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Chair

Mr. Merv Tweed

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● (0850)

[*English*]

The Chair (Mr. Merv Tweed (Brandon—Souris, CPC)): I call the meeting to order.

Thank you and good morning, everyone. Welcome to meeting 25 of the Standing Committee on Transport, Infrastructure and Communities. The orders of the day are, pursuant to Standing Order 108(2), a study of innovative transportation technologies.

Joining us today from Encana Corporation is Sam Shaw, vice-president, natural gas policy development, and from the Canadian Propane Association we have Jim Facette, president and chief executive officer.

Welcome, Mr. Shaw. We had you here recently and had to leave you, so we'll try not to do that today. I'll ask you to make your opening comments. Then we'll go to Mr. Facette and after that to the committee for questions.

Dr. Sam Shaw (Vice-President, Natural Gas Policy Development, Encana Corporation): Thank you so much. It's a pleasure to be back again. I hope there's no vote today, Merv. You said there wasn't, so thank you so much, although every vote is a good vote.

My agenda is going to be very simple. I'll talk about Encana as an industry natural gas supplier, describe some applications and innovations, and give you a couple of recommendations.

Natural gas is abundant, affordable, clean, reliable, and a domestic solution. Encana is one of the largest natural gas suppliers in North America, with 40% of our plays in Canada and 60% in the U.S. As we start looking at a game changer and talk about innovation, it is really around looking at the supply of natural gas. It is very abundant. We estimate there's over a 100-year supply in terms of what we're currently doing.

On transportation, the biggest displacement would be around light duty, but again a lot of emphasis has been on heavy duty. We're also looking at applications for the marine side and the rail side and at operations such as drilling rigs.

What's Encana's role? Clearly it's about education and awareness. It's leading by example. Our own fleet is running on natural gas. Our oil rigs are running on natural gas. We look at collaboration, which is a very important piece as we start looking at the natural gas industry.

Why is liquefied natural gas important in transportation? It's clearly due to economics. If you're looking at a competitive situation with the U.S., we need to be looking at the competition side. I'll reference Robert Trucking out of Quebec. They purchased 180 natural gas trucks. They are a leader in this country, not only in the greening they undertake with their training, but also in their transportation. LNG is around 20% to 40% cheaper than diesel on an equivalency basis.

We chill LNG to -162 degrees Celsius, transport it to a plant or a station, and then dispense it by pump. Encana has pioneered mobile refuelers, so we can go to a yard of heavy-duty trucks and fill them on location.

If you look at the time zone for different milestones, the first marine gas engine was built and patented in 1860. The first LNG facility was in 1912. The patents for barges carrying liquid gas were in 1914. Then you start looking at the first U.S. LNG export in 1969. The first LNG import terminal was built in the U.S. in 1971. The first LNG plant in the U.S. to service the transportation market was built in 1994. In 2003, the conventional diesel locomotive engine was replaced by a smaller natural gas turbine. Again you're starting to see the utilization of natural gas, particularly in the U.S.

The Gulf Gateway Energy Bridge deepwater port opened in 2005. The very first LNG mining truck in the U.S. was in 2010. There are 26 LNG vessels in operation worldwide in 2012. When you start looking at the application of marine rail and heavy-duty trucks, you see LNG starting to get a foothold in the transportation grid.

For LNG supply, there are peak facilities in both Canada and the U.S. We can ship LNG by rail, transport, and intermodal means. When you start thinking about the train system in Canada and the U.S., you realize you have a distribution network for LNG anywhere you want to go.

On the marine side, the Staten Island Ferry in the U.S. has converted over to LNG. Some foreign countries, such as Japan, are looking at transporting in and out with LNG to service their power needs, particularly now in trying to displace nuclear.

If you start looking at the elements in terms of different vehicles, you see that if you have one locomotive, it burns as much as 96 cars. One mining hauler truck is equivalent to burning 142 cars of gasoline. One rig is 426 cars, and one passenger ferry burns as much fuel as 1,160 cars. If you're starting to look at displacement of diesel, clearly natural gas is the way to go.

President Obama has made that commitment in a series of state of the nation addresses in looking at an executive order, and most recently there is their blueprint for energy in terms of weaning themselves off foreign oil. Seventy per cent of foreign oil goes to transportation in the U.S., and clearly that is a priority in the executive agenda in the U.S.

In terms of the corridors in Canada, we're looking at the eastern Quebec-Windsor corridor and the corridor from Edmonton to Vancouver in terms of facilitating those corridors to switch over to natural gas. In terms of global trends, you can look at the European experience, where many vehicles have switched over to natural gas. As well, there are opportunities for redesigning engines and so forth.

In terms of distribution, I'd point to some very innovative practices going on in home refuelling. If you have a natural gas line for your barbecue, you can install a natural gas system for refuelling your car. Currently it's $1,500 to install in the U.S. and $4,000 to purchase. What we're trying to do, working with some partners in the U.S., is get that price down from $5,000 to $1,000 as an appliance in your house.

In terms of innovations, clearly one of the greatest examples in Canada is Westport Innovations. Using innovation out of UBC and rolled out as a commercial entity, they have developed a 15-litre natural gas engine. Now they're developing a 11.9-litre engine, and that is much more attuned to the small commercial fleets.

With regard to tanks, the 3M company has developed a new material, and Chesapeake Energy in the U.S. will partner with 3M on the tank material. Using nanoparticulate, it will be 20% lighter and have a 10% to 20% greater capacity. As nanotechnology comes to the foreground, it certainly has greater applications.

President Obama has also indicated that there will be significant dollars for the Department of Energy to look at infrastructure for tanks, home refuelling, and stations. There are a lot of innovations related to stations. Quantum is a producer of tanks for natural gas. They're looking at shorter and thicker tanks. Vision natural gas vehicles produced in the U.S. will travel 390 kilometres.

The important thing that you're starting to see in the U.S. is their look at standards, particularly in terms of particulate. They're looking at PM2.5. because the particulate coming out of gas-fired generation plants, diesel trucks, and so forth relates to issues around health, respiratory disease, and so forth.

In other innovations, Italy, with Fiat, has done a lot of research, and again, Fiat owns Chrysler. I'm hoping everyone saw the article in *The Globe and Mail* yesterday in regard to natural gas vehicles. Chrysler announced a Dodge Ram 2500 pickup truck. That's an OEM version. If you have the opportunity, we'd invite you to Vancouver to look at that truck at GLOBE 2012, where it will be displayed for the first time in Canada.

● (0855)

As you may be aware, Natural Resources Canada has embarked on a road map, and the road map is now looking at the standards and the education sides.

Finally, as some recommendations, we need to do a better job in terms of applied research on the natural gas side for all modes of transportation. We need to align our standards with the US. As I said last time, I would humbly ask for you to start looking at some funding programs in 2013 for municipalities that want to green their fleet.

Thank you so much.

● (0900)

The Chair: Thank you very much.

Mr. Facette, welcome.

Mr. Jim Facette (President and Chief Executive Officer, Canadian Propane Association): Good morning, Mr. Chair.

Thank you very much to the committee for the opportunity, and thank you very much for your interest in looking at innovative technologies in transportation.

I'm pleased to inform the committee that this year the propane industry celebrates its centennial anniversary. We hope that at the end of our presentation you will agree that propane is a green energy solution and a partner in any sustainable energy strategy.

Our specific request today is that this committee recommend to Minister Oliver that propane be included as part of the Canadian natural gas deployment road map, which it is not now, and that the federal government lead by example by converting more of their fleet vehicles to propane.

[*Translation*]

Today we will be focusing on the availability of propane and its affordable price. The following presentation should provide you with a good understanding of propane's many advantages.

[*English*]

With a $10 billion impact on the Canadian economy each year, Canada's propane industry supports the livelihood of over 20,000 Canadians, while contributing over $900 million in annual taxes and royalties. Nearly 100% of propane consumed in Canada is produced domestically. In Canada, approximately 83% of propane is produced from natural gas processing, and the remaining 17% from crude oil refining.

Your committee is conducting a study of innovative technologies in all modes of transportation that are commercially viable and relevant to Canada. Propane is commercially viable and relevant to Canada.

The propane industry has a role to play in a clean energy mix and is committed to maximizing its value to Canadians over the long term. Canada has a well-developed propane infrastructure, with tremendous capacity to produce an abundant supply with high portability across Canada and into the United States.

Propane is such a clean-burning fuel that it is often used for vehicles that operate indoors. In fact, I'm sure that each and every one of you has seen the most visible indoor vehicle that runs on propane, the ice resurfacing machine commonly known as the Zamboni.

In the industrial sector, forklifts use propane fuel not only for vehicle propulsion but also for load-lifting work. Many proposals for fighting climate change and reducing the environmental impact of energy use will have to wait for new technologies to be perfected; however, propane produced right here in Canada can make major and immediate contributions using today's technologies.

[*Translation*]

Some of you will recall the many gas vehicles that were converted to propane during the 1980s and 1990s. More than 13 million vehicles throughout the world are fueled by propane. In Canada, the figures are more modest, but right now we are witnessing a renewed interest in propane-fueled vehicles for both environmental and economic reasons.

Since people are looking for ways to reduce expenditures and greenhouse gas emissions, for many vehicle fleets, including the federal government's car fleet, we believe that Canada's propane sector can contribute significantly to meeting those objectives.

In comparison with conventional energy sources, propane produces less greenhouse gases and air pollutants for nearly all of the applications where it is used. Propane-fueled vehicle fleets produce up to 26% less greenhouse gases than gas-fueled vehicles, representing a kilo of greenhouse gas for each 36 kilometres travelled, and approximately 50% fewer pollutants and other emissions found in smog created by gas engines.

One private corporation that has a significant propane fleet is United Parcel Service. UPS currently has more than 600 propane vehicles in Canada, including some that are being used here in Ottawa. Six other examples of organizations that have opted for propane and are benefiting from its economic and environmental advantages are TransHelp, from the Peel region, the London Police department, Airways Transit, ThyssenKrupp Elevator, the city of Prince George and Canada Post.

TransHelp from the Peel region was motivated primarily because of environmental protection concerns. Their engines idle in zones that are sensitive to pollutants, such as in hospital admitting areas, and because their passengers have special needs, they have to ensure that the vehicles' temperature is maintained.

As for the London Police department, almost all of its 60 patrol vehicles are fuelled by propane and, over the years, significant savings amounting to millions of dollars have been achieved while maintaining an impressive safety record.

● (0905)

[*English*]

Airways Transit, the largest provider of on-demand, shared-ride airport ground transportation in Canada, operates a fleet that is 100% fuelled by propane. Compared to the use of gasoline-fuelled fleet vehicles, the use of propane has resulted in a reduction of 588 tonnes of greenhouse gas emissions per year for Airways Transit.

ThyssenKrupp Elevator, the largest producer of elevators, is running eight Roush CleanTech Ford E-150 vans and three Roush CleanTech F-150 pickup trucks. They have eight more propane vehicles on order. By the second quarter of 2012, ThyssenKrupp Elevator will have 19 propane-fuelled vehicles—which equals one-third of their fleet in Phoenix—running on this clean-burning alternative fuel.

Their commitment to propane extends further west, with six Ford E-150 vans on order for Seattle, eight for L.A., and 10 for San Diego. According to ThyssenKrupp's director of fleets, Mr. Armstrong, Phoenix-area service vehicles average 25,000 miles each year. This means that for each vehicle purchased, ThyssenKrupp Elevator is reducing its carbon footprint by 12,237 pounds of carbon dioxide each year, for a total of more than 67 tons annually across 11 vehicles already in use.

Just recently, the City of Prince George unanimously approved a city green fleet strategic plan, which includes a pilot project to convert five city vehicles to propane as part of the 2012 action plan. The project will be examined with the possibility of expanding it into 2013.

Finally, Canada Post currently has 100 medium-duty parcel delivery propane vehicles, and an additional 200 vehicles will be converted this year. They also have 10 mail delivery light vans and 20 patrol cars, used by postal inspectors, operating on propane today. Canada Post also has one operational propane refuelling station in Ottawa and plans to construct two additional stations this year.

We believe that there exist tremendous opportunities for many fleets to adopt the use of propane, which would not only help them combat climate change but would also reduce their operating expenses. This is why we are asking this committee to recommend to the Minister of Natural Resources that propane be included as part of the natural gas deployment road map, which has as its purpose to identify the optimal use of natural gas in Canada's transportation sector.

In 2010, under the ecoTechnology for Vehicles program, Transport Canada and Roush collaborated to test a propane-fuelled Ford E-150 van. The test results support the industry position that propane is a clean, affordable, efficient, and sustainable option when considering alternative transportation fuels. In this specific case, the medium-duty propane vehicle tested had carbon dioxide emission reductions of 11% compared to conventional fuel, based on combined city/highway emission results.

Canada's federal government currently faces a number of challenges that should favour their adoption of alternative fuels such as propane.

These challenges include the federal government emission reduction target of 17% from 2005 levels by 2020. The use of propane-powered vehicles on their own can achieve a reduction of up to 26%.

Next, budgetary pressures could be reduced through the application of energy alternatives that yield significant operating cost reductions. Over the last decade, on average, propane has been sold at 36% less than gasoline.

I should also add that the public is looking for the federal government to lead by example with initiatives that both address budgetary concerns and improve environmental performance. With a fleet over 32,000 vehicles, the federal government has a unique opportunity to save money and reduce its environmental impact by using propane in its fleets.

The federal Alternative Fuels Act is aimed at achieving these very goals by directing the federal government to buy alternative-fuels vehicles or to convert existing ones to operate on alternative fuels such as propane, natural gas, and ethanol. The purpose of the legislation, which took effect in 1997, is to accelerate the use of alternative fuels in motor vehicles in order to reduce the emissions of carbon dioxide and other greenhouse gases.

However, for fiscal year 2009-10, the last year for which we could find data, the Treasury Board Secretariat reported that only approximately 10% of federal vehicles were powered by alternative fuels, and only two vehicles were powered by propane.

One of the reasons stated for this is a lack of availability. We differ. Not only are there over 2,000 refuelling stations across Canada, but fleets can also be easily fuelled at fleet headquarters through a tank card-lock system, just as both Canada Post and UPS do.

● (0910)

In conclusion,

[*Translation*]

we have said that propane is readily accessible and available, and that is the case. Our country currently produces considerably more propane than it uses and we know that we have an ample supply to meet the needs of the future.

We also told you that the price of propane is affordable. The vehicle fleets of companies such as UPS and Airways Transit have proven over and over again the economic benefits of propane.

Propane is also a multi-purpose product. Whether it is used in agricultural applications, as vehicle fuel or as a means of heating our homes, or for many other uses, you can count on propane.

[*English*]

In conclusion, we hope this committee recommends to Minister Oliver that propane be included in any transportation road map and that the federal government lead by example by converting more of their fleet vehicles to propane.

Mr. Chairman, thank you for the opportunity.

The Chair: Thank you.

Go ahead, Mr. Nicholls.

Mr. Jamie Nicholls (Vaudreuil-Soulanges, NDP): Thank you, Mr. Chair.

Thank you for your very informative briefing. It is highly appreciated.

I lived in the Republic of Turkey for five years, so things like LNG refuelling stations and propane taxis are quite a common site on the landscape, given that the price of gas in Turkey is about three times the price of what it is here.

However, we've seen that for natural gas refuelling stations in Canada, the numbers actually fell from 134 in 1997 to 72 in 2010. What's the main reason for this decline over time, and what are some of the problems with maintaining and expanding a refuelling network across Canada?

Dr. Sam Shaw: Thank you so much.

One of the issues was a catch-22 in looking at vehicles that run on natural gas and not the marketplace. Now what you're starting to see is this. Particularly in the U.S., there are 1,200 stations. There are some of ours and some from Clean Energy. We just opened our Strathmore facility in the fall. You are starting to see it come back.

It was a case that there was no product, only conversions of passenger vehicles or trucks. Now that you have the OEMs starting to produce—unfortunately, they are not producing them in Canada—you are now starting to see the rollout. Certainly there are some companies that are very interested in reintroducing natural gas stations.

Again, I'd reference the fact that maybe we need to change the game by looking at home refuelling. That's very different. In fact, in one of the focus groups that we had, a number of people said, “Well, if Samantha bought one, maybe it's just a scheduling issue; we'll just go over to Samantha's and fill up our vehicles over there, even at the current price of $4,000, with a $1,500 install price.” Again, people are very cognizant of the cost of gasoline, particularly in the U.S.

The Chair: Go ahead, Mr. Facette.

Mr. Jim Facette: Thank you, Mr. Chairman.

One of the main barriers in Canada to having more self-refuelling stations, or a self-refuelling station, is regulatory and standards in nature. If you have a vehicle in Europe, you can pull up to what they call an autogas station in Europe and fill up your propane-powered vehicle by yourself. In Canada we face some regulatory barriers to get there. That's basically due to a lack of understanding, a lack of harmonization with standards that exist around the world. We believe that if we look elsewhere, abroad, at the way they do it.... If it can be done safely in Europe and accepted every day of the week, it can be done here in Canada as well.

We have some regulatory issues to get through. We have to work with the Canadian Standards Association to do some harmonization across the country as well as recognition of what's done elsewhere in the world, and not try to duplicate or go one up just because it's done one way somewhere else. We should look at doing likewise here in Canada.

● (0915)

Mr. Jamie Nicholls: Thank you.

My second question is more to Mr. Shaw. You spoke a lot about LNG. I'm wondering about LNG versus CNG. I've heard there are efficiency problems with LNG at high altitudes, which would make transport corridors using LNG difficult. With, say, the Edmonton-Vancouver corridor, there would be difficulties with the high altitudes there.

Dr. Sam Shaw: There are not, really—you're looking at a 3% loss on performance side—but clearly the LNG product is for longer distance. You get six times the value CNG gets, and that's why, in the heavy-duty trucks, LNG is used. There's one company that is doing some research on LNG for passenger vehicles, and that's Jaguar.

Typically what we've seen in the U.S. is that the triangles of LNG corridors are operating very well, particularly in Colorado, Texas, and so forth. The high altitude is not a problem.

The other thing that I see happening is the innovation out of Westport. Their joint venture of Cummins Westport has done a lot of research on the efficiency rate of LNG vehicles.

Mr. Jamie Nicholls: Thank you.

As you know, many Canadian provinces have an abundance of hydroelectricity—notably Quebec, where I'm from, but British Columbia and Manitoba also have significant hydroelectric production facilities.

Measuring emissions and energy production in the burning of these fuels is a complicated science, but can you give us a sense of how natural gas and propane vehicles compare with electric fleets powered by hydro? How do you make your case to jurisdictions in these regions of the country?

Mr. Jim Facette: From the propane perspective, Mr. Chair, I'll have to get back to the member on the exact calculation. There are other people who will have far more of the answer than I, so I'll get back to you.

In terms of making the case, it depends where you are. There's not one solution that will fit everybody in Canada. The price of hydro for an electric car is probably cheaper in Quebec that it's going to be or is now in the province of Ontario, so when you look at the math, the math really depends on where you are. The math of converting to propane for fleets works out quite nicely in some jurisdictions and may not otherwise.

At the end of the day, it boils down to choice and giving the market the opportunity to decide what is best for a particular jurisdiction, be it a municipality or anybody else.

That's really what the propane industry wants. We have a product that has been around for a hundred years; it has been in fleets for a long time. Technology has advanced a great amount, and today it is essentially seamless in your fleet vehicles, whether they are trucks or anything else. If we're given the opportunity to compete with someone else or with any other source of energy for the fleet business, we'll do just fine. We'll win some and we'll lose some. That's okay.

The back half of your question really depends on where you are. If a municipality in the province of Quebec or the provincial government of Quebec chooses to go electric because it's less expensive to power that vehicle, then so be it, but they could choose propane for all kinds of reasons; maybe they can't get enough power to power a certain community. You can also use propane for more than just transportation, depending on where you are. It really depends on geography.

The Chair: Thank you.

Go ahead, Monsieur Coderre.

[*Translation*]

Hon. Denis Coderre (Bourassa, Lib.): Thank you, Mr. Chair.

My first question is one that is being asked by a layman.

● (0920)

[*English*]

What is the relationship between propane and natural gas? Are you working together? Are you enemies? Do you want to hug together?

It seems that you should all be part of it. I don't understand why you're not on the road map.

Do you want to talk about it, Jim?

Mr. Jim Facette: Mr. Chair, I have no idea why we're not on the road map either. Part of it may be that someone decided just to go in one direction rather than look at propane. I'm really not sure. The fact of the matter is, and I think you're alluding to what I said earlier, that 83% of the propane in Canada comes from natural gas exploration.

It's interesting to look at where the producers, some of whom are our members as well, are putting their money in their exploration. They're getting away from what he would call a "dry play", which is natural gas only or methane only, and are going to "wet plays", which have propane, butane, and ethane attached to them, because candidly that's where the money is. Heaven forbid that they try to make a buck in this country, but good on them. That's where the money is, in "wet plays".

So I don't know why, and that's why we make the request today.

Dr. Sam Shaw: Yes, I would agree. You start with methane first, and then you end up with propane, but as we start looking at natural gas in Canada, we note that it's at the lowest price it's been for decades and we need to seize the opportunity. Certainly they're doing that in the U.S.

I would say again, Denis, that it's really a continuum of using whatever fuel you need for a particular mode of transportation. You don't use propane typically for marine and rail and heavy-duty transport; you use LNG. Again, it's the product, depending on the mode of transportation, that is important.

Hon. Denis Coderre: It's a complementary kind of approach.

A voice: It is, very much.

Hon. Denis Coderre: Do you believe, Mr. Shaw, that we need also to take a look at the regulations? What would you propose?

Dr. Sam Shaw: Yes, and one of the things that my friend alluded to is that when you look at the regulatory side, NRCan, under the standards subcommittee of the implementation committee, is looking at LNG refuelling structures and so forth. Yesterday *The Globe and Mail* reported that the U.S. builds natural gas tanks for pickup trucks at 3600 psi; we're at 3000. We need to align our standards. Clearly a way forward has to come out of NRCan.

The other element involving standards and regulations is that we need to have harmonization in looking at north, south, east, and west. Interprovincial standards need to be looked at. I mentioned that the last time in noting that we had a valve part produced in Manitoba that wasn't certified in Alberta, and we had to wait three months. This situation is making us uncompetitive, whereas in the U.S.you can get it one time.

It comes back to our needing to have a standardization across Canada.

Hon. Denis Coderre: Would you suggest that this should be a priority in our recommendations?

Dr. Sam Shaw: It should.

Hon. Denis Coderre: This is a major issue.

Jim, you spoke a lot about this being a good product that we should use more.

I'd like you to expand a little on what you are doing in R and D.

Mr. Jim Facette: The industry could do more research and development.

Companies such as Roush, out of Germany, are investing time and money with OEMs such as Ford to advance the use of propane. The fuel injection engine has really allowed for great advancement. When you use propane in a vehicle, it's a liquid, similar to what is in your barbecue tank, and the vapour is what burns. Now we have a lot of opportunity—there is some R and D going around the world—that will allow for greater usage of propane.

As I said in my presentation, there was recently a project with eTV, the eco-technology program within Transport Canada. We hope it continues, because it was, if you will, a government-private sector R and D partnership that looked, both from an environmental side and from an engineering side, at whether there was a loss in power and that kind of idea.

We'd like to see that kind of thing continue. We think there are some good efficiencies in bringing government investments together with the private sector to advance the cause, be it through universities or whatnot. We made that recommendation to the Standing Committee on Finance last year. This is an important thing that would help us advance the cause of propane and technology and their usage.

Hon. Denis Coderre: Mr. Shaw, I was interested in your statement on infrastructure, because basically I believe in options. Of course hydroelectricity is an asset for us, and we should use it, but it's not one size fits all. In certain areas, if we have an alternative, it's great, but it's all about infrastructure, isn't it?

Did I hear you well when you said that we would be able to have refuelling on our own, from our house or from...? Would you expand on that?

● (0925)

Dr. Sam Shaw: Home refuelling—

Hon. Denis Coderre: Is it one day the barbecue, the second day the car? How do you manage that?

Dr. Sam Shaw: That's right. Home refuelling units have a compressor and a pipe, and you connect it to your car. It comes off the natural gas line to your house.

If you think about the infrastructure across Canada, you realize there's a lot of piping that carries natural gas to your residence. You can use it for refuelling your vehicle, or for fuelling your barbecue, your fridge, or your stove, and so forth.

Hon. Denis Coderre: For example, if we already have Gaz Métro in Quebec in our home, then all we need is to add a device, and instead of plugging our car into the electricity, we just plug it in. Is that how it works?

Dr. Sam Shaw: That's right. In my handout, I'll show you pictures of home refuelling units. What we're trying to do is get the best technology out of the different units to bring the price down.

Hon. Denis Coderre: Is it a matter of figures, then? We're all talking about private-public partnership here. How much would it cost to have that kind of infrastructure?

We spoke about the regulatory approach; that's an issue with CSA and all that. How would you perceive it, if you had to go for the next budget? How would you see it?

Dr. Sam Shaw: For the home refuelling infrastructure, it would be a case of going down to The Brick and buying a home refuelling unit, just as you would for your fridge or stove and so on. It would really be the customer. Obviously, this is being driven by the fact that they have to have a natural gas vehicle, either a converted one or one from the OEM side.

One of the things I would also like to say is that in terms of Quebec or B.C. looking at hydro, you can sell the hydro for a higher price than you can actually get for the natural gas. There is a continuum of energy sources, and you make more money selling your hydro and fuelling your transportation with natural gas.

The Chair: Thank you.

Mr. Richards is next.

Mr. Blake Richards (Wild Rose, CPC): Thank you, Mr. Chair.

I appreciate having both of you here today, including Sam from my home province. It's nice to have a fellow Albertan here. I appreciate both of you being here.

I have a number of questions for both of you. There will be a few mixed in that are for one or the other. I'll just ask, because I have a number of questions, that you try to be as brief as you can with your answers so that I can try to get through all the questions I have in a seven-minute period.

Both of you focused a lot on fleets. I can understand the reasons for that at this point in time with both types of fuel. I'll start with some questions about fleets and about some of the challenges and costs and various things. Hopefully, if we have time, we can talk about the individual consumer and some of the challenges that might be there as well.

Starting out with fleets, I know, Sam, that you specifically mentioned the mobile filling stations. Obviously for fleets—and I'm thinking of operations such as the one you mentioned your fleet at Encana is on—operations like Encana or other oil and gas companies often service remote areas, and you have to be able to have the fuel there. For a lot of fleets, for a lot of larger companies, being able to do that would be a pretty key part, and I'm sure there would be a lack of fuelling stations.

I'm a little bit curious about some of the costs. First of all, for each of you, what are the costs to convert to either natural gas or propane per unit, per truck, and what would a mobile fuelling station cost?

I'm not sure if you'd be suggesting propane for a fleet situation or not. I know there's certainly more availability of propane fuelling stations, but maybe I'll ask you both to answer about the costs for corporations to set up their fleets.

● (0930)

Dr. Sam Shaw: First of all, for the station, you're looking at between $1 million and $1.3 million in terms of what we've done with Strathmore and some of our stations in the U.S. In terms of the mobile refueller, I'd have to get back to you on the specific costs because we're looking at some patents on that.

Again, it's one of the first in terms of innovation on that side. In terms of some of the little units, we just opened up our first LNG Tango unit. It's about 14 million dollars. It will service the transportation sector down in Louisiana. Those are the hard costs for supporting the infrastructure for transportation.

The other element we're starting to see is that you can rail or truck LNG to any stop to provide that kind of infrastructure. What's occurring are those triangles for return-to-base. Even though those base triangles may be thousands of kilometres long, there are points at which you can look at refuelling. One heavy tractor-trailer will go between 800 and 1,000 kilometres. Those are the triangles we're starting to build.

In terms of the costs coming down, we see some real innovation. We're looking at a design of a station unit that you can put in any existing service station and look at CNG. We don't have the complete engineering on that—we're going for patents on it—but it will be very innovative at a fraction of the cost of doing a new station.

Mr. Blake Richards: What about the cost of converting individual trucks? What is the cost per truck, roughly?

Dr. Sam Shaw: The conversion costs are typically $8,000 to $12,000. Of that, 40% is the cost of the tank. The difference in cost from $8,000 to $12,000 is roughly the difference between using steel tanks and carbon fibre. It's more expensive for the carbon fibre, but it is lighter.

If I can just add something, the 3M material will actually be lighter and have higher capacity. There's innovation coming in regard to tanks. The key for the tanks is the volume.

We talk about regulatory issues. Why can't you import to Canada a natural gas vehicle, say, from Italy, where there are over 660,000 vehicles? It is because it costs the OEMs so much, because of the safety testing and so forth, that it's better to develop here in North America.

Mr. Jim Facette: There are two parts to your question. The first part is about the cost of conversion. The second part is about the fuelling station set-up costs.

I'll give you a range for the unit cost for the cost of conversion for propane. With more volume, of course, the cost will drop as you take advantage of economies of scale, but the cost of conversion ranges between $3,000 and $6,000, approximately, and it's between $45,000 and $55,000 to set up a fuelling station.

Mr. Blake Richards: Great.

Obviously some set-up costs are absorbed by the fleet owners, but what about fuelling costs over the course of a year? Obviously there are savings. What are we looking at in terms of savings per year per unit?

Mr. Jim Facette: For a propane-powered vehicle, it really depends on your usage. You can recoup your initial investment in less than nine months without too much problem.

Mr. Blake Richards: Okay.

Go ahead, Sam.

Dr. Sam Shaw: We typically say that there's a three-year buyout if you start looking at OEM vehicles and so forth. We've seen between $5,000 and $7,000 in savings for some of our pickup trucks. They're operating up north, in Fort Nelson.

Mr. Blake Richards: I'd like to look quickly at the individual consumer at this point. How much time do I have?

The Chair: You have about 20 seconds.

Mr. Blake Richards: It will be really quick, then.

In terms of the number of fuelling stations in Canada for natural gas, I know that you mentioned, Jim, that there are about 2,000 of them.

To each of you, are there any challenges in taking them into the shop or providing special training for the mechanics because of the conversion to that type of fuel? Are there any safety issues? I know that with propane, there's an issue with underground parking. Are there any safety issues involved for individual consumers?

● (0935)

Mr. Jim Facette: Let me deal with the last part.

Propane is safe. Yes, mechanics will have to be properly trained on conversion, and they should be, absolutely. In terms of individual consumers moving to propane, at the end of the day it really depends on how long they're going to keep the vehicle. Do they want to spend between $3,000 and $6,000 to do an aftermarket conversion? If we could go to OEM, it would be a whole lot better.

Dr. Sam Shaw: In regard to training, if you look at Chrysler, they're already rolling out training for all their mechanics at all the dealers across Canada, because they're introducing a new product. In terms of the issues, clearly there's a big difference between propane and natural gas. Natural gas dissipates. There's not an issue with that. Again, you can park underground.

What we're actually seeing is that the OEM point is really critical in terms of the training and the consumer being able to get the car serviced.

The Chair: Mr. Holder is next.

Mr. Ed Holder (London West, CPC): Thank you very much, Chair. I'd like to thank our guests for being here today. I find your testimony thus far very helpful.

Mr. Facette, you made a reference to our London police force using propane for their vehicles. I'm proud to say, being from that city, that we have certainly embraced that technology. In fact, it was rather interesting. We made a decision, because of the challenges in Ford Talbotville, to buy up all the Crown Victorias they had so that we could put them in storage until we could utilize them again, with the notion of converting them. We also have probably the largest taxi fleet, Aboutown, that not only has all of its vehicles on propane but is a propane supplier, as well, across the city.

I'm trying to understand better the economics of all of this, and the payback. Mr. Facette, I think you said that depending, of course, on usage, it could be as little as a nine-month payback. Mr. Shaw, I think you said that potentially you would set that out generously as a three-year plan. If you'll forgive the pun, why haven't conversions exploded?

Mr. Jim Facette: Why not? It probably goes back to the OEMs, and part of the challenge is infrastructure.

People are comfortable with gasoline. We have a culture that's comfortable with it. We have auto manufacturers who know it. We have a sophisticated distribution system. We have gas stations on pretty much every corner across the country, and that's okay, but getting Canadians to think differently takes time, money, investment, and maturity of the industry. It's not just the individual.

When it comes to propane, the technology has matured over the last 30 years. We had an issue about 25 years ago with conversion. There were incentives offered, and it seemed like anybody with a ranch was doing the conversion, but they were doing it wrong. When you have one chance to get it right and things get done wrong, it tends to stain you for some time.

If we get some more OEMs to produce propane-powered vehicles, it will allow us to put more infrastructure in place to make it easier. Eventually we could go the way Europe has. At one time, they were filling up their BMWs in the middle of the night with propane, but they don't have to do that anymore. They can go to any filling station during the day and self-fill.

It isn't just one thing; there are a lot of stars that have to line up, including the regulations and standards across the country. It is these standards that would allow us to do what is already being done elsewhere in the world.

That's a complicated answer to a simple question.

Mr. Ed Holder: I'm actually old enough to remember when we weren't allowed to pump our own gas. We had to have somebody who knew how to flip the switch, take the gas cap off, and do it.

Ms. Olivia Chow (Trinity—Spadina, NDP): I'm not old enough to remember that.

Mr. Ed Holder: Of course not, Ms. Chow.

We've come a long way, but the newer generation wouldn't know that at one point you couldn't do that, and now you can. How complicated is that compared with the European model?

I want to get back to Mr. Shaw on the same question: why haven't we had the proliferation of vehicles into, say, natural gas? I also want to come back to you on this notion of how difficult it is to flip a switch. Frankly, I've never driven my own vehicle in Europe, although I've been there several times, and I would like to have a sense how hard it would be. Is it the same process as learning how to pump our own gas?

● (0940)

Mr. Jim Facette: Yes, it's a simple process. You take it off the pump, you put it in the part of the car that requires the fuel, and you hold it there. There are built-in valves and mechanisms that shut off the propane when it's full, which for any propane container is no more than 80%.

Mr. Ed Holder: What exactly are the 2,500 propane stations now in Canada?

Mr. Jim Facette: They're essentially filling stations, but a certified individual must do the filling, just as they had to do 35 or 40 years ago.

Mr. Ed Holder: Do you think it's overregulated, that aspect of it?

Mr. Jim Facette: Yes.

Mr. Ed Holder: I was surprised to hear you say—I believe it was you—that the set-up cost of the fuelling station was $45,000 to $55,000. That does not seem like a lot of money to me.

Mr. Jim Facette: It's not. I would invite this committee to ask Canada Post here as a witness. They'll tell you directly about those costs.

Mr. Ed Holder: I want to come back to Mr. Shaw and ask why there hasn't been a move to natural gas and propane vehicles. What's your sense of that?

Dr. Sam Shaw: There are two reasons. One is that in North America it was only in 2008 that we started getting a tremendous supply of natural gas, and this supply has decreased the price. Europe is much more environmentally friendly. They do things like the 30% savings on carbon dioxide and 99% on particulates, the SO_x and NO_x, and so forth. There are 13.6 million natural gas vehicles in the world, but only 140,000 in North America.

Mr. Ed Holder: How many are in Canada?

Dr. Sam Shaw: We have 14,000.

We're starting to see price sensitivity with the abundance of natural gas. That's why the OEMs are starting to move in that direction. There's been a tremendous push since the "Blueprint for a Secure Energy Future" in the U.S. and the executive order to have all U.S. government vehicles on alternative energy by December 31, 2015.

Mr. Ed Holder: That's rather interesting.

When I think of what powers a vehicle, I think of traditional gas, natural gas, propane, electric, solar, but we haven't talked about home. I would think that's the other piece. I know you've talked mostly about fleets.

I'm afraid I'm not going to have the opportunity to get a response on this question, but it would be interesting to have a graph that shows cost. We all think about electric power and the grid, but I'm trying to get a strong sense of what the cost is per litre. I'm trying to find some common ground.

I would challenge a comment that was made earlier. I think Canadians understand economics. If we found that there was truly a savings, Mr. Facette, and if that message got out, I think it would become its own proliferation of positive news. I'd love to get a sense from you of the vehicle side of those comparisons. I'd like to see them on a standardized basis so we could all understand them.

Dr. Sam Shaw: I have some graphs for you in my handout. It's GGE, gasoline gallon equivalent.

Mr. Ed Holder: Thank you.

The Chair: Thank you.

Before I recognize Ms. Chow, home heating fuel—natural gas or propane—is discounted from the price at the station, or at least it was at one time. Is that still the case?

Dr. Sam Shaw: It depends on the jurisdiction and the utility. Some are regulated and some are not.

The Chair: You could fill your vehicle up for a lot less money if you were buying at the home heating cost.

Dr. Sam Shaw: Absolutely.

The Chair: Go ahead, Ms. Chow.

Ms. Olivia Chow: I have a few questions and then I'll give my remaining time to Mr. Nicholls.

Mr. Shaw, Encana has a number of trucks that are natural gas. How many trucks do you have in total, and how many do you have on natural gas?

Dr. Sam Shaw: We have 160 trucks operating on natural gas right now, and those are conversions. Those are not OEMs.

Ms. Olivia Chow: That's out of 1,600 or 2,000 trucks?

Dr. Sam Shaw: We don't have a very large fleet of our own because we have a lot of contractors, so I can't give you the total number of trucks we have. We have been looking at converting as many trucks as we can.

● (0945)

Ms. Olivia Chow: What percentage do you think it would be? Give me a ballpark figure. It doesn't have to be 1,855.

Dr. Sam Shaw: I think we're hitting close to 30%.

Ms. Olivia Chow: Then do you have fewer than 2,000 trucks? What about your contractors?

Dr. Sam Shaw: We just signed a deal last year for Heckmann Water Resources. They've ordered 200 trucks that operate on LNG.

Part of the problem is the barrier in getting the engines out of Westport Innovations. There is one company in North America; it supplies those engines for Peterbilt, Kenworth, and so forth, and the list goes on, but there is one manufacturer.

Ms. Olivia Chow: You have fewer than 1,000 trucks in total.

Dr. Sam Shaw: If you mean pickup trucks, yes.

Ms. Olivia Chow: Are there any other kinds of trucks that you're looking to convert?

Dr. Sam Shaw: No, we don't usually have big trucks.

Ms. Olivia Chow: For the trucks you're using, which corridor do you use in order for them to refuel?

Dr. Sam Shaw: We typically look at our trucks that are located close to our operations, meaning Fort Nelson and Strathmore, and we're looking at Denver and Dallas. They're close to our operations.

Ms. Olivia Chow: In Canada, how many trucks do you have on natural gas, and which corridor do they tend to use?

Dr. Sam Shaw: They don't do a corridor. They're close to operations. If our operations are in Fort Nelson, the trucks are in Fort Nelson. They don't travel, so they're typically return-to-base, out in the field. It's the same with Strathmore. They don't go through a corridor; they return to base in Strathmore.

Ms. Olivia Chow: Right.

If Toronto, for example, wants to order some natural gas buses, they would travel in a certain area that would require refuelling. It's always the refuelling that's the problem, isn't it?

Dr. Sam Shaw: We're working with a number of cities. Calgary is on stream for 200 transit buses. It's a case of putting the infrastructure in the barns, because it's return-to-base.

Ms. Olivia Chow: What would be the combined operating cost, not just the capital cost? How much would the operating cost be to maintain the barn and then to maintain the natural gas buses? Do you have a ballpark figure?

Dr. Sam Shaw: I couldn't give you that. That would have to be a business case analysis, but I can tell you that there has been a lot of analysis done in California in looking at the difference between hybrid buses and natural gas vehicle buses, and typically it comes out that the total cost of ownership of natural gas transit buses is about $250,000 lower than the cost of hybrid buses.

Ms. Olivia Chow: Thank you.

Go ahead.

Mr. Jamie Nicholls: Currently, natural gas and propane consumers are exempt from the federal excise tax on fuel, which is 10¢ per litre. We know that an exemption from a tax is comparable to a subsidy for the industry, and treating various fuels differently can sometimes lead to distortions in the market or artificial demand for one product over another. Can you give us an indication of how demand for natural gas and propane use in the transportation sector is in any way dependent on this current tax exemption?

Dr. Sam Shaw: Let me start.

First of all, it's not dependent, because we don't have a product; as a result, the number of conversion vehicles in Canada, as I said, is minuscule compared to the worldwide number of natural gas vehicles.

Clearly, if you look at the jurisdictions—and I think that's one of the things NRCan will be looking at—in the U.S. you'll see state incentives and federal incentives. President Obama just brought up the fact that there will be incentives for natural gas vehicles. Also, there are incentives in Italy, and so forth. As in the U.S., that was really done to incent the conversion to natural gas for environmental reasons and to utilize domestic supply.

We don't have the excise tax drifting to consumer adoption right now. Ed was talking about how good the economics are, and that will come to the foreground once there are more OEM vehicles, so we would say you should not excise the transportation of natural gas or propane just yet, not until you get an industry.

What you're looking at trying to do is spawn a transportation industry that would spur development in manufacturing of natural gas vehicles, whether it's in Ontario or other provinces. That would be an incentive to the OEMs to start producing natural gas vehicles.

● (0950)

The Chair: Thank you.

Just as a comment, we were recently in India. In New Delhi, the government there declared overnight that all of their small transportation vehicles would go to CNG. It gave them 30 days, and they met that requirement. It's interesting that the technology is probably there and it's just a matter of moving towards that kind of decision.

Dr. Sam Shaw: Mr. Chair, there are so many OEMs manufacturing transit buses now that it really has been the low-hanging fruit for a lot of jurisdictions, particularly in places like L.A.

The Chair: Yes.

Go ahead, Mr. Poilievre.

Mr. Pierre Poilievre (Nepean—Carleton, CPC): Those were both great presentations.

Is home refuelling done anywhere?

Dr. Sam Shaw: As I indicated, there are a number of units in the U.S. that you can buy today for $4,000. You'll see that in my presentation.

Mr. Pierre Poilievre: People could go to their Home Depot, get and install a compression unit, and fill up their natural gas vehicle at home.

Dr. Sam Shaw: As I indicated, it will cost you $1,500 to install, but yes, you can get your Honda Civic and you can refuel it at home. That's being done throughout the U.S. The Honda Civic that is completely CNG is available only in the U.S., and yes, you can refuel it at home.

Mr. Pierre Poilievre: Do you have any numbers on how many are actually doing that?

Dr. Sam Shaw: No, I don't.

Mr. Pierre Poilievre: Would that allow someone to drive their vehicle for an average day of use?

Dr. Sam Shaw: An average commuter does less than 25,000 miles per year. They do the refill at night or, depending on their commuter distance, they may do it every second day or whatever.

Mr. Pierre Poilievre: You're saying the average commuter in his average day could survive on the nightly or morning fill-up.

Dr. Sam Shaw: A Honda Civic will go roughly 300 kilometres, so again, you have a dedicated vehicle.

Mr. Pierre Poilievre: What's stopping us from doing that in Canada?

Dr. Sam Shaw: Typically, where's the product? Yesterday's *Globe* talked about Chrysler coming out with an OEM towards the second quarter of this year. Product is one thing.

The second thing is in terms of conversions. Again, going back to Ms. Chow's comment, there are barriers because they can only put through so many vehicle conversions, and certainly what we're finding is that they're backlogged in Alberta.

Mr. Pierre Poilievre: Are you saying that there are restrictions right now on the importation of foreign-produced natural gas vehicles?

Dr. Sam Shaw: Absolutely. You can get a certificate for three years and bring over a Mercedes E350, but at the end of three years, you have to give it up. Who would spend that kind of money?

Mr. Pierre Poilievre: Is that a federal regulation?

Dr. Sam Shaw: That's federal.

Mr. Pierre Poilievre: That's something we need to look at, then.

Is there anything restricting a retailer, such as Home Depot, from selling the compression unit for a fill-up right now?

Dr. Sam Shaw: Again, it is because of the standards and regulations, because they're not approved in Canada yet. That's the difference, in terms of compliance, between Canada and the U.S.

Mr. Pierre Poilievre: Are those federal or provincial regulations?

Dr. Sam Shaw: They are federal.

Mr. Jim Facette: They set those standards under the Canadian Standards Association. It is the same with propane vehicles they bring into Canada. Jurisdiction over the adoption of those regulations is different not only federally but provincially as well. It's a bit of a mishmash of standards across Canada.

Mr. Pierre Poilievre: Thank you for that. I think what I need from both of you is a specific list of regulations you would like to see changed. We will then bring the departmental officials before this committee and ask them to comment on those proposed changes and raise any potential objections they may have. They can consider your proposals against their commentary and potentially recommend action.

Our hope is to make this report extremely specific and straightforward to implement. If you can put together a table listing everything you want changed, right down to the sections and lines, it would help us very much in making proposals in our report that will go to the minister.

The chair raised the issue of the differential between a fuelling station price for natural gas and a home heating rate. What could we do to eliminate that differential? Is there something in the regulations, for example, that makes that differential exist?

● (0955)

Mr. Jim Facette: Propane is not a regulated utility, by and large, so the market dictates the price of the propane.

Mr. Pierre Poilievre: Okay, then what is it for natural gas?

Dr. Sam Shaw: I think that would be something to take a look at. Again, in each province utilities for the consumer are orchestrated a little differently from the way they are for a station. I think you'd have to take a look at that. We'd certainly have to take a look at that.

Mr. Pierre Poilievre: I know you don't provide retail home heating fuel. You are a wholesaler. Would there be any reason an Enbridge or any other company that provides retail-level home heating fuel would need to differentiate between the home-filled vehicle price and the home heating rate?

Dr. Sam Shaw: I'm not sure why they would want to do that. Basically, you are looking at the volume of natural gas and how it is transferred, whether it's to your barbecue or your vehicle. There certainly isn't enough of a market right now on the home refuelling side.

The Chair: I have to stop you there.

Go ahead, Mr. Sullivan.

Mr. Mike Sullivan (York South—Weston, NDP): Thank you, Mr. Chair, and thank you to our guests.

I am the electricity guy here in terms of transportation. I view what you're suggesting as a kind of stopgap between gasoline and electricity, because eventually, that's what it's going to have to be. By 2050, the goal is to reduce our carbon dioxide emissions by 75%, not 20%, so we need to either stop travelling or use a different source of energy for our transportation needs. The only one currently that provides something like a 75% reduction is electricity.

In the meantime, there are some forms of transportation in this country that aren't easily convertible to electricity. One of them is in the marine industry, and the other is the rail locomotive. Is there any research or development on either propane or natural gas rail vehicles or large ocean-going or Great Lakes freighters?

Dr. Sam Shaw: In my presentation, I alluded to marine engines and rail operating on LNG right now.There are at least 26 marine vessels operating on LNG, and there are more to come. That's for two reasons: the environmental footprint and the cost. It is happening, and it's certainly happening in a lot of jurisdictions, particularly in the U.S.

In fact, a great example is a locomotive operating on LNG that is carrying coal for a coal-fired generation plant in the U.S., so there you go.

Mr. Mike Sullivan: Okay.

Mr. Facette, would you like to comment?

Mr. Jim Facette: I'll get back to you with a more complete answer on the marine and rail applications. I don't have any data in front of me at the moment.

Mr. Mike Sullivan: Are you in conversations with CN, CP, Via, and GO Transit, for example? Right now GO Transit is having to convert all its engines from tier 2 to tier 4; it's a significant expense and a significant hassle, and now that Electro Motive Diesel has fled the country, they have to go to the U.S. to get that done.

Would conversion to liquefied natural gas achieve the same ends?

Dr. Sam Shaw: I can't comment on GO and I'm under a confidentiality agreement with an individual company. I can only tell you that there are companies looking at LNG because the price is right and the environmental footprint is lower.

Mr. Mike Sullivan: How different is the environmental footprint?

Dr. Sam Shaw: In tractor-trailers, it's roughly a 30% decrease in carbon dioxide emissions.

The big thing, again, is really looking at NOx, SOx, mercury, and particulate, and the EPA is looking at the particulate, particularly in the north. Look at that dark cloud cover on the ice up there; that's the PM2.5. That soot is really creating havoc in terms of global emissions.

Mr. Mike Sullivan: An electricity generating plant in southern Ontario was stopped as a result of too much PM2.5 out of a natural gas plant. Compared to a tier 4 diesel engine, what's the output?

● (1000)

Dr. Sam Shaw: I don't have those numbers.

Mr. Mike Sullivan: Can you get them?

Dr. Sam Shaw: We might be able to.

Mr. Mike Sullivan: Okay. Have you looked into PM1.0 and PM0.1?

Dr. Sam Shaw: No, we haven't done that. We're trying to facilitate the conversation around natural gas, but in terms of looking at the specifics, we haven't been involved.

Mr. Mike Sullivan: In terms of safety, we talked about home fuel. We in Toronto are mindful of the safety of propane in particular. I witnessed the Mississauga train derailment first-hand and saw the cars going up in the air, and we had the disaster just north of my riding in central Toronto in 2008. A number of individuals don't believe the industry can regulate itself.

Fuelling by yourself seems to be something that's going to have some public backlash because of these kinds of things. There was a disaster in Trenton as well, I believe, when a propane storage facility blew up.

Mr. Jim Facette: Mr. Chair, any time you mishandle any fuel, you're going to have an accident. What happened at a facility in Toronto was probably the result of some things not being done as they should have been done. It should not paint the industry or the players that are there today, or the product itself. It was a most unfortunate and regrettable accident. Eight people died in 2003 from a natural gas explosion as well. If you mishandle fuel of any type, catastrophes could happen, and it's most unfortunate.

Propane is a safe product when handled properly according to regulations, and the codes and standards exist today to do just that. It's a natural process. You could argue that propane is a natural gas unto itself.

It's safe. I have three barbecue tanks in my backyard. I have natural gas running through my entire neighbourhood, and—God forbid—if something happened to one house on a natural gas line, it's going to happen to all the houses if something goes wrong, and that's regrettable.

It's a fuel. Any fuel, even CNG, compressed natural gas, is under pressure; if that pressure gets compromised, guess what's going to happen? Tragically, unfortunate incidents are going to happen. The key is to follow the code and make sure people are properly trained, be they mechanics or anybody else. People understand that it is safe when handled properly and that technology exists to ensure the safety's there. Enforcement is also a part of it.

The Chair: Thank you.

Mr. Adler is next.

Mr. Mark Adler (York Centre, CPC): Thank you, Mr. Chair, and thank you both witnesses for appearing here today.

In the first part of my questioning I want to follow up a little on what Mr. Sullivan was alluding to.

Before I represented my riding, there was the Sunrise Propane explosion. I know they suspect the cause was a leak in the hose transferring natural gas from one truck to another. Two people died as a result.

Could you comment on the regulations around such facilities? I know they are not necessarily federal regulations. A lot of them are provincial and municipal.

Mr. Jim Facette: In the province of today, every propane facility of any size must have something called a risk and safety management plan. There are two types: one for larger facilities that have more than 5,000 U.S. water gallons on site, and one for those that have less than 5,000 U.S. water gallons on site. The regulations through the TSSA and the Canadian Standards Association—the B149 code, the B51, and the B620, which handles transportation—exist today to prevent accidents from happening. The key is always, as in anything else, safety first, safety first. You have to develop a culture of safety. That is number one.

The standards are already there. People are already handling it safely. No more regulation is required. All the stuff is in place. Different parts of the country are looking at what Ontario and other jurisdictions are doing to ensure that safety. In the province of British Columbia, we have a safety authority that tells industry, “You must adhere to our safety act. That said, if you want to get from here to there differently, come talk to us”, so they take what one might describe as an alternative approach to the more traditional, very prescriptive one.

The regulations already exist and the oversight's there. No more is needed. Tragically, it is alleged that some things.... Maybe corners were cut. It's in a court of law, and one has to be careful right now. An incident happened, and unfortunately that always comes up when you talk about propane. It comes up all the time, so we face it first-hand.

● (1005)

Mr. Mark Adler: People are a bit reluctant around propane just because it's a gas and has explosive properties. It makes people a little jittery.

In your opinion, placing it in residential neighbourhoods is okay.

Mr. Jim Facette: It's done now. You can actually put together a propane grid for a residential community. You won't see the tank in your home. When you turn on your dryer, your fireplace, or your cooktop, it's all on propane. It's perfectly safe. It comes in as a liquid, like anything else, just like methane or natural gas.

Mr. Mark Adler: So the tank would be on your property—

Mr. Jim Facette: Not necessarily. It doesn't have to be. It could be off-site.

Mr. Mark Adler: Okay.

Mr. Jim Facette: Basically a suburban neighbourhood today has a grid that fuels the neighbourhood. You don't see the spaghetti piping of natural gas. Propane would be the same thing. The fuel tank would be off-site somewhere else. You wouldn't see it. There could be a network right under the homes to fuel everything that you want done in your house, including your hot water tank, furnace, fireplace, stove, dryer—even your lights.

Mr. Mark Adler: What would you say is the percentage of Canadian homes that are part of a grid at this point?

Mr. Jim Facette: It is minimal. There are few, actually.

The tradition in Canada has been that people have perceived propane as a means to an end, not an end unto itself, not as a solution. To be honest, we're trying to change that and position propane as a solution, because it can do everything for the consumer or business that you want it to do.

Mr. Mark Adler: Mr. Shaw, I was just down to Washington last week and met with a number of U.S. legislators. Both Democrats and Republicans were very disappointed with the decision the administration took over Keystone. Notwithstanding that, everyone down there is convinced that no matter who wins the election in November, Keystone will carry on.

Dr. Sam Shaw: They're already starting.

Mr. Mark Adler: Yes, they're already starting. They're just not doing the part in Nebraska.

You alluded to the President's blueprint for energy. Could you talk about natural gas as part of a North American energy solution?

Dr. Sam Shaw: The U.S. has a tremendous supply of natural gas. We're down in our natural gas exports to the U.S. because Canada has a big supply and the U.S. has a big supply. That's where we're looking at Kitimat in terms of exporting LNG to the Asian markets. The Prime Minister did a good job in China. Again, we see that as a tremendous marketplace.

In terms of a North American strategy for natural gas, we are probably at least a couple of years behind the U.S. on the transportation side, both for natural gas in heavy-duty vehicles as well as for light-duty vehicles. In terms of off-road, I would probably think that we are on a par with the U.S., whether it's oil rigs operating on natural gas or some of the other modes of transportation.

As for the potential marketplace, I have to bring in the global context, because Australia wants to be the number one exporter of LNG in the world and to supplant Qatar. In that particular opportunity, we may be remiss if we don't get on with looking at the export markets for natural gas. When we look at a North American strategy, we have to look at trade diversification as well.

The Chair: Thank you.

Go ahead, Mr. Nicholls.

Mr. Jamie Nicholls: Thank you, Mr. Chair.

I have questions about the different pricing systems used in jurisdictions around the world. From what I know, there are three types of contract pricing. One is market index. Another, such as what is used in Japan, is based on oil prices or the basket of imported crude. The third is the one used in Europe, which is based on energy carrier index contracts and is linked to the Brent price, the HFO, the LFO, the GO, the coal price, and the electricity price.

From my understanding, in Canada we use a market-indexed pricing system. Could you explain how, in Canada, the pricing system works? The reasoning behind this question is to understand which pricing system is more advantageous to the consumer and offers the lowest price to the consumer.

● (1010)

Mr. Jim Facette: The back half of your question is easier to deal with than the front half.

The best prices offered to the consumer are usually the market prices. Competition usually dictates the best price for the consumer at the end of the day. Where there are more players in the market, you see better prices. I know that's a simplification, but for propane that is certainly the case.

I will give you a case in point. In Montreal last summer, I believe, on a propane tank exchange program, it was about 10 bucks in a very competitive environment, as opposed to 20-something somewhere else.

As far as the pricing in Canada is concerned, a lot of the propane is pricing down at Brent. Traditionally, but not necessarily this year, the price of propane has tracked oil. What we're seeing this year, though, because propane is a commodity traded around the world, is that prices are set for it out in Sarnia, at the BP facility in Sarnia, and it goes from there.

There is an excess supply of the product right now, owing to the warm winter that many of us have experienced. You could probably get a pretty good price long term if you were to pursue that for your home or whatever else. That's essentially the way it works.

Some jurisdictions in this country—for example, New Brunswick and Nova Scotia—will regulate the price of propane based on how you offer it for sale and how many times you touch it. If you do certain things, you can add 5¢. If you do other things, you can add 10¢ to the price. However, they use Sarnia as a bench price and they go north of there depending on how it goes. It depends on where you are. In other jurisdictions across Canada—in fact, most of them—it's just a market price.

Dr. Sam Shaw: Let me just add one component to what my colleague has said: the transmission price. The tolls of the TransCanada are an issue.

Clearly, to take natural gas from western Canada to eastern Canada costs a lot in terms of the tolls that are in existence. This is an issue that is being dealt with by the NEB. Right now you can bring in natural gas from the Marcellus field in the U.S. more cheaply than we can supply it from the west to the east, so there may be a trade imbalance if we don't look at that issue.

In fact, going back to my learned colleague Mark, is the North American strategy to import natural gas from the U.S. because of exorbitant tolls on the TransCanada Pipeline? There's an issue for you.

Mr. Jamie Nicholls: Just to clarify, Mr. Shaw, does the market pricing offer the lowest price to the consumer?

Dr. Sam Shaw: Market index contracting does, yes.

Mr. Jamie Nicholls: Thank you.

In your opinion, how would the private sector react to a fuel tax policy that charged rates to consumers based on the level of pollution created by each fuel, with the more polluting fuels paying higher fuel taxes?

Dr. Sam Shaw: Is that a sophisticated way of saying a carbon tax?

Mr. Jamie Nicholls: No.

Dr. Sam Shaw: I'm not understanding what you're saying.

Mr. Jamie Nicholls: Based on particulates in nitrogen emissions —

Dr. Sam Shaw: You're not talking about carbon; you're just talking about NOx and SOx and mercury in particulate.

Mr. Jamie Nicholls: Yes.

Dr. Sam Shaw: There is a difference between Canada and the U. S. The electricity regulation that is supposedly coming down that was in the *Canada Gazette* talked about CO_2 emissions but did not talk about NOx, SOx, and mercury, whereas the EPA is actually looking at the NOx, SOx, and mercury in particulate, particularly in PM2.5. In either case, whether you're looking at propane or at natural gas, one of the things is that you'll get lower emissions in the utilization of propane and natural gas. This is a good thing in terms of environmental footprint, and it's certainly a bridge to the future.

● (1015)

The Chair: Thank you.

Go ahead, Mr. Poilievre.

Mr. Pierre Poilievre: Thanks very much.

I'm very intrigued by this home-fill option. You've raised the concern about the absence of refilling infrastructure stations. We know we have the infrastructure to bring natural gas to tens of millions of households in this country. There are some households that are still on oil heating and other forms, but in most urban environments natural gas is the principal space heating source.

You're saying it's only $1,200 to $1,500 to attach a compressor that can allow you to fill a vehicle at home.

Dr. Sam Shaw: It's $1,500 to install and currently $4,000 for the appliance itself, so that's $5,500 total.

Mr. Pierre Poilievre: I'm sorry; it's $5,500. That would be the cost at the home. Then there is the cost of converting a vehicle. I know you stated it earlier.

Can you repeat that again?

Dr. Sam Shaw: It can be between $8,000 and $12,000, depending on the tank you choose.

Mr. Pierre Poilievre: Then the barrier right now is that we're looking at about a $13,000 investment for someone to have the ability to fill up at home.

Dr. Sam Shaw: That's correct.

Mr. Pierre Poilievre: What is the price differential between a brand new vehicle operating on natural gas versus one that operates on traditional gasoline?

Dr. Sam Shaw: For the Honda Civic in the U.S. it's about a $3,000 difference.

Mr. Pierre Poilievre: Therefore, if you were to buy that Honda Civic, you would pay a $3,000 premium, plus $5,500 to install a fill-up capacity at home. You're looking at an $8,000 investment.

Earlier you said it would take about three years to pay off the investment of purchasing a natural gas vehicle, but I don't think you were including the cost of the home fill-up.

Dr. Sam Shaw: No.

Mr. Pierre Poilievre: If you did add that home fill-up, you're probably looking at maybe seven or eight years for it to pay for itself.

Dr. Sam Shaw: I think the economics would probably say between three and five years.

Mr. Pierre Poilievre: That's a very reasonable timeframe to expect recovery on investment.

This is probably a question for the retailers. I know a lot of the retailer natural gas companies offer what your business would refer to as something like a futures contract. They'll say, "We'll only charge you *x* cents per unit of energy for the next three years if you buy in at this rate, as opposed to paying the fluctuating cost."

Do you think it's possible for those kinds of contracts to be made very long term for the consumer, so they would have predictability about the cost of investing in a unit to fill up at home?

Dr. Sam Shaw: What would you consider long term?

Mr. Pierre Poilievre: Well, eight years, for example.

Dr. Sam Shaw: That's a possibility.

Mr. Pierre Poilievre: I'm a consumer sitting down with my calculator, and I'm saying, "If I'm going to spend $5,000 to have this system put in at my home and $3,000 more to buy the natural gas Civic as opposed to the gasoline one, then I'm going to want to know the price of natural gas over the long run so I can calculate the savings and determine my pay-back period." You'd want to be able to say to Enbridge, Direct Energy, whomever, that you want certainty from here until 2018 on the price.

Do you think that's something one could realistically ask of a natural gas retailer?

Dr. Sam Shaw: I would think so. In fact, the retailers are now starting to do long-term contracts with Encana.

We did a long-term deal with Northwest utilities in Oregon to make sure we closed in on a pricing that they could pass along to their customers. You're starting to see that throughout the U.S., given the natural gas prices.

Mr. Pierre Poilievre: You said that propane does not have the kind of infrastructure to reach households at the moment. Is that correct?

Mr. Jim Facette: It does not currently exist in many places in Canada. There are a couple of examples—British Columbia has a couple—but you don't see a lot of it. Typically, you see—

Mr. Pierre Poilievre: So the home-fill thing would not be an option right now?

Mr. Jim Facette: Well, sure it would. If you've got a propane tank at your house, you could fill from the existing infrastructure.

● (1020)

Mr. Pierre Poilievre: But you'd have to get a tank at your house and fill up that tank separately. It wouldn't be piped into your—

Mr. Jim Facette: Correct.

Mr. Pierre Poilievre: Okay, thank you.

The Chair: I have a question on propane.

It has been around a long time. I can remember our fleets being switched to propane in, I think, 1975. Has it been government policy or regulation that's held it back? I can't understand why we're almost at the same point we were 35 years ago.

Mr. Jim Facette: I guess history has a way of repeating itself.

It's many different things. Part of it is that the technology back then was not as good as it is today. That technology led some people away from propane. Once you lose a customer, it's hard to bring that customer back.

We're now at a point where technology has advanced so much that you literally can drive your fleet or pickup truck and not have to hit a switch anymore; it's all done. There's no loss of distance and that kind of stuff. It requires a re-education on the industry's part to bring it all back.

However, you're right, Mr. Chairman: the first propane-powered vehicle was introduced in the 1920s, so it's been around for quite some time.

The Chair: Do the manufacturers have a problem with the add-on kits that they would install? Think about that.

Go ahead, Mr. Toet.

Mr. Lawrence Toet (Elmwood—Transcona, CPC): Thank you, Mr. Chair, and my thanks to our guests today.

Actually, the chair led into what I wanted to talk about. You saw quite a few vehicles converted in the eighties and nineties. I had friends who had converted, and one of the challenges was a loss of power. What is the industry doing to work through that attitude shift? I come from the print industry. We went through a lot of innovation over the last 20 years, and it wasn't somebody else's responsibility to bring that innovation forward. It was my responsibility to bring that to the consumer.

What are the industries doing to bring forward what your industry is offering as an alternative fuel source that will benefit consumers?

Mr. Jim Facette: The first thing the industry did was form the Canadian Propane Association. We're a new industry association based in Ottawa, with offices across Canada. It's education; it really boils down to industry getting out there and telling individuals like yourselves about the options and technology available today.

The United States has a funded education research council called the Propane Education and Research Council, or PERC. There is a small federal levy on the propane sold in the U.S. It goes directly into research and development and advocates for the use of propane in various utilities and transportation modes. In fact, there's a conference going on right now down in Orlando looking at propane in transportation, especially in heavy vehicles, so industry is trying to get out there in forums like this to talk about the new technology. Governments can work with us in doing that.

Dr. Sam Shaw: I had said, with regard to education, that we put on summits here in Ottawa to make people aware of natural gas for transportation. We've led by example with our own fleet, particularly with our rig operations and our collaboration with OEMs. We have been working with the OEMs to come out with product. I'm pleased that yesterday's *Globe and Mail* talked about that.

Going back to the home refuelling, we're also working with our colleagues in the U.S. We put out an RFI to 42 companies in eight countries around the world, and we're trying to get a response to bringing the cost of home refuelling down. We also support a lot of research in universities across Canada, as well as in the U.S. From a company standpoint, what with community investment and working with other companies on natural gas, we're doing a lot.

Mr. Lawrence Toet: All right.

It just strikes me as a little ironic, Jim, that we're seeing a shrinkage of the infrastructure for propane at a time when we should be looking to expand that infrastructure. What's the propane industry doing to change that?

If there are regulation issues, have there been ongoing conversations with the different authorities to work through those processes? You talked about the European example of tanking, and I am familiar with it. That technology was actually developed in my riding. In Winnipeg there's a company that has developed a technology for dispensing those fuels and is selling it all over the world, except in Canada.

Has there been ongoing work? Have there been conversations with the regulating authorities? I would also encourage you, as Mr. Poilievre indicated, to give us those regulations that are of concern.

● (1025)

Mr. Jim Facette: We will go through the regulations and we'll give you our response right down to the paragraph as well as we possibly can.

The short answer to your question is yes. Those conversations have begun, and they probably only began in the last couple of years. They take time.

We'll acknowledge that part of our challenge in the industry is to address the image issue that your colleague over here referred to. It's not just about propane, but about fuels in general, and it's to have a comfort level in handling the fuel by yourself. There's a comfort level in going to a gasoline station and fuelling your own vehicle. We have to get to the point where there's a comfort level in fuelling your own vehicle with propane as well.

Yes, the conversations are going on, but it's going to take some time and a lot of hard work.

The Chair: I'll have to stop you there. We're going to do one last round, although I do see lights flashing. I'm not sure if anybody is aware of what that is, but I'm going to do a last....

A voice: It's your medication.

Voices: Oh, oh!

The Chair: I set myself up for that, didn't I?

I'm going to do a last round of three minutes each, and then we can deal with Ms. Chow's motion, subject to.... I see the lights just went out.

Mr. Sullivan, you have three minutes.

Mr. Mike Sullivan: I'm going to go back to what Mr. Poilievre was talking about earlier, and that's the price of natural gas.

It is at a historic low, or close to a historic low. It's difficult to convince consumers that we should convert our personal passenger vehicles to natural gas because the price is low when it can only go up. His question was on the payback time of eight years on the basis of.... Given the life of most vehicles, the historically low price of natural gas is not going to convince a lot of consumers. If we were looking at large fleet operations and large engine operations, that would perhaps be a better way to go for the natural gas industry.

Do you have a comment on how long we are going to have these low prices? What's the result?

Dr. Sam Shaw: Whatever I say, please take it as a caution if you're going to invest in or are an investor in Encana.

However, I will say that the supply side is very high. Globally we now have Germany, Poland, offshore Israel, and Australia all making major natural gas finds, so this is not a phenomenon in just North America. It is global in terms of the supply side of natural gas and in terms of keeping the price lower for the foreseeable future.

Mr. Mike Sullivan: The other question I have is on the ultimate cost of the fuel. Do we have figures on how much energy it requires to compress it?

In other words, we have natural gas that appears freely or is fracked to become available to consumers, and then we've got to squeeze it down into a much smaller piece of energy in order to be able to carry it around. How much does that cost in terms of the overall price of the fuel? Is that part of the calculation?

Dr. Sam Shaw: One of the graphs I'll show you in the handout shows the cost of the energy it takes for home refuelling and so forth, and the pricing it will give you. It will give you a graph for that.

Mr. Mike Sullivan: There was a peak in the use of public transit vehicles on natural gas, and it seems to have fallen off. Do you have an explanation for why the municipalities are giving up?

Dr. Sam Shaw: I think the technology was not appropriate. There's new technology; look at Flyer, with its natural gas transit buses. Calgary has made a commitment for 200 natural gas buses. The biggest difference between Canada and the U.S. is the Clean Air Act in the U.S. L.A., for example, got rid of its last diesel in January of 2011. It operates on CNG completely. Companies like Flyer are producing really great product because the technology of the engines has changed dramatically.

● (1030)

Mr. Mike Sullivan: We need a Clean Air Act in Canada, then.

Dr. Sam Shaw: You might say that; I can't.

The Chair: Thank you, and I'll put in a plug for Flyer, which is based in Winnipeg, Manitoba.

Monsieur Coderre is next.

Hon. Denis Coderre: It will all end in Montreal anyway, so it's okay. We'll talk there.

What's your relationship with the department? How do you manage? You spoke about the road map and you want to be part of it. From the natural gas perspective as seen through your company, how do you manage? How do you work with them?

As well, there are a lot of issues regarding R and D, so what's your relationship with the *conseil de recherches*? It's not just, “Take our resource.” How do you work with them?

As a final question, what's your relationship with the provinces and municipalities? How do you manage that?

Dr. Sam Shaw: With regard to how we manage it, we have an Encana Corporation person on the implementation committee of NRCan, we have one on the standards committee, and we have one on the education committee. We work with

[*Translation*]

Gaz Métro, in Quebec.

[*English*]

They are a great partner and ally in natural gas. We worked with the Province of B.C. to help them with a policy bringing in an incentive for natural gas vehicles. We're working with Alberta, and Alberta may be looking at an election soon. We do work with the provinces. We're working with Ontario.

The four big provinces are B.C., Alberta, Quebec, and Ontario right now. We are trying to do some work, at least on an educational basis, in New Brunskwick.

Mr. Jim Facette: Chair, thank you very much for the question.

Our relationship with the municipalities is actually pretty good in many areas across the country. We have an awful lot of people at the local level working with the municipalities on their various regulations and on implementation. Could it use some improvement and awareness? The answer is probably yes.

With the provinces, we're coming along quite nicely as a new association. We've met with 7 of the 10 jurisdictions. We've had established relationships in the industry going back on a technical level, and when you get beyond that, it's quite good. I was just in Quebec about two weeks ago meeting with the Ministry of Natural Resources there.

Our relationship with Natural Resources Canada, I would say, is in its infancy, to be honest. We need to do more work there. Our exclusion from the transportation road map may be a symbol of that. That said, it's also an opportunity.

Hon. Denis Coderre: Thank you.

The Chair: Please go ahead, Mr. Holder.

Mr. Ed Holder: Thank you. I have a question for perhaps Mr. Poilièvre, if we can squeeze it in.

Mr. Shaw, you talked about payback in response to Mr. Poilièvre and Mr. Sullivan. That cost presumed, did it not, that there was a home pumping station? If one didn't have that and went to the downtown natural gas station—

Dr. Sam Shaw: We have about six or seven in Calgary, and an equal number in Edmonton. Absolutely.

Mr. Ed Holder: There just aren't enough in London, Ontario.

To be clear, what was the conversion for the automobile itself?

Dr. Sam Shaw: It is between $8,000 and $12,000 right now. I can't give you the pricing of the new products that are coming out in the OEM, because they are just an estimate.

Mr. Ed Holder: A number of years versus...that was the three-year period we talked about earlier. Thank you.

Mr. Poilièvre—

Dr. Sam Shaw: I have a graph for you on that.

Mr. Pierre Poilievre: You said that there are now households in the United States that fill their tanks at home. What was the number of households you listed again?

Dr. Sam Shaw: I didn't. I don't have that figure for you.

Mr. Pierre Poilievre: Would you be able to check?

Dr. Sam Shaw: We might be able to. One of the associations I've asked to present to this committee is ANGA, America's Natural Gas Alliance. They may actually have that kind of data for you.

Mr. Pierre Poilievre: Are you aware of any safety incidences or hazards that have manifested themselves at home in refilling?

Dr. Sam Shaw: No. It's just like your barbecue. Your shut-off valves and so forth are of a very high standard. It's a plug-and-play concept. We also have that in terms of the stations that we operate as well.

Mr. Pierre Poilievre: How long do they take to fill?

Dr. Sam Shaw: It depends; you can have slow fill or fast fill. Most of our stations are fast fill, which means within three minutes. In slow fill, it may take you hours, depending on the size of your tank.

Mr. Pierre Poilievre: You could just plug it in, go have dinner, and then forget about it until later. Does it have an automatic shut-off so that you can leave it?

● (1035)

Dr. Sam Shaw: Yes.

Mr. Pierre Poilievre: Okay.

How do we deal with the chicken and egg problem? We can't get natural gas stations until we have an abundance of natural gas-powered cars, and we can't get natural gas-powered cars until we have stations. How does one overcome that self-defeating obstacle?

Dr. Sam Shaw: That's a good question. There are a couple responses.

In the U.S., at the state level, there are tax incentives for infrastructure to incent companies to go in. In Canada we've been looking at putting in our own stations to service our own fleets. There are a number of natural gas distribution outlets throughout the country, but the numbers have not been high. It will be that chicken-or-egg situation until there are more products and units operating on natural gas; then you'll get industry responding.

Mr. Pierre Poilievre: Does your price advantage right now include the excise tax? You said there was a 25% or 30% price advantage for natural gas on a....

Dr. Sam Shaw: On a GGE, a gasoline gallon equivalent, you'll see that it's just on the price of the gasoline versus the price of natural gas, not including the excise tax. The same thing goes for diesel. Again, you'll see some numbers in my handout.

Mr. Pierre Poilievre: Can either of you say that your fuel source is able to stand on its own and make market penetration without government subsidies or favouritism?

Mr. Jim Facette: Yes.

Dr. Sam Shaw: Yes.

The Chair: Great. Thank you.

I just have one question before we thank you.

You mentioned that California will have to go to all natural gas by 2015.

Dr. Sam Shaw: The executive order from the President was to have all of its government vehicles on alternative energy, including natural gas, by December 31, 2015. LA has gone completely natural gas for its transit authority, and the last diesel bus was taken out in January 2011.

The Chair: How long would it take Canada to get to that same position, if we were to say that's the direction we wanted to go? Is it three years, five years? How much time does the industry need?

Dr. Sam Shaw: I think you would get the same thing as you would get in India. Industry would respond with the OEMs to put product on the market. You just saw the announcement of GM decreasing the production of the Volt because it's not a good seller.

I will get back to California. They did a study. Because they have 651 coal-fired generation plants in the U.S., from well to wheels, an electric vehicle is more carbon intense because they are so intent on coal-fired generation, as opposed to Canada.

There's product in the marketplace. We could do that.

Mr. Jim Facette: Mr. Chairman, if the federal government decided to convert any or all of its 32,000 vehicles to propane, the supply of propane would not be a problem. There are conversion garages across the country that could handle it within two to three years without any problem.

The Chair: With that, I will thank both our guests today. It was very informative. I'll ask you to step away from the table and I'll ask committee members to stay, as we have a motion before us.

We'll take a one-minute recess and thank our guests. We'll suspend for one minute while we clear the table....

With that, I will thank both our guests today. It was very informative. I'll ask you to step away from the table and I'll ask committee members to stay, as we have a motion before us.

● (1035)

(Pause)

● (1040)

The Chair: I will advise the committee that as I was expecting either a motion or that the supplementary estimates and main estimates were coming forward, I invited the minister to appear. He has confirmed March 27 for us, but I know Ms. Chow has a motion for March 13.

The March 27, just for your information, would be past the date of the supplementary estimates, but we could discuss the main estimates, as they would be before the committee at the same time.

I will defer to Ms. Chow and give her the option of what she may or may not want to do.

Go ahead, Ms. Chow.

Ms. Olivia Chow: Mr. Chair, I am moving this motion again because we do have two more dates. If the minister is not available to come on March 8 or 13, we could certainly try for other dates.

I was going to amend my motion slightly to read "...that the Committee invite the Hon. Minister to appear on March 13, 2012, or any available time prior to the supplementary estimates (C) reporting to the House of Commons on March 26".

I say that because there are five areas, whether it's the elimination of the green infrastructure funds, the cut in the VIA Rail funds, or the transport safety program cut, where there are lots of questions on the supplementary estimates (C). I would like to ask the minister some questions. We missed the last round in supplementary estimates because he was not available and we had the interruption.

I know there are the main estimates, but we have until May to deal with them. We could certainly work with the minister for a time in April. I don't want to lump both the supplementary estimates and the main estimates together, because there are different issues involved in each. As it is, we are not spending that much time dealing with the transport budget.

I put this is front of you and ask for a vote.

The Chair: Is there any further comment?

Ms. Olivia Chow: I would like a recorded vote.

The Chair: Ms. Chow has suggested she would amend her motion. We've heard the discussion. We know she would be looking at alternate dates.

Before we vote, knowing or confirming that the minister will be here on the 27th, is it the wish of the committee that I uninvite him for the 27th?

Go ahead, Mr. Coderre.

[*Translation*]

Hon. Denis Coderre: I would like some information. We are tabling a motion to invite the minister when in fact he is already supposed to be coming. I am trying to understand. Is that the only date when the minister can come, or can he come before the supplementary estimates (C) are tabled, on March 26?

Otherwise this is redundant. We are making a resolution for the sake of making a resolution. The minister is available, he is coming on March 27. Could he come before? I do not understand how this motion is relevant.

[*English*]

The Chair: That was the question I had asked him too. Knowing the supplementary estimates (C) were coming up, I asked him if he could be available and to give me his date, and he returned with the 27th. He is willing to talk about the main estimates and the supplementary estimates (C). Main estimates are a general discussion about the budget.

[*Translation*]

Hon. Denis Coderre: Will he be here for the entire two-hour period? We do not want to have him for only one hour.

[*English*]

The Chair: I'll check on that. I know he and his staff are available for the two hours. I will verify whether he is committed for the full two hours.

Okay, we have a motion before us by Ms. Chow ,and she's asked for a recorded vote.

I call the question.

(Motion negatived: nays 6; yeas 5 [See *Minutes of Proceedings*])

Again I will ask the question of the committee: is it the will of the committee to have the minister appear on the 27th? If so, I do have to make some changes on committee invitations.

Go ahead, Ms. Chow.

● (1045)

Ms. Olivia Chow: Would that be for the supplementary estimates (C) or the main estimates or both?

The Chair: The main estimates cover the waterfront, or that has been the case in this committee.

Technically, because the supplementary estimates are passed, it would involve discussion on the main estimates, but as I've said before, I don't think this committee has ever restricted anybody from asking broad-based questions of the minister. I will make him aware that such questions may be a part of the discussion.

Ms. Olivia Chow: That means we would not have another round for the main estimates. March 27 will deal with the main budget.

The Chair: It will deal with the main budget, but it's up to the will of the committee if we want to invite him for another meeting. We can certainly decide that afterward.

Have a good morning. Thank you.

The meeting is adjourned.

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