem's plants can be located in both rural and urban areas.

Building a strong domestic biofuels industry so that Canada can lead the world in the development of next-generation biofuels requires the right combination of public policy instruments. It must include:

1) A federal renewable fuels mandate to create a stable market. The government has mandated a renewable fuel content of 5% in gasoline by September 2010.

2) A capital program to help finance the construction of biofuels production facilities across the country. The government has created the NextGen fund managed by Sustainable Development Technology Canada.

3) A producer incentive to support the domestic production of renewable fuels. The government has implemented the ecoENERGY for biofuels program, which provides the 10¢ per litre. The ecoENERGY for biofuels program has largely benefited the first-generation biofuels sector and has created a solid foundation for a strong domestic biofuel industry.

The first generation of biofuels has paved the way for the next growth phase, which will involve the commercialization of next-generation technologies that are being developed here in Canada, like the one Enerkem has developed.

● (1030)

[*Translation*]

These technologies enable us to produce renewable fuels from a broad range of biomass, forest residues and even domestic residual materials. It also enables us to even further reduce our greenhouse gas emissions.

[*English*]

According to Natural Resources Canada, there is currently $473 million available within the program budget for the ecoENERGY for biofuels program. The program has received 68 new applications, representing approximately $2 billion. The government is now in the unenviable position of having to decide which programs are acceptable based on predetermined criteria. This demonstrates the success of this program but also its limitations, as the government is now faced with having to select winners.

As a producer of next-generation ethanol, we have not yet benefited from this program, as our facilities are just starting to be built and operated. We submitted our applications for two commercial plants, the one in Westbury and the new one in Hamilton.

We strongly believe that this program is essential in order to build a strong domestic biofuels industry. It is also a program that provides a certain level of parity with the United States, which also has a producer incentive for its biofuel producers. The U.S. program is more generous, as it provides cellulosic ethanol companies a total of 20¢ U.S. per litre instead of 10¢ per litre.

In conclusion,

[*Translation*]

I would like to say that, if Canada wants to take advantage of the platform it has created with first-generation biofuels and continue to promote the creation of green jobs and economic recovery with the green energy sector, this program must continue.

[*English*]

Specifically, this producer incentive in the ecoENERGY for biofuels program is of high importance in order to continue to build a competitive and strong domestic biofuels industry. The ecoENERGY program has built first-generation plants across the country, which is a solid foundation on which to build next-generation biofuels plants, like the Enerkem facilities. The ecoENERGY program is an important program that will ensure that future generations of clean energy technologies that we often refer to as "clean tech" are developed at home, in Canada, as opposed to abroad.

Thank you for giving us the opportunity to participate in the ecoENERGY for biofuels program hearing.

Merci.

The Chair: Thank you very much, Ms. Labrie.

We go now to Resource Efficient Agricultural Production Canada, or REAP Canada, to Roger Samson, for your presentation.

Go ahead, please, Mr. Samson.

Mr. Roger Samson (Executive Director, Resource Efficient Agricultural Production (REAP) Canada): Thanks very much to the committee for the invitation to speak to you today.

For the past 20 years, REAP Canada has been Canada's leading agency in developing ecoENERGY from agriculture. We commend the federal Government of Canada in its recognition of the need to support bioenergy initiatives from the farm sector. Support for the Government of Canada's ecoENERGY initiatives can help strengthen Canada's prosperity in two ways. It creates demand enhancement for farm products, thereby strengthening commodity prices for the farm sector, and it enables Canada to become a leader both in the development of crops that efficiently harness the sun and in processing technologies that turn plant matter into useful energy forms for consumers.

Our agency supports the general concepts of existing ecoENERGY programs: support for producers for business plans, support for capital building offsets, and support for fuel producer incentives. However, before our agency makes specific recommendations to the committee, let me take the opportunity to better explain our approach and history with developing renewable energy from agriculture.

In 1991, REAP Canada gave a brief to the House of Commons Standing Committee on Agriculture about the state of the crisis at that time. We proposed that the best solution to the farm crisis was to recognize that the farming sector has a surplus production capacity and countries need to use this surplus agricultural production capacity to efficiently develop environmentally friendly renewable energy. Twenty years later, Canada has only been partially successful in developing this potential. We have been successful in strengthening farm commodity prices by using grains and oilseeds as feedstocks as liquid biofuels for the transport sector. However, the food commodity crisis that occurred in 2008 makes us realize that creating too much food crop demand through biofuel use can be too much of a good thing.

Canadians must now collectively acknowledge that the rapid scale-up of food crops into renewable fuels can also bring appreciable social dis-benefits to others. Make no mistake, the commodity crisis was largely driven by the rapid expansion of coarse grain utilization in 2008. In retrospect, renewable energy policy that creates liquid biofuels from food commodities has been a breakthrough in creating demand enhancement for Canada's farm sector. Using food commodities for renewable energy, however, can bring appreciable harm to the one billion people on this planet who remain hungry. While it remains the Government of Canada's aim to develop non-food crops as liquid biofuels, this remains technologically and financially elusive, despite noteworthy efforts by Canadian companies over the past 35 years.

Where the Government of Canada has failed over the past two decades is not recognizing that in order to create appreciable amounts of renewable energy from agriculture, one needs to view first and foremost the land as a means to capture and store solar energy. This stored energy must be harvested and efficiently converted into an energy form that we can use, such as solid biofuels, biogas, and liquid biofuels.

Let's briefly look at the state of the solar battery technology on farms. From a solar energy collection standpoint, it is remarkably inefficient to use only the seed portion of plants to capture the sun's energy. Instead, energy crops like switchgrass, where the whole plant is used, should be prioritized. REAP Canada's recent book chapter on developing energy crops for thermal applications, published in 2008, found in the case of the province of Ontario that switchgrass can produce 67% more net energy gain per hectare than grain corn and more than four times the net energy gain per hectare than soybeans or canola.

It does not make sense to put appreciable research support and generous incentives in place to support seed crops as fuels. Canada should be developing ecoENERGY policies that embrace the development of whole plant energy crops and phase out investments that develop grains and oilseeds into biofuels. Seed crops can be used to produce bioproducts, but it is a fully inept renewable energy policy to try to develop these crops as energy sources for the Canadian energy supply.

The Obama administration has fundamentally recognized this need to move beyond grains and oilseeds as energy sources by making important investments in energy crops through the new biomass crop assistance program. This program provides incentives for the farmer by offsetting establishment costs for growing energy crops, as well as providing the bioenergy conversion facility up to $45 per tonne of incentive for utilizing these feedstocks.

● (1035)

I want to stress to this committee that investing in energy crops is the best ecoENERGY policy approach when it comes to using Canada's agriculture sector for renewable energy production. Energy crops are the solar batteries of agriculture. They provide both large- and small-scale investors the potential to have relatively abundant and affordable energy feedstocks for their energy conversion technology. This approach takes the Government of Canada out of the business of picking technology winners and unleashes the entrepreneurial spirit of Canadian businesses.

Our agency recommends that the new ecoENERGY program provide farmers a $100-per-acre incentive to plant perennial energy crops. This will help them minimize their liquidity constraints in developing energy crops and help mitigate their risks. Furthermore, we recommend that Canada develop its own biomass crop assistance program, which would provide bioenergy conversion facilities a $40-per-tonne incentive to use energy crops and a $20-per-tonne incentive for the sustainable use of crop residues over a three-year period.

Canada can develop an appreciable energy supply from dedicated bioenergy crops. REAP Canada has calculated that using 14% of Canadian farmland for bioenergy crops could produce 55 million tonnes of biomass or the equivalent of 175 million barrels of oil.

Now let's examine what happens to the energy we have collected on farmland after it is processed at a bioenergy conversion facility. What we find is that traditional liquid biofuels, such as corn ethanol and soybeans, produce 16 and 11 gigajoules respectively per hectare of net energy gains. In contrast, whole plant crops like corn silage converted to biograss or switchgrass converted to pellets can produce 120 to 140 gigajoules per hectare of net energy gain.

This again is from the same report I mentioned earlier, our book chapter on thermal energy crops for bioenergy.

It is evident that the greatest amount of renewable energy production can be realized by using bioconversion technologies that use whole plant energy crops such as switchgrass or whole plant corn. The least efficient thing we can do is turn seed crops into liquid biofuels. Clearly, the Canadian government should develop ecoENERGY policies that promote the use of whole plant crops into energy for producing densified solid biofuels or biogas for heat, power, and transport. It is time for the Canadian government to move boldly forward with progressive new policies to use our farms and fields to efficiently harvest the sun.

Thank you very much for your attention this morning.

● (1040)

The Chair: Thank you very much, Mr. Samson, from REAP Canada.

We will go now to our teleconference witness today. As an individual, we have Professor Daniel Sperling, University of California, Davis, California.

Go ahead, please, Professor, with your presentation.

Prof. Daniel Sperling: Thank you very much. It's an honour to be with you, Mr. Chairman and committee.

I'm a professor of engineering and environmental science and policy here at the University of California, Davis, and also director of our Institute of Transportation Studies. I've studied alternative fuels for 30 years. I've written over 200 papers and 12 books on this topic, including the most recent—this is my only advertising here—*Two Billion Cars*. It came out this past year.

All energy supply options have large downsides. All of them have problems, including biomass. Incidentally, that is the reason energy efficiency strategies deserve to be the number one strategy to be pursued.

I want to make three points. The first point is that while there are many biomass feedstocks, some are clearly more attractive and promising than others.

Making fuels from food and feed materials is problematic, the so-called first generation. In general they use a lot of water, they have high energy inputs, they push up food prices, and they have high greenhouse gases. There are some exceptions to that. Probably the most promising is sugar cane from Brazil, where they've learned how to use much of the material from the sugar cane plant. They grow it very efficiently; it has high yields. But that tends to be one of the few exceptions.

What are much more promising are the second-generation feedstock materials you've been hearing about, the cellulosic materials, grass. A wide variety of grasses and trees can be used. They have much higher yields, they can use marginal lands, they use much less water, they use less energy, and they have a lower carbon footprint.

But this is what I really want to emphasize in talking about feedstock materials: by far the most promising and what I believe will be the most important feedstock material is the waste stream. That means crop residues, forestry residues, municipal solid waste. That's where the focus should be. I believe in the long term that will be the principal source of biomass material we will use for energy and fuel.

Then we come to the second topic, and that is the best way to use biomass. Here there's quite a bit of uncertainty. As the previous speaker talked about, biomass can be used for electricity production. Incidentally, it can be co-fired with coal and fossil fuel. It can also be converted into biomaterials as well as used for liquid fuels and fuels for engines.

The point I want to make here is, as far as transportation is concerned, probably the most important and promising application of biofuels is that they will eventually be used in airplanes and in long-haul, heavy-duty trucks, because those are the two applications where very dense energy materials are needed, and electricity and hydrogen are not very good sources for those two end uses.

As we think about the use of biomass, we really should be thinking those are the applications where the biomass materials are most attractive and in the end probably most likely to be used.

Then, third, we come to policy. I'm more familiar with the United States and Europe. In the United States, as you know, we have the renewable fuel standard, essentially a mandate to which they also attached a greenhouse gas threshold requirement. I believe very strongly that we need a much better policy, one that is more fuel neutral, that harnesses market forces. That approach is similar to what California has done on the low carbon fuel standard. This approach has also been embraced by the European Union. The European Union is moving away from mandates and towards a performance standard.

● (1045)

In California, there's a 10% performance standard. It means fuel suppliers need to reduce the carbon content of fuels by 10% by 2020. In a sense, it's grams of CO_2 equivalent per megajoule. In the California case, and I think anywhere it's likely to be used, it will be based on a life-cycle metric. The target or the point of regulation would principally be the oil companies that are major fuel suppliers, but very importantly, it covers all fuels.

The real danger we have when we make policy is that, as one speaker said, there's a tendency to try to pick winners. The reality is that as policy-makers and academics we don't know what the best options are going to be. I've studied transportation fuels for 30 years. If you ask me what the best fuel options would be for 20, 30, or 40 years from now, I don't know the answer. I know some of them are more promising.

We need a policy that is fuel neutral and performance based and that harnesses market forces and motivates innovation. That's what the low carbon fuel standard does. One can tweak it and make small modifications, but I believe this is fundamentally the right approach.

The low carbon fuel standard provides a durable framework so that we don't have to keep changing it every couple of years, with a new subsidy here and a new subsidy there. We've gone through the process of what I sometimes call the “fuel du jour” phenomenon, where we keep jumping around. Policy-makers, legislators, journalists, and the public jump from one silver-bullet solution to another. It doesn't work. We keep making the wrong choices and there's a lack of fundamental performance standards.

In closing, that's my recommendation and my suggestion. I'll leave it to you, if you have any questions.

Thank you very much for your time.

The Chair: Thank you very much, Professor Sperling, for your presentation.

To all of you, thank you for your presentations.

We unfortunately have very little time left for questions. A committee will be coming in immediately following ours, which leaves about two minutes for questions.

Starting with Mr. Tonks, let's have one short, crisp question, with a short, crisp answer.

● (1050)

Mr. Alan Tonks (York South—Weston, Lib.): Thank you to both panels.

We've heard a little of everything in terms of a strategic overview. Ms. Labrie talked about the recycling of municipal waste in terms of the energy stream and biomass stream. There's the canola approach. We then have reminders from Mr. Samson with respect to the implications for developing countries.

The question is this. Where is the strategic positioning that will do what Professor Sperling has said, a strategy that's based on policy performance and the unleashing of innovation?

My question has two parts to it. I'm sure the committee would be interested in what you would advise the government. Does the Obama administration have it right in terms of biomass crop energy programs? Will that position provide the necessary incentives in terms of the types of non-cellular and non-cellulosic technologies that will gently lead us to a more rational and balanced future with respect to cellulosic innovations and other innovations?

There are two parts to the question. The second part is on carbon pricing. How does that figure in? I don't think we're going to get to that, but the government needs to know or we need to know what the implications would be.

Thank you, Mr. Chair.

The Chair: We have a problem here. The two minutes is gone, and I know all parties would like to ask questions. I don't know how I'm going to handle this. Would one individual like to give a really short answer to that, and if so, who would that be?

Mr. Samson.

Mr. Roger Samson: I've worked on energy crops and bioenergy conversion systems for 20 years, and from a practical standpoint, we need to use marginal farm land because those are the lands that are really in surplus and are providing low income to farmers. We can increase those farm receipts from that farm land, and if we strengthen the overall demand from the farm sector, we help all the commodities like canola and we can produce appreciable amounts of energy. Utilization of wastes can be a good thing, but crop residues really aren't waste; they do feed the soil and protect the soil. So we have to do that judiciously.

The Obama strategy of supporting the sustainable use of crop residues and wood residues and energy crops I think is brilliant because it takes the government out of the business of picking technology winners on the conversion side and it's a safe investment because you're investing in energy and helping support it broadly for conversion technologies.

The Chair: Thank you, Mr. Tonks.

Madame Brunelle for just two minutes.

[*Translation*]

Ms. Paule Brunelle (Trois-Rivières, BQ): Good morning.

Ms. Labrie, I am very interested in what Enerkem is doing. I see it's highly diversified. You use 20 types of raw materials. You use a broad range of biomass. Is that the secret to your success? Is it also the fact that the plant is near the resource, whether it be waste or anything else?

Furthermore, you say the U.S. government has granted you $50 million for a plant in the United States and that here, the ecoENERGY program has limits. In view of the fact that your business is a success, shouldn't the government be investing more to support your efforts?

Mrs. Marie-Hélène Labrie: As regards the neutrality of the raw material, I believe it's by having the broadest possible diversity that we'll achieve the most success.

As for your second point, I would say that a model under which plants are located near the raw material is an environmental and sustainable development advantage.

With regard to your last point, I would like to point out that the SDTC program, NextGen Biofuels Fund, offers roughly the equivalent of what we have in the Mississippi. We intend to use that program in Canada for our plants.

● (1055)

Ms. Paule Brunelle: Thank you.

The Chair: Thank you, Ms. Brunelle.

[*English*]

Mr. Atamanenko, make it a very short question.

Mr. Alex Atamanenko: For Professor Sperling, I've studied in Davis, by the way, and it's a beautiful campus.

Should we be moving, as soon as possible, away from first-generation biofuels?

Prof. Daniel Sperling: Absolutely, yes. I think certainly in the United States, certainly in most parts of the world, we've already gone beyond the threshold of what is desirable. Many people make the argument that these first-generation fuels are a good transition, create the foundation for a transition. But to the extent that's true, we've gone beyond that boundary already, so every incentive we create, every policy we create, should be aggressively focused towards moving towards second-generation options and waste materials.

Mr. Alex Atamanenko: Thank you.

Prof. Daniel Sperling: Someone asked about carbon prices. Carbon prices are probably the best policy option, but most politicians are unwilling to do that, and that's why I advocate the low carbon fuel standard as a second-best approach to it that is fuel neutral and that uses tradeable credits so that you create market forces, stimulate innovation, and create a durable framework. A parliament or a legislative body should not get into the business of trying to micromanage and pick winners. It will lead to wasted money. Something like a low carbon fuel standard also reduces the burden on taxpayers because it creates a requirement in which the fuel suppliers need to respond and it reduces the need for subsidies.

The Chair: Thank you.

Thank you, Mr. Atamanenko.

We'll go now to the government side with Mr. Anderson.

Mr. David Anderson: I want to wrap up with a comment rather than a question.

Mr. Samson, I enjoyed most of what you had to say, and I agree with the importance of involving the agriculture community in this. We set up ecoABC to deal with that and give that opportunity.

I want to take exception to one thing. I think in the public's mind the commodity price hike in 2008 was supposedly due to ethanol production and biofuels production. I don't think that's accurate. We had stocks-to-use ratios dropping off for years, particularly in grains. Some manipulation took place in the financial markets there.

Ethanol production may have had something to do with that, but if it had played a major role in it, our prices would still be high, and our grain prices now are very low. I see Ms. Buth shaking her head.

I think it was a simplistic explanation to try to blame that on ethanol production. We should be encouraging ethanol production as much as possible, and other agriculture-related biofuels production on the farm. I don't think that argument is one we can use as producers and as responsible people who are putting programs in place.

Mr. Roger Samson: If you go to the FAO *Food Outlook* report, they give the status of grain carry-overs from 2006 to 2008. You'll see there was a 10.9% increase in other uses of coarse grains, and that was primarily ethanol. The world's farmers had a good crop year in 2008. The problem was that we had a major change in industrial use, and that brought down the world's stocks.

Although Canada is not a very big player in the global grain industry as far as coarse grains, it has a role because it imports corn from the U.S. The farmers of the world were basically delighted with the program, because it really strengthened them and they had been living in a state of penury. But we really need to be cautious about how far we go with these mandates.

The Chair: Thank you very much to all the witnesses for being here today. There was some great input for the study we're doing on the ecoENERGY biofuels part of the question. We will meet again on Thursday.

Thank you to Professor Davis for joining us by teleconference. I very much appreciated the short time. It would have been good to have heard more, but thank you very much.

The meeting is adjourned.

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