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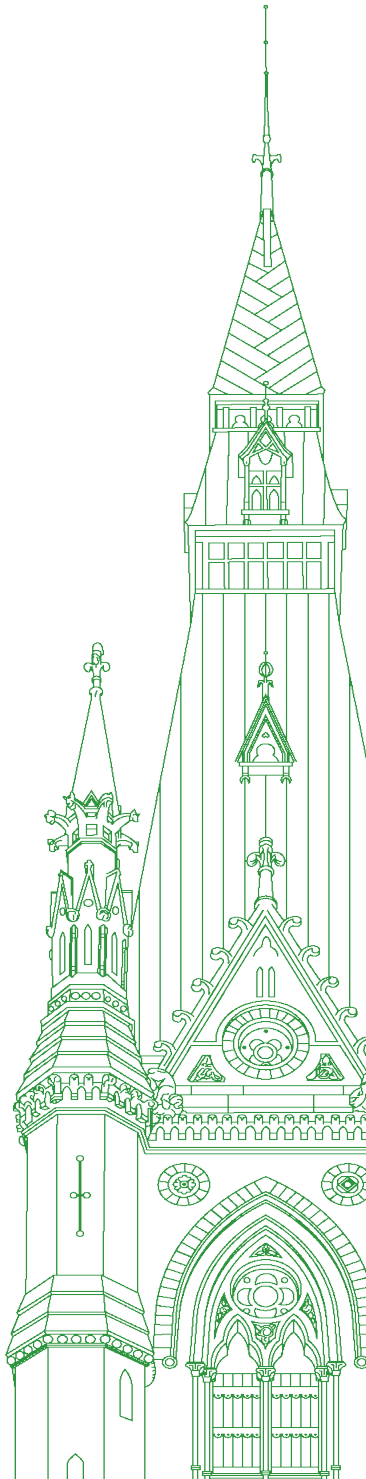

Chair: Mr. Francis Scarpaleggia

Standing Committee on Environment and Sustainable Development

Wednesday, November 25, 2020

● (1530)

[*English*]

The Chair (Mr. Francis Scarpaleggia (Lac-Saint-Louis, Lib.)): Welcome, everyone, to the eighth meeting of the Standing Committee on Environment and Sustainable Development, and our fourth and last meeting with witnesses for our study of zero-emission vehicles.

Today we have four witnesses. Each witness will have five minutes to give their opening remarks. That will be followed, of course, by the standard question-and-answer session.

Witnesses, you can speak in either official language. If you're not speaking at a particular moment, please put your mike on mute. Also, in order to allow members to get the most information out of their questioning of you, if you could be as succinct as possible in providing answers and getting to the core of the subject matter of the questions as directly as possible, that will allow members to ask more questions and the committee to get more information for its report.

Without further ado, I believe we're ready to go. I would ask—

[*Translation*]

Mr. Joël Godin (Portneuf—Jacques-Cartier, CPC): Mr. Chair, I have a point of order.

The Chair: Go ahead, Mr. Godin.

Mr. Joël Godin: We've received documents on several occasions, notably from Electric Mobility Canada. So documents are piling up.

I just want to make sure we inform the members whether the version of a document we receive is identical to a previous version or has been modified. Can the clerk let us know? We're having trouble keeping track of all these documents.

The Chair: Do you mean documents submitted by witnesses?

Mr. Joël Godin: Yes.

The Chair: As I understand it, you're saying that documents are sometimes sent a second or third time? That should only happen rarely since, once those documents are submitted to the clerk of the committee, they're then sent to the members.

A witness may send additional information and amend a document. In some instances, witnesses also send various types of documents: a briefing note, for example, may be added to documents submitted for the purposes of the meeting.

Mr. Joël Godin: I understand.

That's intended as a constructive criticism. I would just like us to be informed when a revision has been made. Otherwise we'll assume it's the same document.

● (1535)

The Chair: That's a good idea since we receive many documents by email.

Mr. Joël Godin: Thank you, Mr. Chair.

[*English*]

The Chair: Today we have with us the Canadian Taxpayers Federation, Electric Mobility Canada, Global Automakers of Canada and Ballard Power Systems.

We'll go in that order with five minutes each, starting with the Canadian Taxpayers Federation, represented by Aaron Wudrick, the federal director.

Go ahead, Mr. Wudrick, for five minutes, please.

Mr. Aaron Wudrick (Federal Director, Canadian Taxpayers Federation): Thank you very much, Mr. Chair.

Good afternoon to all, and thank you very much to the committee for the invitation to appear today.

The Canadian Taxpayers Federation, for those who are not familiar with us, is a national, non-profit, non-partisan group founded in 1990. We have approximately 235,000 supporters across the country. We focus really on three broad areas; lower taxes, less government waste and accountability and transparency in government.

With respect to the committee's study, the reason for our appearance today is our submission with regard to the second point on government waste, specifically, what we see as a well-intentioned but ultimately wasteful program intended to encourage the purchase of ZEVs.

In October, our group released some access to information documents we obtained regarding the cost of a program launched by the federal government last year entitled “Incentives for Zero Emission Vehicles”. This was a program that provided a taxpayer subsidy of up to $5,000 off the purchase price of electric vehicles if the base model was listed for less than $45,000. If that base model was under $45,000, higher price versions of the same model up to $55,000 would then also qualify.

The way it works is that dealerships apply this to the price of eligible vehicles when they are purchased, and then they apply to Transport Canada in order to be reimbursed for the subsidy afterwards.

This program was launched in May 2019. It was expected to run for three years and had a budget of $300 million. As of January of this year, $134 million in rebates had been issued, with the rest of the funds expected to be entirely gone by the end of 2020.

Tesla has received the most subsidies from this program, taking in more than $60 million just between May 2019 and the end of March, a little bit under a year. Notably, Tesla's Model 3 did not qualify for this subsidy initially because the base model was priced too high. It was priced at $53,700, well above the $45,000 price cap.

To solve this, Tesla introduced a Canada-only version of the Model 3, which they called “standard”, with a non-negotiable reduced range of 150 kilometres per charge. Tesla priced this at $44,999, one dollar below the program cut-off rate, to be eligible for the subsidy.

Interestingly, they only sold 126 of this base model, but they did sell 12,000 of the higher-priced “standard plus”, which is now eligible for the subsidy because of the existence of this base model.

I would suggest that this is a problem. Presumably the purpose of setting a cut-off price was precisely to avoid having these subsidies go to more expensive vehicles, and yet that's exactly what happened here. Perhaps even more importantly, if the purpose of these subsidies is to encourage the uptake of zero-emission vehicles, it seems that a relevant question is whether they are actually leading to a higher uptake or simply providing subsidies to people who were going to buy ZEVs anyway. It's especially fair to ask that question given the price points we're talking about here.

Even a $45,000 vehicle, I would suggest—never mind a $55,000 vehicle—would be considered a luxury vehicle by most Canadians, and I think it's a fair question to ask whether regular Canadian taxpayers should be subsidizing the purchase of luxury vehicles for people who are fully prepared to pay full price for them. I would suggest that the answer is no, and for that reason our organization believes this program should be scrapped or, at the very least, revised.

I will close by observing that this government has in the past demonstrated an awareness of this windfall effect, where subsidizing the cost of something simply gives extra benefit to people who would be happy to incur the full cost anyway. The current government eliminated tax credits for transit, children's sports and arts using this exact argument since there was little evidence that they were leading to increased uptake of these things. They were simply providing a windfall to people who were going to buy transit passes or enrol their kids in sports anyway.

Taxpayer dollars, of course, are valuable for every use they have. There are many other potential alternative uses, and I would urge this committee to explore some of those uses to ensure that taxpayers are getting good value for their money.

[*Translation*]

The Chair: Thank you, Mr. Wudrick. That's very interesting and your explanations are very clear.

Now we'll hear from Mr. Breton, president and chief operating officer of Electric Mobility Canada.

Mr. Breton, you have the floor for five minutes.

● (1540)

Mr. Daniel Breton (President and Chief Operating Officer, Electric Mobility Canada): Good afternoon, ladies and gentlemen.

Thank you for the opportunity to address your committee as part of your study on zero-emission vehicles in Canada.

Founded in 2006, Electric Mobility Canada is one of the very first organizations in the world dedicated to electric mobility. We are a national non-profit organization and are considered the Canadian experts in electric mobility.

[*English*]

EMC has more than 220 member organizations, including utilities, vehicle manufacturers, infrastructure providers, tech companies, research centres, cities, universities, fleet managers, etc.

We work on electric mobility from bikes to cars, from buses to boats, from trucks to trains, from mining to research to assembly to infrastructure to recycling and in all parts of Canada.

I personally have been working on electric mobility for almost 20 years and have written many books on the subject. At home, we drive electric cars, and by the way, we live in a rural area.

EMC supports incentives for the purchase of light and heavy-duty electric vehicles from buses to school buses to trucks, incentives for the purchase of used EVs and PHEVs, financial support for the purchase and installation of charging infrastructure, a federal ZEV standard, innovation programs related to the EV industry, education for consumers, the electrification of government fleets, and training and retraining programs for workers across Canada.

In the first half of 2020, ZEV sales were at 3.5% of all light-duty vehicle sales in Canada.

Unless a ZEV standard is adopted, Canada won't be able to meet its EV adoption targets. It still is very hard to find an EV, since only 33% of dealers in Canada have at least one EV in stock. Outside of Quebec, B.C., and Ontario, fewer than 20% of dealerships have at least one EV on their lot, so even though dealers want to sell EVs, they don't have enough supply to meet consumer demand.

According to a 2019 report by Clean Energy Canada, 560,000 clean technology jobs are expected to be created in Canada by 2030, with 50% of them in the clean transportation sector.

Between 2021 and 2030, if Canada follows the examples of California, B.C., Quebec and other jurisdictions around the world and adopts a ZEV standard, expected sales revenues, according to our calculations, are projected to exceed $190 billion.

[*Translation*]

Canada's goal is to reduce emissions of greenhouse gas, or GHGs, by at least 30% of 2005 levels by 2030. Between 2005 and 2018, GHG emissions from cars and light trucks rose 9%. GHG emissions from the transportation sector may soon be the number one source of GHG emissions in Canada, ahead of the oil and gas sectors.

According to the International Energy Agency, Canada is the number one country in the world for GHG emissions per kilometer driven by its light duty vehicle fleet, ahead of the United States' light vehicle fleet.

Over that same period, GHG emissions from the electricity sector have decreased by 46%, making Canada's electrical system one of the cleanest in the world, with 82% of electricity in Canada coming from non-GHG-emitting sources.

According to the National Research Council of Canada, light and heavy electric vehicles are cleaner than gas and diesel vehicles across Canada. By 2025, new battery technologies will drive battery prices down more than 50% while range will increase by more than 50%.

[*English*]

Air pollution in Canada has caused 14,600 deaths, which is 7.5 times the death toll of motor vehicle accidents.

In 2017, transport was responsible for the majority of total nitrogen oxide emissions and carbon monoxide emissions in Canada.

According to the 2019 Health Canada report, the total annual economic value associated with air pollution is $114 billion.

In conclusion, EVs, from light to heavy-duty, can help Canada meet its goals on climate change, lower air pollution and help Canadian citizens' health as well.

Thank you.

● (1545)

[*Translation*]

The Chair: Thank you, Mr. Breton.

Mr. Adams, are you there?

[*English*]

You were disconnected at one point. I imagine that you're back on the call, Mr. Adams. Are you there? No?

Okay, we'll go then to Mr. Pocard of Ballard Power Systems for five minutes, please.

[*Translation*]

Mr. Nicolas Pocard (Director, Marketing, Ballard Power Systems Inc.): Good afternoon.

My name is Nicolas Pocard. I am the director of marketing and strategy at Ballard Power Systems.

[*English*]

Ballard is a technology company based out of Vancouver, British Columbia, that has been developing fuel-cell and hydrogen technology for the past 40 years.

Today, I would like to highlight the key role that hydrogen will play in the decarbonization of the economy in Canada, especially when it comes to heavy-duty transportation. We believe that if you want to meet the objective of carbon neutrality by 2050, we are going to need hydrogen heavy-duty mobility to achieve those targets. By that, I refer to the trucking, rail and marine industries, where hydrogen fuel cells provide a path to decarbonization. In addition to that, we believe that the maturity and the leadership that Canada has in hydrogen fuel-cell technology represents a unique economic opportunity, but we need to maintain that leadership. We need to invest in the deployment and in the R and D of fuel cells in Canada. We need to keep that.

We have started to see outside of Canada countries in Europe making major investments in hydrogen, and we see the same thing in the U.S., China, Japan and Korea. We are looking forward to the soon-to-be-announced hydrogen strategy that the B.C. Ministry of Energy, Mines and Low Carbon Innovation should be announcing very soon, but we want to make sure that this strategy is backed up by support in order to deploy technology in Canada, as well as supporting R and D to maintain that technological leadership.

We strongly believe that Canada must join the other countries that have recognized the fundamental role of hydrogen fuel-cell technology in the decarbonization of heavy-duty transportation, as it represents a unique economic and job opportunity in Canada. We believe it's possible to achieve a target of 10,000 fuel-cell buses and trucks in operation across Canada by 2030. This also represents a really important investment in the value chain. Energy—hydrogen in this case—is being produced from the natural resources of Canada, from wind, solar, hydro or, in the Prairies, using natural gas converted to blue hydrogen and carbon sequestration to ensure the local production in Canada of low-carbon hydrogen. As well, it goes through the entire value chain. A fuel-cell vehicle is an electric vehicle and includes all the equipment we produce here in the value chain, from the fuel-cell system, the power train and the different integration. This represents a unique economic opportunity, as well as a way of achieving those targets of decarbonization.

Thank you.

[*Translation*]

The Chair: Thank you, Mr. Pocard.

We will now begin the first round of questions. We will give Mr. Adams the floor if he can reconnect.

Go ahead, Mr. Godin.

Mr. Joël Godin: Thank you, Mr. Chair

Thanks to the three witnesses for taking part in this exercise. We'll thank the fourth witness later if he manages to reconnect. Hurray for technology! This is what we elected members go through every day.

My questions will first be for a representative of Quebec, Mr. Breton, who was environment minister in 2012.

Mr. Breton, as you mentioned, you're very consistent in your statements on the environment. You're very sensitive to the environment issue, but I'm not sure your successor shares that concern. It was the leader of the Bloc Québécois in the House of Commons, Mr. Blanchet, who took your place when you left your position in that department.

The greenhouse gases produced by oil consumption are one aspect, but the composition of an electric vehicle has a significant impact on production. It also emits greenhouse gases. If you reduce GHGs on the one hand, but increase them on the other, I'm not sure we can be carbon neutral by 2050.

Mr. Breton, can you provide us with information on the impact of electric vehicle production on greenhouse gas emissions?

● (1550)

Mr. Daniel Breton: That's an excellent question. You're ultimately talking about the entire vehicle lifecycle, that is, production of the vehicle, including its battery, use and disposal.

On pages 8 and 9 of the brief I sent you on Monday, we discuss an analysis that was conducted by the National Research Council of Canada. That analysis shows that, in Quebec, for the entire lifecycle, including battery production, the greenhouse gas emissions of partial and fully electric vehicles are 35% to 55% lower than those of an equivalent gas vehicle. Even in Alberta, where electricity production is not as clean, an electric vehicle is still cleaner than a gas vehicle. Regardless of the sources used for electrical generation or battery production, a partial or full electric vehicle is still cleaner than a gas vehicle.

In addition, since 2013, battery production has vastly improved from an environmental standpoint, as a result of which its environmental impact has declined by 60%. Emissions from battery production and battery lifecycle will decline by a factor of 8 by 2030. I can send you documents on that subject later. Batteries pollute less and less because we're discovering increasingly efficient manufacturing methods that make electric vehicles cleaner and cleaner over time.

Mr. Joël Godin: You're talking about battery manufacturing.

Mr. Daniel Breton: Yes, that's correct.

Mr. Joël Godin: You have to mine raw materials in order to produce batteries, and that has an impact on GHG emissions.

We believe you when you say that the impact of battery production on greenhouse gas emissions will decline by a factor of 8 by 2030, but are there any hard facts on that?

You haven't convinced me with your argument that electric vehicle use is “the” solution. I think electric vehicles are one of the solutions. From what I understand, we'll need oil to produce plastics and the materials needed to build electric vehicles.

I'd like to get your view on that, Mr. Breton.

Mr. Daniel Breton: I just told you about the study conducted by the National Research Council of Canada. I'm talking about the entire lifecycle, from the mining of raw materials to battery manufacturing, vehicle use and disposal. That's the full lifecycle. It includes drilling for oil and mining raw materials to produce gas vehicles because they have to be built, and drilling for oil in order to build electrical vehicles, as well as using oil and electricity to operate those vehicles. That's the full lifecycle. What you're telling me corresponds to that. We take into account raw materials extraction for producing both batteries and gas vehicles.

The National Research Council's study clearly shows that electric vehicles emit less GHG throughout their lifecycle, including emissions attributable to raw materials extraction.

Mr. Joël Godin: I'd like to continue on the subject of the impact of electric vehicle production, but from another angle.

We have power grids. You live in a rural area, Mr. Breton; you know exactly how cold it gets in Quebec. It happens every year. We have a power supply problem in January, and Hydro-Québec, a Quebec crown corporation, asks us to cut back our power consumption. If you cause one problem by trying to solve another, maybe you're putting the cart before the horse.

Can you explain to me how we can manage the energy transition efficiently and the way we use electricity so that our grids can meet our needs?

● (1555)

The Chair: Your time is unfortunately up, Mr. Godin. You're on the list for the next round, and you'll have an opportunity to get an answer to that question.

Mr. Joël Godin: That'll be my next question, Mr. Breton.

The Chair: You'll have a chance to answer it later, Mr. Breton.

Mr. Daniel Breton: I have the answer to that question.

The Chair: Good, we're eager to hear it.

I understand that Ms. O'Connell will speak on the Liberal side.

[*English*]

Ms. O'Connell, go ahead, please.

Ms. Jennifer O'Connell (Pickering—Uxbridge, Lib.): I'm having issues with my Internet, so I had to connect via my cellphone. I'm not sure if you can hear me.

The Chair: We can hear you. It's all good.

Do you have a headset for the interpretation?

Ms. Jennifer O'Connell: No, the headset doesn't work on my cellphone. I can connect with a different one. Give me a moment.

Perhaps you want to go to one of my colleagues and I'll come back.

The Chair: Sure.

Let's go to Mr. Longfield, please.

Mr. Lloyd Longfield (Guelph, Lib.): Sure, thanks. We can switch spots.

I wanted to start off with Ballard Power.

We've had quite a few presentations on plug-in vehicles, but yours is the first that's really focused on the hydrogen cell technology.

I'm wondering whether the technology enters into the market at a certain horsepower or a certain type of motor or, say, class 5 or class 8 vehicles, or whether they would also be available on smaller vehicles.

Mr. Nicolas Pocard: Thank you very much. It's a good question.

Today's technology is available for all types of vehicles from light duty to heavy duty vehicles. I think what is important is trying to identify what is the best case—the use case. Which application.... At the end of the day, it's electrification. Whether it's a fuel cell or a battery, both are electric vehicles. It's a matter of how you bring the energy to the vehicle, how you store the energy on board the vehicle.

Each use case will differ. When you look at heavy duty, the bigger the vehicle is and the larger the payload that you have to carry, then hydrogen makes more sense because you don't have to compete with a very large battery weight against the goods you want to transport. Duty cycles are very important. If you have a taxi, which operates multiple shifts with little time to recharge, hydrogen makes sense. It's a mixture of the use case, the payload and the duty cycle that you want to have.

The technology itself is available. You can have fuel-cell engines, ranging from powering a car all the way to a train. It's just a matter of finding ways of best application based on the use case.

Mr. Lloyd Longfield: Thank you.

In terms of the climate change impact, when you look at the duty cycle of a normal passenger car, it sits parked for 95% of the time, whereas, a taxi, a freight truck or a delivery truck has closer to 95% usage of vehicle time. The impact on the actual climate change could be higher with the fuel-cell technology as compared to some of the others.

I suppose the mix of the market would be something that would be interesting for us to include in our report.

Mr. Nicolas Pocard: Absolutely. Those vehicles tend to have a much higher impact on the emissions compared to a personal car. They operate for longer times and they have more emissions.

I think it's the same thing as the question that was asked before. We need to look at those total life cycle costs. Fuel cell has a big advantage here. It's much less energy intensive to produce. It's the manufacturing part. The life cycle cost of the fuel cell from cradle to grave is also very attractive.

Today at Ballard, we recycle the fuel cells, so when a fuel cell reaches the end of life we can recycle. We rebuild it using the same material and recover 95% of the precious metals that are there. I think it's important to look at the use case as well as the total life cycle cost.

Mr. Lloyd Longfield: Back in the nineties I was supplying pressure regulators to Ballard in the very early stages of development, so it's interesting to see how far the market has gone.

I'll stay on Ballard just for a little bit longer. I only have a few more minutes. I'm thinking of the parts supply. I mentioned I was supplying pressure regulators. What type of parts supply do you have?

You're in Vancouver, which is outside of the auto parts supply of southern Ontario. How does that integrate with the North American parts supply between Canada and the United States or, in fact, across Canada?

● (1600)

Mr. Nicolas Pocard: It's a good question. I think it has changed a lot in the past 10 years. When we started 30 years ago at Ballard, it was very hard to find parts. It was probably too early. Nobody was developing those components. I'm thinking about the components outside of the core of fuel-cell stacks that we make at Ballard; components like the air compressor and DC/DC converters were not available. What we are seeing lately is that a lot of manufacturers, like automotive tier-one suppliers, are looking toward developing components for fuel-cell systems. We have the big names, like the Bosch's of this world or Linamars or those companies. We are starting now to have access to an automotive supply chain that is developing components that we need to build that fuel-cell engine.

Mr. Lloyd Longfield: You've mentioned Linamar, which is in my riding. They have a new building where they're making parts for this market. That's why I wanted to put that on the table.

Mr. Nicolas Pocard: Yes, and we are working with them—

Mr. Lloyd Longfield: If I might, just quickly say, I think Honda is also procuring a fuel-cell company.

Some of the automotive manufacturers are racing to get into this by acquiring other companies. Is that another market move we might be watching for?

Mr. Nicolas Pocard: Yes, we have seen that. We have seen Cummins, the largest manufacturer of diesel engines in North America, purchase Hydrogenics, a Canadian company, so we are seeing the consolidation and integration of some of the value chain in the automotive industry.

I think that's something we are also seeing in Europe a lot. A lot of the tier-one OEMs in Europe have invested in fuel-cell hydrogen technology by either developing it themselves, like Daimler and Volvo, or acquiring companies, like Bosch and other automotive suppliers have done.

Mr. Lloyd Longfield: You haven't mentioned the Americans. Are the Americans in this market?

Mr. Nicolas Pocard: I mentioned Cummins. Cummins has done investment there. Then, as we know, GM has their own fuel-cell development program that they have accelerated lately.

Mr. Lloyd Longfield: Very good. That's great information. Thank you for that.

I'll go over to you, Mr. Chair.

Mr. Nicolas Pocard: Thank you.

[*Translation*]

The Chair: Thank you very much, Mr. Pocard.

I'm told that Mr. Adams has rejoined the meeting. I'm going to give him the floor for five minutes, then we will continue with Ms. Pauzé.

[*English*]

Mr. Adams.

Mr. Adams, you're on mute perhaps.

Mr. David Adams (President and Chief Executive Officer, Global Automakers of Canada): Yes. Is that better?

The Chair: Yes.

Do you have a microphone with your headset?

Mr. David Adams: I do.

The Chair: Okay, great. Thank you.

Mr. David Adams: Thank you very much, Mr. Chair, and honourable members—

The Chair: Excuse me, it's a bit weak.

Would that be at our end?

Could you bring the microphone a little closer?

Mr. David Adams: Sure.

The Chair: Perfect. That's great.

Mr. David Adams: Thank you very much, Mr. Chair and honourable members, for the opportunity to appear in front of you today.

I apologize for the technical difficulties getting connected to the meeting, but I do appreciate the opportunity to be here.

I want to start off by saying that Global Automakers of Canada represents 15 international automakers and their Canadian operations in the country here, which represent 20-odd models.

Our affiliates and their members employ more than 77,000 Canadians in vehicle manufacturing, sales, distribution, parts, service, finance and head office operations. In 2019, the member companies with the GAC sold 1,146,000 vehicles, which represent about 60% of the auto market and over 60% of Canada's 3,300 new vehicle dealerships.

Our members are committed to the decarbonization of the products they are producing. However, it is clear the goal of decarbonization of the light-duty transportation sector cannot be achieved by focusing on new vehicle sales alone, which represent approximately 8% of all vehicles on the road. It is also clear that we will not achieve our GHG reduction goals for the overall light-duty fleet by focusing on driving the update of ZEV technology alone, as opposed to focusing on the real goal, which is GHG emission reductions in the transportation sector.

Currently in Canada there are about 168,000 zero-emission vehicles on the road out of a total light-duty vehicle population of approximately 23.5 million vehicles. This equates to ZEVs comprising less than 1% of all light-duty vehicles currently on the road.

That said, as others who have appeared before you have noted, hundreds of billions of dollars have been invested in zero-emission vehicle technology globally by automakers. While COVID-19 has in some cases delayed the introduction of models, it has by no means deterred automakers from the pursuit of the development and introduction of ZEVs. In fact, and importantly, I think, for those who have suggested that there are supply issues, GAC members alone will have more than 125 BEV and ZEV models brought to the market between 2021 and 2025.

In this regard, it's important to understand and underscore that the only real difference between the perspectives of governments, ENGOs and the automotive industry with respect to zero-emission vehicles is the issue of timing. We share the same goal.

The automotive industry is going through an unprecedented transition, the likes of which it has not experienced for more than 100 in its more than 100-year history. That transition is moving quickly, but it will time. It takes three to five years to bring a new vehicle model to market and roughly $1 billion to $2 billion. Auto companies must continue to earn profits on their current vehicle mixes to support the development of these vehicles.

Additionally, new suppliers and supply chain partners must be developed and cultivated to secure long-term contracts for batteries and other components that are completely new for the production of ZEVS.

As noted, the industry is changing, but it does take time, and the change is also responsive to demand and supply and will likely lag demand for the immediate further. However, we must underscore in no uncertain terms that short-term regulatory intervention in the form of ZEV mandates is out of step with the medium and longer-term time horizon of this industry transition.

We have a series of recommendations in our submission, but I think it's more important to hear questions from committee members.

● (1605)

The Chair: Thank you, Mr. Adams.

We'll continue with Madame Pauzé, please, for six minutes.

[*Translation*]

Ms. Monique Pauzé (Repentigny, BQ): Thanks very much.

My first question is for Daniel Breton from Electric Mobility Canada.

I've always viewed the environment and health as connected, and you make that connection too. You say that the more polluting vehicles there are on the roads, the higher health costs will be.

Could you go back to that statement and give us a few more details? I must say you're addressing my biggest concerns here.

Mr. Daniel Breton: The study published in 2019 on atmospheric pollution states that it has an impact of $114 billion a year. That's a recent study, from barely a year ago. It suggests that large quantities of atmospheric pollution comes from transportation and that road transportation—light, medium and heavy vehicles, buses and so on—make a significant contribution to that pollution.

Antipollution systems have become increasingly efficient in recent years, reducing total atmospheric pollution per vehicle. However, we now see that progress has stagnated and atmospheric pollutants such as carbon monoxide have even increased. Physicians and Health Canada therefore expect that more deaths will be caused by transportation-related atmospheric pollution.

You can see from the documents I sent you that the longer people live near sources of pollution, such as major roadways, the greater the risk they will suffer from health issues such as cardiovascular and pulmonary problems and cancers. In 80% of cases, the problems are cardiovascular. While climate change is a global problem, atmospheric pollution is both a global and a local problem. A person living near a source of atmospheric pollution may suffer extremely harmful effects. In the book I published two years ago, I quote Dr. François Reeves discussing the appeal of electric vehicles as a way to reduce atmospheric pollution.

Ms. Monique Pauzé: Mr. Breton, you say that atmospheric pollution is on the rise again and that it's due to transportation. Is that correct?

Mr. Daniel Breton: Yes.

Ms. Monique Pauzé: I see. So it really is due to transportation.

My next question is for Mr. Wudrick from the Canadian Taxpayers Federation.

You said at the outset that government incentives were not a good thing. I don't share that view at all. Electric vehicle numbers rose in British Columbia and Quebec after provincial and federal incentives were offered. In addition, electric vehicle sales in Ontario fell 55% in the first quarter of 2019, relative to 2018, after Doug Ford cut financial incentives. Here's another example. In Georgia, in the United States, electric vehicle sales dropped 80% after financial incentives were eliminated. As you'll understand, that's not a question but rather a comment intended to show you how much I disagree with your statement.

That being said, many measures are possible. In the United States, for example, the federal incentive takes into account purchasers' incomes, and an incentive is offered in the form of a non-refundable income tax credit.

Furthermore, it's been said that these incentives concern luxury vehicles, but the prices of RAM, Dodge and Ford F-150 light trucks, which are big sellers, range from $43,000 to $74,500. However, those trucks are big polluters and, as noted earlier, have a harmful impact on people's health.

Getting back to measures, would you be in favour of a regulatory no-cost measure for taxpayers that would have the effect of putting more zero-emission vehicles on the market?

● (1610)

[*English*]

The Chair: Mr. Wudrick.

Mr. Aaron Wudrick: Thank you for the question.

I want to be clear: I don't doubt that there are some individuals who purchased the vehicle only because of the subsidy. It's important to measure what is the impact of that subsidy, and the question I'm asking is, how many more people are buying them as a result of the subsidy as compared with the people who would have purchased the vehicle anyway?

Again, remember that we are talking about vehicles that are fairly expensive. I think the whole reason we are even talking about a subsidy is that these vehicles are above the price point of the average Canadian. I don't believe that I would be in position to buy a $55,000 vehicle with or without a—

[*Translation*]

Ms. Monique Pauzé: Pardon me for interrupting you, Mr. Wudrick, but I'd like you to answer the question I asked you.

Would you be in favour of a regulatory no-cost measure for taxpayers that would have the effect of putting more zero-emission vehicles on the market?

[*English*]

Mr. Aaron Wudrick: We take no position on that. We are not an environmental group. We are focusing on the subsidy, so if it's something that does not have an impact on the taxpayer, then we are completely ambivalent.

[*Translation*]

Ms. Monique Pauzé: Here's another question.

According to the International Institute for Sustainable Development, the fossil fuel sector receives a lot of money. The financing granted for the Trans Mountain system now amounts to $12 billion. Don't you think these excessive amounts of public money would be better spent on investments that would benefit Canadian taxpayers and improve public health?

[*English*]

The Chair: Be brief, please, Mr. Wudrick.

Mr. Aaron Wudrick: Yes, Madame. We're on the record as opposing the nationalization of Trans Mountain.

The Chair: Thank you.

We'll go now to Mr. Bachrach for six minutes.

Mr. Taylor Bachrach (Skeena—Bulkley Valley, NDP): Thank you, Mr. Chair. It's good to be here with the committee. Thank you for allowing me to sub in for Laurel Collins, my colleague.

Thank you to the witnesses for your testimony. It's been very interesting.

Mr. Breton, you mentioned that you live in a rural area and you drive an electric vehicle. I also live in rural northern British Columbia and drive a Chevy Bolt through the winter. It's working out really well for my family and me, so thanks for sharing your story.

I have a bunch of questions, but maybe I'll start with Mr. Breton. I have a question about Canada being left behind in the manufacturing of zero-emission vehicles. Obviously, this is a growing market and our auto sector could use the jobs now more than ever. What does it say about the industrial strategy that we need as a country if we're going to capitalize on this opportunity?

Mr. Daniel Breton: This is very important because, believe it or not, I've been talking about a Canadian EV industry strategy since 2006. As I said, as time goes by we're going to switch more and more towards EV for light-duty to heavy-duty vehicles.

More and more studies are coming out. One from ICCT came out a few months ago saying that if Canada doesn't have a strategy, doesn't have a plan for an industry, whether it's for light-duty or heavy-duty vehicles, we might end up having no automotive sector 15 to 20 years from now.

We've been in decline for many years and now, since we have so many assets in Canada.... We have strong OEMs based in Ontario. We have minerals. We have metals. We have scientists from Nova Scotia to B.C. who can do the job. We have people in Quebec building cars, trucks and buses. We have people in Manitoba.... We are presently working on an EV industry strategy with other stakeholders so that we can see all of the progress that we can make, because we want to fight climate change, we want to fight high pollution, and we also want to create jobs in the meantime. For us to have a Canadian EV industry strategy makes total sense.

● (1615)

Mr. Taylor Bachrach: Thank you, Mr. Breton.

Perhaps I'll move on to Mr. Wudrick. I was quite intrigued by your last comment that if it doesn't have an impact on taxpayers, we're “completely ambivalent”. Well, taxpayers are also citizens, and all of the polling and surveys show that citizens in Canada are very concerned about the climate crisis and that they want action. Of course, a lot of climate pollution comes from light-duty vehicles, and the policies we're talking about today are meant to drive down that pollution.

Broadly, is that a policy objective that you support?

Mr. Aaron Wudrick: We're not a group that's trying to get involved in every issue. That's the reason we focus on the taxpayer angle. I have no beef with electric vehicles, ZEVs. If they can make good products and people want to buy them, I've no objection to that. The reason for the critique of the specific policy was whether or not it is achieving the objective that the policy is set out to do. I'm simply questioning whether or not there's evidence that the subsidies leading to the uptake are the cause of the uptake rather than a windfall to people who are going to buy them anyway.

Mr. Taylor Bachrach: Here's the thing, Mr. Wudrick. Around the world there are jurisdictions that are really leading when it comes to the transition to zero-emission vehicles. Among those jurisdictions, do you know of any that lack or that don't have a zero-emission vehicle incentive like the one that you're so opposed to?

Mr. Aaron Wudrick: Not to my knowledge, but the question is, when do we reach a critical mass? I think we know the answer to that. We're going to reach a critical mass of take-up when the price point drops to a significant point where they're competitive with other vehicles, and that's not going to be achieved by a $5,000 subsidy at a $55,000 price point.

Mr. Taylor Bachrach: Here is my last question for you.

Part of your argument around low-income Canadians has merit. You expressed some willingness to look at changes to the incentive program. What specific changes do you think would best allow lower-income Canadians to buy zero-emission vehicles in the context of an incentive program?

Mr. Aaron Wudrick: To be clear, we don't support this approach, but if you were going to do it, lower the ceiling. Right now it applies to vehicles that cost up to $55,000. I think lowering the ceiling would ensure that the money is more likely to go to people who could use the subsidy rather than to those who are just happy to get it.

Mr. Taylor Bachrach: Thank you, Mr. Wudrick.

I'll go back to Mr. Breton.

In British Columbia you can buy a used Nissan Leaf for about $12,000. That's pretty affordable, especially given the very low operating costs.

Have you thought about what kinds of incentives could be used to help lower-income Canadians purchase zero-emission vehicles and contribute to this larger policy goal that we're trying to achieve?

Mr. Daniel Breton: Yes, actually we have. We support some kind of rebate for used EVs or PHEVs in Canada. Actually, there is a rebate in B.C. There's one in Quebec as well.

For people who can't afford or don't want to pay for a brand new vehicle, whether a gas vehicle or an electric vehicle, getting people to come on board with EVs or PHEVs that are used is not an issue for us. We think it only makes sense.

I would add that the average purchase cost of a gas vehicle in Canada in 2019 was over $40,000, and now we see that gas vehicles at a very cheap price point, such as the Honda Fit and the Nissan Micra, are all disappearing. Now the beginning price point of a vehicle is not $15,000 anymore; most cars cost $25,000 at least.

The Chair: Thank you.

We'll go to the five-minute round now, starting with Mr. Redekopp.

Mr. Brad Redekopp (Saskatoon West, CPC): Thank you to all the witnesses for being here today.

I want to start with Mr. Wudrick and carry on with this theme a little bit, just to recap what you were telling us.

It was interesting to hear the story of Tesla, which essentially gamed the system to get the Model S in under that price point so that it could qualify for the program.

I share your view that a $55,000 vehicle would be a luxury vehicle for most Canadians. Just comment a bit on this. Essentially what we're doing is subsidizing a vehicle that a wealthy person is going to buy, but at the same time we are not really helping out the person struggling to get by who is buying the $25,000 vehicle.

Is there a policy rationale for this that you can figure out?

● (1620)

Mr. Aaron Wudrick: Not really. There is good intention here; I understand what the government is trying to do. I don't think anybody objects to the idea that we would be better off if people were driving cleaner vehicles. I think that's a noble objective. The question is whether the policy is actually doing that. If there is evidence, we have not seen it, and I think that's something worth investigating.

The reason for the subsidy, again, is as I said that these cars are very expensive. I think we need to ask ourselves whether mass take-up, in terms of market share, is ever going to happen unless the average price point reaches a point where these become competitive, so that mass numbers of Canadians can purchase them.

Mr. Brad Redekopp: Right. You're probably well aware of NDP's position on this government, in fact the reason we still have a government, is that the NDP has been supporting the Liberals on key legislation that they've been bringing forward. To hear the NDP support for this incentive, which benefits primarily the super rich, is thus a little rich, given that they also at the same time support the Liberal carbon tax policies, which affect the working class.

Do you think it's a little rich in that sense?

Mr. Aaron Wudrick: Look, I just think we need to separate the intention from the outcome. I think most folks and all parties have good intentions, but that doesn't mean that the policy is going to be designed in a way that actually achieves the outcome.

I just don't see that this policy is doing so.

Mr. Brad Redekopp: In my riding, Saskatoon West, people are concerned about Jagmeet Singh's comments about holding up this Liberal government.

You've seen these incentive programs. As you think ahead, can you comment on some economic devastation that an NDP-Liberal coalition will do to Saskatoon, with environmental policies going in this direction?

Mr. Aaron Wudrick: I would just say that we have to remember that there are costs involved here. When we undertake policies with a good intention, there are collateral effects. That's the reason the government, with the carbon tax, for example, introduced the rebate. We don't believe the rebate always compensates people to the point that the government claims, but they recognize that there is a cost. That's why they introduced the rebate.

I think that applies to other policies. This is a policy that costs money. This is $300 million that could go to any number of other things, including things that might be seeking the same objective but do a better job of it. I think we have to be mindful and not waste money. Especially with measures like this, if you're going to target the money, target it where it's most needed. I would suggest that the people who can afford a $55,000 vehicle are not the most needy.

Mr. Brad Redekopp: Thanks.

Mr. Adams, I was looking through your notes. On the one hand, you're saying that supply will lag demand. I think this gets a little bit to the point we were just speaking about. You said that supply will lag demand “for the immediate future”, and therefore having short-term regulatory interventions is “out of step”. But in your recommendation three, you want the government to re-fund the ZEV incentive program.

To me, those are inconsistent. If the issue is that there is more demand than supply, then why do we need an incentive for that? The demand is there. The cars will get bought. People have the money to buy the Teslas. Why do we need the incentive program at all?

Mr. David Adams: The demand is there because the incentive is there. I think that's what's been proven in British Columbia and to a lesser extent in Quebec. British Columbia had a market penetration of about 9% ZEVs because they have had an incentive in place for the last many number of years. That is now stackable with the federal incentive. The same is true in Quebec as well.

Some might ask if an incentive is a good thing or a bad thing. I think Mr. Wudrick makes a good point; if you do the analysis in terms of cost per megatonne reduction, is this the best mechanism to spend money on? Maybe, maybe not; but the reality from the automotive industry is that those vehicles will not sell unless there is an incentive in place.

[*Translation*]

The Chair: Thank you.

● (1625)

[*English*]

We'll go to Ms. O'Connell.

Ms. O'Connell, are you ready to take part?

Ms. Jennifer O'Connell: Yes. Thank you, Chair. I had some Wi-Fi issues earlier.

I want to first pick up on this idea that was exchanged in the last round, that somehow incentives support vehicle purchases of $55,000 but not $25,000. They absolutely would. This notion is absolutely ridiculous. There is an upset limit. I want to clarify that for the record.

The other point that I think is important is the incentives to ensure that manufacturers are in fact investing in Canada. I come from Durham region. GM is here. Manufacturers across this country were on the verge of closing. All those workers would have been laid off if it weren't for electric vehicles and retooling in our country. I find it a bit rich, especially from the Conservatives, that they talk about taxpayers and protections but they don't seem to care about the workers who are actually making these vehicles in our community and in our country. I wanted to start off with that point. They forget that it's actually taxpayers receiving the benefits of these incentives, not to mention the environmental benefits as well.

On this point, I want to ask a question that perhaps you can answer, Mr. Adams. In some of our briefing documents, we have information that manufacturers could lose approximately $12,000 U.S. per vehicle just from retooling, resetting or re-establishing these vehicles within their fleet. One, is that a figure you would agree with? Two, do you or the industry have an idea of when that loss could over time be incorporated into the normal course of business, which would reduce costs overall and then reduce some of the need for these incentives to encourage manufacturers to move to electric vehicles?

Mr. David Adams: Sure.

I would start by saying that I don't believe at this point there's any manufacturer that is making money on a zero-emission vehicle. The quantum of that inherent loss is debatable, but there have been public figures out there in the neighbourhood of $9,000 to $15,000 or something like that. Again, it would depend on the vehicle.

As you know, the chief source of cost in the vehicle is the battery, so when the battery cost comes down significantly, which it is doing rapidly, then we'll get to a situation where we're coming into cost parity, where—to Mr. Wudrick's point—we wouldn't need a subsidy or an incentive anymore because the vehicles would cost the same amount.

Ms. Jennifer O'Connell: Thank you.

Do you have some idea of a time frame of where you would be in a position of cost neutrality, if not profit, which is the ultimate goal?

Mr. David Adams: In terms of cost parity with ICE vehicles, there are numerous dates out there. By the end of this decade is generally conceived to be a fairly accurate time frame.

Ms. Jennifer O'Connell: Thank you.

Mr. Breton, you talked about California's being a leader, and frankly, there are other countries and jurisdictions around the world.

Can you speak about any jurisdiction that has successfully integrated and built up domestic production of EVs without offering consumer incentives to change consumer purchasing patterns?

Mr. Daniel Breton: I haven't. I can't. All of them have included....

To us, what we see as the best pattern is to have rebates—subsidies—for the purchase of electric vehicles, as well as regulation. They go hand in hand.

With regard to the last question you asked, I remember when Toyota came out with the Prius 23 years ago. It was said, “You'll never make money out of this.” The former VP of GM said it was a joke, a PR stunt. Now, there are over 10 million hybrid vehicles sold. They're making a lot of money, and they're saying that they're making money with them.

Someone from Ford said that the first Mustang Mach-E that will be out on the market in a few months will make money, so it's not 10 years from now; it's right now.

● (1630)

[*Translation*]

The Chair: Thank you very much.

[*English*]

Ms. Jennifer O'Connell: Thank you very much.

[*Translation*]

The Chair: Go ahead, Ms. Pauzé.

Ms. Monique Pauzé: Thank you, Mr. Breton. I was going to ask you that question. These businesses are losing money. I had the impression they were making big profits. Thank you for answering that question.

Your brief states that you have a long version of it. I'd ask you please to send it to the members of the committee.

My question concerns the quite impressive figure that appears in your brief. Sales for the electric ecosystem are expected to rise to $190 billion between 2021—that's very soon—and 2030. That includes buses, trucks, infrastructure and charging stations for electric vehicles.

Can you provide details on your forecast?

Mr. Daniel Breton: It's quite simple. When you look at electric vehicle sales, you tend to focus on cars, but they also include trucks, transit buses and school buses. There are various types of vehicles, including electric and hydrogen vehicles.

The Quebec government has announced that it wants to have 1.5 million electric vehicles on the market by 2030. Quebec represents roughly 50% of the electric vehicle market in Canada and 23% of the market for light vehicles sold in 2019. We should multiply that figure by 4, but I've multiplied it by 2.5 to be more conservative. I have assumed that the rest of Canada will catch up to Quebec, but not necessarily reach the same level as Quebec or British Columbia. We multiply 1.5 million vehicles by 2.5 in Canada, which takes into account light vehicle and bus sales. The Canada Infrastructure Bank has a program for bus, school bus and charging infrastructure acquisition.

Then there are electricity sales. We did the calculation with Hydro-Québec on the weekend. We're talking about nearly $3.8 billion by 2030 in Quebec alone. If you add electricity sales across Canada, that amounts to approximately $9 billion.

All these costs and sales together represent roughly $190 billion by 2030. That's a lot of money, investment and employees.

Ms. Monique Pauzé: I haven't done all those calculations, Mr. Breton, but, from what I see, your figures are sound, and they aren't just pulled out of thin air.

The Chair: Thank you, Ms. Pauzé.

Ms. Monique Pauzé: Are the two and a half minutes up?

The Chair: Yes, we'll add 10 seconds to your next round.

[*English*]

Mr. Bachrach.

Mr. Taylor Bachrach: Thank you, Mr. Chair.

I have a question for Mr. Adams.

We have the ZEV mandate, which is on the supply side, and we have the ZEV incentives on the demand side, and those are driving sales. I think that's something you recognized in your remarks.

At the same time, we know that 80% of electric vehicles are produced in the jurisdictions where they're sold. Right now, there's $300 billion being invested in EV manufacturing. Why wouldn't Canada want a piece of that? Why wouldn't we want the jobs, the prosperity and the community well-being that comes with those excellent jobs?

Following back, don't these policies contribute to that goal of getting that economic development in our country?

Mr. David Adams: I have to say that you're wise to look for those jobs and for that economic activity. I guess I would just counter what you said. Your statistics may be right, but in Canada, 85% of what we build goes somewhere else, and that somewhere else is the United States. Really, only about 15% of what the five companies that manufacture in Canada produce stays in Canada.

For the recent announcements, for instance, that Ford and DaimlerChrysler made about electric vehicles, they're counting on those vehicles being able to be sold in the United States. I think it might have been a different story under the previous administration, and we'll see what happens under this administration.

I would say to your first point that what has been driving sales in Canada to date has been incentives, not mandates. People will say, well, B.C. has a mandate. Well, that regulation was just passed in July, as you know from where you live, so the mandate has had no effect yet. It's all been incentives that have been driving demand to date.

● (1635)

The Chair: You have 40 seconds.

Mr. Taylor Bachrach: Okay.

I wanted to ask a question of Mr. Pocard about Ballard, because I feel that he's been left out of this exchange.

It's a wonderful B.C. company, and I wanted to ask you, Mr. Pocard, about the niche with hydrogen sales. Is it a competing technology with battery electric vehicles, or is there a unique niche in transportation?

The Chair: Be brief, please.

Mr. Nicolas Pocard: I think it complements. We see hydrogen as a complement to electric vehicles, especially for heavy-duty applications for bus coaches and trucks. That is really where hydrogen will add value to the users. We see that as not complementing, but adding.

The Chair: Thank you.

Mr. Jeneroux, please, for five minutes

Mr. Matt Jeneroux (Edmonton Riverbend, CPC): Thank you, Mr. Chair, and thank you to the witnesses for joining us here today.

Before I get to my questions here, just to make a counterpoint to the Liberal member who said that taxpayers are the people who are receiving these incentives, look at who the taxpayers are who are receiving these incentives, and particularly at the ones who are not spending $50,000 for a car. I think that's essentially what we're trying to get at with this study. There are some of these cars, such as the Tesla Model 3, as was indicated by Mr. Wudrick, that are just completely out of the price range of many families, at least in my riding here in Edmonton, Alberta. It's a challenge to be able to afford those cars.

Again, I think this is well intentioned. To echo the comments of the Canadian Taxpayers Federation, this is a well-intentioned program. I do believe that having more electric vehicles on the road is a good intention. However, what we're seeing is that with the way this was set up.... Then it was amended, and it was even more ridiculous to get those models that are out of the price range of the average family.

For an average Dodge Caravan, a simple Google search puts you at $30,000. Are we getting these vehicles off the road? Are we getting the F-150s—the vehicles that may be the high emitters—off the road with this incentive? I would argue likely not. It's looking at those taxpayers who can afford those higher-model vehicles. I think this program has completely missed the mark in that regard.

Mr. Wudrick, we had somebody before our committee—I think from the Pembina Institute—who actually said that more incentives would be the answer to this particular program, to make it more attractive to Canadians. Could you perhaps comment on their comments that providing more money for this program would be the answer?

Mr. Aaron Wudrick: Well, I think, first of all, under the current program, certainly not. I already gave you the statistics. For the low-end vehicle, of the base model, the specific model that Tesla introduced to trigger the subsidy for the higher version, they sold only 126. They sold 12,000 of the $55,000 model. Therefore, with all due respect to Ms. O'Connell, if you can buy a $50,000 vehicle, I'm not sure that the average Canadian would say you're the one who needs the $5,000 subsidy. You can make the case for cheaper vehicles, but of course, there aren't that many vehicles that are ZEVs at that price point, and that is the whole reason for the subsidy in the first place.

Look. If you are going to look at ways to increase incentives, you have to target them at the people who could really use the help and where it will actually make the difference between, do I want to buy a vehicle at $20,000 that has a combustion engine, or do I want to spend the same amount on something that's cleaner?

Mr. Matt Jeneroux: Again, we both feel that it's well-intentioned, but getting to the point of where this is actually making a difference on the roads, there are moves to getting to 100% electric vehicles by, I believe it was 2040 that the government was looking at. To get there, how do we make that average for the middle-class Canadian to be able to afford them?

If they go into the dealership and see there's a $30,000 minivan there, or maybe that Tesla over there looks pretty attractive to the family, you know what, probably they're going to make the decision to go with the minivan and hope that the price comes down at some point in their lifetime. Therefore, is now the right time for these incentives, or is it waiting for that supply and demand to really equal out?

● (1640)

Mr. Aaron Wudrick: Yes, that is the big question that the committee and government need to ask themselves. How much will it move the needle? The challenge right now is that we're just not quite there yet.

When I think of myself looking for a new vehicle, the main barrier to buying a ZEV is the price. That is the only barrier, and it is nowhere near the price range. Even the $5,000 doesn't move the needle that much. I wish that we had more price-competitive ZEVs right now, but we don't, and I don't know that the $5,000 incentive is going to move the needle so much as to justify the cost.

The Chair: Thank you.

We'll go to Mr. Saini.

Mr. Jeneroux, I'll give you an extra 10 seconds if you're up again.

Mr. Matt Jeneroux: I'm okay. Thanks, Mr. Chair.

The Chair: That's my treat to you. I'll bank it.

Mr. Raj Saini (Kitchener Centre, Lib.): I'll take his 10 seconds.

Thank you, Chair; and thank you, everyone, for coming today.

Mr. Breton, I want to follow up with you, because it seems that Mr. Adams has a different opinion on ZEV mandates, and your organization has a different opinion on ZEV mandates.

Whatever reading I've done, the jurisdictions that have ZEV mandates tend to have more sales, and where the cars are made or deployed, the uptake is higher in that jurisdiction. We see China with mandates, and that's why the investment there has been growing, companies are going there because they know that they will have a market. If you look at the European Union, they're thinking of having mandates; they're voluntary right now, but they're thinking of going in a more concerted direction.

We heard Mr. Adams' opinion. I just want to hear why you think ZEV mandates work.

Mr. Daniel Breton: It's because manufacturers send the vehicles where there are mandates. It's as simple as that.

I can give you two examples. Right now, if you want to purchase a Toyota RAV4 Prime, you'll be able to get it in Quebec because there's a ZEV mandate. You won't be able to get it elsewhere in Canada.

I can give you an even better example than that. In 2011, the federal government and the Ontario government financed the assembly of the Toyota RAV4 EV. It was built in Woodstock, Ontario. Because there was no mandate in Canada but there was a mandate in California, all these vehicles were shipped to California and no one in Canada had access to these vehicles.

I think it's really interesting now that the Governments of Canada and Ontario are investing in the assembly of electric vehicles, but as Mr. Adams said, these are made to be shipped to the U.S. With a Biden government that intends to be more and more aggressive regarding EVs, I think there's a chance that if we don't have a mandate at the federal level, these vehicles will be sent to the U.S., Quebec or B.C., and the dealers in Ontario, Manitoba, Saskatchewan or Alberta won't be able to get these vehicles, and it's a real issue.

Mr. Raj Saini: You're suggesting, then, that with the mandate and with incentives, you would probably see an uptick in the market.

Mr. Daniel Breton: Absolutely. That's what we've seen elsewhere.

Mr. Raj Saini: The other question I have for you, Mr. Breton, is on mining, which you mentioned in part of your opening remarks. Right now, as you know, as ZEV production starts increasing, cobalt and lithium and other precious minerals will also be mined more heavily. Eventually, we're going to reach a point where either you will have ZEV vehicles that are retiring off the road, or where you are at a critical mass.

How do you think the recycling part of that will work?

Mr. Daniel Breton: Actually, there are two very interesting companies in Canada that work on recycling batteries. Now they have technologies that can recycle up to 95% of the components. That's very good, first of all, and one thing you cannot recycle is oil. Once it's burned, that's it.

There's a real market for that. It's coming to fruition, but right now one of the problems that we have with recycling is very simple. There are not enough batteries. Batteries last longer than we expected. Batteries for electric vehicles are either warrantied between eight to ten years or between 160,000 to 240,000 kilometres. They last a lot longer than we originally thought. My first hybrid vehicle that I bought 20 years ago still has the original battery in it.

Mr. Raj Saini: Thank you for those remarks, Mr. Breton.

I'd like to move to Mr. Pocard, because I want to get a little bit more insight from you regarding hydrogen. You said it's complementary to electric cars, but what I've read is that the production of hydrogen is still very expensive and can be cost prohibitive.

What can we do to bring the cost down so that it could be another alternative to electric cars?

Mr. Nicolas Pocard: That's a very good question.

I think we need to separate the vehicle from the energy source, that is, the the vehicle from the fuel cell. It is all about manufacturing. Volume will bring down the price and all of a sudden, the price of a fuel-cell engine will be comparable to manufacturing, or cheaper than manufacturing, a diesel engine.

Your question addresses the energy. With electric, you directly use electricity to recharge a battery. In a fuel-cell electric vehicle, you use energy carrier hydrogen to store the energy on board the vehicle.

Hydrogen can be produced two ways. Today I would say 95% of the hydrogen produced worldwide comes from a derivative of natural gas, and there are production plants in Canada here. This way, you don't reduce those emissions, so you have a carbon-intense hydrogen. The challenge is to be able to reduce that intensity by doing carbon sequestration. In Canada today, you have companies—and it's already done in Alberta—where you can take a natural gas stream, remove the carbon component during the production of hydrogen and store that or use it in the industrial feed.

● (1645)

[*Translation*]

The Chair: Thank you very much.

[*English*]

Mr. Nicolas Pocard: You can reach cost-parity with diesel.

[*Translation*]

The Chair: Your remarks are very interesting from a technical standpoint.

We will now begin the third round of questions.

Go ahead, Mr. Godin.

Mr. Joël Godin: Thank you, Mr. Chair.

Mr. Breton, you may have an opportunity to answer the question I left open a little earlier.

My next question is for Mr. Adams.

Mr. Adams, let's imagine that the government decides tomorrow morning to stop subsidizing the sector of the industry devoted to producing zero-emission vehicles. What would the players in that industry do?

[*English*]

Mr. David Adams: I think the answer to that is what would Canadians do, and I think Ontario provided a good example. When the Ford government rescinded the subsidies, electric vehicle sales fell 45%. That's what happens.

If those vehicles are sitting on lots, then I suppose at some point they may or may not sell, depending on how interested people are in purchasing them at their real cost.

The reality, though, is that if there weren't incentives in place, probably.... It's not the manufacturers, but the dealers, who will order and sell what customers want to buy.

[*Translation*]

Mr. Joël Godin: I have another question.

If I wanted to order a car in Quebec or British Columbia tomorrow morning, I'd have to put my name on a waiting list. The waiting time is approximately two, three, four or six months. There's a market for that. I think consumers have taken a big step.

What troubles me in this process is that the automobile industry is asking for help. You have to invest in order to do business. The industry has done that in the past, but I'm convinced it did so because it anticipated a business opportunity. Consequently, instead of assisting consumers or car manufacturers, perhaps we should invest in an awareness campaign to inform people about the environmental impact of automobile production instead of giving money to those producers.

Would that be a feasible suggestion?

How would members of your organization perceive that?

[*English*]

Mr. David Adams: We would support that wholeheartedly. If you look at a stool with three legs, one leg is incentives, another leg is infrastructure and the third leg is a broad educational campaign. I think it has been proven time and time again that we need more education about electric and hydrogen vehicles.

[*Translation*]

Mr. Joël Godin: Mr. Breton, we know that Canada has regions where it's very cold. With the advent of large numbers of electric vehicles, is the power grid ready to respond to increased demand in winter, if a power shortage occurs or the temperature falls to -30?

Mr. Daniel Breton: That's an interesting question.

People don't realize that increasing numbers of electric vehicles can be preprogrammed to recharge at night. Demand for electricity occurs during the day, not the night. Demand is high mainly between 7 a.m. and 7 p.m.

In many parts of the world, vehicles can be preprogrammed to recharge when electricity is cheapest or demand is low. We can do that.

I want to say one thing. A few years ago, I was living in a place that often had power outages. I used my electric car battery as a power source for my refrigerator and computer so I could keep working. When I needed power because my battery had gone down, I went and recharged my car, then went back home. People who had gas cars at the time couldn't fill up because service stations are normally closed during a power outage.

● (1650)

Mr. Joël Godin: So zero-emission vehicles can serve many purposes.

Mr. Daniel Breton: Exactly. We'll do that using a technology we call

[*English*]

“vehicle to home” and “vehicle to grid”.

[*Translation*]

So vehicles will serve as power and energy sources. That will be the case of trucks and buses in particular. You already see that in regions in the United States where electricity rates are very high.

Mr. Joël Godin: I'm still learning things at my age.

Now I'm going to talk about hydrogen.

Mr. Pocard, your sector is interesting but not well known. I'm going to ask you a very simple question.

Why can't you make a breakthrough in developing businesses associated with hydrogen-based technology?

Your technology promises benefits, but we sense that you're very shy. You say you complement other technologies, but you're the small player compared to electric vehicles, which are in turn small players relative to gas cars.

The Chair: I'll ask you to answer briefly, Mr. Pocard.

Mr. Nicolas Pocard: That's a very good question. Our technology appeared a little too soon compared to other technologies. The electrification of electric vehicles also helps hydrogen. The decline in electric car costs is paving the way for hydrogen-based technology. We're seeing very rapid development.

It took a long time to start up, but now we're seeing a sharp increase in the number of vehicles. It's developing quickly.

The Chair: Thank you, Mr. Pocard.

[*English*]

Go ahead, Mr. Schiefke.

[*Translation*]

Mr. Peter Schiefke (Vaudreuil—Soulanges, Lib.): Thank you very much, Mr. Chair.

I'm a member from Quebec. My province is rich in natural resources such as lithium, which will help in electrifying our society

The Minister of Innovation, Science and Industry recently declared that Canada should support the development of battery supply chains in Canada using Canadian resources. Quebec's also trying to develop a lithium battery sector.

Mr. Breton, what federal measures are likely to encourage development of those supply chains in Canada?

Mr. Daniel Breton: Thank you for your question.

The Strategic Innovation Fund is an extremely promising program that's already in place. The Minister of Innovation, Science and Industry came to our annual conference two weeks ago to discuss what interest there might be in creating a national transportation electrification industry.

It's important that the various provinces cooperate. There are strengths in Quebec, Ontario, Nova Scotia, Manitoba, Alberta and British Columbia. If we coordinate our strengths rather than compete with each other, we can achieve very good results.

I think it's extremely important to have an innovation assistance program. The Canada Infrastructure Bank program to assist in the acquisition of school buses and recharging stations is important too. Ultimately, we have to accelerate innovation by promoting electric vehicle purchases.

It's very simple. The discount provided on the purchase of an electric vehicle is an incentive to innovation. Its purpose is to increase the number of electric vehicles on the road. People from General Motors and Tesla recently said we could achieve virtual parity between electric vehicles and gas equivalents around 2025. Supporting innovation with a discount on the purchase of an electric car is like supporting innovation in the pharmaceutical, health and even oil and gas industries to reduce pollution.

If I'm not mistaken, the government stated in the throne speech that we want to make Canada the most attractive country in the world for businesses that use clean technologies. I'm entirely in favour of that.

● (1655)

Mr. Peter Schiefke: Thanks very much, Mr. Breton.

[*English*]

I have another question for you. This is regarding the impact of Conservative cuts to electric vehicle subsidies in Ontario and the fact they now don't have a mandate for electric vehicles by 2030, 2040 or 2050. What impact is that going to have on the typical family in Ontario being able to have access to and afford an electric vehicle? What impact is it going to have on the Ontario government's ability to reduce the province's greenhouse gas emissions because of that?

Mr. Daniel Breton: Is the question for me again?

Mr. Peter Schiefke: Yes.

Mr. Daniel Breton: I think that Premier Ford has missed a great opportunity to be able to be a leader in North America, because there are a lot of OEMs in Ontario. In their economic update a few weeks ago, they said they wanted to be a leader in building electric vehicles in Ontario, but they don't set an example—there's no rebate and they don't have anything to support infrastructure installation.

I think there's a great opportunity for Ontario, for Canada, but we have to be aligned because right now there are discrepancies that are making Ontario lag behind B.C., for instance.

Mr. Peter Schiefke: So what we're looking at essentially is a situation where Ontario may produce a large number of electric vehicles, but the people living literally a kilometre away from that plant may not be able to access those vehicles because there are no subsidies in place. Because there's no mandate, those automobiles are going to be shipped to other jurisdictions—Quebec, British Columbia, California—where there are those incentives. Is that correct?

Mr. Daniel Breton: Yes, exactly.

I was talking about Toyota, but we could say the same thing about Subaru, because Subaru sells their plug-in hybrid vehicle in Quebec and in the Ottawa region, but not elsewhere in Canada because there's a mandate in Quebec.

So it's a real issue because I know that a lot of people outside Quebec and B.C. say that they want to buy an electric car, but they can't get one because there are none on the lot. When you are a dealer, you have to make sales and if someone comes to a dealer—

[*Translation*]

The Chair: Thank you, Mr. Breton. You gave a good answer to the question. We understood the essential points..

[*English*]

Mr. Peter Schiefke: Thank you, Mr. Breton.

[*Translation*]

The Chair: Ms. Pauzé, you have the floor for two and a half minutes.

Ms. Monique Pauzé: Thank you, Mr. Chair.

Mr. Wudrick, you say in your brief that taxpayer dollars are valuable. Once again, I'm going to ask you the question I asked at the start.

The Canadian fossil fuel sector received $600 million from the federal government in the 2019-20 fiscal year. Earlier you only discussed subsidies for the Trans Mountain system, but subsidies are also granted for fossil fuels, and they're bigger than the subsidies for electric vehicles..

Don't you see that as a contradiction? On the one hand, electric vehicles will help us achieve our greenhouse gas reduction targets, which will be beneficial for health, and, on the other hand, subsidies are being granted to make people sick.

[*English*]

Mr. Aaron Wudrick: Let me be clear that we oppose those two. We do not say that you should subsidize fossil fuels and not subsidize EVs. We say that you shouldn't subsidize either of them.

When it comes to EVs the question is the value for the dollar. There are other measures you can take. Is spending this money getting you the greatest reduction for the dollar? I am suggesting that there has been no evidence that this program is getting you the best bang for your buck in terms of reduction.

[*Translation*]

Ms. Monique Pauzé: I think I gave you some figures earlier. Others have discussed them too, but that doesn't seem to have convinced you. If you have any arguments other than the ones already stated, please send them to us.

Now I'll go to Mr. Pocard. I heard a lot about hydrogen at the Zoom meetings I've attended. It seems it's important to make trucks pollute less.

Do you think all forms of hydrogen are equally good? There's highly polluting hydrogen, but there's also green hydrogen.

Mr. Nicolas Pocard: You're right. To take action on greenhouse gas emissions, we need decarbonized hydrogen or low-carbon hydrogen. It's produced in two ways. Green hydrogen is produced by electrolysis involving renewable energy: hydroelectric, solar or wind power. Blue hydrogen is produced using natural gas. When you use carbon sequestration, what's released into the atmosphere is low-carbon hydrogen.

● (1700)

The Chair: Thank you.

I'm going to try a fourth round of questions.

Ms. Monique Pauzé: Twenty seconds plus the 10 seconds from earlier, that gives me 30 seconds.

The Chair: I'm doing what I can, Ms. Pauzé.

[*English*]

Mr. Bachrach.

Mr. Taylor Bachrach: Thank you, Mr. Chair.

Mr. Breton, I want to ask you about economies of scale and how they play into this whole picture.

We've heard a lot about the price of electric vehicles. I agree that price is one of the barriers that might prevent people from buying a new electric vehicle, although I think if you look at it from a full-cost accounting perspective and count in the maintenance costs and the low operating costs of using these vehicles, the price is at least a wash, if not in favour, of EVs.

This seems to me like a change that's going to happen inevitably. These vehicles are cheaper to run and they're more fun to drive, especially the light-duty category. Are we simply just talking about priming the pump with these incentives?

To what degree could the incentives actually be temporary once the market size gets big enough to drive down price by itself because we have that economy of scale?

Could you speak to that?

Mr. Daniel Breton: Yes. I see you know what you're talking about because you have an EV and you drive an EV.

Total cost of ownership is really important. Very often people think about the purchase price, but they forget the energy price, the insurance price, the maintenance price and the resale value. When you start adding these numbers, I'm surprised that Mr. Wudrick would say that people can't afford it.

When you start to add all the calculations, in the end an EV can be just as affordable as a Honda Civic. It's really surprising to hear that.

When we talk about taxpayers, I want to mention one thing because this is very important. If we create jobs with electric vehicles—from light to heavy-duty, from infrastructure, to research, to mining—that's people with good-paying jobs who will pay taxes.

In the end we have to look beyond just the subsidy for the purchase of electric vehicles. It's the whole ecosystem that we're thinking of because we're looking at a new industry altogether. We have to think beyond just the price of the vehicle. We have to look at, as you said, the total cost of ownership. We think that is very important.

I don't know if you know this, but in 2012, Barack Obama, when he was President of the United States, said that there have been subsidies in the U.S. for oil and gas companies for a hundred years. If we can get subsidies for just 10 years, I think we'll be okay because by then the price will be at par, at least.

The Chair: You have 15 seconds.

Mr. Taylor Bachrach: Thank you for your comments, Mr. Breton.

I was just thinking that we're on the brink of this massive technological shift and we're probably going to look back on this debate in 50 years and laugh a bit to ourselves. I certainly hope we do. I think we're going to get to that point very soon where these incentives are no longer needed.

[*Translation*]

The Chair: Go ahead, Mr. Godin.

Mr. Joël Godin: It's Mr. Redekopp's turn.

The Chair: All right. Thank you, Mr. Godin.

Go ahead, Mr. Redekopp.

[*English*]

Mr. Brad Redekopp: Thank you.

Mr. Breton, I think I saw it in your notes that half a million jobs will be created from this. Are you saying those are new incremental jobs, plus 500,000? It seems to me that we'll be losing jobs on the production of ICE vehicles, and they will be in a sense replaced with the production of EVs.

Is it truly plus 500,000 or is there some netting go on there?

Mr. Daniel Breton: Well, there are net new jobs in electric vehicles. From my point of view and many people's point of view, if we don't make the switch towards electric vehicle production in Canada, whether light or heavy-duty, well, I doubt there will be an automotive sector 15 to 20 years from now in Canada, whether light or heavy-duty, because we are going toward electric vehicles anyway.

We're thinking about saving jobs and creating new jobs, whether it's for infrastructure providers, whether it's for utilities or whether it's for research and development and mining. I mean, there were some mines that were closed, and they're opening back up again because of electric vehicles. There are a lot of new jobs.

Mr. Brad Redekopp: Okay. Thank you for that. I think the important point there is that this is not necessarily incremental tax revenue, as you said, though, because we're just saving jobs, which means we're keeping those jobs in Canada. There may be some incremental too, but I think it's important to note that.

I want to go to you, Mr. Adams, to talk about non-tariff trade barriers. In October I asked Environment Canada if the regulations they do are being checked against our international treaties. The answer I got back was, no, it's not their responsibility; ask Global Affairs.

It just makes me wonder if Environment Canada's creating regulations and they're not considering our trade treaties. That's a concern, I believe. You represent automakers from across the globe. They have maybe not head offices in Canada but they have operations here. They're covered by different trade treaties that we have, such as CETA, TPP, etc. Does it concern you that Environment Canada is putting in regulations without concern for the non-tariff trade barriers that might be created because of that?

● (1705)

Mr. David Adams: Trade is an interesting subject. I think oftentimes what's been raised in front of this committee is the number of EV models available in Canada, for instance. There are so many other models that are available elsewhere around the world.

I think Canada, for a long time, has subscribed to harmonizing or aligning its safety standards and its emissions standards with those of the United States. To the extent that we're tied with the United States, then the chances are that we're only going to get product offerings that meet both the safety standards and the emissions standards of the United States. That makes sense, because the automotive industry is a regional industry. There's a North American industry, there's a European industry and there's an Asian industry.

But to your point, because there are different standards—not necessarily better or worse, but different—that does preclude some models from coming into the Canadian marketplace.

Mr. Brad Redekopp: Is it true that if there's a regulation in Canada that causes you to have to...? Let's throw something out: There needs to be a certain Canadian content in a battery, let's say, and that car is currently produced in Japan or somewhere. That's now imported. It creates increased costs for Canadians, does it not? If those regulations aren't standardized properly, Canadians just end up paying more. Is that a fair statement?

Mr. David Adams: I think it's a fair statement if you look at the recent USMCA trade agreement, which basically was looking at trying to bring more manufacturing into the North American region. I think the reality of doing so is that products, especially automobiles that are made in the North American region, will cost more because of the supply chain realignment that had to take place to accommodate the content provisions of the new USMCA agreement.

Mr. Brad Redekopp: Turning to my next question, Mr. Breton said that "a ZEV mandate is unavoidable", and that "OEMs are not responding to consumer demand". I worked in the manufacturing industry for quite a number of years. I know what's involved in designing and bringing a new vehicle to market. Could you maybe comment a little bit on OEMs not responding to consumer demand?

Mr. David Adams: Well, I think they are. As I noted in my remarks, between now and 2025 my own members, my 15 members, will have more than 125 models in the marketplace. It's an issue of timing, as I indicated before.

Just in terms of a key indicator, on the iZEV program that's been put in place, the vast majority of those funds that were intended to last three years have already been fully subscribed to by consumers. So to say that there's no demand—I think the data refutes that.

The Chair: Thank you.

Mr. McLeod.

Mr. Michael McLeod (Northwest Territories, Lib.): Thank you, Mr. Chair.

I've been listening with interest. I appreciate all of the people who presented here today.

Mr. Breton, I had an opportunity to drive a hybrid vehicle. I test drove it in the town of Inuvik, which is quite far north, in in the northern part of the Northwest Territories. It was -32 when I got the vehicle. That night when I parked it at the hotel it went down to -37. The next morning, the vehicle was no different from when I parked it. It started up, no problem. It was a half-ton truck. It was no different from a regular vehicle, except it was a hybrid. It was quieter. It had quicker response. I really enjoyed the vehicle. I live in the north, where most contractors in industry be it oil and gas or mining, drive the larger one-ton trucks or half-ton trucks. They start them in October and let them run until March. They don't shut them off. Usually they're diesel trucks.

A lot of people would like to see that idling time reduced. That includes governments. The cost of the batteries is so significant. The batteries are lasting longer; they can last eight years plus. They cost up to 25% of what the vehicle costs. I understand there are lots of different batteries on the market and more coming all the time. We probably have more battery scientists then we have ever had in our history.

With your knowledge, do you see something down the road: a graphene battery, a mechanical battery?

Can we look into the future and say something can be purchased for the electric vehicles?

● (1710)

Mr. Daniel Breton: Yes, absolutely.

First, I took a trip at about -25 when I went to Saguenay from Berthierville where I live. We had no problem whatsoever. When it's really cold, it's a lot easier to start an electric vehicle than a gas vehicle. We had to boost a few gas vehicles when we did some tests in past winters. I understand absolutely what you're saying.

To your point, yes, General Motors, Tesla and others are working on third-generation batteries that will have 50% more energy density, thus a lot more range. It will be 50% to 60% cheaper by 2024-25. That is very close to now. After that, by 2026-27 we're thinking about solid state batteries, the next generation batteries that will have even more range. We're talking about 800 to a 1,000 kilometres with five to 15 minutes to recharge. Things are evolving really quickly. With the likes of Professor Jeff Dahn at Dalhousie University who works with Tesla, Karim Zaghib who works for IREQ at Hydro-Québec, and others in Canada, huge progress is being made with battery technology nowadays, and battery manufacturing as well.

I think the pickup trucks are going to be a lot more affordable than people think when you calculate the total cost of ownership. They are coming to market in 2021-22. It's tomorrow. I know that a lot of people who work in construction are interested in buying electric pickup trucks because they know how expensive gas is for trucks.

Mr. Michael McLeod: Regarding the incentives, I find there's so little knowledge about zero-emission vehicles. We live in the north here. There are not a lot of zero-emission vehicles, but there is a huge need. We have really low greenhouse gas emissions, but at the same time we have a lot of vehicles idling in the north.

Mr. Daniel Breton: Yes.

Mr. Michael McLeod: I don't know if most sectors, industries and governments would buy and test these vehicles without the incentives. I think the educational component is really needed. This is beyond the cost of the vehicle, as you said. We need subsidies to get people comfortable with the zero-emission vehicles. We need to be able to make sure that people know that there will able people who can do repairs.

The Chair: Yes.

Mr. Michael McLeod: We have to be able to know that, yes, we can get parts for the vehicle. We need to know that people can make money with charging stations—all of these things.

The Chair: Yes.

Mr. Michael McLeod: But without incentives I don't think we'll ever get there.

The Chair: That's a good comment, but we won't have time for an answer.

We can squeeze in a fourth round if we reduce the time of the questions. I figure if we do four, four, two, two, four, four, we'll get it done.

We start with Mr. Hoback for four minutes, please.

Mr. Randy Hoback (Prince Albert, CPC): Thank you Chair. It's been fascinating listening to this.

I got excited. I was at a consumer electronics show in Las Vegas about five years ago, where they were talking about their charging stations, and they were just starting to introduce these cars. The talk, then, was of course about the grid and how we were going to support that and all of the things that we would need around this new technology.

My first question is with regard to this becoming more common on our streets. When there is a car accident and emergency response is attending to these vehicles, is there anything that they should be looking at now and putting into their inventories to handle, say, a rollover or a vehicle accident, or something like that?

● (1715)

Mr. Daniel Breton: Who is the question for?

Mr. Randy Hoback: You guys know the industry very well. I'm curious about what you both think.

Mr. Daniel Breton: Well, actually, there is training now for firemen and emergency people regarding electric vehicles. But if you're talking about rollovers, they are really rare because the weight of the battery at the bottom of the vehicle makes them a lot more stable than a normal gas vehicle, especially when you're talking about SUVs. They are giving training nowadays to emergency people and firemen who work in the industry so they can manage everything related to wiring.

Mr. Randy Hoback: Exactly. When you look at that end of it, you see that we have to prepare not just the guys buying the car and the people producing the car, but all of the areas around it that help support the whole automotive sector. I know Mr. McLeod talked a little bit about that too.

One other thing I was curious about is when these batteries go in vehicles, they have a duty life cycle—I think that's the appropriate way to call it. There comes a time when they are no good for a vehicle, but they still have life left in them and could be used somewhere else. How are we making sure that there is commonality? When you take that battery out of the vehicle and, let's say, put it into a fridge or a house or something like that, you want to make sure that you get the full value out of the battery.

Mr. Daniel Breton: Well, you can pile up batteries from electric vehicles for energy storage, where, for instance, you're away from a grid and you get energy from, let's say, solar power or wind power. We see that in Hawaii and elsewhere. These batteries can last a lot longer, so they have their second life as storage components. After that, they can be recycled up to 95%. A battery can last for 20 to 30 years.

Mr. Randy Hoback: Maybe the automotive sector can answer this better. Are we seeing some commonality in the construction of these batteries so that they can actually be unplugged from the car and plugged into the house? Are we seeing some commonality so that that can actually happen? Is that actually in the design criteria for these batteries at this point in time? Is it talked about as they develop these batteries?

Mr. David Adams: There are standards being developed for the secondary-use cycle. Mr. Breton is correct on how they can be used afterwards. Really, most people don't know that there is a lot of life left in the battery—it's 80%. Once that battery depletes below 80%, it's no longer useful as a car battery but has a number of years left for use as a secondary source.

Mr. Randy Hoback: Okay. You say “a number of years”, so it can go into a house for 10 years. I guess it depends on the size of the battery and everything else.

I'm a farm kid and I can remember the days when we used to hook up our hydraulics. A John Deere tractor had a different set of hydraulic ends than a Case tractor had. I want to be sure that we have some commonality.

One thing about the USMCA that would attract opportunity—a potential, and maybe we've missed it—is through the creation of North American regulations. By having everything done in North America and being first at it, our volumes are so big here that it would force the other parts of the world to take on our regulations, which would then become the norm. It would give us the manufacturing advantage here in North America. Are we actually going to be able to accomplish that?

The Chair: A 10-second answer, please. It's a yes or no, really.

Mr. David Adams: No, we actually don't have the dominant regulatory standard. There are other standards around the world that are [*Inaudible—Editor*].

The Chair: Thank you.

We'll go to Mr. Longfield. He'll be splitting his time with Mr. Saini, so two minutes each.

Mr. Raj Saini: Thanks, Chair.

Mr. Lloyd Longfield: Okay, I'll go quickly.

Mr. Adams, I missed the beginning of the meeting. I wanted to ask you a question from our auto caucus. Thank you for being there on Monday.

We saw our vehicle sales go down all across Canada during COVID. We looked at possibly having some type of an incentive program, like cash for clunkers, could maybe get us towards ZEVs if we had an incentive to get 12-year-old cars off the road.

Could you have a quick comment on that? Then I'll turn it over to Mr. Saini.

Mr. David Adams: We believe that reducing emissions takes a multi-faceted approach. In addition to getting more EVs on the road, you need to address the current fleet, which is much larger by orders of magnitude. Cash for clunkers or a scrappage program would take care of vehicles that are 12 years or older and get them off the road.

Mr. Lloyd Longfield: Thank you.

The Chair: Go ahead, Mr. Saini.

Mr. Raj Saini: Thank you, Mr. Chair, and I thank all of you again for coming here today.

I have more of a philosophical question, and it's for Mr. Adams and Mr. Breton. I don't need a long answer.

If we look at what it takes to manufacture an electric vehicle, whether it is with lithium, cobalt, nickel or copper.... These are all precious minerals. We have the mining capacity to do this in an environmentally sustainable way, yet we're importing these products.

For our own defence capacity and national security, could this not be a way of incentivizing other industries, to make sure we protect our national security?

● (1720)

Mr. Daniel Breton: Do you want to go ahead, Mr. Adams?

Mr. David Adams: Do you mean national security in the sense of the raw materials you're referring to?

Mr. Raj Saini: Yes.

Mr. David Adams: Yes, certainly. If electrification and electric vehicle manufacturing are going to take place, it makes sense, as a corollary of that, to have battery manufacturing in Canada too, because it's too expensive to move those from one jurisdiction to another. It makes sense that you would want to try to develop the whole supply chain.

Mr. Daniel Breton: I agree with Mr. Adams. I think there's a case to be made about the geopolitical implications. We've seen that with oil in the past. I think making batteries with minerals from North America—in Canada, for example—is strategically very important. We've seen that with COVID. It has been hard to get pieces from Asia and right now most batteries are made in Asia.

If we want to be more independent, in a sense we cannot be totally independent; we have to be codependent, especially in North America. But I think it makes sense to have batteries made with minerals from Canada and the U.S. for the North American market. Geopolitically, it makes sense.

Mr. Raj Saini: Thank you very much.

I want to pass the rest of my time to MP O'Connell.

The Chair: There's not a lot of time left. I had Ms. O'Connell on the list anyway, at the end.

Mr. Raj Saini: That's okay.

Ms. Jennifer O'Connell: Mr. Chair, I can go in the next round.

The Chair: Yes, okay. We'll get to you, Ms. O'Connell.

Go ahead, Madame Pauzé.

[*Translation*]

Ms. Monique Pauzé: Thank you, Mr. Chair.

Mr. Adams, you say in your brief that short-term regulatory intervention promoting the purchase of zero-emission vehicles is out of step with the medium- and longer-term time horizon of the transition the industry is going through. My impression is that it's more the manufacturers that are out of step with reality.

In 2008, I wanted to buy an electric car, but the dealers tried to persuade me otherwise and encouraged me to buy a gas car instead.

Do your members, who are dealers, train their salespeople on how to promote electric vehicles?

[*English*]

Mr. David Adams: I think an area we can always improve upon is the education not only of the public but also of the dealerships.

As you know, the dealerships are independent businesses of the vehicle manufacturers. Dealerships are in business to make money and sell vehicles. If they are looking to sell a vehicle, they'll generally try to sell what the consumer is looking for.

Maybe you were referring to a hybrid in 2008. The reality is that we're at the nascent point of this industry. It's just beginning—

[*Translation*]

Ms. Monique Pauzé: No, they really suggested that I buy a gas car.

Getting back to the supply issue, several people have told us, since this committee's first meetings on zero-emission vehicles, that vehicle supply is still a problem today.

I'm going to ask a question related to the one my Liberal colleague Mr. Saini asked earlier. China and Europe have legislation on zero-emission vehicles, which has accelerated the industry's transition.

Am I correct in understanding that you agree with this kind of legislation?

The Chair: I would ask you to respond briefly, Mr. Adams.

[*English*]

Mr. David Adams: I would say no. China has the largest population in the world. It has a number of manufacturers that are indigenous to China. We don't. China is also prescribing that manufacturers not build ICE vehicles as of 2035. I don't think Canada is in a position to take draconian measures like that.

The Chair: Mr. Bachrach, you have two minutes.

Mr. Taylor Bachrach: Thank you, Mr. Chair.

I have a question for Mr. Wudrick.

Mr. Wudrick, you were saying earlier that you represent an organization that's concerned about taxpayers and the costs they bear. Health Canada estimates that air pollution, especially in urban areas, causes 14,600 premature deaths every year and that the social, economic and public welfare consequences cost taxpayers $114 billion a year.

If we're talking about incentives for electric vehicles that reduce air pollution, as well as climate pollution, shouldn't we be considering those health benefits of improving air quality when we're looking at the impact on taxpaying citizens?

● (1725)

Mr. Aaron Wudrick: Sure. Again, I don't have any issue with the objective of this policy.

My point is this: If you have people who are in a position to buy a $55,000 vehicle, are you actually changing many minds by giving them $5,000 of taxpayer money? It's great that they buy a cleaner vehicle, and it's great that there are health benefits for all of us, but I'm simply questioning whether or not they've analyzed the marginal change in those purchases, based on the policy.

Mr. Taylor Bachrach: I hear you bringing this up again. It's around the efficacy of these incentives. However, the jurisdictions that are leading, in terms of the number of electric vehicles, all have these incentives in place. Isn't that a proof point that says that these incentives work to incentivize the purchases?

Mr. Aaron Wudrick: I've actually heard contradictory things today. I've heard, on the one hand, that we need the subsidy to stimulate demand, but I've also heard that demand is so high that people can't find them on the lots. I have heard that the life cycle, based on the total cost of the vehicle, is comparable to combustion engines. Well, if it's comparable, then why do we need the subsidy?

I mean, I'm hearing contradictions here. Again, I have no issue with ZEVs. It would be great if we could all drive them and if they were all priced competitively. I'm simply questioning whether giving $5,000 to people who can afford a $50,000 car is a good use of taxpayer money.

[*Translation*]

The Chair: Thank you.

Mr. Godin, you have the floor.

Mr. Joël Godin: Thank you, Mr. Chair.

Mr. Breton, earlier we talked about the capacity to generate the electricity to meet demand. We know that any change made in a market requires a period of transition and adaptation.

Wouldn't it cause problems if we suddenly put a large number of zero-emission vehicles on the road without installing recharging stations?

If, tomorrow morning, manufacturers managed to build enough electric vehicles to meet consumer demand, do you think the recharging station network could meet demand in the following three months?

Mr. Daniel Breton: No, but no manufacturer could meet demand in the following three months.

That will all happen gradually. More and more stations are being installed across North America every week. Infrastructure is extremely important; you're entirely right about that.

People tend to think the problem's related to highway infrastructure. In fact, it occurs more frequently in downtown areas. Many people can charge their electric cars at home. That's where more than 80% of recharging is done. However, people living in condo towers who can't plug in their cars need quick-charging level 2 street chargers. The Canadian government and provincial governments will have to look into that.

Incidentally, just a few days ago, calls were made in Edmonton for more recharging stations to be installed in that city.

You're correct in saying that infrastructure has to follow. Natural Resources Canada has established a recharging station installation program. As it's all rolled out in exponential fashion—we're already seeing this—more and more stations will be required. The British Columbia example is indicative of this. Ontario and Manitoba will have to go with the flow.

Mr. Joël Godin: Thank you, Mr. Breton.

I probably expressed myself poorly when I asked my question. I'm well aware of the fact that manufacturers won't be able to produce high-quality electric vehicles in the next three months, but they'll eventually have to produce them to meet future market needs.

Mr. Adams, what do you think of Quebec's program to reduce the number of gas vehicles to zero starting 2035?

Will your industry be able to meet needs or will Quebec be neglected?

[*English*]

Mr. David Adams: That's an interesting question. I think if you look around the world, lots of different countries are setting targets for banning internal combustion engine vehicles.

I think the reality is going to be more what consumers will do if their choice of the new vehicles that they want to buy is somewhat limited. If they're all EVs, there may be some people who don't want to buy an EV. What are they going to do? They'll continue to drive their used vehicle, or they'll import a vehicle from elsewhere. That's neither beneficial to Quebec business, nor to Quebec air quality, I would say, because they're just keeping older vehicles on the road longer.

● (1730)

[*Translation*]

Mr. Joël Godin: I'd encourage you to improve the way you produce electric vehicles so you can speed things up and meet the demand. I would also remind you that there are waiting lists in Quebec and British Columbia. If there was a supply, I'm convinced consumers would be ready to buy, and I don't think it's a matter of subsidies. It's much more a matter of availability. The industry has a great opportunity to make its contribution. I'm convinced it will be profitable for you given the investments you're making and the expenses you're incurring.

You have to bear in mind that designing a new product costs a lot of money at the outset, but it becomes profitable later on. If you're prepared to share your profits in the 10, 15, 20 or 30 years, subsidies may be warranted. If you say that you don't want subsidies, that you're going to invest and that you won't share future profits, I don't see any problem with that.

The Chair: Thank you.

[*English*]

Ms. O'Connell, why don't you take us home?

You have four minutes, please.

Ms. Jennifer O'Connell: Thank you, Mr. Chair.

I feel compelled to perhaps correct the record of what we heard today for those who may not have understood. The demand and the access is an issue, because the EVs are being sent to jurisdictions where there are incentives or regulations. Therefore, incentives and regulations equal demand, which is ultimately helping consumers and the environment, if this is what is called an honourable goal. We've heard testimony stating that without the incentives, demand has dropped in the case of Ontario. Where there are incentives, there is demand. I just felt that this point has to be clarified.

My question is for Mr. Pocard. I'm sorry you haven't been able to get on, but I did actually have a question for you. I'm not as familiar with your industry, so forgive me.

You spoke about support for R and D, which is always great. Canada tends to be a leader in research and development, but where we tend to fall short is the commercialization of it. How, as a Canadian government, can we make investments that would ultimately also help commercialization, and then ensure that the costs are passed on to Canadian consumers? I ask because we've talked a lot about this industry and the jurisdictions that are building or manufacturing vehicles that are more affordable in those same jurisdictions.

If we make this investment, how do we commercialize it here, so that Canadians ultimately reap that benefit from that investment—outside of the environmental goals obviously—in terms of commercialization and economic goals for the average Canadian?

Mr. Nicolas Pocard: Today Canada is uniquely placed, with companies like Ballard and others. In Canada, we really have leadership in technology development and then we are providing.... Today at Ballard, we are exporting 100% of our fuel-cell systems outside of Canada. We sell our engines to U.S., China, as well as Europe.

One way to help would be to create demand here in Canada, as we discussed...everything requesting ZEV mandates. Especially for heavy-duty mobility buses and trucks, as long as it's technology neutral, I would actually invest in that. As long it meets the objective of having zero-emissions, regardless of whether it's battery-electric or fuel-cell electric, it doesn't really matter. Canada has a chance to be able to locally produce fuel-cell technology using Canadian IP and workers here. It doesn't require a lot of minerals, imports or anything. It's just standard construction material.

We have an opportunity to build on this industry here, but we need to create the demand for vehicles. Whenever we have opportunity with those 5,000 zero-emission buses, we need to make sure that both technologies—battery-electric and fuel-cell electric—have a chance to be deployed. It's up to the user to define what technology fits the best for the use case. It's for heavy-duty trucks, long-haul transportation and longer route coaches where hydrogen provides that path to decarbonization and zero-emission mobility.

● (1735)

[*Translation*]

The Chair: Thank you, Mr. Pocard.

[*English*]

Ms. Jennifer O'Connell: So if—

The Chair: Ms. O'Connell, we have only maybe 15 seconds left for a comment.

Ms. Jennifer O'Connell: I just want to make sure that it's not as much of the front-end R and D, but more of the demand investment that is needed.

Mr. Nicolas Pocard: Yes, absolutely.

Thank you.

The Chair: Perfect. Thank you.

[*Translation*]

This is really fascinating. We've had an opportunity to ask some very good questions.

Mr. Peter Schiefke: I have a question, Mr. Chair.

The Chair: Go ahead, Mr. Schiefke.

Mr. Peter Schiefke: My question concerns our next meeting. We'll be able to discuss this after we thank our guests. I'd like to know whether our committee will be meeting on Monday.

The Chair: I'll answer your question in a few moments.

Mr. Peter Schiefke: Perfect, thank you.

The Chair: We've had some good answers. I think this has really contributed to our thinking.

On Monday, we'll meet with the analysts to discuss the structure of the report. We'll be able to give them some instructions.

Mr. Peter Schiefke: I asked that question because, at 4 p.m., the Minister of Finance will be delivering...

The Chair: You're right.

Mr. Peter Schiefke: At 4 p.m., do we want to continue the meeting or go to the House to listen to the Minister of Finance's speech?

The Chair: I'm going to release the witnesses. Thank you very much for the time you have spent informing us.

[*English*]

Thank you to the witnesses.

[*Translation*]

We will take 15 minutes to do the transition. We won't go in camera, but we will release the witnesses.

Mr. Peter Schiefke: Yes.

The Chair: The presentation of the economic statement is at 4 p.m., and I think the speech will take about 45 minutes.

Mr. Peter Schiefke: That's usually the case, but we don't know exactly.

The Chair: Do the members of the committee want to meet at 3:15 p.m., have a break and resume the meeting after the speech on the economic statement?

Ms. Monique Pauzé: Yes.

[*English*]

Mr. Raj Saini: I think it would be better if we just stopped the meeting, because obviously, it can be a very important speech and we're all interested in the snapshot.

Mr. Matt Jeneroux: Mr. Chair—

The Chair: Mr. Jeneroux, I'll get to you in a moment.

Okay, then basically we would just not have a meeting, and I think the minister is coming on Wednesday, so we would have to meet on the report the following Monday—that type of thing.

We'd have to work it out somehow.

Mr. Jeneroux.

Mr. Matt Jeneroux: Thanks, Mr. Chair.

I know from previous committees that typically the first meeting concerns instructions for the analyst. Is that essentially the purpose of the meeting on Monday?

The Chair: Yes, it is.

Mr. Matt Jeneroux: In some committees I've been on in the past, that's often just a 15-minute meeting. I'm not sure we need the full time.

The Chair: I want to discuss the witnesses for the CEPA study, the enforcement study, so I think we do need some time.

Are there any other comments?

Mr. Peter Schiefke: Obviously, I brought it up. I think it's a non-partisan issue to be able to be there to hear what the Minister of Finance has to report. There might be some aspects to it that touch us as a committee, so it might be interesting for us to be able to devote our time to what the Minister of Finance is going to be putting forward.

If Mr. Jeneroux says that we can get it done in 15 minutes based on his experience—

● (1740)

The Chair: Personally, I don't think we're going to be able to get it done in a short time. What if you left it with me and the clerk and I can consult Madame Pauzé, Ms. Collins and Mr. Redekopp after the clerk has given me some options?

I think there's a willingness to listen to the speech. Members want to be at the speech, and we can't do all the work that we want to do in 15 or 20 minutes. I don't think that's possible.

Mr. Jeneroux, I agree that sometimes it can be, but we have to talk about witnesses. Therefore, would you leave it with me and I'll discuss it with the clerk and with the members of the steering committee?

[*Translation*]

Mr. Joël Godin: I have a suggestion for you, Mr. Chair.

[*English*]

The Chair: Go ahead.

[*Translation*]

Mr. Joël Godin: Given the situation, we don't know what will happen next Monday. Today is Wednesday. I think my colleague Mr. Schiefke has raised a very important point. Wouldn't it be appropriate to postpone Monday's meeting until Wednesday. It's a domino effect. That would be obvious for everyone.

We're talking about holding a 15-minute meeting. I think it can be done, but you say the meeting may be longer since it will be the first. I understand and respect that, but wouldn't it be easier for everyone, in the circumstances, to decide now to cancel Monday's meeting and reschedule it for Wednesday?

The Chair: The minister will be meeting with us on Wednesday. So that will depend on...

Mr. Joël Godin: So we could postpone the meeting on the report until the following Monday.

The Chair: I have an idea. Mr. Jeneroux may be right. We could meet for at least 45 minutes to debate certain matters. Then we could adjourn the meeting and see what we have managed to accomplish in those 45 minutes.

Mr. Joël Godin: That's a good idea.

The Chair: As a result of doing nothing...

[*English*]

Yes, Ms. O'Connell.

Ms. Jennifer O'Connell: Mr. Chair, I don't mean to interrupt. I just think it might be difficult even to meet in those 45 minutes—because some members will be in person and some will be virtual—and then coming back to connect.

The Chair: Yes, okay.

Ms. Jennifer O'Connell: In fairness, all parties will have opportunities to make statements and speak afterwards. I'm sure that nobody has really figured out who is doing what on that day and so, in fairness, Mr. Godin's point about maybe just moving it to the following Monday would be the easiest so that we don't run into issues.

The Chair: Okay then, here is what I suggest. Let me work with the clerk and the steering committee, and we'll try to reschedule some things and just live with the fact that we're not having a meeting on Monday.

Mr. Peter Schiefke: Thank you, Mr. Chair.

The Chair: Is there consensus on that?

I see thumbs up, two thumbs up, okay, so let's do that, and the clerk and I will work on it, and I will consult the members of the steering committee.

Mr. Matt Jeneroux: Mr. Chair, just quickly from our side, when I raised the point, I forgot that we were looking at witnesses for the CEPA study, so I certainly agree with Mr. Schiefke on that course of action to go forward.

We will wait for your final, official determination.

The Chair: Thank you for your co-operation, everyone.

It has been a great meeting. It is a great study.

Mr. Saini says I have to use the gavel for effect.

The committee is adjourned.