



ISSN 1180-436X

**Legislative Assembly
of Ontario**

First Session, 41st Parliament

**Assemblée législative
de l'Ontario**

Première session, 41^e législature

**Official Report
of Debates
(Hansard)**

Wednesday 9 March 2016

**Journal
des débats
(Hansard)**

Mercredi 9 mars 2016

**Standing Committee on
the Legislative Assembly**

Natural Gas Superhighway
Act, 2016

**Comité permanent de
l'Assemblée législative**

Loi de 2016 sur l'autoroute
du gaz naturel

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Hansard Reporting and Interpretation Services
Room 500, West Wing, Legislative Building
111 Wellesley Street West, Queen's Park
Toronto ON M7A 1A2
Telephone 416-325-7400; fax 416-325-7430
Published by the Legislative Assembly of Ontario



Service du Journal des débats et d'interprétation
Salle 500, aile ouest, Édifice du Parlement
111, rue Wellesley ouest, Queen's Park
Toronto ON M7A 1A2
Téléphone, 416-325-7400; télécopieur, 416-325-7430
Publié par l'Assemblée législative de l'Ontario

LEGISLATIVE ASSEMBLY OF ONTARIO

ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

**STANDING COMMITTEE ON
THE LEGISLATIVE ASSEMBLY**

**COMITÉ PERMANENT DE
L'ASSEMBLÉE LÉGISLATIVE**

Wednesday 9 March 2016

Mercredi 9 mars 2016

The committee met at 1300 in committee room 1.

**NATURAL GAS SUPERHIGHWAY
ACT, 2016
LOI DE 2016 SUR L'AUTOROUTE
DU GAZ NATUREL**

Consideration of the following bill:

Bill 76, An Act to encourage the purchase of vehicles that use natural gas as a fuel / Projet de loi 76, Loi visant à encourager l'achat de véhicules utilisant du gaz naturel comme carburant.

The Chair (Mr. Monte McNaughton): Good afternoon, committee. Welcome to the Standing Committee on the Legislative Assembly. We're here today to discuss Bill 76, An Act to encourage the purchase of vehicles that use natural gas as a fuel.

US GAIN

The Chair (Mr. Monte McNaughton): Our first presenter is Marc-André Paquin.

Mr. Marc-André Paquin: Correct.

The Chair (Mr. Monte McNaughton): If you'd just introduce yourself. You have five minutes to present, then three minutes from each party, starting with the official opposition.

Mr. Marc-André Paquin: Certainly. We'll start right away with page 1. Good afternoon. Thank you for taking the time to be present here and to listen to what we have to say on this grand initiative, which is natural gas for vehicles. My name is Marc-André Paquin. I'm the Canadian business development manager for US Gain, operating the Gain Clean Fuel CNG public refuelling network.

What is Gain Clean Fuel? Gain Clean Fuel is, as I mentioned, a network managed and operated by US Gain, US Gain being a division of the grand family of US Venture, owned by the Schmidt family and located in Appleton, Wisconsin. We opened our Canadian entity in June 2015, and in the fall of 2015 we opened our first two Canadian public CNG refueling stations, in Mississauga and in Coteau-du-Lac, just west of Montreal.

Page 2: Like you can see there, this is our first station—opened in the fall of 2015, in Mississauga. The project was completed in partnership with CAT, Canadian American Transportation; with Emterra Environment-

al, which a few of you are probably already aware of; and obviously with the help of Ontario's own ComTech CNG. This will allow public CNG refueling at strategic locations. This specific strategic location—we'll see it on the next slide, if you want to switch the page—is a golden location, right at the intersection of Highway 401 and Dixie Road.

Page 4: As you can see, the CNG station is very similar to what we already know about your card-lock-type commercial stations. They allow for a fleet to refuel CNG 24/7, in a similar timeframe as what drivers are used to when it comes to diesel.

I mentioned that our Mississauga station was our first one in Canada, but it is also our flagship. It's as big as any other station that we have across our North American network. In addition to providing CNG for all interested fleets and all interested CNG vehicle owners, the station connects and fills, every night, almost 100 Emterra refuse trucks. What you see at the back of the picture that look like big blue containers are actually refuse trucks that are parked there every night and that are filled throughout the night, so that the driver leaves with a full CNG truck in the morning. The totality of the waste collection done by Emterra in the region of Peel is accomplished with CNG vehicles being fuelled at that station every day.

The next page will show you our Coteau-du-Lac station, which, for those of you that are aware of the province of Quebec, is just off the island of Montreal going west. Mississauga was our first station, but we also opened the second station a few months afterwards in the fall of 2015 as well. Those two stations really represent the foundation of our Canadian network, focusing on the most heavily used commercial trucking corridor in the country, the Quebec-Windsor corridor.

The next slide will show you the Gain Clean Fuel North American network. Our network spreads across North America, with over 50 stations. If we have over 50 stations, why do we only have two in Canada? The truth is that we've been behind as a country, as a province. We've been behind our southern neighbours when it comes to alternative energies for the commercial transport sector, specifically with the class 7 and 8 trucks. The province of Ontario currently has less than 10 stations, and the country as a whole has less than 50.

The next slide will show you that, conversely, the United States is currently hosting almost 1,000 public natural gas refuelling stations. California, the cap-and-

trade partner for Ontario and Quebec in the carbon market, hosts over 300 CNG and LNG sites by itself.

Why natural gas for vehicles and, really, why support Bill 76? The first factor and the most important factor is for the environment; specifically, to help meet and exceed our greenhouse gas emissions target. The second factor is from an economic standpoint: to improve the competitiveness of Ontario-based fleets throughout North America.

The next slide will show you Ontario's 2013 greenhouse gas emissions by sector. What do we notice by looking at this pie chart? The largest single sector of emissions is road transportation. Per vehicle, commercial road transport—diesel vehicles—produce more than any vehicles in the sector—

The Chair (Mr. Monte McNaughton): Thank you very much. We have to move to the official opposition for three minutes of questioning.

Mr. Robert Bailey: Sorry about that.

Mr. Marc-André Paquin: My apologies.

Mr. Robert Bailey: Thank you very much for coming in today to testify, Marc. I've only got three minutes and I know my colleague has got a question to ask. Based on your experience in other provinces and US states, which jurisdictions are leading in the natural gas transportation file?

Mr. Marc-André Paquin: Two provinces are currently the front-runners: the provinces of British Columbia and Quebec.

Mr. Steve Clark: In terms of fleets that come to you and want to switch to natural gas now that you've got the two facilities, can you give us some of the reasons why they switch?

Mr. Marc-André Paquin: Well, they switch, first of all, for the economics. If it's green, it's fantastic; it's part of their target and they want it to be. But that being said, they're not going to jeopardize their competitiveness in the market to make that switch. It makes sense because natural gas as a fuel is cheaper than diesel. You're going to see, in some of the slides that you'll look over later, the price difference is—even with a barrel at \$30, and as of this morning, the rack price in Toronto for the ultra-low-sulfur diesel was 55 cents a litre. If you add the taxes, it sums up to about 80 cents per litre.

Mr. Steve Clark: So what's the major barrier to them switching?

Mr. Marc-André Paquin: The engine, education, and a lot of these people have been doing business that way for a long time. There's the availability of the infrastructure, which we are working on. The engines are now up to par with what we expect them to be, and my friend at Cummins will be able to talk more in depth about that. Those would be the main two factors.

Mr. Robert Bailey: I have a question, so I'll just jump in if I've got a second. Do you think this legislation or something like it with amendments would go somewhat along to helping convince manufacturers and contractors, the owners of the fleets, to convert?

Mr. Marc-André Paquin: I can't say how much it's going to help. It's going to help tremendously. It affects and it helps the kickoff and acceleration of the CNG initiative for the fleets. If it doesn't make sense for them financially, even if it's green, even if it's in our best interest as a people, they're not going to make the move.

Mr. Steve Clark: It's obvious from your map that some of the states are head and shoulders ahead of where the province of Ontario is. Can you give us any idea how some of the states progressed this fast? You mentioned California, for example.

Mr. Marc-André Paquin: Correct. They progressed fast, first of all. They also started a few years ago. A lot of these states started to make that switch four or five years ago. If you go back four or five years ago—

The Chair (Mr. Monte McNaughton): Thank you very much. We have to move to Mr. Gates from the third party.

Mr. Wayne Gates: Hi. How are you?

Mr. Marc-André Paquin: Very good. Yourself?

Mr. Wayne Gates: Good. Do you believe that the specific financial incentives detailed in this bill are the appropriate measures to encourage the adoption of LNG vehicles? Is there another, alternative form of financial incentive that you believe would be better suited to the goal of encouraging more LNG vehicle use?

Mr. Marc-André Paquin: To motivate the use of natural gas for vehicles, I strongly believe that the effort must be targeted to those who will be using the product, so to the fleets, which is why I think that the bill is well directed. It touches on, probably, one of the main factors why the growth and acceleration of the market isn't where we think it should be.

Mr. Wayne Gates: Okay. This is a question that I found interesting when I was doing my research on the bill. If the price of natural gas were to increase dramatically, would the incentives detailed in this bill be enough to allow you to continue to purchase new LNG vehicles or have more go to it?

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Mr. Marc-André Paquin: If the price of natural gas were to go up all of a sudden—obviously this whole business case of switching to natural gas relies on the delta between the price of diesel versus natural gas. If the price of natural gas is up to par with the price of diesel, all things remaining the same, there is still a reason to do it, and that is specifically when it comes to the environmental advantages that we can perceive from using natural gas. So, yes.

Mr. Wayne Gates: Why don't you list some of those advantages?

Mr. Marc-André Paquin: From an environmental standpoint, looking at page 10, when you burn natural gas versus diesel, you can observe a 90% to 97% reduction in carbon monoxide emissions, 50% to 75% of non-methane hydrocarbon emissions, 25% of carbon dioxide emissions and 35% to 60% of nitrogen oxide emissions.

It's a reduction. Is it perfect? It is not perfect; it is not the perfect answer. What it is, however, is the best

technology we have today to optimize our transport of commercial goods in Ontario and Canada as a whole.

Mr. Wayne Gates: Okay. Thank you.

The Chair (Mr. Monte McNaughton): Great. We'll move to the government. Mr. Ballard.

Mr. Chris Ballard: Thank you. Just a technical question: I'm old enough now to remember at least two waves in Ontario where we had—

Mr. Marc-André Paquin: Yes, early 1990s.

Mr. Chris Ballard: —a conversion to propane and a conversion to natural gas. I remember looking at cars driving around with propane tanks, from my perspective, precariously close to the roadway as they drove along.

From a scientific perspective, because it's one thing to talk about price per litre or whatever, how much energy compared to, say, a litre of diesel versus a litre of compressed natural gas—what's the energy component of both or the dual—

Mr. Marc-André Paquin: Yes. So the BTUs produced by one litre of diesel is obviously not the same as what it is by one litre of natural gas. Diesel obviously contains a bit more energy than what natural gas does. So you do need to use a little bit more natural gas to achieve the same.

Mr. Chris Ballard: To achieve the same, yes, okay.

Mr. Marc-André Paquin: Yes, the same production of gigajoules.

Mr. Chris Ballard: Do you know how much more? This is just out of interest because I know that was one of the big things that people talked about in the past. I'm just interested if maybe new technology, new engines, have changed that a bit.

Mr. Marc-André Paquin: Correct. I don't have the specific numbers, nor do I want to give you the wrong answer. However, I can tell you that around 2:45 p.m. you'll have the precise answer to your question.

Mr. Chris Ballard: Okay. 2:45, good. If I've got just a second more, I know that obviously you're the business development manager for Canada, but I'm wondering if you can tell the committee members a bit more about the American experience with natural-gas-fueled vehicles.

Mr. Marc-André Paquin: Yes. The market has developed at an impressive speed over the last four or five years, motivated mainly by the price of diesel, motivated also by the initiative of the United States to reduce their greenhouse gas emissions, obviously led by the province of California, which is head and shoulders above all the other states.

So it has developed well, and it has developed because of a couple of reasons. The engines from Cummins, when the 12-litre engines became available, it really made sure that most of the fleets in the United States, whatever their business model is, had access to a natural gas engine. That would be the first one.

The second one would be to have the necessary infrastructure. Depending on the routes, wherever you want to go or at least in the major urban points, you will have availability and you will have stations that can fill your trucks.

The Chair (Mr. Monte McNaughton): Ms. Wong.

Ms. Soo Wong: I wanted to ask you, sir, with regard to your presentation—because your sector is relatively new in terms of conversion of our traditional gas vehicles. I come from a very diverse community. How are you working with the community to ensure to educate our community about this new type of fuel efficiency but also to educate our community about natural gas? Are you committed—

The Chair (Mr. Monte McNaughton): Ms. Wong, I'm sorry, we're out of time. Thank you very much—

Mr. Marc-André Paquin: Can I just answer the question?

The Chair (Mr. Monte McNaughton): No, we're out of time. I'm sorry.

I would like to remind committee to keep your questions short so the presenters have time to answer.

Thank you very much for presenting today.

Mr. Marc-André Paquin: Thank you very much, everyone. I appreciate it.

UNION GAS

The Chair (Mr. Monte McNaughton): I'd now like to call upon Union Gas and Dave Simpson.

Thank you, Mr. Simpson. If you would just identify yourself for the committee, you'll have five minutes for a presentation and three minutes from each party, starting with the third party.

Mr. David Simpson: Thank you very much. Good afternoon. My name is Dave Simpson. I'm the vice-president for sales and marketing and customer care with Union Gas. We serve 1.4 million natural gas customers across 400 communities in Ontario.

In our few minutes together today I want to convey two things: first, to voice our strong support for Bill 76, the Natural Gas Super Highway Act, which recognizes the important role natural gas can play as a fuel for medium and heavy-duty vehicles on Ontario's transport routes; and second, to say that while passing Bill 76 would be an important step, it's only one step. It's one step towards fully transforming Ontario's transportation sector, and it is time to think big and act decisively. That's where natural gas does in fact come in.

Highway 401 runs about 800 kilometres, from Windsor to Quebec's border. Every day, thousands of trucks carry their goods to and from manufacturers and consumers in Ontario and beyond. About 60% of Canada's road-travelled trade with the US occurs on this small corridor. Natural gas in a compressed or liquefied state is cleaner than diesel and it costs up to less than 50%.

If passed, Bill 76 will help facilitate switching to natural gas by allowing a higher weight limit on Ontario's highways to accommodate heavier fuel tanks without sacrificing payload. The bill's proposed tax credit will help incent a general shift towards vehicles powered by liquefied and compressed natural gas.

Major American trucking companies are already taking that first step. Companies such as UPS are incor-

porating liquefied natural gas, or LNG, into their long-haul fleets, as are regional trucking companies from Illinois to Florida. Name-brand manufacturers like Nike and Walmart are pressing for transportation of their goods by natural gas vehicles.

In Hamilton, we are supporting, as Union Gas, the local public transit provider as it grows its compressed natural gas bus fleet to 120 buses over the next six years. This move represents about \$40 million in savings to that community over the next 20 years, and Hamilton isn't alone. We see other applications for natural gas: as a rail fuel, as a marine fuel. In Europe, natural-gas-fuelled ships are already being built and operated in national waters, mainly for transport and commercial use. The world's largest cruise ship company, Carnival Cruise Lines, has announced it is building four new ships that will be 100% powered by liquefied natural gas while at sea, and they will use the LNG to generate electricity while they're stationed at the port.

By 2035, we can achieve annual emission reductions in the transportation sector as a whole that would be the same as removing more than 545,000 cars from Ontario's roads for a year, if we reach for aspirational targets. That would represent perhaps up to \$3 billion a year to our overall economy in savings.

We are excited about harnessing the tremendous potential of natural gas to lower emissions in the transport sector, which is the number one greenhouse-gas-emitting sector in this province, while delivering substantial cost savings that will help Ontario businesses support growth and competitiveness.

I'd like to thank you for your time in this afternoon, committee, and I look forward to your questions.

The Chair (Mr. Monte McNaughton): Great. Thank you very much. We'll begin with the third party. Mr. Gates.

Mr. Wayne Gates: How are you this afternoon?

Mr. David Simpson: I'm very well, thank you. How are you?

Mr. Wayne Gates: Good. Could you explain what the Dawn Hub is?

Mr. David Simpson: Absolutely. Dawn is a wonderful gift that Mother Nature gave us, located between Chatham and Sarnia. It's a rock formation about 2,000 feet below ground. I always explain it as a sponge. It's a rock that acts like a sponge in the Petrolia area. It was the first find of oil on this continent, and natural gas was close by.

We are able to store natural gas back into this rock, safely and effectively, so that we can manage our winter peaking demands by injecting gas into this rock in the summer and withdrawing it in the wintertime to supplement our higher consumption requirements. It's all underground, but it is the largest storage hub in Canada, and it is one of the most liquid trading points for natural gas on the entire continent.

Mr. Wayne Gates: Now, from that hub, you have a lot of distribution, as well, which goes right across Canada and North America. Is that accurate?

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Mr. David Simpson: Well, Union Gas is an Ontario provincial distribution company, our parent is Spectra Energy, which is a North American company, but Union Gas operates within the province of Ontario, basically serving all customers with the exception of Enbridge's service territories, which are the greater Toronto area, Ottawa, St. Catharines and a few others.

Mr. Wayne Gates: I apologize for that. The point was that the storage is the biggest in North America. I kind of messed up on that.

In order to talk about financial incentives outlined in this bill, to function, the federal government must be willing to make amendments to the Excise Tax Act. Do you have reason to believe the federal government will be willing to do this?

Mr. David Simpson: Well, I know this for sure: Businesses need assistance in getting this opportunity started, and Bill 76 brings to the forefront exactly that. It has opportunities to help motivate businesses in a tax way and in an incentive way, and to help them from a productive standpoint in making sure that the payload that they're carrying isn't sacrificed.

Mr. Wayne Gates: Okay, thank you. What benefit, if any, will your organization see as a result of the shift to more LNG vehicles being used?

Mr. David Simpson: This has got twofold benefits, as I opened with: one that's economic and one that's environmental. I think finding the balance between both of those is the exact objective of the province.

Mr. Wayne Gates: Thank you very much, I appreciate it.

The Chair (Mr. Monte McNaughton): Great timing. We'll move to the government. Ms. McMahan.

Ms. Eleanor McMahan: Nice to see you. Thank you for being here. I'm from Windsor originally, so I've had friends over the years that work at your company, based in Chatham, just down the road. I'm now the MPP for Burlington.

Mr. David Simpson: Very good.

Ms. Eleanor McMahan: A quick question for you: I used to work at Petro-Canada, so I know a little bit about the downstream and gasoline industries as a consequence. Whenever we talk about natural gas, infrastructure is always an important part of the conversation. Can you talk a little about the infrastructure requirements for us to really look at using natural gas more broadly and, secondly, how that would impact our infrastructure? Because wear and tear on our roads is an incredibly important conversation for both the province and municipalities.

Mr. David Simpson: Very good. Thanks for the question. I would just say that, in Ontario, we're blessed with natural gas infrastructure in a couple of ways. The first is what Mother Nature provided. Storage facilities in themselves are a natural infrastructure that would otherwise reduce the need for larger assets to bring gas in on a peak winter day without access to storage. So I think we're blessed on a natural basis.

On a physical basis, we have one of the largest systems in terms of a peak-day capacity in Ontario. I think we're number two or three in North America. The amount of gas that we can flow effectively down the 401 corridor rivals any other major natural-gas pipeline system in North America.

And we have access to very affordable and very close supply basins, as close as Pennsylvania and Ohio and as far as Alberta and BC. We are connected to them all. They all converge at the Dawn Hub, which creates liquidity for trading and low-pricing stability, and then physically flow west to east to serve markets, not just Union, but also within Enbridge and beyond our borders into Quebec and the US.

Ms. Eleanor McMahon: How do we supplement that infrastructure with infrastructure that's necessary for natural gas vehicles, for example?

Mr. David Simpson: It could result in some infrastructure improvements and expansion. We're used to that. We are in the midst right now, as Union Gas alone, of investing over \$2 billion over the next three years. It is a very significant construction period for us. What's driving that is the desire by the customers I just named—the GTA, Quebec and the US—to have access to Dawn and to have access to low-priced natural gas that's clean, affordable and available on our system. We're expanding our system from roughly a \$4.5-billion asset base to \$6 billion over the next three years.

The Chair (Mr. Monte McNaughton): Thank you very much. We'll move now to Mr. Bailey.

Mr. Robert Bailey: Thank you, Mr. Simpson, for being here today. I want to say from the outset that the Chair and I share the Dawn Hub in our two respective ridings, so I would encourage all of the committee members that are here today to take the time and contact Mr. Simpson and take the opportunity to go and see the hub. It's certainly a magnificent facility, what they're doing down there safety-wise and storage-wise.

To move on to a question: Ontario right now is consulting on a climate change plan, Dave, and given that natural gas transportation would reduce greenhouse gases, do you think that the measures included in this bill, and probably with amendments, could help Ontario, in some small way, incrementally meet its greenhouse gas initiatives?

Mr. David Simpson: Thank you for the question. And absolutely, anybody interested in seeing Dawn, our facility, I would be pleased to help facilitate that.

This bill will help us as a province do two things: It will help reduce greenhouse gas emissions. The transport sector is the largest contributor of greenhouse gases, and the long-haul heavy-duty portion of that sector is the most significant and fastest-growing sector. So it is the exact sweet spot where we should be going, with available technology today, to see results today.

So yes, I do think it will help on an environmental perspective. I also want our businesses to be able to compete. I want them to save money so that the transport of their product is cheaper to keep and grow the jobs that we have in Ontario.

Mr. Steve Clark: Chair, do we have more time for a question?

Interjection.

Mr. Steve Clark: Thanks, Mr. Simpson, for being here. With your experience looking at different jurisdictions in other provinces and other US states, I'd like to know what type of incentives those areas use to spur on natural gas transportation. Could you outline that for us?

Mr. David Simpson: Yes. I think we're on the right path with this bill, as I've alluded to. It helps, I'll say, the transport company in a couple of ways through a tax incentive, which is really critical to help motivate the conversion of their fleet. I mentioned Hamilton Street Railway as a leading example on compressed natural gas. Robert Transport out of Quebec is a very distinguished leader of liquefied natural gas for their long-haul truck fleet. I think those are two examples where motivation, especially in Quebec—that's already existed—would help. Any additional motivation in terms of conversion costs as well as the road allowance for weight—all of those coupled together, I'm convinced, will help motivate this to take off.

The Chair (Mr. Monte McNaughton): Mr. Bailey?

Mr. Robert Bailey: I've got time for one more. I'm going to ask you to get your crystal ball out, Mr. Simpson. Natural gas is quite reasonable right now. Can you give us an idea with what it might be in five, 10, 25 years? I think that's what some of the members are concerned about: "Okay, we move this way now; where are we going to be at down the road?"

Mr. David Simpson: Sure. There are ample studies that have been completed. We've gone through a transformation in North America with respect to natural gas. I don't think that's completely well understood. By that, I mean we have managed to become—rather than a net importer, we actually are self-sustaining in terms of the gas we have in North America. So the supply picture is much improved and it's to be that way for a long time—

The Chair (Mr. Monte McNaughton): Mr. Simpson, I really apologize. That's the time. Thank you very much for presenting.

Mr. David Simpson: Thank you very much for your questions.

THE RUSTBELT GROUP

The Chair (Mr. Monte McNaughton): I just wanted to call out to see if anyone from Canada Steamship Lines has arrived yet. If not, we'll call upon the Rustbelt Group: Christopher Milani. Thank you very much for coming forward early to present. If you would introduce yourself, and then you'll have five minutes for your presentation and three minutes of questioning from each party, starting with the government.

Mr. Chris Milani: Good afternoon, Chairman McNaughton and distinguished committee members. My name is Chris Milani. I appreciate the opportunity to speak before the committee to advocate for good public policy under proposed Bill 76, to support the expansion

of natural gas as a clean, safe, abundant and economically efficient alternative fuel for transportation in Ontario.

Today, I'm here to impress the need for policy incentives in Ontario under the provisions of Bill 76, and to support transportation fleets with a desire to convert from petroleum to natural gas fuel, by providing equalizing gross weight exemptions of 2,000 pounds and a reduction in the HST for natural-gas-powered trucks domiciled in Ontario.

As the co-founder and principal of a US-based business working closely with major transportation fleets in Canada and the US, I represent the Rustbelt Group. The Rustbelt Group is an Ann Arbor, Michigan-based consulting firm, and we have been contracted with FCA Transport, formerly known as Chrysler Transport, since 2014 as a force multiplier in the role of project management to convert the private FCA Transport fleet of 340 class-8 over-the-road tractors from diesel fuel to CNG power.

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With an annual CNG capacity of approximately 38 million gasoline equivalent litres, the largest commercial CNG fueling station in North America was successfully commissioned at the FCA Transport terminal in Detroit last fall. Another major station for FCA Transport will commence construction later this year in Windsor at the FCA Windsor Assembly Plant on Walker Drive.

The Rustbelt Group is also contracted with the Ford Motor Co., and we currently work with their government fleet team at their world headquarters in Dearborn, Michigan. Personally, I volunteer and serve on the executive board of directors for the Michigan Trucking Association in the capacity of vice-president. I also serve as a founding member of the new Clean Fuels Michigan coalition.

Prior to co-founding the Rustbelt Group with my business partner, Matt Sandstrom, I accumulated three decades of executive transportation experience. Early in my career, I ran business units for the OEM drivetrain manufacturers, like Eaton Corp., where I experienced an expat assignment as the general manager of the Canadian business unit, based here in Brampton. A bit later in my transportation career, I returned to Canada as vice-president of van operations for a publicly traded Woodstock, Ontario, company named Contrans. My responsibilities included the day-to-day operations of Laidlaw Carriers and Brookville Carriers.

Since 2004, my involvement with natural gas as an alternative fuel includes the ownership of a retail heavy-truck sales and service business that supported the natural gas vehicle markets in New York and New Jersey. This provided me the opportunity to work shoulder to shoulder with many major transit, refuse, and over-the-road fleets regarding the successful deployment of heavy-duty natural gas vehicles.

When my family and I moved back to Michigan in early 2009, I returned to trucking and assumed the position of operating the day-to-day business for a Michigan-based logistics company named UBCR.

Immediately, it was apparent that the fleet application was an excellent fit for natural gas vehicles.

With the assistance of terrific industry partners like the Michigan Clean Cities Coalition, Ryder Leasing, Cummins Westport and a local gas utility, we deployed 16 CNG heavy-duty trucks and built two truck-friendly, high-capacity public access fuelling stations near north-west Detroit and Grand Rapids, Michigan. This enabled our fleet to pull over 2.2 million miles annually.

With these solid public and private partnerships and securing \$2.1 million in US Department of Energy grant funding, we were able to orchestrate a natural gas initiative at our fleet that annually displaced 1.5 million litres of diesel, thereby reducing harmful greenhouse gases by 135,000 pounds per year while carving out significant operating costs by reducing our net fuel expense by 45%.

Most unique about the UBCR switch to CNG was that it was the first of its kind in North America in terms of an entire fleet conversion from diesel to compressed natural gas. Until FCA Transport went online with their CNG trucks and reached a steady state last fall, UBCR burned more natural gas in transportation than any other business in Michigan.

Our clients included soft drink producers and beer and wine wholesalers who fully embraced the greening of their supply chain.

The Chair (Mr. Monte McNaughton): Mr. Milani, I'm sorry. We have to move to the government for questions.

Mr. Chris Milani: Yes, I would be glad to field some questions.

The Chair (Mr. Monte McNaughton): We'll move to Mr. Ballard.

Mr. Chris Ballard: Thank you very much for coming in. It's some very good information, and very intriguing information, that I've been hearing.

You're probably aware that Ontario recently reformed its weight laws to consider the maximum weights that we could allow on our roads while doing the least amount of damage to the roads and bridges and other sorts of infrastructure. So there is some concern that providing that additional—I think you were talking about an exemption of up to 2,000 pounds. There is some concern that if we go above the regulations, it could result in increased road and bridge damage and could have negative effects on safety.

Can you address those concerns?

Mr. Chris Milani: Relative to the wear and tear on the roads, I think it would be absolutely nominal, if there is any measurable depreciation in the wear and tear on the roads.

In regard to safety, trucks that are on the road and being built today are the most safe vehicles, with collision avoidance systems and with disc brakes—before, they were always drum brakes—and, of course, with the ABS systems and a number of other safety features. The Chrysler trucks that they put on the road are by far the safest trucks that they've ever acquired. Their drivers felt very compelled to go out and promote that

element of driving the safe trucks on the US side when they were actually meeting with some of the Canadian drivers. They felt very comfortable with the safety element of these new trucks.

Mr. Chris Ballard: So that additional gross weight that would be needed to carry the additional fuel—your sense is that it would only have a nominal impact on wear and tear on roads and bridges?

Mr. Chris Milani: I think it would be very nominal. I'm not sure how you would actually measure that; I'm not the scientist on this subject. In Michigan, like Ontario, we do have some heavy GCWs, up to 160,000, and it's predicated based on the number of axles and the spacing of those axles.

Our roads in Michigan are not in very good shape, but it's not really from the effect of the B-trains and the super Bs and the Michigan specials that run along those routes. There's a lot of debate back and forth on bridge formulas and how they actually impact the wear and tear on infrastructure.

Ms. Eleanor McMahon: I'm nodding my head because I used to work at Petro-Canada and so B-trains are a conversation I know something about.

The Chair (Mr. Monte McNaughton): You have about 10 seconds, Ms. McMahon.

Ms. Eleanor McMahon: Can you tell me a little bit about the cost with the automotive industry? It's been a barrier to conversations because the engines are very expensive when it comes to personal vehicles.

Mr. Chris Milani: Yes, and that's where there's been—

The Chair (Mr. Monte McNaughton): Sorry. I really apologize. We have to move to Mr. Bailey from the official opposition.

Mr. Robert Bailey: I'll try to work it into my question. I'm going to ask you my two questions and maybe you can answer the cost on the motors, because that's something that I'd like to get fleshed out too.

One of my first questions: Is Ontario being left behind in the natural gas transportation sector because we haven't moved this way yet? We hear a lot about electric cars, electric transportation. Can heavy-duty trucks or ships or trains do the same job today running on electricity or do we really need to look at LNG?

Mr. Chris Milani: I'll address the latter question first. It really has to do with range and weight. You've got two detrimental effects there with electric vehicles when you're talking heavy duty. In terms of power, yes, you can probably generate the power necessary to pull, but you're not going to get very far without having to recharge, with today's technology.

The first question, I'm sorry—

Mr. Robert Bailey: The first one was, are we being left behind on the cost? But the other one, if you do have time to answer Ms. McMahon's question about the difference in—

Mr. Chris Milani: Yes, absolutely. There has been a lot of leadership shown by some of the other provinces, as well as some of the other states in the US: Pennsyl-

vania, Oklahoma, Texas, Ohio. There are exemptions for CNG and LNG vehicles in most of the Great Lakes states except Michigan. We're working on that right now, the 2,000-pound exemption that we're talking about, to equalize the difference between a diesel fuelling system and a natural gas on-board fueling system.

In regard to being behind, you'd really like to see these things driven by the marketplace. The marketplace, when it comes to shippers who are looking to green their supply chain and what may or may not happen down the road when it comes to trade credits for emissions and what that impact may have—with some of the larger fleets, what I've been experiencing is that they are working their strategy on a 10-year basis. They know they're going to be here 10 years. They know they're going to be hauling freight for the next 10 years. So they're taking a longer view and they're willing to make some of those investments. Where you see, really, the acceleration of the technology is in those states that have assisted with either infrastructure or on-board fuelling systems and the cost of that.

Mr. Robert Bailey: I've got time for one more question—

The Chair (Mr. Monte McNaughton): Twenty seconds.

Mr. Robert Bailey: Twenty seconds. Give us an answer to Ms. McMahon's question about the difference in the cost in the motors.

Mr. Chris Milani: Yes. The incremental expense is going to differ depending on whether it's a nine litre or a 12 litre. It's also going to differ on the manufacturer and it's going to differ on the size of the order as well. All of those things do come into play. Now, if you're looking at, say, just a general data book position when you're buying a truck or acquiring a truck, yes, it's going to probably be about a \$15,000 to \$25,000 upcharge for the engine.

The Chair (Mr. Monte McNaughton): Sorry; we have to move to Mr. Gates from the third party.

Mr. Wayne Gates: Good afternoon. How are you?

Mr. Chris Milani: I'm doing well, thanks.

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Mr. Wayne Gates: You caught my attention when you talked about Chrysler and what they're doing. Obviously, we're trying to look at whatever we can to stay competitive in the auto sector. A lot of important jobs are in Windsor.

Mr. Chris Milani: Absolutely.

Mr. Wayne Gates: I'm just wondering about the move to LNG: What do you think the savings to a company could be when you're looking at being competitive, trying to make sure that you can bid for more work? They're moving into Windsor, so it's got to be a successful program.

Mr. Chris Milani: Yes, absolutely. You want to boil it down to what it costs per mile to operate your fleet. If your cost today is, say, 60 cents a mile for diesel and 32 cents a mile for natural gas—which it was in my fleet when I was operating a fleet in Michigan—it's very

significant. So the delta is really the key factor, and the number of miles that you can generate on that equipment. If you're running a slip-seat operation, running a truck around the clock, running it for two 10-, 12- or 11-hour shifts, what have you, then your payback is going to be much faster.

The payback on the Chrysler initiative was less than a year. It was 0.9 on their ROI for the Detroit terminal, and they're looking at maybe a little bit more than that on Windsor. So, yes, in terms of jobs and in terms of competitiveness, that's where the rubber really hits the road. If I'm going to be able to compete with a guy who is going to be operating with diesel for my freight that I have today—because Rubbermaid, Unilever, P&G or even Chrysler, with some of their third-party carriers, is asking us to consider moving over to CNG—I really need to understand the cost component. Fuel makes up about 20%, 22% or 23%, depending on the application, of the operating expense of a fleet, so if you can cut that by 40%, you're knocking six or seven points off your operating expenses and it's very significant. It gets you in a very competitive position.

Mr. Wayne Gates: They should be able to have a good idea, because the plants are pretty stationary, so they're driving basically the same roads all the time in a lot of cases. Right?

Mr. Chris Milani: Well, you hit it right on the head in regard to why the application was a good fit: because they are in a nesting application. They come home to the terminal. So if you build that infrastructure at their terminals—which we did in Hamtramck in Detroit and we're now doing in Windsor—then they have a base of operations. They're always coming back there; they're getting their fuel there. They may offer that to their third-party carriers as well and maybe share in the revenue stream.

The Chair (Mr. Monte McNaughton): Thank you very much. That's all the time today. Thank you very much for presenting.

DR. PHILIP WALSH

The Chair (Mr. Monte McNaughton): We'd now like to call upon Dr. Walsh from the Ted Rogers School of Management.

Dr. Walsh, if you would introduce yourself. You have five minutes for your presentation, and we'll be starting with the official opposition.

Dr. Philip Walsh: Thank you, Mr. Chairman, for allowing me this opportunity to address the distinguished members of this committee. My name is Dr. Philip Walsh. I'm chair of the department of entrepreneurship and strategy at the Ted Rogers School of Management. However, I'm also here in my capacity as a researcher at Ryerson's Centre for Urban Energy and our Institute for the Study of Corporate Social Responsibility, as well being as a cross-appointee to our graduate program in Environmental Applied Science and Management.

My experience with the natural gas industry is now approaching 35 years in both the upstream and down-

stream sectors. I like to think of myself as a late-life academic. I sort of had a midlife crisis and started my PhD in research related to deregulation of industries, in particular the Ontario natural gas industry, when I was at the ripe old age of 40.

Today, I continue to practise—

Interruption.

The Chair (Mr. Monte McNaughton): I'm sorry. Could we have silence in the background, please?

Dr. Philip Walsh: I continue to practise as a registered professional geoscientist here in Ontario. For the purpose of disclosure, I have from time to time provided consulting services related to the natural gas industry to utilities, governments and energy companies.

However, I'm here today to present my thoughts on this bill currently before the assembly in my capacity as an academic. I would like to present as objective a position as I can and to address frankly any questions that this committee might have. My presentation today will be brief so that we'll have plenty of time for questions.

In essence, in the research that we've been doing—this committee is well aware of it—the transportation sector is the single largest emitter of greenhouse gas in Ontario, and it's the one sector in Ontario that has actually been growing in terms of greenhouse gas emissions. Part of the problem deals with things such as medium-duty and heavy-duty trucks that are running on diesel. They are a significant emitter even with improved diesel technologies, principally because we're seeing such growth in these vehicles on the road.

Ontario's clean electricity portfolio allows us the opportunity to essentially look at electric vehicles as the way to go in terms of passenger vehicles. However, we have to recognize that in transportation where we have longer distances and heavier loads, it's impractical for us to consider electric motors and battery storage at this time.

Natural gas is a cleaner and more practical choice for fleet vehicles and heavier-duty trucks than diesel, and provides positive returns on conversion costs when we compare those costs per tonne of avoided CO₂. Natural gas engines have, in the past, suffered from lower performance capabilities when compared to diesel, but technology advances in natural gas engines currently and in the future will close that gap.

Government has a role in promoting adoption of technologies when we're addressing the contribution to societal need—in this case, cleaner air—and we call that “technology push.” But ultimately, free market fundamentals will drive adoption once scale can be achieved—that's what we call “technology pull.” Government and regulatory support for complementary assets—for example, refilling stations—are also ways for us to promote adoption.

Bill 76 is a reasonable step forward—and I use the term “reasonable”—in helping incent the switch to a cleaner fuel for medium- to heavier-load vehicles.

The Chair (Mr. Monte McNaughton): Thank you very much. We'll move to Mr. Bailey.

Mr. Robert Bailey: Thank you very much for your presentation today. I've asked this of other people, and I'll get you on the record. Ontario is currently consulting on a climate change action plan. Could you explain, and maybe keep it as concise as you can, how this would help reduce greenhouse gases? Do you think it would be a positive step—this bill plus some amendments to it?

Dr. Philip Walsh: Yes.

Mr. Robert Bailey: Okay, that's short. Based on your knowledge, what does the future look like in Ontario for the price of natural gas going forward and the availability in North America?

Dr. Philip Walsh: Well, if I really knew, I think I'd be betting on the market. The reality is that we're looking at very low prices, oversupply—that kind of dynamic will ultimately lead to increased demand. How quickly that demand ramps up will dictate where prices are going to go. As a geoscientist, as a geologist, I can tell you that there are plenty of natural gas reserves around, in particular with the technology used in fracking and the discoveries in the production of shale gas.

Mr. Robert Bailey: I think the other presenter touched on it, but maybe, being that you're with the school of management—and maybe anything he didn't cover. What competitive advantages would natural gas transportation provide for both Ontario and Canada?

Dr. Philip Walsh: Well, I think, quite frankly, we'll always be behind jurisdictions that choose not to pursue a cleaner economy. In terms of how it might benefit us as Ontario, I think it's principally driven by benefits associated with the environment and cleaner air. In terms of making us more economically competitive, I would argue that it probably will not, but that may not be really what the problem is here. For us, it's about maintaining a cleaner environment.

Mr. Robert Bailey: Okay.

The Chair (Mr. Monte McNaughton): Another minute?

Mr. Robert Bailey: Well, you covered everything that I had here. The technologies available today with the motors—I noticed you touched on that in there, that they can actually meet and surpass what the diesels are doing.

Dr. Philip Walsh: Yes, interestingly enough, the developers, the innovators are folding back because they're not finding the market really that interested in those technologies. It's policies like this that are going to provide incentives that allow them to get that technology out there.

Mr. Robert Bailey: Okay, thank you.

The Chair (Mr. Monte McNaughton): Mr. Gates?

Mr. Wayne Gates: You made an opening comment that I think a lot of people have to hear: "The medium- and heavy-duty vehicles make up 3% of the vehicles on the road today, but contribute"—

Dr. Philip Walsh: I'm not sure I made that comment.

Mr. Wayne Gates: I got it here. No, it's not in your statement—but they make up 20% of the greenhouse gas emissions on the road. So I think that's why the bill becomes a real issue, to try and clean that up.

The second part of that: Do you have any concerns that it's a private member's bill?

Dr. Philip Walsh: No.

Mr. Wayne Gates: None?

Dr. Philip Walsh: None.

Mr. Wayne Gates: Okay. I'm a little surprised at that.

Given the possibility—and this is one that you did talk about—that the global movement against the practice of fracking could have serious impacts on the price of natural gas, has your organization or your studies considered alternate fuel sources other than natural gas to assist in a move away from traditional fuel sources?

Dr. Philip Walsh: Yes. Our research has looked heavily at things such as biodiesel fuels, and we're big on electric at our Centre for Urban Energy. But I can tell you that when we start talking about specifics in the short and medium term related to medium- and heavy-duty trucking, the conversion costs are most positive when it comes to that particular segment, with paybacks and significant reductions in carbon emissions.

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Mr. Wayne Gates: You might have touched on this a little bit, but is there a particular reason, that your studying shows, that you believe natural gas to be a better alternative than other options we're exploring?

Dr. Philip Walsh: Again, it's based on a couple of factors: One is economic and one is environmental. In both cases, the balance between the two is optimal given the conversion to natural gas. Obviously, the size of the vehicle has a lot to do with it, as I said earlier. When we're talking about light loads and urban transportation, nothing beats electric.

Mr. Wayne Gates: Just to follow up, do you have any concerns, on the cost of electricity—what's going on in the province of Ontario to make it competitive?

Dr. Philip Walsh: Yes, I do, and again it comes back to the answer to the other member's question, in that we're looking at a balance between economic and environmental benefits. If anybody could tell us what the true cost of carbon happens to be, I'd like to know that. But given the numbers we do have, the suggestion is that while we are looking at a higher-priced environment for electricity, given the approach the government has been taking, I think there are some smarter ways to have done things in terms of how we implement it. Quite frankly, again, it's a balance between the environment and the economy.

Mr. Wayne Gates: I don't know what your way of thinking is on a smarter way. I actually agree that there's a better way to take care of hydro, but that's only me—

Dr. Philip Walsh: Yes. That's a discussion for another time.

Mr. Wayne Gates: Another day.

The Chair (Mr. Monte McNaughton): We'll move to the government. Mr. Balkissoon.

Mr. Bas Balkissoon: You say technology is advanced and it's available, but—maybe I'm not aware of the industry—is there any real drive by the manufacturers of these big vehicles to adopt an all-natural-gas engine rather than go through conversions?

Dr. Philip Walsh: There are basically two ways that you see technology adopted: either because it has an economic benefit or you're sophisticated enough to recognize that a benefit may exist in the future. Companies like the trucking companies will have to balance both approaches, and, quite frankly, it would appear from the research that their approach is one of economics. Until that point in time when we can initiate something for the benefit of the climate to incent them to override their economic concerns, we won't see them adopting this technology—my point being that we really need incentives like this. It may not be the best. We maybe need more, but a lot of that can come about in terms of ancillary complementary assets that can be invested in by utilities, for example. Because they have a regulated rate base, they have an opportunity to convince the regulator that these investments are worthwhile. That will encourage more use of the technology. That will allow for scale. Scale will improve the economics, and trucking companies will become more open to the idea.

Mr. Bas Balkissoon: Can you give us a couple of jurisdictions that have actually adopted something similar in an incentive form, where the government is incentivizing the trucking industry to make these conversions in a huge way?

Dr. Philip Walsh: We've seen in history a coming and going of incentives related to this particular technology. As was indicated by the previous gentleman, you do see it as a dominant policy in some of the major gas-producing states in the United States. For obvious reasons, it's to their benefit to see natural gas used—

Mr. Bas Balkissoon: Can you give us an idea of how much there is—

Dr. Philip Walsh: No, I cannot do that—not off the top of my head.

The Chair (Mr. Monte McNaughton): Twenty seconds.

Mr. Bas Balkissoon: I'm fine.

The Chair (Mr. Monte McNaughton): Thank you for your presentation today.

FORTISBC ENERGY INC.

The Chair (Mr. Monte McNaughton): Committee members, our next presenter is Sarah Smith from FortisBC Energy Inc. She's joining us via teleconference.

Sarah, welcome. Please introduce yourself. You have five minutes for your presentation, and then there will be three minutes of questioning from each party, beginning with the third party.

Ms. Sarah Smith: Can everybody hear me?

The Chair (Mr. Monte McNaughton): Yes.

Ms. Sarah Smith: I had a slide deck. Has that been distributed?

The Chair (Mr. Monte McNaughton): It has been.

Ms. Sarah Smith: Very good.

One of the questions that was asked of the previous speaker was about other jurisdictions' experience with

natural gas transportation, so that is what I'm going to speak to today.

I am Sarah Smith. I am the director for natural gas transportation for FortisBC. I've been involved in natural gas transportation since 2000. My last posting here at FortisBC, before re-taking on the natural gas transportation portfolio, was in conservation and energy management, so I've been involved in environmental initiatives for a large part of my career.

Just a quick introduction to FortisBC: We are a regulated gas and electric utility. We have over one million energy customers. We serve 135 communities across BC. Interestingly, we deliver more energy than any other utility in this province.

Moving to slide 3: Why natural gas for transportation? The economics make sense. For our customers, they see an investment payback of two to seven years, based on the incremental cost of a natural gas vehicle, depending primarily on the price that they're paying for the incumbent fuel, which, in this case, is diesel.

Another reason: We provide them with financial incentives that are recovered from all ratepayers.

Reason number 3: There is reliable and proven engine technology available for original equipment manufacturers today.

Reason number 4: An opportunity to reduce not only a carbon footprint, but—something that's not on my slide—other air contaminants such as small particulate matter.

The primary reason is that natural gas is a domestic fuel here in British Columbia. We have five preserves of shale gas available and a strong provincial focus on using that resource.

Moving to slide 4: Our context is that we have legislated the GHG emissions reduction target. We have a strong focus on natural gas; we have a strong focus on energy efficiency and conservation; and we also have a strong focus on alternative energy development. All of that is enshrined in the BC Clean Energy Act of 2010.

Moving to slide 5: Flowing from the Clean Energy Act, the greenhouse gas reduction regulation was enacted in 2012. It provided for the expansion of the use of compressed natural gas, CNG, and liquefied natural gas in the transportation sector to displace higher-carbon fuels. There were a number of elements to the greenhouse gas reduction regulation, but it allows for approximately \$53 million in incentives for natural gas vehicles, \$3.2 million for marketing, training and education, \$6 million for customer facility upgrades and \$42 million for fueling infrastructure to support customer adoption of natural gas vehicles.

In 2013, our government issued a special direction which authorized FortisBC to invest up to \$400 million in the expansion of an existing LNG production facility that we've had in the rate base since 1971.

Moving to slide 6: Our role as a regulated utility is to support our customers from stem to stern. Really, we help them address the incremental costs of natural gas vehicles; we support them with the provision of natural

gas fuelling; and we offer an incentive program to offset the cost of any maintenance facility upgrades that they need to undertake.

Slide 7 really builds on that previous comment. Again, it's an end-to-end business model where we, as a distribution utility, are taking supply into our system, compressing it in the case of compressed natural gas, and supporting customers with stations and dispensing natural gas as a transportation fuel. The same holds true for LNG, which is a fuel offering that's more suited to heavy-duty vehicles than for medium-duty vehicles.

Slide 8—

The Chair (Mr. Monte McNaughton): Ms. Smith?

Ms. Sarah Smith: Yes?

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The Chair (Mr. Monte McNaughton): We're going to move to questioning now. Before we do, if you're on speaker phone, would you mind picking up the handset, if that's possible? It might be easier for the questions and answers.

Ms. Sarah Smith: Yes.

The Chair (Mr. Monte McNaughton): We're going to start with Mr. Gates from the third party.

Mr. Wayne Gates: Hi. How are you?

Ms. Sarah Smith: Very well, thank you.

Mr. Wayne Gates: That's good. I'm sure you've read the bill that's before us today. Do you believe that the financial incentives detailed in this bill are appropriate measures to encourage the adoption of LNG vehicles?

Ms. Sarah Smith: I do.

Mr. Wayne Gates: Compared to BC, what's the comparison as far as the dollars go?

Ms. Sarah Smith: Our total incentive budget was 52-odd million dollars. Our customers have been extremely receptive to that offering, to the point that we only have a few million dollars of our total allowed incentive amount remaining.

Mr. Wayne Gates: Okay. In order to have the financial incentives outlined in this bill function, the federal government must be willing to make amendments to the Excise Tax Act. Do you believe that the federal government would be willing to do that?

Ms. Sarah Smith: I can't speak to that, what the federal government would or would not be willing to do.

Mr. Wayne Gates: I guess that's fair. That's all I have.

The Chair (Mr. Monte McNaughton): Excellent. We'll move to Ms. Wong, from the government.

Ms. Soo Wong: Thank you very much for your presentation. I have two quick questions for you. What are the existing legislation weight restrictions for vehicles in British Columbia?

Ms. Sarah Smith: I'm sorry; I don't have that off the top of my head.

Ms. Soo Wong: Can you get back to the committee with that?

The second question is: Has the BC government tried to mitigate the damage that heavier natural gas vehicles can have on existing infrastructure?

Ms. Sarah Smith: I'm not aware that that is a particular concern here in British Columbia.

Ms. Soo Wong: I didn't catch that.

Ms. Sarah Smith: Sorry. I'm not aware that that is a particular concern of the government here in British Columbia.

Ms. Soo Wong: Why is that?

Ms. Sarah Smith: It just has not come up.

Ms. Soo Wong: Okay. Do I still have time, Mr. Chair?

The Chair (Mr. Monte McNaughton): Absolutely.

Ms. Soo Wong: So are you saying to me the government of British Columbia is not concerned with heavy vehicles driving on the highway? It'll have no impact on the infrastructure?

Ms. Sarah Smith: Sorry. What I said was that I'm not aware that the government is concerned or not about the weight of vehicles and infrastructure effects from that. I can't speak for the government.

Ms. Soo Wong: Okay. My last question to you is: Beyond the growth of the natural gas sector, what have been the impacts on expanding natural-gas-powered vehicles in other jurisdictions that you're aware of?

Ms. Sarah Smith: Quebec has a fairly strong natural gas transportation program that I'm aware of. Certainly, there are numerous jurisdictions in the United States that are really focused on the adoption of alternative fuels and natural gas.

The Chair (Mr. Monte McNaughton): Any other questions from the government? Mr. Balkissoon.

Mr. Bas Balkissoon: I just have a quick question. I'm reading your slides and it says, "Financial incentives from FortisBC," which is a private company. Were there any incentives from the government itself?

Ms. Sarah Smith: Incentives that the government has enabled through the Greenhouse Gas Reduction Regulation, which are offered by FortisBC, as a publicly regulated utility, and recovered from all ratepayers.

Mr. Bas Balkissoon: So really all your government did was enable the legislation to allow you to do what you're doing.

Ms. Sarah Smith: They enacted the legislation that enables us to do what we're doing.

Mr. Bas Balkissoon: Okay. I think you started out by saying BC has its own natural gas source.

Ms. Sarah Smith: Yes. We have extensive domestic natural gas resources.

Mr. Bas Balkissoon: Okay. Thank you very much.

The Chair (Mr. Monte McNaughton): Excellent. Thank you. We'll move to Mr. Bailey, from the opposition.

Mr. Robert Bailey: Thank you for presenting, Ms. Smith. I want to ask you a question. We currently are going through a climate change action plan here in Ontario. I wanted to know: Is it your opinion that by adopting this bill, and maybe some measures along with it, it would dramatically decrease greenhouse gases in Ontario?

Ms. Sarah Smith: Our activity has had a significant impact on greenhouse gas emissions from the transportation sector, which are difficult emissions to address, because if you want to have a thriving economy, you can't move goods less. So this program has enabled the displacement of almost 26 million diesel litres with natural gas in 2015 alone, and when you consider that there's a 20% to 30% reduction in emissions by using natural gas over diesel, that's a significant number.

Mr. Robert Bailey: Okay. Another question I have, Ms. Smith: Could you give us a quick synopsis of how British Columbia is building out its infrastructure and driving the adoption of natural gas vehicles, other than what's in your presentation? Is there anything else that they're doing currently?

Ms. Sarah Smith: I'm really quite focused on what we're doing. I know that we have a phase B tranche of incentives that we're going to be moving forward for consideration by the government in the near future. That hasn't been advanced as yet. We're advancing that in the next couple of weeks. That will be in roughly the same ballpark as our previous greenhouse gas reduction regulation program.

The Chair (Mr. Monte McNaughton): We'll move to Mr. MacLaren.

Mr. Jack MacLaren: Ms. Smith, you have mentioned that natural gas is cleaner than diesel or other transportation fuels. Is there anything that can be done to make it even cleaner in the future?

Ms. Sarah Smith: Well, we have a renewable natural gas program which is covered off on slide 11 of my presentation. Really, what we're doing when we produce renewable natural gas is, we produce methane from waste, and renewable natural gas is considered to be entirely carbon neutral at 100% RNG concentrations. So the short answer to that is yes, the adoption of RNG in transportation would lead to even further GHG emission reductions than those we're seeing using conventional natural gas.

The Chair (Mr. Monte McNaughton): Excellent. Thank you very much, Ms. Smith, for your presentation today.

CANADA STEAMSHIP LINES

The Chair (Mr. Monte McNaughton): We'll move now to Canada Steamship Lines. I believe they're here. If you would identify yourself for the committee. You have five minutes for a presentation and three minutes from each party for questioning, beginning with the government.

Mr. Yousef El Bagoury: My name is Yousef El Bagoury. I'm a superintendent at Canada Steamship Lines. CSL is a leading provider of dry bulk cargo. We're the world's largest owner and operator of self-unloading vehicles throughout the Great Lakes. We carry grain, iron ore, coal, salt, gypsum and other bulk cargos. Short sea shipping contributes immensely to the provin-

cial and federal governments. I've highlighted some of these contributions on the handout there.

Over the years, CSL has made a serious commitment to the environment. We have reduced our CO₂ by 20% from our 2008 levels, and with respect to natural gas we are the only bulk carrier company participating in the east coast and Great Lakes marine natural gas supply chain, which was commissioned by Transport Canada.

Regarding shipping, Canada has adopted this eco-zone—this is the low sulphur. For shipping, this means either a conversion to ultra-low sulphur heavy fuel, which is available in limited quantities; natural gas; scrubbers; or we have to evaluate running on burning diesel oil at a premium.

We've evaluated LNG for our newest ships, our Trillium Class. The main engines are retrofit capable. The main problem is the cost. To convert the main engine alone is about \$1 million; for an LNG tank it's \$4 million; for piping it's \$1,000 per foot. So we estimated a total cost close to \$10 million, which is approximately 25% of the capital expenditures to build the ship in the first place. Right now, that would make it prohibitive for Great Lakes shipping.

However, looking outside of Canada, the Norwegian government implemented a fund regarding NO_x emission reduction. The reimbursement was 80% of the additional cap ex required for retrofit or new build construction. Our European office designed and successfully applied to the NO_x fund for an LNG-powered vessel for the stone trade in Norway. We also believe that FortisBC replicated a similar model by giving Seaspans a similar percentage reimbursement for their ferries, which highlights the value of subsidies with regard to shipping and its implementation of LNG.

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To adopt LNG distribution will be critical. Short sea shipping revolves around a short import time. Typically, our ships are only in port for about eight hours. With the low density of natural gas, we would need more trucks to refuel our ships, and therefore CSL's interest and support in increasing the axle limits for LNG tanker trucks.

Beyond natural gas, we also look at methanol as a potential problem to the emissions-versus-cost debate. Methanol is made with natural gas, so our interest remains objective; it remains current. It's made with natural gas and CO₂, which is largely a waste product of industry. For the shipowner, we don't need cryogenics, the piping, the conversion—all the operating expenditures and capital expenditure reducers—but we still get the benefits of the sulphur-free fuel, no particulate matter and the emissions reductions that we're seeking to achieve through Bill 76.

Methanol also has the same low-energy density as natural gas, and so our support and our argument for increasing the axle limit for tanker trucks remains true. If you investigate shipping and LNG, there's a lot of chicken-or-the-egg arguments that come up, and I would encourage you strongly to forget that. It's chicken and egg, and it's everybody else. It has to be a partnership.

With shipping, we're talking millions of dollars. It's too much to just be adopted and absorbed by a single entity.

Without some sort of assistance, particularly in this downward market, the implementation of ECA zone limitations regarding fuel and sulphur is very difficult to achieve. We would also look, as I mentioned earlier regarding the Norwegian government, that we expand this to the federal level. If any federal assistance could also be considered, that would greatly assist the ship owner. Our neighbours to the south have also implemented similar contributions regarding their ships. MARAD provided a half-a-million-dollar grant to Interlake regarding a scrubber program, while the EPA has provided SO_x relief via the Great Lakes Steamship Repower Incentive Program, where American Great Lakers don't have to meet the ECA zone requirements until 2025.

The Chair (Mr. Monte McNaughton): Excellent. Thank you very much. Just to let everyone in the room know, there is a presentation going on upstairs. That was the noise. I noticed you kept looking up.

We'll move to the government and Ms. Wong for three minutes.

Ms. Soo Wong: I want to ask you some questions on your written submission to the committee. When you say, under the heading on page 2, "Why subsidies are needed," you identify that Bill 76 should be expanded to include emissions, blah, blah, blah. Can you elaborate a little bit more about these additional emissions?

Mr. Yousef El Bagoury: My understanding, if I look at Bill 76, is that the main goal is to improve air quality, to reduce sulphur, SO_x gases. This can be done via other means and not just natural gas. Methanol is sulphur-free as a fuel, and therefore we get the same SO_x reductions, we get similar NO_x reductions and we get similar particulate matter reductions. For the end user, we could adopt methanol, meet the main objective of Bill 76, but at a far reduced cost to the ship owner.

Ms. Soo Wong: Okay. Because we don't have time—I want to be mindful of the time—I need you to shorten your answers.

Mr. Yousef El Bagoury: Okay.

Ms. Soo Wong: You said that US EPA provided some concessions when you guys travel through the Great Lakes. What are some of the concessions that they've given you guys?

Mr. Yousef El Bagoury: Not to Canada; just to their own ships.

Ms. Soo Wong: So there's an equity issue, I'm hearing.

Mr. Yousef El Bagoury: It was agreed that, whereas in Canada, the ECA zone requirements have to be met by 2020, for the older steamships in the US, they don't have to meet the requirement until 2025.

Ms. Soo Wong: Okay. I'm going to let my colleague—

The Chair (Mr. Monte McNaughton): Mr. Anderson.

Mr. Granville Anderson: Thanks for your presentation and thanks for being here. Are there any jurisdictions

that you're aware of where methanol is being used to power steamships at the moment?

Mr. Yousef El Bagoury: In Europe.

Mr. Granville Anderson: In Europe?

Mr. Yousef El Bagoury: It has been successful in Europe, yes.

Mr. Granville Anderson: And you're saying it's more cost-sensitive?

Mr. Yousef El Bagoury: It's more that the capital investment and operating costs are less than for natural gas because we avoid cryogenics.

Mr. Granville Anderson: Okay. Thank you.

The Chair (Mr. Monte McNaughton): Any other questions from the government? We have a minute left. No?

We'll move to Mr. Bailey from the opposition.

Mr. Robert Bailey: Thank you for presenting today. I live on the Great Lakes at Sarnia, so I'm quite interested in this. It's interesting to see the jobs and how important this is to all of the provinces that go around the Great Lakes.

When Canada Steamship Lines looked at natural gas, was it mainly for economics or was it for environmental? Was it a combination of reasons? Maybe you can give us an answer there.

Mr. Yousef El Bagoury: Truthfully, in the beginning, the economics were the key driver. When we started looking at oil, it was a lot more expensive. As oil drops in value, the economics start to disappear, but we still have an environmental commitment.

Mr. Robert Bailey: Refueling stops: Could one or two refuelling facilities service all of the Great Lakes, to the St. Lawrence and to the north?

Mr. Yousef El Bagoury: I believe that maybe two liquefaction plants could, but distribution beyond that would have to be by truck. The liquefaction plants are too expensive to expect a liquefaction plant at every port.

Mr. Robert Bailey: I know we looked at one in Sarnia with Shell.

Mr. Yousef El Bagoury: Yes, with Shell.

Mr. Robert Bailey: That's fine. I'm being parochial there, a little bit.

Other than oil and diesel, are there any other fuels that ships can run on? Probably not economically but—

Mr. Yousef El Bagoury: Companies are bringing out fuels that are called ultra-low sulphur heavy fuels. They're basically a heavy fuel with 0.10% sulphur. The main problem there is that it's a limited quantity and it can't be blended.

Mr. Robert Bailey: Do you want to ask something? Do we have time?

The Chair (Mr. Monte McNaughton): Yes.

Mr. Jack MacLaren: I understand that you're a Canadian company, but when you visit foreign countries, are they looking at natural gas as a fuel for ships? Does Ontario or Canada have an advantage when it comes to natural gas shipping?

Mr. Yousef El Bagoury: I wouldn't say that, right now, they have an advantage. We have natural gas in

Canada. That certainly puts us at an advantage in the sense that we're not importing it, but we're not as developed as close to what we see in Europe.

Mr. Jack MacLaren: Okay. Thank you.

The Chair (Mr. Monte McNaughton): We'll move to Mr. Gates.

Mr. Wayne Gates: Thank you very much. How are you?

Mr. Yousef El Bagoury: I'm good. How are you?

Mr. Wayne Gates: Good.

I think the one thing that I want get on the record that I think a lot of people don't realize with the marine industry in the Great Lakes is the number of jobs—some \$1 billion of revenue, the taxes that they're paid. Something that I like is that a lot of the workers there are unionized, and they're being paid a fair wage with some good benefits. I thought I'd let you know, to take that back to your company.

Mr. Yousef El Bagoury: I appreciate that.

Mr. Wayne Gates: It's always nice when you're paying people fairly.

The one bulletin here that says that "there should be rewards and/or incentivized program for companies moving to cleaner fuels, not just natural gas."

You did touch on that a bit. Can you touch on it again? Then I'll ask you a follow-up question.

Mr. Yousef El Bagoury: Okay. When we look at CSL and our fleet, like I mentioned before, we reduced our CO₂ by 20% since 2008. The benefits there are not just that it's a fuel reduction, but it's an environmental responsibility. We're always looking for what else we can do and what's next.

In terms of rewards and incentives: We've done that off our own back. But to make the leap to natural gas, it has got to be more incentivized, as opposed to being forced upon us.

Mr. Wayne Gates: Okay. I guess my question to you is, would you not make it up by changing them over, or is it just too big of a hole?

Mr. Yousef El Bagoury: The initial investment is just too big and, with the oil prices right now, we don't believe LNG to be competitive.

Mr. Wayne Gates: Okay. I'm trying to do this quick because three minutes go relatively fast.

The Chair (Mr. Monte McNaughton): You have a minute.

Mr. Wayne Gates: In order for the financial incentives outlined in this bill to function, the federal government must be willing to make amendments to Excise Tax Act.

Do you have reason to believe the federal government would be willing to do this?

Mr. Yousef El Bagoury: Right now—

Interjection: Yes.

Mr. Yousef El Bagoury: I'm hoping "yes," but I'm not involved at a high level of policy within CSL.

Mr. Wayne Gates: Neither am I; that's why I asked you.

Mr. Yousef El Bagoury: Right now, we have their interest via the Transport Canada study, and we hope that the results from that will help encourage the federal government to help shipowners.

Mr. Wayne Gates: I hope they do, too, but my last question—I'm going to get this in quickly. I'm a firm believer that we should be looking at the Great Lakes because of the economic benefits that we have to extending our shipping season.

There is climate change out there—people can agree to disagree to that—but also the water is not freezing as early, and I think there are some more opportunities to extend the shipping season as well. Do you have any thoughts on that?

Mr. Yousef El Bagoury: Yes. In particular, one of the ships I'm responsible for: We bring salt from the Magdalen Islands to Montreal. In the wintertime, that's incredibly valuable. This is the salt that goes on the roads and keeps critical services open—

The Chair (Mr. Monte McNaughton): Thank you. I'm sorry to cut you off.

Mr. Yousef El Bagoury: No problem.

The Chair (Mr. Monte McNaughton): Thank you very much for your presentation today.

EMTERRA GROUP

The Chair (Mr. Monte McNaughton): We'll now call upon Emterra Group: Paulina Leung. If Paulina could introduce herself for the committee, you'll have five minutes for your presentation and questions will begin with the official opposition.

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Ms. Paulina Leung: Hi. Good afternoon. Thank you for having me here. My name is Paulina Leung, VP of corporate strategy and business development for Emterra Environmental. I will be speaking very fast.

I'm here to speak to you today from the perspective of a private fleet owner and operator, specifically in the waste management sector. Very quickly, our company's vision is to be the most highly regarded waste-to-resource company in Canada, serving municipalities and the industrial, commercial and institutional sectors. So what do we do? Across Canada and the state of Michigan, we provide recycling and waste diversion services to municipalities, servicing over 10% of the Canadian population—high numbers, to show that we do have credibility.

In business for 40 years, we process and market over half a million tonnes of recyclables a year. We have over 1,000 employees, 40% of whom are ethnic minorities, and 35% of our senior management team are women. We have over 550 trucks; 35% now use compressed natural gas.

We support this bill because it's the kind of catalyst that our province has been sorely needing. With more than 40,000 medium- and heavy-duty natural gas trucks in North America, this technology is proven, it's reliable and we can speak to that from actual experience.

The cost of transportation affects taxpayers in terms of nearly everything that we buy in goods and services. Natural gas is cheaper, cleaner and is the right way for us to grow our business and our economy in Ontario.

US transportation has long recognized this. We all know about their natural gas highway. We know about all of the stations that are being built every single day and the thousands of fleets that are continuously being launched. They are building connections on this highway to important regions and transportation corridors. We cannot afford to be excluded from that, and we need to develop our own trucks and our own stations.

Recognizing our larger role in this national context, Emterra has built a network of four compressed natural gas fuelling stations that are open to the public. These are located in Victoria and Chilliwack, BC, in Winnipeg, and, of course, our newest one in Mississauga, which is actually right by Toronto Pearson on the 401. In Ontario, we now have over 100 CNG trucks and we have the largest public CNG fuelling station with our partners, CAT, Canadian American Transport, based in Quebec, and also Gain Clean Fuel; Marc-André is here.

So why did we make this investment years ago? We made the first investment four years ago because our company's DNA is built on entrepreneurialism, industry leadership and taking risks. Our CEO had this vision. Even though we are in the waste management sector, we wanted to do more than that because we know business needs to move forward in non-uniform and non-traditional ways.

When other companies were investing in landfills, our company was investing in recycling facilities or in organics facilities. When other companies were talking about how difficult it's going to be to reach the new air emissions standards, we were investing in compressed natural gas trucks. We chose to do so in the most difficult parts of Canada. No offence to anybody from Manitoba, but Winnipeg is darned difficult to launch a compressed natural gas fleet in, especially in that Arctic climate. We did that. We fell. We fell a lot, and we learned and we have our partners—some of them in this room today, including Cummins Westport—who helped us get through that.

Over the last three years, we have worked closely with equipment manufacturers, body manufacturers, Cummins Westport and the largest truck dealerships in Canada. The Cummins Westport ISL G engine, which is the bread and butter of the natural gas transportation industry in terms of equipment, is completely viable, ready for cold-weather climates and ready for mass deployment. We have proven that.

We took these investments and we made these risks as a private, for-profit company because we believe that in order for us to be more competitive, to differentiate our services and create more value for our customers, we have to do so and we have to do so with a smaller environmental impact yet still make money.

Last year we invested \$50 million in our fleet of 100 natural gas vehicles very close to here, in Mississauga; a

fuelling station with our partners Gain and CAT; and also in a compressed-natural-gas-compliant maintenance shop; and, soon to come, a truck-washing bay.

Why did we do it? Quickly—triple bottom line—from an environmental perspective, I don't need to talk about that. There are lots of experts here. From an economic perspective, fuel cost is a major consideration, obviously. We have experience in terms of fuel costs in three provinces and, based on our experience and looking at our trends, the last three years have been very stable. But stable is not enough, of course. I'll be talking more about that later.

Technology: As I mentioned, the ISL G natural gas engine from Cummins Westport is very reliable. We've proven that—

The Chair (Mr. Monte McNaughton): Sorry; we have to move to questions now, beginning with the official opposition.

Mr. Robert Bailey: Thank you very much for your presentation. Maybe you can finish it through some of the answers that you give.

Based on your experience in Peel and other regions of Ontario, how do municipally elected officials react to the idea of natural gas or LNG? Is there any fear of the unknown, or are they accepting? And two, in the transition from diesel to natural gas vehicles, what has been your greatest growing pain?

Ms. Paulina Leung: In terms of municipal acceptance and understanding, it's really region-specific and person-specific. I would say in British Columbia, because of what Fortis has done, there's more global recognition and understanding. In places like Manitoba it's about hydro; there's cheap hydro there. They've got more of a focus there.

Here it's different. In Peel, their commissioner, their CEO, their chair, was very forward-thinking. Other places, it comes down to cost. They will only reward a contract to a contractor if it's the lowest price. Municipalities are under that tax crunch. If we cannot offer natural gas trucks at the same or lower price as using diesel, nobody is going to choose us.

The Chair (Mr. Monte McNaughton): Mr. MacLaren?

Mr. Jack MacLaren: Can you speak at all to the reliability of natural gas engines compared to diesel engines?

Ms. Paulina Leung: We have used natural gas trucks for the last three years. The first couple of years in Winnipeg were hard. I'm not going to lie about it; we had 50% downtime. But we've gotten over that. When we take a look at our newest fleet in Peel—100 trucks—we have less than 5% downtime a day. In our industry, you want to have 10%—that's what you're achieving—and we're well below that.

The Chair (Mr. Monte McNaughton): Any other questions from the opposition?

Mr. Robert Bailey: Not from me. Lisa?

Ms. Lisa M. Thompson: Not from me.

The Chair (Mr. Monte McNaughton): Okay. We'll move to Mr. Gates.

Mr. Wayne Gates: Hi, how are you?

Ms. Paulina Leung: Good.

Mr. Wayne Gates: I'm not going to talk as quick as you. Is that okay? I'm going to take my time on this. I know it goes quick.

Your company seems to be committed to diverting as much waste as possible from landfills. Do you want to elaborate on that a bit? I think that's good.

Ms. Paulina Leung: Well, first of all, we take a different perspective. We see waste materials as a commodity. These are recoverable, secondary commodities and there is a lot of useful life to them. Our industry now talks about the circular economy. The circular economy is: How do we continuously renew commodities, reuse them, recycle them, use them for the manufacture of new products and then for consumers to buy? Ideally, you want to do that in the same place so that you're creating a closed-loop economy as close as possible to home.

Mr. Wayne Gates: The other thing that I liked is that you talked about the number of employees you have. You have 1,000 employees?

Ms. Paulina Leung: Yes.

Mr. Wayne Gates: And 550 trucks?

Ms. Paulina Leung: Yes.

Mr. Wayne Gates: Out of that 550, how many are already LNG?

Ms. Paulina Leung: They're all CNG. Actually, that's one thing I would like to point out. This bill speaks very specifically to LNG. CNG is going to be the quickest way for the transportation sector in Ontario to move forward. Our investments in terms of fuelling infrastructure and in terms of the cost of the equipment is much lower than with LNG. If you want the biggest bang for your buck in the near term and to move in the right direction from an environmental and economic perspective, please do not forget about compressed natural gas trucks. Include that in your discussion; include that in your weight limit expansions.

Mr. Wayne Gates: Very good. The other question that I have: In order for the financial incentives outlined in this bill to function, the federal government must be willing to make amendments to the Excise Tax Act. Do you have reason to believe that the federal government would be willing to do this or be interested in doing this?

Ms. Paulina Leung: Based on my limited knowledge of the federal government, and from my perspective, I do believe that they will make the changes.

Mr. Wayne Gates: Okay. Thank you very much.

Ms. Paulina Leung: Thank you.

The Chair (Mr. Monte McNaughton): We'll move to the government: Mr. Ballard.

Mr. Chris Ballard: Thank you for your presentation and all that we've heard today. It's really quite interesting and quite exciting.

I just was wondering, the vehicles that are compressed natural gas—that's what you're running on: Was there a provincial government incentive to move in that direction? Was there a program in Manitoba, for example, to

help you move in that direction, or was this a corporate decision to do this and you paid for it yourself?

Ms. Paulina Leung: Thank you. That is a great question, because I didn't get to get to it.

The answer is different depending on the province. In Manitoba, we did that because we felt that without any help from the lower cost of fuel, from the cost of the equipment, from our partners, we could achieve a reasonable payback. So the answer is no. However, within six months of us implementing it, the Ministry of Finance there implemented a road tax.

It is now 10 cents per cubic metre. A cubic metre is very similar to a diesel litre equivalent. Right now, we are taxed on every single cubic metre of natural gas we consume, at a level so high that we are still the only natural gas fleet in the entire province. We have a fuelling infrastructure for other fleets, but nobody is buying because they've stopped it with that road tax.

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In British Columbia, we are beneficiaries of the FortisBC natural gas program. Because of that program, you might say, "Paulina, you guys would have invested there anyway for natural gas." The answer is "yes," but we would have done so on smaller scales in smaller markets, not Vancouver. We made these investments in communities like Chilliwack and Victoria, so we're expanding this technology and bringing the environmental and economic benefits in small communities, where we wouldn't necessarily do so if there were no financial incentives.

It's easy to make the case for an investment for a large station and for a big fleet. When you're talking about smaller fleets, it's a lot harder, and, with the incentive, we could do so in BC.

Mr. Chris Ballard: Good. Thank you.

The Chair (Mr. Monte McNaughton): Ms. Wong?

Ms. Soo Wong: There's time, Mr. Chair? Okay.

I asked one of the previous witnesses—I want to hear about the Manitoba government. In terms of the weight issue associated with the use of natural gas: What kind of weight limit issues are there in the province of Manitoba?

Ms. Paulina Leung: We have not come across that because our trucks carry a very specific amount of material—recyclables, garbage. Weight has not been an issue for our industry and our business.

But for the bill being considered, it only speaks to LNG vehicles. Again, I ask that you include CNG vehicles for any weight restriction lifting.

Ms. Soo Wong: Okay. In terms of other companies in Manitoba, are there any other companies that you know of who are going to be converting to natural gas?

Ms. Paulina Leung: No.

Ms. Soo Wong: No?

Ms. Paulina Leung: I'm trying to do the same presentation to say that we have fuelling infrastructure in the heart of the province in Winnipeg. But fleets are not willing to do that because there is a 10-cents-per-cubic-metre road tax, and there is no end to that.

Ms. Soo Wong: So with regard to the current conversation federally and provincially about clean energy and climate change, the sector is not moving forward about this issue?

Ms. Paulina Leung: In Manitoba, I would say no, and it's unfortunate because, compared to the rest of Canada, the transportation sector is, I think, 40% of the GDP. Because of that, the contribution of the transportation sector for greenhouse gases is 40% versus 30% for the rest of Canada. It's really a shame. It's a lost opportunity.

Ms. Soo Wong: Thank you.

The Chair (Mr. Monte McNaughton): Thank you very much for your presentation today. We really appreciate it.

CUMMINS WESTPORT INC.

The Chair (Mr. Monte McNaughton): We'll call now our last presenter of the day, Cummins Westport Inc. and Charlie Ker.

Mr. Ker, if you would introduce yourself. You have five minutes for your presentation and then three minutes from each party.

Mr. Charlie Ker: My name is Charlie Ker. On behalf of my colleagues at Cummins Westport, thank you for this opportunity today.

Cummins Westport—or CWI—is a 50/50 joint venture founded in 2001 between Cummins, the world's largest builder of commercial diesel engines based in Columbus, Indiana, and Westport Innovations, a leader in gaseous fuel engine technology based in Vancouver, BC. Since its inception in 2001, CWI has sold roughly 40,000 medium- and heavy-duty engines in North America.

Our company designs, manufactures and markets natural gas engines for use in over-the-road trucks and buses. To service these market segments, we have developed and deployed three engines between six and 12 litres in displacement. These natural gas engines are built on the same assembly lines as their diesel counterparts. They share the majority of the same parts, the same diagnostic tools and the same warranty as diesel, as well as the same parts, service and training support offered through the Cummins distribution network. But unlike this diesel variant, our engines are purpose-built to run on 100% natural gas, stored as either compressed CNG, liquefied LNG or renewable natural gas, RNG.

A quick review of the engines from biggest to smallest: We have the 12-litre engine, launched in August 2013, to service the heavy-refuse and over-the-road truck market. To date, this engine has been well received in the US by truck fleet customers such as Ryder, Frito-Lay, UPS and Anheuser-Busch, to name a few.

Most recently, as we've heard, Fiat Chrysler—FCA—invested in 180 CNG-fuelled trucks stationed in Detroit. This purchase was followed up with a new fleet of 89 CNG trucks in Windsor that will deliver auto parts to Brampton. You will also hear about CAT and their use of 100 CNG trucks to haul goods from Montreal to Texas.

Keep your eyes out for the natural gas trucks from Robert Transport and Minimax hauling goods along the 401. These fleets all made the switch to natural gas because the fuel is cheaper—albeit less so today than two years ago—the engines are quieter and emit fewer emissions, more so today than ever.

In 2007, our company launched the ISL G, a 9-litre engine that has become the mainstay for private and municipal refuse and transit fleets across North America, most recently Hamilton Street Railway. Today 50% of all new refuse trucks and 30% of transit buses purchased each year in North America run on natural gas. This ISL G engine met the 2010 EPA emissions level for particulate matter and smog-forming oxides of nitrogen three years ahead of the emissions standard.

Next month, Cummins Westport will again lower the emissions bar with the launch of what we call the ISL G near-zero engine. The ISL G near-zero received a certification late last year from the US EPA and the California Air Resources Board which defined the certification level as equivalent to a 100% battery truck using electricity from a modern combined-cycle natural gas power plant. The engine technology—applicable across all CWI engines—employs a system that captures engine-related methane to reduce greenhouse gases.

Furthermore, the capture and combustion of renewable natural gas derived from organic waste at landfills, agricultural and food waste sources can actually result in a negative carbon footprint. Air Resources Board data show that 53% of natural gas vehicle fuel used in California by many of the customers mentioned earlier is renewable natural gas. Moreover, the board staff has recommended, given California's criteria pollutant, GHG, and petroleum reduction needs, that the ARB implement statewide strategies to employ near-zero combustion engines coupled with the use of renewable fuels in order to attain near-term air quality and climate goals.

But, quickly, back to the engines: Along with the launch of near-zero technology this year, CWI will soon launch a new medium-duty 6.7-litre engine, first into the school bus market and later into shuttle buses and medium-duty pickup and delivery trucks, as well as vocational applications such as street sweepers and port trucks.

The natural gas truck and bus market has come a long way in a few short years. Today, our engines are offered by virtually every bus and truck manufacturer direct from the factory. We have shown great success in transit and refuse markets, and an over-the-road truck market is emerging.

In closing, I'll echo what I'm sure you've heard and will hear from many within our industry: Natural gas provides the fastest and most economical pathway to both lower carbon intensity and cleaner air. Bill 76 sends an important signal to industry—station builders, vehicle and engine manufacturers, parts suppliers and fuel providers—that the government sees natural gas as a key stepping stone towards a low carbon economy.

Thank you very much.

The Chair (Mr. Monte McNaughton): Thank you very much. Right on time. We'll move to—

Mr. Charlie Ker: Sorry, I was trying to keep up to Paulina and I don't think I did.

The Chair (Mr. Monte McNaughton): I will move to Mr. Gates for three minutes.

Mr. Wayne Gates: It's tough to do.

Mr. Charlie Ker: It is.

Mr. Wayne Gates: Does your organization believe that the positive impact that a reduction in the use of diesel trucks would have on our environment would offset the negative impact increased fracking activities would cause?

Mr. Charlie Ker: Sorry, if the environment will overcome the negative economics?

Mr. Wayne Gates: Yes.

Mr. Charlie Ker: I see them as both mutually reinforcing, actually.

Mr. Wayne Gates: Okay. What, if any, negatives does your organization see resulting from a shift to increased LNG vehicle use?

Mr. Charlie Ker: You're talking a lot about negatives here.

Mr. Wayne Gates: Well, I think it's important to have somebody who's been involved with this and who has been doing the engines for a long period of time to say what the positives are. If there aren't any negatives, tell us what the positives are. I agree with you; it may be a good thing, but get it out there.

Mr. Charlie Ker: The negatives are the fact that we have a wonderful opportunity in front of ourselves, but we can't kid ourselves. When we talk about over-the-road trucking especially, we are very nascent. We're crawling and trying to reach a jog here. With 250,000 to 300,000 over-the-road trucks built every year, we're not even at 1%. Let's not kid ourselves. We are in the early stages of market development, but, as you've heard from previous speakers, we have had great success in transit and refuse. These are return-to-base fleets where it makes the most sense. We're getting there. We have to keep at it.

Mr. Wayne Gates: Because you've been in it for a long time, maybe you could help us. Does it require additional training around the handling of these types of vehicles and stuff like that?

Mr. Charlie Ker: Yes.

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Mr. Wayne Gates: Could you explain what some of that is?

Mr. Charlie Ker: As I said, it's a qualified yes, because when you're looking at a natural gas engine, you see the same block. So the ISL G has a counterpart in the diesel called the ISL. It's built, as I said, on the same assembly line. You're all invited to—these are built in the United States: in the case of the 9-litre, in Rocky Mount, North Carolina; and in the case of the 12-litre, in Jamestown, New York. There are a few changes—spark ignition. You're dealing with spark plugs, not com-

pression ignition, and fuel handling, really. So a lot of the training goes around the fuel system that accompanies the engine, but the training is not unlike that of diesel.

The Chair (Mr. Monte McNaughton): We'll move to the government now. Ms. McMahon?

Ms. Eleanor McMahon: Thanks for coming. I'll speak quickly—because I always speak quickly, as my colleagues will tell you.

Part of the conversation today has been around the infrastructure to support any kind of natural gas pipelines or broader usage. In commercial and personal vehicles, there are significant costs associated with engines, and that increases the cost of the vehicle. Is that the same case in the trucking industry? What does that look like in terms of broader uptake, in your opinion?

Mr. Charlie Ker: Our customers are actually the OEMs, the Peterbilts, the Kenworths, the refuse trucks, Bil-Mac, Autocar. And their customers are the municipal and the private fleet.

From our engine manufacturer's standpoint, the mantra has always been "Fuel first." Actually, it hasn't always been that. It is now, because the vehicles are now available. This was not the case seven years ago. If you had walked into a dealer and asked for a natural gas truck, they would have looked at you like you were from Mars. Now for every vehicle, from class 6 to class 8, in a variety of different vocational applications, there is a CNG option.

Getting back to "Fuel first," you have to figure out your refuelling, where you're going to get your fuel, and that certainly—when you are a fleet operator, it's not just the vehicle; it's the combined total capital costs, in many cases, of both the fleet vehicles themselves and the station.

Ms. Eleanor McMahon: If cost is becoming a lower barrier to entry, which is what I'm hearing from you—

Mr. Charlie Ker: Yes.

Ms. Eleanor McMahon: If that's the case, given the benefits as you've articulated them, how do we get to a place where we have the kind of infrastructure in place—the stations, the fuelling capacity—in order to encourage a greater uptake of natural gas?

Mr. Charlie Ker: Certainly, this bill is a great start. We've heard examples from the United States. Our company really started in the California market. That's what really made us what we are today—and some of the incentives there. You can't buy a diesel transit bus anymore in southern California. You can't buy a diesel school bus in southern California, or a refuse truck. They just won't allow it. They have many programs: the Carl Moyer program, different incentives where they get fees for vehicles—

The Chair (Mr. Monte McNaughton): I'm sorry. We have to move to the official opposition.

Ms. Thompson.

Mr. Charlie Ker: Sorry, I could go on.

Ms. Lisa M. Thompson: Please do. Hello. Welcome. We're very interested in what you have to say today.

I want to applaud my colleague Bob Bailey, because Bill 76 is exactly the type of thinking we need to enable your industry to move forward. I think you said specifically that Bill 76 is an important signal that Ontario may be pursuing a path that will get it right, and I'm glad you recognize that. We in the PC caucus certainly applaud Bob, the member from Sarnia–Lambton, for bringing this forward because—it's the innovation. Government needs to get out of the way of industry so you can explore and bring forward the innovations that we need to truly become green.

I'm very interested in what you said earlier about an invitation, because my husband actually—off-farm—works in a product launch department for Wescast Industries in Wingham. It's all about manifolds and turbos for him.

Mr. Charlie Ker: Okay.

Ms. Lisa M. Thompson: But I can appreciate the type of evolution that's happening in all transportation. I think that my first question has to be around the biggest barrier to converting to natural gas for businesses like yours who are thinking forward a little bit: What has to happen in order for you and your colleagues who have deputized before you to really move forward and expedite the path to use of compressed and liquefied natural gas?

Mr. Charlie Ker: Well, the adoption curve, as I've said, has been dramatic, over the last seven years, in these transit and refuse fleets. I think that we're going to keep seeing that, although the current reality around the price of a barrel of oil right now is having its effect.

One of our parent companies, Cummins, has been in the business for almost a century. The diesel business is going to be here for a long time to come. That is the incumbent.

I keep bringing up California, but California is, as is Ontario, looking at other zero or near-zero emission options—electric, fuel cells and what have you. Our customers down there asked us two years ago, "How low can you go in emissions? Because we can't be constrained to a few technologies that, maybe, aren't ready for prime time just now." That's what—

The Chair (Mr. Monte McNaughton): With that, thank you very much for presenting today.

I'd like to thank everyone for respecting the orders of the House that we were given, as far as the timelines for everyone to speak. We'll be meeting again on Wednesday, March 23, the week after constit week. Thank you again.

The committee adjourned at 1447.

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