Legislative Assembly of Alberta

The 28th Legislature
First Session

Standing Committee on Alberta's Economic Future

High-speed Rail
Stakeholder Presentations

Wednesday, February 5, 2014
9 a.m.

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Standing Committee on Alberta's Economic Future

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Standing Committee on Alberta's Economic Future

Participants

9 a.m. Wednesday, February 5, 2014

[Mr. Amery in the chair]

The Chair: Good morning, ladies and gentlemen. It's 9 o'clock, and we must begin. I would like to welcome all members and staff and guests in attendance at today's meeting of the Standing Committee on Alberta's Economic Future.

I would like to call this meeting to order at this time and ask that members and those joining the committee at the table introduce themselves for the record. Also, please indicate if you are attending as a substitute for a committee member. I will start. I am Moe Amery, MLA for Calgary-East and chair of this committee.

Mr. Fox: Rod Fox, MLA for Lacombe-Ponoka and vice-chair of this committee.

Mr. Quadri: Sohail Quadri, Edmonton-Mill Woods.

Ms Olesen: Good morning. Cathy Olesen, MLA, Sherwood Park.

Mr. Bhardwaj: Good morning. Naresh Bhardwaj, MLA, Edmonton-Ellerslie.

Mr. McDonald: Everett McDonald, MLA, Grande Prairie-Smoky.

Mr. Rogers: George Rogers, MLA, Leduc-Beaumont.

Mr. Cao: Good morning. Wayne Cao, MLA for Calgary-Fort.

Dr. Hendry: Michael Hendry, University of Alberta.

Mr. Halasz: Good morning. Charles Halasz, national manager, rolling stock, for Siemens Canada.

Mr. Delvecchio: Rocco Delvecchio, vice-president of government affairs for Siemens Canada.

Mr. Hall: Steve Hall, general manager of western Canada for Bombardier.

Mr. Larouche: Paul Larouche from Bombardier.

Mr. Barnes: Drew Barnes, MLA, Cypress-Medicine Hat, sitting in for Ian Donovan.

Mrs. Sarich: Good morning and welcome. Janice Sarich, MLA, Edmonton-Decore.

Mr. Rowe: Good morning. Bruce Rowe, MLA for Olds-Didsbury-Three Hills.

Mr. Stier: Hello. I'm Pat Stier, MLA for Livingstone-Macleod, and I'm subbing in today for Rick Strankman, MLA for Drumheller-Stettler.

Ms Robert: Good morning. Nancy Robert, research officer.

Ms Sorensen: Rhonda Sorensen, manager of corporate communications and broadcast services.

Ms Dean: Shannon Dean, Senior Parliamentary Counsel and director of House services.

Dr. Massolin: Good morning. Philip Massolin, manager of research services.

Mrs. Sawchuk: Karen Sawchuk, committee clerk.

The Chair: Thank you very much.

We also have Mr. Luan and Mr. Hehr teleconferencing. Please introduce yourselves for the record.

Mr. Luan: Good morning, everybody. Jason Luan, MLA, Calgary-Hawkwood.

Mr. Hehr: Good morning, everybody. Kent Hehr, MLA, Calgary-Buffalo. Thanks for being here.

The Chair: Thank you very much.

Ladies and gentlemen, just a few housekeeping items before we begin our business. The microphone consoles are operated by the *Hansard* staff. Please keep all cellphones, iPhones, BlackBerrys off the table as these may interfere with the audiofeed. The audio of the committee proceedings is streamed live on the Internet and recorded by *Hansard*.

Now we will move on to the second item on the agenda, the approval of the agenda. Would a member move adoption of the agenda, please?

Ms Olesen: So moved.

The Chair: Ms Olesen moves that the agenda for the February 5, 2014, meeting of the Standing Committee on Alberta's Economic Future be adopted as circulated. All in favour? Opposed? Carried. Thank you.

Now we move on to the third item on the agenda, the oral presentations. We have for this item from 9 till noon, and that's panel 5, railway infrastructure and engineering.

Today the committee will be receiving presentations from a number of stakeholders on the potential for high-speed rail transit within Alberta. I am pleased to welcome our guests participating in the first panel, part of panel 5, railway infrastructure and engineering. We anticipate completing this part of panel 5 by 11 a.m. The committee will be hearing from representatives from Siemens Canada Limited, the Canadian rail research laboratory, and Bombardier. You will each have 10 to 15 minutes for your respective presentations, and then I will open the floor to questions from the committee.

With that, I will turn it over to Mr. Halasz and Mr. Delvecchio from Siemens Canada. Please go ahead with your presentations.

Siemens Canada, Canadian Rail Research Laboratory, Bombardier

Mr. Delvecchio: Thank you very much, Mr. Chairman. We're pleased to be here, and we're present and anxious to answer any questions that you may have as well.

Mr. Halasz: Good morning. Again, my name is Charles Halasz, or Chuck, and I'm the national manager for rolling stock in Canada for Siemens.

First, just to further express Siemens' gratitude and honour for being invited and being part of the conversation, this is something that personally and also within the company we view as very exciting. Hopefully, we can help you progress the project and the whole idea.

What I'll do is that I'll quickly go through some of the Siemens rolling stock, which is, you know, representative of high-speed rolling stock globally. Obviously, I'll present what we have, and that's just to give you a flavour of the various types of solutions out there, specifically our Russian high-speed train because we

think that's very relevant in terms of the cold weather package that we've developed, so I'll go a little deeper into that one.

In North America our first high-speed, if you will, locomotive or service is the American Cities Sprinter, which is on the left. That is an electric locomotive. Amtrak purchased it last – well, we started delivering it this year. That's a 125-mile-per-hour electric locomotive that's going to start running in the northeast corridor. I guess it's almost started. That's a very exciting project for us, and we're looking forward to growing that market here in North America.

Aside from that – and this looked a lot larger when I was looking at it in front of my computer – we have high-speed in the U.K. and France, the Velaro model. That's a 320-kilometre-per-hour vehicle, delivered in 2010. In Spain, obviously a very hot weather climate, we have our Velaro E, which is set at 350 kilometres per hour. In Germany, which is obviously our home turf, we have our ICE trains. Soon coming out are our ICx trains, which is the next generation, and those run up to 320 kilometres per hour.

Relevant to, I think, this committee is our Russian Velaro, or Velaro RUS, as we call it. We've delivered 16 train sets in 2006 and '11. It runs at 155 kilometres per hour, but the vehicles themselves are rated to go faster. It's just that the electrical infrastructure is somewhat a legacy infrastructure, and that's as fast as vehicles can go, but they are upgrading, and the vehicles will run at the higher speeds eventually. China has had a huge boom in the high-speed rail market. They've been building high-speed rail at a frenetic pace, so we have a portion of that market as well. We have our Velaro China, or Velaro CN, and that's rated at 250 kilometres per hour.

We'll jump in right away to Velaro Russia, our high-speed train set there. I wanted to specifically go through some of the cold weather design changes that we made to make sure the trains could run and be comfortable for the passengers. As I mentioned, the first vehicles were delivered in 2006, and then we got a follow-on order, which we will deliver at the end of this year. Right now the train configuration is 10 cars, and by the time we finish delivering the new order, they will actually be 20-car trains. There will be a locomotive in the front, 10 trailing cars, and then they'll couple up the other train, 10 trailing cars, and a locomotive in the back, so it will be, I think, the longest high-speed train globally. It'll be about 250 metres long.

As I said, the maximum speed is 155 kilometres per hour, and that is due to the traction power supply, which is at 3 kilovolts. The more modern systems are at 25 kV, which would promote a higher speed. The track gauge is Russian broad gauge, and that does allow actually for, they say, more stability, but there's certainly standard-gauge high-speed as well. That's just the Russian standards that the vehicle was designed to.

In terms of the cold weather specific items one of the big ones is the increased thermal insulation. These are wide-bodied vehicles, and the walls themselves have about six inches of insulation that we added to it. Normally it would be about half that. For obvious reasons they run in extreme cold temperatures, up to minus 50 degrees C, minus 58 degrees Fahrenheit.

The rooftop air intake was one of the critical items for Russian Railways. As you can see in the picture, there's a lot of kick up of snow in the trailing cars. Because this is a distributed power train, that means that there are electric motors under all the cars. Each motor needs to be cooled, and if you take that cooling air in from the trackside, which is a more traditional way, then you can ingest snow, and that could pose some technical difficulties or some operational difficulties with the cooling of the motors or with the motors themselves. So we run some ducts up to the top of the roofs, and we draw air from the top of the roofs.

9:10

We have pressurized underfloor compartments. It's hard to see, but underneath the locomotive we have electrical cabinets and compartments. Typically those are just sealed with a regular door and type of seal, but we've actually pressurized these similar to what a paint room would be, where you want to have a positive pressure inside the cabinet so that no snow or no dust or anything gets inside the cabinet. So that's another one of the cold weather measures we took.

We have a heated, insulated water system. Being, you know, an intercity passenger system, it has amenities where you'd need to run water, so those pipes for washrooms and things like that are insulated, and the pipes are actually heated as well through heat tape and things like that.

Then there are thermal expansion measures. Because there's a wide range of operating temperatures, much like in Alberta – in the summer it can get quite hot in certain regions, and in the winter it gets extremely cold – the car body needs to be able to expand to meet all those requirements without causing stresses and cracks and things like that. So there are thermal expansion joints that were enhanced for this particular model that allow for their operation in that range of temperatures.

Finally, the snowplow. All of our high-speed vehicles have snowplows. The Russian operator required one, not that they run high speed, plowing through snow. There still are limitations. That you have to keep the track clean is one of the challenges, but if you were in the yard or if you were at regular operating speeds or even below that, depending on how much snow, you can clear that snow with the train as opposed to dispatching a maintenance vehicle. That's one of the things they wanted added.

Here's a quote from the director at Russian Railways, and I'll just read it: the real innovation is the winter package that our high-speed trains are equipped with; it allows us to travel at 124 miles per hour at minus 38 degrees Celsius. You know, there are other issues when you do start running in cold weather that could derate the speed of the train, not just the train itself but the track conditions and things like that. They do dial down their speeds at extreme cold temperatures, but they're able to do so safely and keeping a reasonably high speed even under extreme cold temperatures.

The next photo is one of our cold room, our climate test, and this is just an example of how we validated the Velaro RUS to ensure that it met the safety standards and the operational requirements for Russian Railways. Here it looks like they're doing a windshield test to ensure that the heated windshields would melt the snow and ice under extreme cold temperatures. They would also do functional tests to ensure the electronics are working, the heat is working, and things like that. This is all part of the validation that would be done, really, for any new train system or train set. However, you know, if we do, say, take the Velaro RUS and bring it over to another cold climate, if that cold climate has similar or easier climate requirements, then we wouldn't necessarily have to redo these types of tests because it's already service proven. Those are the kinds of discussions that would come along later in a procurement process, where you'd need to decide what you're actually going to do in terms of your validation.

Siemens is also performing the maintenance on the Velaro RUS. We have a 30-year contract with them and currently at a 98 per cent availability. There are, as you can see, no reserve trains, so at peak periods we actually have the entire fleet on the railroad.

We're pretty proud of our performance so far. Operational delays of only five minutes occur about every 2 million miles, so that's something that we're proud of.

The next slide is really meant to provide you with, I guess, some level of comfort that if Alberta brought in high-speed, you're not bringing in leading-edge and certainly not bleeding-edge technology. You know, the technology has been around a number of years. We started with the second generation of our Velaro in 2007. We're now in the fourth generation delivering those, and obviously with each generation you have an increase in reliability and system maturity. We feel very comfortable stating that we have a service-proven design, not just for typical European markets, but also with our third-generation Russian Velaro we have cold-weather climate as well. I just wanted to reinforce that the issue should not be one of technology. The technology is out there.

In terms of the regulatory framework – and this was, I guess, one of the questions that were posed to us – great progress has been made in terms of North American high-speed. There's the rail safety advisory committee's Engineering Task Force, which Bombardier, Siemens, and Alstom have participated in, and it's been an ongoing task force, established, I believe, around 2010. They've defined high-speed rail, and there are different tiers of high-speed rail. They've defined the crash energy management requirements, fire safety glazing, which is the window strength requirements or crash worthiness requirements, and also the brake system requirements.

The good thing is that there is a lot of effort going on right now in North America to bring high-speed to North America, and typically Transport Canada would follow the lead of the FRA, at least in large portion, so that work being done by the FRA in the U.S. FRA is the Federal Railroad Administration in the U.S., and it's their regulatory body. That work is ongoing, and it's a good time to jump into the high-speed rail market. That is the message.

One thing to take away as well: if there is standardization across borders, then you can eventually work towards a crossborder high-speed rail connection, which is always a nice thing to have or at least plan for.

If you indulge me for a little bit, I'll give you the sales pitch part of the presentation. Velaro is, we feel, a perfect fit for Canada. Siemens is one of the pioneers in high-speed rail. We have, you know, global experience, as I mentioned, throughout Europe and into Russia. One of the more impressive things, I believe, is our operation of 440 million miles in carrying passengers, which is quite a bit; mature fourth-generation design; proven reliability and technology, as I mentioned before; and, you know, the hope or the idea that you try to use that technology and that base design with some level of localization requirements to build on that existing technology as you move forward. We feel we have the platform to do that while still remaining flexible in making sure the design meets the requirements of Alberta.

9:20

One of the things I would also like to point out is that the manufacturing is actually done in North America. We have a facility in Sacramento that currently makes the light rail vehicles for Edmonton and Calgary, and that would be the facility that would make any high-speed rail as well.

That's all for the presentation. I was told there was going to be some Q and A, so I thought I'd leave some time for that if I did.

Thank you.

The Chair: Thank you very much, Mr. Halasz. Very interesting.

Now we'll move to Dr. Hendry from the Canadian rail research laboratory. Go ahead, please.

Dr. Hendry: All right. I'd like to say thank you very much for giving me the opportunity to speak here today. I am Michael Hendry. I am an assistant professor at the University of Alberta. I'm also the associate director of the Canadian rail research laboratory. My purpose in attending today is that some of the research that we are conducting – and it is with the freight railroads; I will say that straight off the bat – has been trying to address some of the same questions that have been asked, at least within the letter that I received, as far as concerns about building high-speed rail within Alberta. So I will start with the sales pitch. I won't end with it.

Just in case you aren't familiar with the Canadian rail research laboratory, or CaRRL, as we call it, it was established March 1, 2011, at the University of Alberta. It was originally founded as an initiative by the Railway Research Advisory Board of Canada. That's a board that was started by Transport Canada. Currently the other committee members consist of most of the industry, so most of the industry within Canada for the railroad does have membership on the Railway Research Advisory Board. In fact, there's a meeting tomorrow, which I'll be attending, of the technical committee, so perhaps if there's anything that you would like to be brought up, I can bring it up at that meeting.

The University of Alberta did compete with 16 other universities right across Canada to host this facility and to become Canada's primary, at least educational, facility and a major research program at the University of Alberta for railway engineering.

Again, we were officially established on March 1, 2011. Our objectives are to conduct high-quality research with the faculty and facilities available at the University of Alberta and to develop collaborations right across Canada with other institutions such as NRC and other universities as need be for local support.

Our goal is to train highly qualified engineers for the Canadian railway industry. There is currently a demographic issue within the railroad industry. When CN and CP downsized quite a bit in the '80s, they left this huge gap of young engineers. Most of their highly experienced technical staff are about ready to retire, so there's this big need for new engineers trained for the railway industry. Part of our goal is to train new engineers and point them in the direction of the railroad industry.

Our industry funding is coming from Canadian National and Canadian Pacific as well as the Association of American Railroads. As our funding comes from the Association of American Railroads, it makes us also an affiliated lab with the AAR, so that makes us join other universities such as Virginia Tech, Texas A&M, and also the University of Illinois, the Urbana campus. We are within that group, and we do have a lot of collaborations going on within that industry and those universities.

Also, I forgot to mention, which I definitely shouldn't have in this group, that Alberta Innovates is also providing quite a bit of our funding as well. That was a more recent addition but a very welcome one and very helpful.

Now, the topics we're covering with our research admittedly, again, are all with freight rail. That's been our focus. We don't have any current projects dealing with passenger transportation although we're always open to expanding.

Some of our focus has been on major research themes, so cold weather reliability. A lot of this has been focusing on air brakes on older freight trains, some of the designs for which are over a century old. I'm sure they're much, much different on the high-speed rail vehicles that were presented today. We also have the optimization of rail steel for cold weather operations, so dealing with the potential for cold weather rail breaks. Most of that is due

to high-impact loading from wheels that have defects in them on heavy freight trains.

Earthworks and infrastructure. That's an ongoing one dealing with the terrain in Canada. There are a lot of soft subgrade soils.

Ground and environmental hazards. This is mostly based in B.C. A lot of it's rockfalls, large-scale landslides, and avalanches.

We're also looking at optimization of maintenance, what kind of maintenance cycles CN and CP should instill to make sure that the rights-of-way are maintained safe for the passage of freight trains. Also, we have a couple of students currently embedded in CN. They're looking at optimizing the freight rail network and inputting new means to try and increase the capacity without significantly increasing the infrastructure.

Several of the issues that we are dealing with that are potentially relevant to the high-speed rail in Alberta are the soft subgrades, the assessment of existing railway infrastructure, and the cold weather reliability of infrastructure components, specifically the rail steel and how it performs at low temperatures. We do have several researchers working on these different topics. If you have any questions for me specifically, you should know that my specialty is with soft subgrades and ground hazards and infrastructure assessment. I do know a little bit about the steel components, but that's not my specialty.

Now, the reason we did get CaRRL at the University of Alberta was because it was building upon a relationship we've generated with CN and CP since 2003. We've developed a lot of trust, and they're willing to share with us a lot of information that they wouldn't necessarily give to any other groups. That was part of our ability to strike a chord with the industry and get them to trust us.

With that, the railway ground hazard research program did start in 2003, and the focus has been on more geotechnical-related issues. Typically they're low frequency but have high consequences like the large landslides, but in the past we've branched out into rockfall, poor subgrades, and ballast conditions. Even though CaRRL has only existed since 2011, we have 11 years experience with CN and CP working on their geotechnical issues, and most of our research in that area is much further advanced.

My research started with the railways back in 2004-2007. Most of this was actually conducted in Europe. We were dealing with embankments on soft foundations and passenger transportation. This research has come to an end, but we've kept in contact with Network Rail representatives and their work to increase speeds on some of their traffic lines. Most of the research at this time was dealing with using existing infrastructure, increasing train speeds on that existing infrastructure, and the problems that arose from that.

For this one, this is the Belfast to Dublin Enterprise train. They were constantly being restricted to 20 to 30 miles per hour because of poor subgrade conditions. That, for a high-speed rail, is not good. It kind of makes the whole purpose of it go away. This was only maxing out at about 90 miles per hour, so it's not high speed, but going at 30 miles per hour meant it couldn't even compete with the buses on the highways. That was a major problem for Northern Ireland Railways, and that's what we were called in to help deal with.

This is a picture of a drill rig on the centre line of an embankment. That's actually out near Niton Junction on CN's main line. Our more recent research has been working with CN and CP. They had some pretty bad failures in southern Quebec on peat subgrades. Some of them did spill some hazardous material – that was back in '99 and 2004 – so they launched a major research program to try and investigate how these embankments fail.

That's been an ongoing program and something that we've been quite successful at. It received a lot of attention, especially from the United States and the AAR. That was trying to determine how these embankments fail: what kind of loads can be applied to them, and when do we start getting concerned that they aren't stable? That research program has been going on essentially since 2007, and now we've started to expand that into clays and unsaturated soils, so other soils besides peat and muskegs, which aren't as common. Clays – lacustrine clays, weathered tills – are extremely common right through the prairies.

Mr. Stier: Peat?

Dr. Hendry: Peat. Well, most of our embankments were actually constructed on peat back a century ago, but I'll come back to that shortly. That is a concern.

I'll just mention that peat is typically 80 per cent water, so when we run a train across a peat bog, we're actually floating, essentially, on water. It's kind of a neat geotechnical problem, but it's one we've been doing successfully, I have to mention, for more than a century, so it's not like this is a new, risky procedure. It does have quite a bit of history behind it. That was the same as what was happening in Ireland, and the U.K. does have quite a few lines that run on peat that are trying to upgrade to higher speeds.

9:30

More recently we've been dealing with CN, and they've done a large-scale assessment of the Lac La Biche line up to Fort McMurray. You're planning for a large increase in traffic of trains up to Fort Mac, so the question is: what's the condition of the track? Now, the track was originally built by the Alberta government, finished in the 1920s, and it was known for being extremely poor construction. At the time I think there was a bit of a political scandal that was associated with that. CN has owned it for quite some while, short lined it, so has had a small company run it, and it was almost abandoned in 2007, before CN took over. They've invested heavily in making sure that it's passable by trains.

The question now is: if they're going to increase traffic, where should they focus their efforts and their capital investment into this line? That's where we've been working with them quite closely. Starting in October of this past year, they've done an extensive geotechnical investigation, lots of investigation into soil types, the distribution of soil types, how it deflects, past maintenance records. All of that's coming through us, and it's been a great opportunity. That's given us a really good idea of how to analyze and assess hundreds of miles of track at a time.

Now, just to mention, I did put this graphic up there. That is a Google Earth image, and overlaid on it is one of our metrics for the quality of track. Red does not mean unsafe, and I don't mean to suggest that by putting it up there. It just means that one of our metrics is particularly high in that area.

Most of our railway infrastructure in Alberta as it currently exists is more than a century old. The construction methods are a legacy of that time. The same thing that we ran into in Alberta is that they weren't built for high-speed rail lines, and the freight trains that typically run over them are very capable of traversing some very difficult track conditions as long as they're going slow enough. We've seen that with track conditions where it looks really rough, trains are passing safely, but they might only be going 10 to 15 miles per hour. They can keep running over that for quite some time. It just means that they've reduced their capacity for that track. That's just a monetary issue for them. They've maintained a safe track, but it does cost them capacity. Now, as far as a

high-speed rail line on these existing lines, that starts raising some serious questions as to whether or not that can be maintained.

Existing infrastructure. I guess this starts coming into something. I read through the 2008 reports on high-speed rail in Alberta, and they did list a budget option for a 120-mile-per-hour track. This was going to be accomplished cheaply by using existing CPR right-of-way and potentially the same alignment. The problem starting to come up when you start using existing right-of-way or existing alignment or existing track that you're sharing with CN and CP is that the construction methods aren't there. They have a difficult time maintaining a high quality of track. It's a high enough quality for the safe passage of freight rail but not one that would meet the tolerances, I don't believe, for high-speed rail.

As soon as we start putting that high-speed rail on existing infrastructure, you'll be required to do an extremely extensive investigation into the current construction of the railway line. That would be extremely extensive. Then that would likely lead to large amounts of upgrades, that would have to be paid for. I think the cheap option that was listed in the 2008 report is optimistic, and I think there'll be a large increase in costs to actually make this existing infrastructure passable. Even then, we wouldn't quite know what kind of risks you were taking on by using existing infrastructure.

Now, the existing infrastructure has been running freight on it for over a hundred years, so we're pretty certain that it can withstand freight transportation. The question is: what happens when you start changing things quite rapidly, putting on increased speeds, and running freight transportation at the same time? There are a lot of risks that might come up associated with that. I already went through this slide. I don't mean to skip over it and not talk about the material, but just the major point was this. Don't underestimate the cost of using existing CP rail line.

Also, something that's come up: the high-speed rail has become a major issue in the U.S. because of the push by the current administration to get high-speed rail moving. I deal a lot with the AAR and go to a lot of their meetings. They do deal a lot with existing railroads or freight railroads. Some of the concerns that have come up from the freight railroads aren't necessarily technical or whether or not they're purchasing the right equipment or whether or not the track they're buying is correct. The big concern is that they're running adjacent to existing freight railway lines.

Typically with a freight railway line, if there is a derailment – I know there have been some spectacular or catastrophic ones recently. But for most cases a derailment for a freight railway line means that some inert cargo – so a shipping container, maybe lumber, maybe some potash – comes off the tracks. Typically in those types of cases the damage is measured in maybe a couple of million dollars, but that's absorbed by the railway company, and that's just part of operating costs.

When you deal with high-speed railways, my assumption is that any sort of derailment would be definitely not something you'd want to consider. When you put the alignment together – so you have a high-speed rail line and a freight rail line next door to one another – then you run into the case where the standard of care for the freight railway line has been much lower because the consequences have been much less. If you have the high-speed rail line right next door, if there's a derailment, now you're impacting on the high-speed rail line. So the potential there is to impact the high-speed rail line and potentially cause some damage or potential derailments.

What the U.S. railroads are grappling with is that now that the standard of care for the high-speed rail line right adjacent to theirs has increased so much, do they now have to do that same standard of care on the existing freight railroad lines to make sure that the potential for derailments is less? That's a major concern, and I think that even comes down, again, to the existing infrastructure in Canada. If you were to put in a high-speed rail line adjacent to an existing freight rail line, you would have to possibly increase the maintenance standards of that freight railroad line and also invest heavily in the infrastructure even if you aren't using the same line.

The question, then, is: who's going to bear those costs, and will CP, in this case, take over those costs, or will they try and pass that on to whomever is constructing the high-speed rail line beside them? That's a major concern that I don't think was addressed in the 2008 report and something that should be really brought into play if you ever consider that alignment or constructing along the existing CP line. That's the bad news.

The good news is that as far as the poor subgrade conditions go in Alberta, there's no real reason why you can't build what we would consider highway-quality infrastructures that would be suitable for high-speed rail in Canada. The soils we deal with, even the peat and muskeg, are prevalent within Europe as well, where they are traversing them with higher and high-speed rail lines. The major point is just that this infrastructure would likely have to be fairly new and constructed, hopefully, a distance away from existing freight railway lines.

Peat and muskeg are fairly common in Europe and the U.K. They are dealing with it because they are using historical infrastructure and upgrading it. But within central Alberta I think it's sparse enough that we can avoid it for the most part. Modern construction, at least in Alberta, is for the most part to dig it out and replace it with granular fill, so something more competent for a foundation material.

As long as we stick with ballasted track, even our poorer soils, that have a tendency to settle quite a bit, can be dealt with. Ballasted track is extremely maintainable. They can maintain it and resurface it within hours over certain sections, so it's extremely robust for poor circumstances.

Now, as far as feasibility in cold weather, I'll leave the actual rolling stocks to the experts from Siemens and Bombardier.

Generally, our work has focused on the infrastructure components. One thing we've been working on is continuously welded rail and trying to optimize the metallurgy for CN. Now, continuously welded rail has been used for quite some time in Canada right across the country, and CN hasn't had many problems with it. Most of the problems do come from the standards of steel that have been bought from the U.S. They are imposing their own standards now to increase the cold weather fracture toughness. Essentially, continuously welded rail is a single piece of rail that stretches across the country. When it gets really cold, it has a tendency to contract, generating high tensile forces. Then if you get freight cars with flats or where the wheels are defective, they have large impacts that bang away on this railway line. They do try and detect that and pull those out of service as soon as possible. But, essentially, that's where the problems with continuously welded rail come from, these high tensile forces and these large impacts.

The assumption would be that for high-speed railway lines the rolling stock would not be allowed to develop those kinds of defects. There are a few million freight rail cars in service in North America, and any one of those can come up any freight railroad line within Canada, so the maintenance on the car is hard to maintain in all cases, and sometimes the history of maintenance isn't always apparent for freight railway cars. That would obviously be completely different for high-speed rail.

Essentially, the continuously welded rail shouldn't be a problem. For any other clips, fasteners, ties there's been a large amount of research and work done in the past in northern Europe on these items, and there shouldn't be a problem as far as applying the technology here, perhaps just a slight bit of testing, but there are no major obstacles that I can see.

I think I've gone over my time, but thank you very much.

9:40

The Chair: Thank you very much, Dr. Hendry.

Now we will move on to Bombardier. Mr. Hall and Mr. Larouche.

Mr. Hall: Thank you, Mr. Chairman. Thank you for the invitation to be here. What I'd like to do: I'm just going to provide you with a very brief overview of who we are at Bombardier, and then my colleague Paul Larouche is going to talk about our experience with high-speed and very high-speed trains and particularly focus on what our experience has been with projects in North America, to give you some kind of background and lessons we've learned from these kinds of projects.

Who are we at Bombardier? Obviously, we're a proud Canadian company. We started with a guy in his garage building a snowmobile, and we've grown to become one of the world's largest rail suppliers and the third-largest aircraft builder in the world. We're the only company that happens to combine those two things. We've grown as a company. We've got 72,000 employees now, and more than a third of those are here in Canada, but 95 per cent of our revenue comes from outside Canada. We're dealing in rail and aircraft all over the world.

We're a publicly held company. The rail business and the aircraft business are roughly the same in size, about $8 billion a year each, and we've been very successful on both sides. On the train side, where Paul and I come from, we're not just a train builder. We do the whole spectrum of rail projects. We do the train. We'll build the whole system. We participate in public-private partnerships when that's required.

The biggest and fastest growing part of our business is operations and maintenance. We have more than 8,000 people who operate and maintain railways all around the world. We also supply components. We work with our other industry partners like Siemens and others, and we supply train components, propulsion systems, trucks. We provide signalling systems. So we're right across the board in terms of that.

I'm going to ask Paul now to talk about what we've done on the high-speed side.

Mr. Larouche: Thank you, Steve, and thank you very much for giving me the privilege to address you today about a subject that I'm very passionate about. In fact, I've been working at Bombardier on high-speed rail since 1987.

Now, as Steve has said, the presentation will address mostly the lessons learned over those years from the various projects that we've participated in. No need for much of a sales pitch. As our colleagues from Siemens have mentioned, all of the major manufacturers – in alphabetical order: Alstom, Bombardier, and Siemens – are fully capable of providing the technology that you need. It's clearly not a technological issue. The specific questions that Mrs. Sawchuk sent us I've kept for the question-and-answer period, and I'll be focusing mostly on the lessons learned.

The point on this slide is that Bombardier actually has been a key player in virtually all of the high-speed rail projects around the world. This is an illustration of all of the projects on which we've either had 100 per cent participation or as low as 20 per cent participation in projects with Siemens and Alstom around the world. At the bottom of the slide you see three projects for high-speed rail equipment that we're currently manufacturing. On the left you see the ICx, which was mentioned by Siemens. They're the project leader, but Bombardier is a key player on the ICx. Then in the middle we have the Zefiro 380, which is a Chinese high-speed rail train. I'll be talking to you a little bit more about that train.

On the right at the bottom you see the V300 Zefiro, which is being built for an Italian high-speed rail project in collaboration with AnsaldoBreda, the Italian manufacturer. So around the world there are more than 900 train sets that have been delivered that Bombardier has had some level of participation in.

Now, our product line is identified as the Zefiro product line. It has three main products. The Zefiro 250 and all of the Zefiros operate on standard track gauge. It's a little bit confusing here on the slides where I refer to wide gauge. Wide gauge refers to the width of the car body. So the Zefiro 250 has a wide car body – it just allows you to have more seats; you can have additional seats in the width of the car – and 250 kilometre per hour capability.

The V300 Zefiro is built with a car body that can fit through the European clearance gauge. That's what we call the UIC clearance gauge. Despite its name of V300 – I don't know who does our branding – it's actually capable of 360 kilometres per hour.

The top of the line is the Zefiro 380. It's also a wide-bodied car. I'll be talking to you more about that in the subsequent slides.

Basic features of the whole product line are, well, a big focus on being able to transport large quantities of passengers and to have interior designs that are flexible so you can have more or less seating density depending on your specific needs. As you will see in some subsequent slides, there's a high level of attention to passenger comfort and, once again, they're highly customizable interiors.

We've paid particular attention to sending all of the equipment into compartments located underneath the car. We have no vestibules. We have what we call gangways between the cars, so it's an open space between the cars, just a small door, so you can maximize the amount of space that's used by passengers. We've taken particular attention to minimizing energy consumptions, a lot of attention to aerodynamics and various other means to reduce energy consumption. The trains can be configured, longer or shorter trains, according to your needs.

We've got a high level of redundancy. In fact, the Zefiro 380 is currently undergoing endurance tests in China. I got a report back last week that said that they had completed 300,000 kilometres without a service interruption. That's very impressive. We're halfway to the 600,000 kilometre requirement from the specification.

The Zefiro 380. You see this artist's rendering, but you also see the picture in the inset, there. The picture looks quite a bit like what the artist had anticipated. It's won three design awards, in 2011, 2012, and 2013.

The next slide here looks at the particular architecture of the train. These are what we call electric multiple unit trains. There are no locomotives. The vehicles at the ends of the cars are simply called cab cars. The operator's cab is located on those end cars. The traction power is distributed along the length of the train. In the illustration those wheels that are shown with, I believe, green and black cross-hatch are those axles on which there is actual traction power. Now, depending on the terrain or the performance that you're looking for, we can power more or less of these axles.

The configuration that's shown here has two types of power supplies. In Europe, for example, if you need to be travelling through different territories with different voltages or frequencies,

you need to be able to adapt as you're going from one area to the next.

9:50

I was talking about the luxurious interiors. This is the interior of the cab car, which houses the VIP class in the Zefiro 380 in China. You see that there is a glass partition between the passenger compartment and the driver's compartment. This allows a very nice view of the upcoming track. You see an inset. You see what could be a family room or a small office. Very, very nice interiors.

This is the interior of the first class for the Zefiro 380, and in coach class we have three-and-two seating, three seats on one side, two seats on the other, and a wide aisleway. The wide car body allows you to have that three-and-two seating layout. Just a few more pictures showing the luxurious interiors.

Now moving on to the lessons learned over the years, I'm showing on this slide three particular very high speed projects, two of which actually went into execution after an international competition. The first one at the top that I'm referring to is the Texas TGV project. Bombardier was part of a consortium that after an international competition won a franchise for a system that would have connected Dallas, Houston, and San Antonio. The franchise was awarded in 1991. Our consortium was called Texas TGV consortium. We were hard at work on that project when it was eventually cancelled in 1994. The lesson learned from that project is that you need to bring all the stakeholders to the table when you're preparing your project. In this case, this project would have been eating into market share held by Southwest Airlines, the originators of the discount airline in the U.S.

Now, the project had been awarded on the basis that it would use purely private funds, no public money. The financial setup for the project assumed the use of tax-free bonds. The opponents of the project eventually successfully argued that tax-free bonds amount to actually using public funds and went to court, challenged the project, and the project was eventually cancelled in 1994. So lesson learned: bring all the stakeholders to the table.

Later, in 1996, the Florida overland express. The Florida High Speed Rail Commission awarded in 1996 a franchise to the FOX consortium. In this case the consortium was made up of Fluor, the civil company, Bombardier, GEC Alsthom, and Odebrecht construction. That project would have connected Tampa, Orlando, and Miami. Even though it was awarded in 1996, the project was cancelled in 1999, a few days after the election of Jeb Bush. Lesson learned there is that you need really strong political support over the length of the life of your project.

The project was actually resuscitated when the population had a ballot measure a few years later obligating the Florida government to build a high-speed rail project, and at the next election there was another ballot measure that reversed that one, so political support is very, very important.

In previous years there have been many studies about high-speed rail linking Toronto, Ottawa, Montreal, and Quebec City. There was actually a study conducted by the Ontario, Quebec, and federal governments, called the tripartite study, that concluded that in that corridor high-speed rail would be viable. In response to that the private sector on its own initiative formed a partnership that came up with an unsolicited PPP proposal. We formed a consortium that we called the Lynx consortium. We spent a huge amount of money preparing a very, very detailed proposal. I was reading it again recently. We even went as far as calculating how many pickup trucks the operating company would have to purchase to operate its system.

We gave the very detailed proposal to the government, to the federal and Quebec and Ontario governments, in April of 1998. Lesson learned there is that timing is everything, and 1998 was a year of a very big fight against deficit. We came up with an $11 billion project in a time of deficit reduction. So nothing has yet come of that proposal.

Finally, on the next slide we see an example of the Acela Express, the only high-speed rail system that's operating in North America. It operates on the northeast corridor linking Boston, New York, and Washington. In 1996 Amtrak awarded a contract to a consortium composed of Bombardier and Alstom. They purchased 20 electrically operated train sets. Now, in this case the technology did involve locomotives, or what we called power cars, six coaches, and then another power car.

This program was undertaken in a situation of a regulatory vacuum. The FRA rules at the time only allowed operation at speeds up to 115 miles per hour, and Amtrak was proposing to operate at up to 150 miles per hour. So the Federal Railroad Administration, the FRA, worked amazingly quickly and came up with the tier 2 rules which allow operation at 150 miles per hour in mixed services with other modes such as commuter rail and freight rail, including grade crossings.

Bombardier announced them both and brought the technologies that allowed this to be a success. Bombardier brought its tilting system experience that it had gained from the LRC that was in operation with Via Rail. The tilting system allows faster speeds through curves, and on the northeast corridor it's a very, very curvy route, and this allowed shorter trip times.

Even today, 13 years later, the northeast corridor Acela Express service is a huge revenue generator for Amtrak. In fact, they undertook a procurement last week to eventually add additional cars on the northeast corridor.

As I said, I've kept the answers to questions for the Q and A period. In your packages I've also included a bit of additional material which contains additional technical details about the Zefiro 380.

Thank you very much.

The Chair: Thank you very much, gentlemen, for your very interesting and informative presentations.

Now I will open the floor to questions from committee members, and committee members, if you have any questions or comments, please give me a signal, and I will add your name to the list.

We will start with Mr. Jason Luan. Jason, can you hear us?

Mr. Luan: Yes, Mr. Chair. Thank you. A very exciting presentation, and I'm so thrilled hearing all of that very relevant information. The one I am particularly interested in is the lessons learned. If I followed what our speaker talked about, you need stakeholders together; you need government and business all working together. My question is about the real cost of such a program, let's say in Alberta, and the ratio between initial investments to the ongoing operation costs. If our panel members can give me some sense of, "This is the ballpark of what we think you ought to prepare, and this is the ratio for ongoing operation," I'd appreciate that.

10:00

Mr. Hall: If you look at the project for Alberta, if you look at the capital side, you're in the ballpark of probably $5 billion for a project like that, I would say. We participate in a lot of these kinds of P3 projects around the world. It's a good question. Often with a 30-year P3 sort of arrangement the operation and maintenance costs will actually be larger than the original capital cost on these kinds of projects, so it's a factor you have to look at, a very

significant factor in the equation, and plan for the whole scope. Now, on the P3 side, of course, what you do get is a guarantee of those costs for the 30 years. That's the value of the P3 approach to a government or whatever. It is a very significant issue in looking at the assessment.

Mr. Luan: Thank you. Thank you for that.

May I also ask a supplemental question, Mr. Chair, very quickly?

The Chair: Yes, you can.

Mr. Luan: Thanks.

Just a question to our two operators: was it your experience internationally that most of those operations are subsidized by government, or are they a mixture, sort of a combination? I can tell you from my hunch that this looks like a public infrastructure investment with long-term economic return, but the initial cost must be borne by government. That's what the tax money is mostly useful for. It's when private industry doesn't want to take that much high risk. Clearly, there's a long-term benefit, but who wants to dive in first? I'm really curious. I'm asking this question of different panels who have got different perspectives. I'm just wondering. From your point of view as operators, what's your experience with that?

Mr. Halasz: Yes, by and large, rail projects are delivered by government funding. You know, even in a private investment scenario where there's a public-private partnership or things like that, there's still a large government contribution to that project. Especially in Canada, I don't see a purely private project being pulled off. It would be very challenging.

Mr. Luan: Thank you very much.

Mr. Larouche: Can I add to that? Just recalling some of my experience on the Lynx proposal, that included a complete financial montage that had been prepared by Pricewaterhouse-Coopers, and it showed that over the life of the franchise, 60 years, the government did recoup all of its investment at an interest rate that was higher than their cost of borrowing. So there was significant net positive cash flow, but that positive cash flow only kicked in after something like 20 years. Basically, that says that the role of government in a project like that is to be a patient investor because there's nobody in the private sector that wants to wait 20 years to get their money back.

Mr. Luan: Yeah, I totally concur with that. I think that one of the previous panel members the other day used this in reference to the early stage developments of the oil sands, that government needed to kick in at the beginning, supporting the technology, supporting the vision, and essentially 30 years later companies are making good money, and our economy is doing well. I'm a big believer of that kind of a vision in this regard.

Thank you very much. I really enjoyed your information.

The Chair: Thank you, Mr. Luan.

Mr. Rogers.

Mr. Rogers: Thank you, Mr. Chairman. Gentlemen, thank you for your presentation. It's certainly very enlightening, the technology, the opportunities, and I certainly appreciated the examples you gave of systems in other places, particularly the cold weather example, something more relevant particularly on a minus 30 day here in Edmonton.

To the gentlemen from Bombardier: it's really great to see where a Canadian company has gone. I had the privilege of visiting your factory in Bautzen a couple of years ago, so I'm certainly aware of your reach and very impressed by some of the other examples you gave.

You mentioned the Zefiro option, the fact that it's a system without a locomotive. I'm just wondering if that would offer the potential for a cheaper vehicle set. What does that mean? Or is that technology so expensive? It caught my attention right away when you mentioned no locomotive. I'm not very technical, but you talked about the wheels with the crosshairs and so on doing the driving.

Mr. Larouche: Well, I believe the driving factor for having distributed power is a technology one. Axle load, the actual load that you have at an individual axle, is the limiting factor for high-speed rail. If you combine high axle loads and high speeds, you damage the track quicker than if you have low axle loads. In the case of the Acela the heaviest axles are under that locomotive because all of that heavy equipment is located – the locomotive becomes your limiting factor because of its axle load. The way around that is to put all of that heavy propulsion equipment on multiple axles. Also, there's the fact of steel wheel on steel rail. The quotient of friction between two steel surfaces is quite low, so then you're limited by the adhesion between those four axles or eight axles on two locomotives. If you have more powered axles, you're less limited by the adhesion factor.

Mr. Rogers: You still didn't address whether the cost might be different without a locomotive. Or is that marginal?

Mr. Larouche: I think it might even be a little bit more expensive because it's a little bit simpler to have all of that equipment located on one vehicle. Now you have to distribute the power and control the power along the length of the vehicle. No, I don't think that cost reduction is the driving factor there; it's technology.

Mr. Rogers: Thank you for that.

A supplemental, Mr. Chairman?

The Chair: Absolutely.

Mr. Rogers: To our presenters from Siemens: I believe the ICE is one of your vehicles. I had the privilege along with my colleague of riding that from Cologne to Frankfurt. You know, I looked up, and it said 200 kilometres, and we were there like that and certainly a very comfortable ride. These are systems that certainly excite me, the opportunity to have that service here.

I was also interested. I think I heard both sets of presenters talk about collaboration, the fact that you've participated in comparable systems or parts working together to build systems. So it seems to me – and, of course, you referenced the political side and what changes when governments change and so on. It's a lesson that, obviously, the better we're able to combine forces, be they technology, et cetera, along with some more certainty in places where people like myself and my colleagues live, that would seem to give a better opportunity for some success with these projects.

Mr. Halasz: Yes. Certainly, just in terms of the collaboration, as Paul mentioned, we collaborate throughout the world, not just Bombardier and Siemens, like we do in Germany, but all the major suppliers because it is, I think, a very small industry, and the opportunities don't come every day to do this type of thing.

There's always a desire to collaborate, so that's always a possibility.

Mr. Hall: There are lots of good suppliers in this. You would be entering a situation where there's potential for good competition. There are lots of good technologies out there that could do the job for you. So it's not a technology question on a project like this. It's doable, and there are people who are interested in doing this kind of work. That's not the issue. It's the will and the organization and the structure to do it.

Mr. Rogers: Thank you.

Dr. Hendry, thank you for the safety perspective. Certainly, with all the news of accidents recently, it's important that we keep that aspect of it in mind. I'm really pleased with your organization and the work you're doing because, obviously, those considerations will be taken. I'm assuming we'd probably do a greenfield if we were to go ahead with this, but obviously we'd take the kind of lessons you learned into consideration in going forward.

Thank you.

The Chair: Thank you, Mr. Rogers.

Mr. Barnes.

10:10

Mr. Barnes: Thank you, Mr. Chair, and thanks to all five of you for your excellent presentations, your excellent information.

I'd like to start with my first question to Mr. Halasz. During your presentation you said that you're looking forward to a growing market and growing opportunities. Could you please touch a little bit on that? Are there other jurisdictions in Canada, in North America that are looking at a high-speed train? Is there new technology coming that may be a game changer in terms of cost or service?

Mr. Halasz: Yes. Certainly – and Paul would be able to expand more on this – leading the way is U.S. high-speed rail: California high-speed rail and an Amtrak procurement that's just hit the market. The RFP was released, I believe, last week or so. That's obviously a great step forward for high-speed rail in North America, again because there is a lot of collaboration between U.S. and Canadian authorities for at least the regulation of that. In terms of opportunities that's probably the biggest one.

Much like the Calgary-Edmonton corridor, there's always talk about a Windsor-Quebec corridor high-speed rail through Ottawa. Via Rail as recently as last year had some plans for sort of a phased-in high-speed program where they were going to run dedicated track from Montreal, Ottawa, Kingston and then run along CN lines at regular speeds. There are always people trying to push the high-speed development forward, and we're of course hoping that, again, it becomes a matter of political will, if you will, to do that.

What happened with the Via project is that, again, we're in times of austerity, or maybe not pure austerity but not expending, so the project was cancelled before it actually really got off the ground. You know, those things will happen. You have the ups and downs as projects come forward, then realization hits, and then they're pulled off. But some actually move forward like they are in the U.S.

Mr. Barnes: Okay. So technology changes coming?

Mr. Halasz: Not really. I mean, the base technology is what's being used globally. Again, it has to be localized in terms of meeting federal regulations for interior requirements and safety requirements and things like that, but the core technology is not anything terribly new.

Mr. Barnes: Okay. Thank you.

Supplement to Mr. Hall of Bombardier and Dr. Hendry of the rail research laboratory. I appreciate your putting an approximate number of $5 billion as a guess on the cost. We've had numbers floated around of $3 billion to $20 billion. I presume the $5 billion is just for the 180 miles between Calgary and Edmonton. One of the things that's had a little bit of interest in my mind is the 275 miles from Edmonton to Fort McMurray or whatever the route would be, so I wonder if you'd care to take a stab at what that might cost, if that might change, if you'd speculate a little bit on where the $5 billion would be.

Then, Dr. Hendry, I know you talked quite a bit about the ability to do the rail to Fort McMurray through the peat and the moss and that kind of thing, but if you could touch on that for me again with any specific concerns, please.

Mr. Hall: I'll go ahead, if you like.

I don't really know much about that part of the route, so saying a cost is difficult. It's something that we've been paying attention to. I guess the question that I would ask is: is it really necessary that it be high-speed for that section of the route? I mean, there is potential, without entering that level of cost, to provide a very good rail service between Edmonton and Fort McMurray – and you could speak more to this – possibly upgrading existing infrastructure to do that without necessarily having to go to the full length of all of the infrastructure required for high speed. That may be more viable for that section rather than what you might do between Calgary and Edmonton.

Mr. Larouche: Could I just add to that? If that were to be the approach that you would take, it's just simply important that the alignment, where you run the track, is actually compatible with high-speed rail so that eventually if you want to upgrade to high-speed rail, at least the physical alignment has the proper curve radii and so on. Later on you could do further investment and move up to true high-speed rail.

Dr. Hendry: The train going up to Fort McMurray is much, much more difficult than going down to Calgary. The current line that's running up there has about 75 miles of railway track built upon peat, and the Lac La Biche line is about 263 miles long. So there's a huge amount of peat. It is extremely difficult to miss. Going south, we have a lot different terrain, and you would be able to avoid the muskeg, but going north, there's just too much to avoid. You would have to do a lot of excavation.

The current track, as I mentioned, is 75 miles over peat. Most of the original construction was simply a layer of sand with the track right on it. That was originally done – it was finished in the early 1920s by the Alberta government. CN spent a lot of money upgrading that just to maintain their current axle loads up there. Other stories from riding up there are from the railroaders, that whenever they stopped the train, they had to decouple the old locomotives and keep them moving back and forth so that the whole track wouldn't sink and disappear.

So it's extremely challenging terrain, and I'd say that with the current upgrades that CN has to do to make sure that they can run their unit trains, you'd probably be capable of running a regular speed, maybe 90 miles per hour, passenger transport vehicle up there. I don't think high-speed would even be a consideration on that track right now as it stands without major reconstruction. Again, that comes down to probably more of a greenfield site, and

then that would be expensive, not impossible but more expensive per mile.

Mr. Barnes: Would you anticipate, then, considerably higher costs to go to Fort McMurray?

Dr. Hendry: My assumption would be that the initial capital costs would be more going up to Fort Mac per mile than it would be down south.

Mr. Barnes: Okay. Thank you.
Can I have one more question, please, Mr. Chair?

The Chair: Sure.

Mr. Barnes: Thank you. Boston-New York City-Washington: does anybody know? Is it successful? Is it making money? Is it profitable? I mean, there are a whole bunch more people there, but does anybody know how successful this operation has been?

Mr. Larouche: It's extremely successful. It's generating a lot of cash for Amtrak. As part of this procurement that started last week, Amtrak invited all the car builders to ride up and down the northeast corridor for four days. I went on this trip, and what I saw was a train that, first of all, was immaculate, It wasn't a special train; I just bought a ticket, got onto it, just any train. The exterior and the interior of the trains are immaculate.

Every train is at capacity, 100 per cent. They don't run at an 80 or 70 per cent load factor. They sell every seat on those trains. In fact, I saw it. Because, unfortunately, they don't have a reserved seating system, you will see passengers walking up and down the train trying to find the seat that's still open so that they can sit down in it.

It's very, very successful, and two years ago they tried to buy additional cars to increase the capacity of the northeast corridor in order to generate more revenue. For various commercial reasons that didn't work out, so right now they're undertaking a procurement to buy additional train sets in the near future.

Mr. Barnes: Okay. Thank you, all. Thank you.

The Chair: Thank you, Mr. Barnes.
Mrs. Sarich.

Mrs. Sarich: Thank you very much, Mr. Chairman, and I'd like to thank all the presenters this morning for the insightful information that you have provided to the standing committee.

I would like to explore a little bit further the right-of-way issue. I know that the focus has been on Edmonton to Calgary, and then the member to my left, Mr. Barnes, had asked about that Fort McMurray leg and some of the implications there.

In Alberta we have land-use frameworks for various regions. They're in the process in those regions of doing further planning. Alberta Transportation has opened up a consultation on an integrated transportation plan as we look 50 years out, which I would encourage the presenters to take a look at. If you have some advice to provide to Alberta Transportation, that's an opportunity. It's just not exclusive to Albertans. I'm reasonably confident that the minister would welcome perspectives from different parts of Canada or even the international because as we are exploring the issue of transportation within the province, there's a lot of intellectual property that could be shared.

10:20

In terms of the right-of-way the other focus is that when we look at this as a standing committee, we are looking at it as Alberta, the bigger question being: what is the line? A potential line: Edmonton to Fort McMurray, Edmonton to Calgary, and then we go south. Just to help Albertans understand: what are some of the implications for right-of-way considerations on high-speed rail? You started, Mr. Larouche, to say, you know, that if you're going to put some technical thought in here, these are some of the considerations. If they're looking at it from the lens of land management and usage, what are some of the things that you could offer to the standing committee that would be pertinent today?

Mr. Larouche: Dr. Hendry made some very, very good points. He used the word "incompatibility" . . .

Dr. Hendry: Mismatch.

Mr. Larouche: . . . mismatch between freight and high-speed rail. In the work that the Federal Railroad Administration's rail safety advisory committee has been doing, there's attention that's put to: if you're going to be sharing the same alignment, you should have barriers. You should have barriers that in the case of a derailment would keep the freight from encroaching onto the high-speed rail right-of-way.

High-speed rail right-of-way needs to be completely fenced in, but don't try to explain that to some moose. You need to be thinking, you need to do a very good environmental study about what wildlife migratory patterns you might be impacting, and you need to plan on overpasses or underpasses, depending on the type of wildlife. You need to be thinking about that infrastructure for the wildlife.

High-speed rail needs very large curve radii, which is not necessarily the same radius that the freight line has been built upon. I haven't seen that actual freight line, but I can imagine that there are probably areas where in order to make that turn, you're going to have to get away from the existing freight infrastructure.

Mr. Hall: For high-speed rail straight and flat is good, right? You want to protect a corridor. You don't want to give up your speed because you're restricted for curves and so on, so you need to be thinking about that for the long view. If you want to be 380 kilometres an hour, as Paul says, you have curves that are kilometres in radius. It's very straight, generally. You want to look at that when you're doing it. As he says, it's not often compatible with what existing rail would be.

Mr. Halasz: If I could just add to that, if you are looking at a phased-in approach, where you are using the existing track and, you know, there are control systems in place if you do have a speed restriction . . .

The Chair: Mr. Halasz, can you speak up a bit, please, and closer to the microphone? Thank you.

Mr. Halasz: I'm just trying to make the point that if you are looking at a phased-in approach, you don't want to spend all $5 billion to $20 billion in one day. You can do that. There are control systems in place so that if you do have a speed restriction, the system will ensure that the train has slowed to that safe speed in areas where you're not upgraded yet or you haven't built out the curves and things like that. There are options to progress. Certainly, greenfield is best. If you can do that, that's great. You don't have to worry about speed restrictions. The customers are happier going 300, 200 kilometres per hour, whatever it is, as opposed to slowing down, but it is possible.

Dr. Hendry: I'd just say that, riding along the rails in Alberta on a high-rail truck, we usually have to get it on and off the tracks quite a bit to make sure that whenever the trains come, we don't, obviously, impede the traffic. There are lots and lots of access points along any freight railroad line in Alberta. So any time a gas line crosses over the tracks, they do have an access road. Grid roads are very constant everywhere. A high-speed rail line would have to not allow those accesses to occur because each would be a potential for a conflict between whomever was using it, the conditions at that crossing, and that train. For freight it's extremely robust. We've been operating with lots of crossings for a long period of time. But I think that if you have to restrict access significantly, then you'd have to deal with all these small points of access and how you're going to manage getting from one side of the tracks to the other.

Mrs. Sarich: My supplemental question would be: any perspectives, based on your experience, on the environmental impact of high-speed rail? Some of the presenters that we've had thus far have indicated that, depending on the technology used, there are certain considerations as well. It's not as clean as it appears to be. Is there anything that you'd like to say on the environmental impact?

Mr. Larouche: Well, all of the true high-speed rail technologies are electrically powered – they're electric systems – so the actual vehicles are not generating any greenhouse gases, but the net is actually dependent on how you're generating the electricity.

There were some interesting studies that we did for the Lynx project that demonstrated that high-speed rail, by getting people out of their automobiles into trains, had a big impact on the generation of greenhouse gases. The project also coincided with the federal government's – this was right after Kyoto, and the federal government had created various tables to find solutions on how Canada could meet its greenhouse gas commitments. I happened to be on the transportation table, and compared to all of the other transportation solutions that were being brought forward, high-speed rail turned out to be a very low-cost way, a net low-cost way, of reducing greenhouse gas. You know, the cost per tonne of greenhouse gas reduced was very low.

Those numbers are available in a transportation tables report, and I can also share the calculations that we had done for the Lynx project. I just don't have them with me here.

Mrs. Sarich: Sure.

Dr. Hendry: I don't think I have anything to add to that. Sorry.

The Chair: Thank you, Mrs. Sarich.

Mr. Rowe.

Mr. Rowe: Thank you, Mr. Chairman, and thank you, gentlemen, for the presentations. Some very valuable information.

As we work through this process, I believe it becomes more evident that the CP Rail and the CN Rail rights-of-way are not viable options. We just can't do this due to the urban population along both of those routes. It just makes it not viable to do, in my opinion, which means that we will probably end up landing on the greenfield option. That creates a whole new set of issues that we'll have to deal with, as Dr. Hendry mentioned: all of the east-west traffic, the grid roads and so on, the farming operations. How do we deal with emergency operations – fire, ambulance, and all the rest of it – that will be basically cut off? We do have to isolate this system.

In all of the presentations and literature that we've been presented with, nobody has given us a cost differential between an at-grade track and an elevated track. Can any of you enlighten us a little bit on that? Further to that, is it an option to go at grade in some portions of it and then go to an elevated system where it might be necessary and back to at grade? Is that differential problematic and so on? I think those are some answers we need before we proceed with a defined route, and it would be helpful to get that information.

Thank you.

10:30

Mr. Larouche: I don't have numbers about the difference between at grade and elevated, but I remember that on the Florida overland express project there was a significant portion of the alignment that was elevated, a remarkable amount. I could try to dig through the files that I have on that subject and get back to you on that, but there was some really good work that had been done back then. There was a huge cost impact. When we're talking about grades separated, it's usually less expensive to have the automobile or truck traffic go on an overpass or an underpass rather than having the entire rail system elevated.

Mr. Rowe: Okay.

Mr. Halasz: Most of the solutions that have been developed just have vehicle underpasses. Currently on a railway farmers will come up and just kind of build their own little overpass. Those types of scenarios obviously can occur, and that becomes, I think, a challenge because they have two properties on the side of the track. How do you farm that? That's going to be a challenge and could add cost because you'll have to put in underpasses, and they won't like where the underpasses will be and things like that.

Elevated: in terms of high-speed I don't know. With light rail you're typically looking at about a 30 per cent premium for an elevated light rail versus at grade.

Mr. Rowe: There are other costs, I think, that need to be looked at when we look at this, though. The land acquisition costs alone would be, I think, significantly less with an elevated system because the farmers can work around those pylons, the same as they do power lines or whatever.

As well, as I said, for the emergency vehicles you're going to have to set up two separate systems, on either side of this track, to properly service people. The environmental impacts would be significantly less with an elevated track. You wouldn't have to worry about wildlife getting on the track and the fencing and all the rest of it that goes with it. I think it will be valuable to collate all of that information and let us take a look at that before we decide on the final configuration.

If I could just have one supplemental, Mr. Chairman?

The Chair: Sure.

Mr. Rowe: To Bombardier: what happened to your JetTrain, that was going to operate at 250 kilometres an hour on conventional tracks? Whatever happened to that concept?

Mr. Larouche: Just so everybody knows, the JetTrain took an Acela power car, and we took the gas turbine engine from the Q series aircraft, those turbo props. That gas turbine fits on this desk very nicely, on this table right here. We put that in there, connected that to an alternator, generated the electricity right there in the car, and then powered the electric power car from the electricity generated by the gas turbine.

Well, it was a technical success. We were able to make it run, and it toured Canada, but there were no takers. I must admit that one of the drawbacks of this technology is that a gas turbine engine consumes as much fuel when it's idling as when it's going full speed, so the actual fuel economy of that vehicle was quite limited. It had a lot of guys in our engineering offices doing a lot of calculations to show that, yes, we'll be able to get to Toronto if we leave from Montreal. If anybody would like to visit the JetTrain, it's parked at the transportation test centre in Pueblo, Colorado.

Mr. Rowe: Okay. Was noise a factor in that as well?

Mr. Larouche: No. Noise was not a problem.

Mr. Rowe: Okay. All right. Thank you, Mr. Chairman.

The Chair: Thank you, Mr. Rowe.
Mr. Cao.

Mr. Cao: Thank you, Mr. Chair. Thank you very much, gentlemen, for your presentation, which I consider very thorough from the technology, business, and engineering sides. I really see it comprehensively.

I had the pleasure of riding TGV in France and also from Boston to Washington, DC, a couple of times. I enjoyed it very much. It's just very, very smooth. Now, my colleagues have already asked about this, but my question is more about the project. You have a series of projects, some of them successful, some that fell through and didn't get anywhere. My question is: who kick-started that project? How did it start? Was it that the government wanted it done, or is it something to attract business to come in and then put a consortium together? I wonder how it was kick-started.

Mr. Larouche: Well, I took the two cancelled projects and the one that never got off the ground and put those up there. In Texas it was the government of the state of Texas that said: "We will issue a franchise for a high-speed rail project linking these three cities, but it has to be an entirely privately funded project. No public money."

Well, I dug up an old, old presentation by Mr. Gene Skoropowski, who is very well known in the transportation field in the U.S., where he was talking about the reasons why previous projects have failed. He summarized those. I just lifted this right out of his presentation. These are about efforts much prior to anything that's up here. He said that the projects were overly optimistic in thinking that public money can do it all. After the Reagan administration that was the mantra: public money will do it all. A lot of projects failed because of that approach. Then he listed lack of public will, you know, if the government wants it, but the people don't want it; lack of public policy; and finally, lack of public resources.

Texas: that was that project. Florida: there, again, one governor's administration issued a request for proposals for a franchise, the franchise was awarded, a change of government, and the project got cancelled.

Mr. Cao: Basically, the initiator is the government attracting people in.

Mr. Larouche: Yes.

Now, the Lynx project. After the tripartite study concluded that the project would be viable, I remember Mr. Chrétien said: it's now up to the private sector to step up. Mr. Beaudoin from Bombardier formed this consortium, and we spent three years and a whole lot of money and applied a lot of talent to this to come up with a proposal, but at the time that the proposal came out, people were not interested in spending $11 billion on a high-speed rail system. There were other priorities, so that was just bad timing.

Mr. Cao: All right. Thank you.
May I have a supplemental one?

The Chair: You have a supplemental? Go ahead.

Mr. Cao: My colleagues mentioned elevated. In my mind, simply, we have airplanes at high elevation, and then we have trains on the ground and maybe a subway under, but now we're talking about something in the middle, in terms of speed as well, which is the elevated one going through fast and greenfield and everything. I haven't seen a previous presentation about our project here just saying, "Greenfield, elevated: what's the cost?" We haven't seen that. I don't know how, but if you can help to give some ballpark at least, maybe $20 billion or something. You mentioned $5 billion to $20 billion. I think my perspective is that it is something that is worthwhile to investigate from the technical side and from the business side.

Mr. Halasz: If I could just add one thing to your previous question in terms of the discussion of public versus private funding. If you are going to look for privately funded or at least partially privately funded, you have to look at the actual project and at: will investors invest, you know, if this is the first high-speed project in Canada and there's, let's say, ridership risk, as we say, where the private company would have to make their own money back from it and it's a purely private project? You have to look at whether or not investors would do that without the government there to at least backstop loans or things like that. So it's another consideration.

As lessons learned from Toronto, although Siemens is not involved, there's an airport rail link between downtown Toronto and Pearson airport, and that was originally almost a fully private project. However, they couldn't secure funding until the government then backstopped the loan. Eventually the project was kind of rejigged, and now it is a public project run by the Ontario government. That's one of the nuances of these public-private partnerships.

10:40

Mr. Cao: Thank you.

The Chair: You're done, Mr. Cao?

Mr. Cao: Yes.

The Chair: Thank you very much.

I must say that it's a very interesting presentation and information. This is the first time ever that I have seen that a member of the research branch would like to ask a question. Dr. Philip Massolin, manager of research services at the LAO.

Dr. Massolin: Well, thank you, Mr. Chair, and thank you for allowing me to ask a question. This question is directed to Mr. Hall and Mr. Larouche from Bombardier. In your presentation, gentlemen, on page 4, I believe, you referenced Bombardier's participation in operations and projects in both Sweden and Norway. I'd like to highlight those two because of two factors. One is the relatively small populations of those countries comparable to Alberta, especially Norway, and the economics of

high-speed rail or higher speed rail and how that would apply to Alberta. Or would it?

Then the second one has to do with climatic and sort of topographical conditions that might also be similar to Alberta's given the cold and other features. Perhaps you could just provide the committee with your experiences there and how that situation in those Nordic countries would apply to Alberta.

Thank you.

Mr. Larouche: I don't know much on the specifics about those two references, but from a very down-to-earth perspective about operating in a cold climate, because these are electric trains, you have an abundant amount of energy that's available to heat the trains. That may seem a little bit mundane, but, you know, if you're operating a diesel-electric hauled train, the train length is actually limited by the locomotive's ability to heat the wagons behind it, which is not a limitation that you have when you have an electrically powered train. That's a very down-to-earth response to a very good question.

I'm sorry; I don't have the details about those two countries.

The Chair: Questions?

I see no more questions, so, gentlemen, I'd really like to take this opportunity to thank you very, very much for taking time out of your very busy schedules to be here and give us this overview, insight. Very informative presentations. Thank you very, very much.

I'd also like to remind you that you can access the *Hansard* transcript of the full day's proceedings via the Legislative Assembly of Alberta website later this week, and the audio of the meeting is also available on the Assembly site. Thank you very much.

Committee members, now we will take a 10-minute break. Please be back here at 5 to 11 sharp. Thank you.

[The committee adjourned from 10:44 a.m. to 10:58 a.m.]

The Chair: Okay. Ladies and gentlemen, I'd like to call this meeting back to order.

Now we will be hearing from Magnovate Technologies and Alberta High-Speed Rail (2005). I'd like to welcome you, gentlemen.

We will do a quick round of introductions before we get started. I'm Moe Amery, MLA for Calgary-East and chair of this committee.

Mr. Fox: I'm Rod Fox, MLA for Lacombe-Ponoka and vice-chair of this committee.

Mr. Quadri: Sohail Quadri, MLA, Edmonton-Mill Woods.

Ms Olesen: Good morning. Cathy Olesen, MLA, Sherwood Park.

Mr. McDonald: Everett McDonald, Grande Prairie-Smoky.

Mr. Cao: Wayne Cao, Calgary-Fort. Welcome.

Mr. Clayton: Carl Clayton with Magnovate.

Mr. Matheson: Scott Matheson with Magnovate.

Mr. Corns: Dan Corns, president of Magnovate Transportation.

Mr. Cruickshanks: Bill Cruickshanks, president of Alberta High-Speed Rail. Jack, our chairman, will be with us shortly.

Mr. Barnes: Drew Barnes, MLA, Cypress-Medicine Hat, sitting in for Ian Donovan.

Mrs. Sarich: Good morning and welcome. Janice Sarich, MLA, Edmonton-Decore.

Mr. Rowe: Good morning. Bruce Rowe, MLA for Olds-Didsbury-Three Hills.

Mr. Stier: Hello. I'm Pat Stier, MLA for Livingstone-Macleod. I'm subbing in today for Rick Strankman, Drumheller-Stettler area.

Ms Robert: Good morning. Nancy Robert, research officer.

Ms Sorensen: Rhonda Sorensen, manager of corporate communications and broadcast services.

Ms Dean: Shannon Dean, Senior Parliamentary Counsel and director of House services.

Dr. Massolin: Good morning. Philip Massolin, manager of research services.

Mrs. Sawchuk: Karen Sawchuk, committee clerk.

The Chair: Mr. Crawford, would you like to introduce yourself for the record?

Mr. Crawford: Yes. I'm Jack Crawford, the chairman of Alberta High-Speed Rail.

The Chair: And we have two members joining us via teleconference. Would you please introduce yourselves.

Mr. Luan: Jason Luan, MLA, Calgary-Hawkwood. Welcome, everybody.

The Chair: Okay. Thank you very much.

Mr. Rogers.

Mr. Rogers: Thank you, Mr. Chairman. George Rogers, MLA, Leduc-Beaumont.

The Chair: Great.

Now, ladies and gentlemen, we will hear first from Magnovate Technologies.

Gentlemen, go ahead, please, with your presentations.

Magnovate Technologies, Alberta High-Speed Rail

Mr. Corns: Thank you for the opportunity to present today. I'll start off with an overview of the Magnovate transportation consortium. Then I'll address the engineering questions. Magnovate presents a new paradigm for building a world-class automated transportation network, or ATN, that is faster, safer, more economical and user friendly than legacy transportation systems and can promote a higher quality of life for Albertans in many ways.

Our revolutionary Magline technology leapfrogs high-speed rail with ATN that obsoletes the 19th-century iron horse to serve Alberta for the next 50 years and beyond with genuinely sustainable travel options to connect and transport people and products.

Magnovate is the linchpin of a consortium that includes several multibillion-dollar international industrial leaders all working together to create a complete maglev transportation industry in Canada. The Magnovate consortium will provide end-to-end

services, from planning and analysis, infrastructure and vehicle manufacturing, and condition-based maintenance. We have developed a self-funding rail and property business model well suited to the population density of Alberta. Our industrial consortium includes PCL Construction, Stantec, and Magna International.

Magline ATN consists of computer-controlled driverless vehicles of various sizes and configurations which operate on an elevated guideway. Unlike conventional transportation systems that operate as a line or loop, ATNs are networks that connect multiple destinations over a larger service area. Conventional trains stop at each station along the route according to a fixed schedule, and people must wait for them. Stops delay everyone in the train, including those not using that station.

ATNs have offline stations so that individual vehicles not using that station bypass without stopping. Each vehicle travels point to point in response to passenger demand and network loads, eliminating irrelevant stops along the way with no fixed timetable. ATN vehicles thus wait for people. Computers optimize each vehicle's routing to align with the demand, eliminating heavy trains in favour of pipeline flows of individual vehicles. Individual cars are much lighter, so support infrastructure is also lighter, less expensive, and faster to construct.

Now I'll address the engineering questions. Magline's patented technology uses magnetic levitation, or maglev. Maglev trains in Germany and Japan have safely operated at speeds near 500 kilometres per hour for decades but lack high-speed switching capability. These systems long ago proved the enormous performance and economy of replacing conventional wheels on axles with frictionless maglev. Levitation eliminates the pounding of steel wheels on tracks as well as friction and rolling resistance and enables high speeds and unparalleled energy efficiency with minimal wear.

Maglev vehicles cost less to build than conventional trains and make much less noise and have lower maintenance costs. Elevated guideways help avoid accidents and automobile traffic while conserving land and the integrity of farms. Support towers can be built on muskeg, and lighter, less expensive bridges are required to cross rivers.

Magline's proprietary switches enable vehicles to change tracks magnetically with no moving parts at high speed. This innovation along with offline stations facilitates a packet switching model much the way information packets travel on the Internet. Vehicles bypass stopped traffic without slowing on complex networks. Spur lines to towns, academic and corporate campuses, factories, mines, and shopping districts create alternative routes to reach any destinations.

11:05

Computers route and reroute vehicles to avoid congestion. There is currently no regulatory framework in Alberta for high-speed rail or maglev ATN. However, Alberta Transportation has agreed to implement the regulatory framework necessary to adopt maglev ATN through a project that the Magnovate consortium is planning from the Edmonton International Airport to the Century Park LRT station.

Alberta enjoys the unique opportunity to exploit the Magnovate consortium first on a major scale. It is a technology especially well suited to Canada, a nation with cities spread across a vast continent of open space. Such a bold, visionary step would thrust Alberta and Canada immediately into a leadership role in this industry. As the leader Alberta could have singular access to large emerging multitrillion-dollar transport market opportunities in China, India, Africa, the Persian Gulf, and South America. The Magnovate supply chain includes over 160 specialized manufacturers and component suppliers in Alberta.

Thank you.

The Chair: Thank you very much.

Now we will move to Alberta High-Speed Rail.

Mr. Crawford: Well, thank you. We appreciate your making available the time for us to make a presentation today. I understand that your committee is under a very tight timeline, so we're appreciative of the opportunity, and we'll try and make it worth your while. What we want to talk to you about today is how we believe the private sector can build a high-speed rail link using a more conventional technology, that you heard about earlier, between Calgary and Edmonton without government money.

Now, it seems to us that most of the people who have talked to you before – I mean, we've reviewed some of the *Hansard* and so forth and the newspaper reports, but it seems that most of what you're hearing is to be very cautious with government money because the assumption seems to be that it's going to require government money to make the project move forward. We don't think that's necessarily true, so the question really becomes: why should you believe us instead of what seems to be a bit of a forming consensus? Simply put, I think it's fair to say that we have experience in railroad design, construction, operation, and the prosecution of megaprojects like this. We've studied this project in very specific detail over a considerable period of time. I'll elaborate on that in a minute.

The next thing that we think we need to talk a little bit about is: what is the role of government in a project that's privately supported? We do see a role for the government, but it's really in terms of providing a regulatory framework. Mr. Corns a moment ago referred to the fact that you don't have a comprehensive set of railway regulations in place, nor do you have what I would characterize as an overall regulatory framework. We've got some suggestions in that regard and think that we'll elaborate on that in just a minute.

Lastly, your letter of invitation to come here put forth some questions, and we'll try and answer those questions. At the end, of course, we'll answer whatever questions you might have over and above the ones that were formally asked of us.

Bill and I represent a Canadian-owned Alberta company. I am the chairman of the company. I'm a professional engineer but with a background more in oil and gas, especially the downstream end, so much of my experience relates to pipeline construction. I was the project engineer that designed and built most of the supply network for the petrochemical business in this province. Subsequent to that I worked on a cross-country system to take away the petrochemical products.

Much later in my career I put together a project called the Alliance Pipeline, which was a natural gas pipeline. A new cross-continent transmission system was built with a completely different business construct than had been used in the past. We quite literally started a company which put together the right-of-way and built the system in the space of about five years, which was very, very short in terms of projects. Certainly, you're seeing today that projects are having a more difficult time and a much longer time frame.

Seated to my left, of course, is Bill Cruickshanks, who is the president and CEO of the company. His experience is in banking. He had a long career with CIBC, so he certainly understands the challenges of financing a large project like this. In addition to that,

of course, he's also a keen railroader and has an interest in the history of railroads.

Two other members of our team are unable to join us today. The first is a gentleman by the name of John Chaput, who is our VP of operations. John, like me, is an engineer, but his background is much more in terms of transit and transit operation. He was one of the early people involved in Calgary's LRT system. Our other VP, Ralph Garrett, is also an engineer. He's our VP of infrastructure. Like John, he has roots in the Calgary LRT, but he also has built railroads all over the world, including Australia, Quebec, and he was sort of the founder of the Central Western Railway, the passenger railway in and around Stettler. There are several other experienced personnel with an interest in this key piece of infrastructure, and I won't go into detail, but our website gives some details on the many years of experience that are represented by our team. I might also add that we have enlisted the help of some of the best companies in things like right-of-way acquisition, public consultation, and regulatory proceedings.

The company has been in operation for something like 14 years. Over that period of time we've conducted an extensive review of different high-speed rail operations in different parts of the world. We've looked at the different technologies and different options to implement high-speed rail. Really, what we've come up with is – I think you heard this earlier; I think there's some sense around it – that you need a greenfield route. The technology that we think makes economic sense in this corridor is conventional steel wheel on steel rail, operating at something in the order of 300 kilometres per hour, and, again, electric driven, as you heard earlier. We think that is a project that can be economic on its own. We've also done a fairly extensive review of the feasible corridor. What we believe makes sense is a corridor just west of the QE II highway.

We've done a very detailed capital cost estimate using current construction costs and prices for materials. We've also done a detailed review of operating costs, and obviously our team's experience in LRT operation has assisted in that. As I mentioned earlier, we've enlisted what I characterize as the A-team of consultants in public consultation, right-of-way acquisition, environmental assessment – we believe that's obviously something that will have to be done – and legal and regulatory aspects of the project. We think we've identified a window of opportunity. We're currently sitting at a period in time where interest rates are at historically low levels, and to be frank about it, those low interest rates are a key part of why we think this project can be built and stand on its own. Those low interest rates won't necessarily last forever, so we think we have a window of opportunity right now to initiate this project.

11:15

Let's talk a little bit about what we see as our plan. We call it here a construction plan, but in fact there's obviously a front end to it. We believe that any kind of a project of this nature – I guess the popular term is that it needs to earn its social licence to operate. We think that's a valid concept, and we think that a project like this deserves a fair bit of public scrutiny. What we would envision would be preparing a full regulatory application, including an environmental assessment, and having that reviewed in an open, public hearing. That process in total would be expected to take roughly three years, and that would then be followed by approximately a three-year construction schedule. Our most recent cost estimate is in the order of 3 and a half billion dollars. We're in the process of updating that. To be frank about it, it's in all probability going to rise closer to $4 billion. We think that at that level we can privately fund this, because we think we can demonstrate that it will make money.

As I said, the route that we've identified is just west of the QE II highway. You'll note that the vast majority of it is virtually straight, that the curves have a very long radius on them, as your last presenter talked about. The fact that it's close to the QE II, which is, generally speaking, a limited-access highway, means that you've already sort of dealt to some extent with the access issues that were talked about earlier.

We'd see, as I said before, conventional steel wheels on steel rails, double track for the majority of the distance and operating at 300 kilometres an hour. Again, as was discussed earlier, any crossings will have to be grade separated, and the right-of-way will be fenced on both sides. We do recognize that there is going to be a requirement to deal with the needs of the farming community.

Once the system is constructed, we would envision operating from 6 a.m. to 9 p.m. each day, hourly service. As I said before, this is about a six-year window, so if we were able to commence the process – and we'll talk about what that will take – we could be in operation in the year 2020.

Our current projection for downtown-to-downtown travel time is 84 minutes. At this point we believe that we can achieve that at a fare of approximately $100 one way.

I'm sure you've seen it, and many of you, I heard earlier, have experienced it, so this just gives you a sense of what the cars on a high-speed rail line can look like, comfortable, obviously. I think that in today's wired world the ability to utilize your computer, your cell phone, and to have access to Wi-Fi is likely to drive ridership beyond what we can easily see.

As I said, what is it that we need from government? Plainly, we need timely consultation with a number of different departments in the government. A suggestion that we have in terms of a public review is something that – I'm not even sure if the Natural Resources Conservation Board exists anymore under the new energy regulation scheme, but the province does have in place or has had in place a review process for what I would characterize as difficult issues. The Natural Resources Conservation Board has been there to review projects of a unique or one-off nature. We think that with very minor changes to the regulations, that process could be quickly adapted to review high-speed rail.

The last thing that we think is logical is some guidance from the government in terms of what you would like us to do with what we understand is some lands that the government has already purchased in advance of the thinking for high-speed rail.

Some of the questions that were posed to us were with respect to high-speed rail's safety record. I think you heard from the last panel considerable discussion around the fact that this conventional high-speed rail technology has an excellent safety record over a long period of time. My understanding is that Japan has operated high-speed rail for something in the order of 40 years, to the tune of 7 billion passengers, without ever having a fatality. You also heard earlier that high-speed rail operates in climates that are similar to Alberta's, so we don't anticipate that there'd be any difficulty operating in the weather patterns that we're currently experiencing or even worse.

I think you also heard earlier that the Edmonton-Calgary corridor is a relatively easy corridor to construct the steel-wheel-on-steel-rail technology that we're looking at. We also envision that you could add legs to Lethbridge, Medicine Hat, Grande Prairie, Cold Lake, and Lloydminster almost as easily, not necessarily as economically but at least as easily from a construction perspective, as the Calgary-Edmonton corridor.

The Fort McMurray leg – again, you heard this earlier – suffers from rather extensive areas of muskeg. Our civil engineers

advised me that that doesn't mean that you can't build high-speed rail, but it will be significantly more expensive.

I believe you asked about bridges, highways, and tunnels. We would envision, obviously, bridges over the major rivers. We would also envision that we would have to grade separate all of the paved highways between the two cities. We would however expect that the more minor roads would be dead-ended, similar to the way they are against the QE II because of limited access. We don't see the need for any tunnels.

You asked about maintenance facilities. We plainly will need a maintenance yard, or garage if you like, which we would envision being immediately adjacent to the right-of-way at one end or the other.

Last, you asked about emergency response. As I said, the advantage of putting it close to highway 2 is that you've already dealt with the needs for emergency response across a limited-access highway. I'm very familiar with emergency-response planning because we do it very extensively in the pipeline business in very close conjunction with the various municipalities which your right-of-way passes through.

That pretty much concludes the formal part of our presentation, but I am, as always, happy to answer any questions related to the points that I've made or any points that we haven't made.

The Chair: Thank you very much for your presentations.

Yes, I do have a speakers list for questions, and we'll start with Ms Olesen.

11:25

Ms Olesen: Thank you. My question is for Mr. Crawford. Your proposal talks about building high-speed rail from downtown Calgary to downtown Edmonton. What would be the implications if you built it from the two international airports and you left the cities to provide LRT out to the airports? How would that affect the project in the cost and the strategic planning of that?

Mr. Crawford: Well, obviously, the most difficult part at both ends is from the airport to downtown, so certainly from a cost perspective it would make it cheaper. It certainly would have implications for the time of travel, you know, on the downtown-to-downtown piece. We'd certainly then have to look hard at what that did to the economics. I think the government's own ridership study demonstrates very clearly the strong linkage between available revenue and the time of travel. So much of our economics is based on a 90-minute downtown-to-downtown travel time. I'm skeptical that you could achieve that with LRT at both ends, but that would certainly be something that would warrant looking at.

Ms Olesen: So it's more the time than the cost that is the issue.

Mr. Crawford: Well, certainly there would be a commensurate saving if someone else picked up the piece for the LRT and we just had to build airport to airport. What I'm saying is that there are both cost and revenue implications, and it's the conjunction of those that would have to be looked at.

Ms Olesen: Okay. Thank you.

Mr. Cruickshanks: Could I add to that? All the research indicates that when people want to get on a transportation mode, they want to go to the downtown. In fact, Taiwan built one which didn't go downtown in the cities of Taiwan, and it has not been very successful, because people want to be dropped off downtown. They'll make arrangements to get to the station at the other end. Another factor is that in the transportation mode, people don't want to have to change vehicles. They want to get into one seat. It's rather like at the airport, where you have to sit at various seats before you get on the plane. You don't want to be doing that with a train. So you can build a system right into the downtown just outside the Legislature Building in Edmonton and on 9th Avenue in downtown Calgary. The premise in the TEMS study was also that you'd be travelling downtown to downtown.

Ms Olesen: I would certainly agree. Thank you for that.

The Chair: Supplemental?

Ms Olesen: No.

The Chair: Would the gentleman from Magnovate like to add to this question or responses?

Mr. Corns: Yeah. I'd concur. Transportation engineers call that an out-of-vehicle transfer penalty. In that case, if you were to build LRT links from downtown to both respective airports, that type of a system would be subject to a very heavy out-of-vehicle transfer penalty, which is the measurement that passengers spend transferring from one mode to another. So that's certainly something we want to avoid.

The Chair: Thank you.

Mr. Rogers.

Mr. Rogers: Thank you, Mr. Chairman. Gentlemen, thank you for your presentations. Just referring to Mr. Crawford's presentation, you mentioned, sir, that your vision would not necessarily include any government money, which is very encouraging from the point of view of a government member. You said that the project could stand on its own, particularly in this low interest rate environment, which most of us, like you, don't expect to last forever.

You didn't mention cost, a proposed cost. Is that because you felt that this is something that could be essentially built by a consortium like yours and others and would probably only need, then, some government regulatory framework or some enabling legislation, what have you? We heard presentations over the last few days and some particularly yesterday that talked about these systems, for the most part, making money above rail and that it would be necessary that government essentially pay for a good chunk of, if nothing else, the grade infrastructure, the right-of-way, and maybe the rail, and so on. I wonder if you might comment on how those thoughts compare to where you see the opportunity that you've expressed.

Mr. Crawford: Well, we have looked, like I said, very hard at the capital costs, which is to say that our current estimate is about 3 and a half billion dollars, which is certainly on the low end of what you're hearing. I expect that there's a natural wonder of: why is our cost estimate so low? I think we've asked ourselves that question. A lot of it is found in the fact that you have a somewhat ideal set-up: two cities a fairly optimum distance apart, very few physical obstacles in the way, and good soil conditions all the way. So our engineers have looked hard at those specific conditions and come up with a cost estimate, and we're using the government's own ridership study to forecast revenues and ridership. When you put those together as well as the operating costs that we've estimated, we think the project will make a modest rate of return in the order of what you would expect from a utility for its investors. For that reason we believe we can attract investors.

Mr. Rogers: If I may, Mr. Chairman, just to follow up. Then your approach would be a totally private-sector opportunity, the rail and all of the infrastructure necessary.

Mr. Crawford: Yes. A complete system.

Mr. Rogers: Wonderful. Thank you for that.

Mr. Cruickshanks: May I add that when you're looking at railway infrastructure, you're looking at very long-term life infrastructure. The average age of rolling stock, et cetera, in North America is 35 to 40 years. If you look at CP, they're basically still using the same infrastructure they built 125 years ago, which has been upgraded.

You can finance these things in pension funds over these long terms, and this allows you to take the long-term view in paying this thing back, and you have got this very small, NEAT-size railway where you're going to get people travelling up and down between these two major cities. It's like a shopping mall with the Bay at one end and – I was going to say Sears at one end; let's try somebody else at the other end.

Mr. Rogers: Two hubs.

Mr. Cruickshanks: Yes. Two hubs.

We have people paying for every mile of our track, every kilometre. It makes a huge difference. Look at Via Rail and Amtrak. They're running thousands of miles per year. In the winter months there's very little traffic, and their service is not compatible or competitive with the other modes. Ours will be competitive.

Mr. Rogers: Thank you.

Mr. Chairman, I did mean to have a supplementary to one of the other presenters as well if that's allowed.

The Chair: We'll allow that.

Mr. Rogers: Okay. Thank you.

Mr. Corns, I just need, if I may, a little bit of clarification of your terminology. You mentioned legacy systems versus the mag system that you're proposing. Are the legacy systems the typical steel track and the locomotives and other type vehicles that the other presenters have been talking about? Is that the comparison?

Mr. Corns: Yes. That's correct. It's the steel-wheel-on-rail technology that's been around for about 200 years. Granted, the speeds have increased. It's the conventional steel wheel on rail.

Mr. Rogers: So your system, a mag system, obviously would be totally dedicated infrastructure above ground. They have similar systems at airports; I think of Newark, that type of a system.

Mr. Corns: Yeah. It's typically built on an elevated guideway. One distinction with our maglev technology is that we have a passive switching technology, which allows the system to abandon the train business model. The typical, you know, legacy systems have some powering locomotives and a bunch of train cars that follow behind them whereas with this system, via the passive switches, the vehicles can make offline stops without slowing the main line down. We could have, you know, offline stations at the Edmonton airport, Leduc, you know, at a number of economic centres between Edmonton and Calgary, so they could benefit from the high-speed link as well.

Mr. Rogers: Thank you.

11:35

The Chair: Thank you, Mr. Rogers.

Before we leave this subject, I have a little follow-up about the costs. You mentioned 3 and a half billion dollars. You also mentioned that 3 and a half billion dollars would be at the low end of the cost. Does that include the land?

Mr. Crawford: Yes, it does.

Just to clarify, when I say the low end – I think you've heard ranges here from sort of $3 billion to $20 billion, and I acknowledged that we're at the low end of that range.

The Chair: Well, that's a good deal.

Mr. Crawford: We agree. To be perfectly blunt about it, what we can't understand is why the government hasn't put in place the kind of a structure that is required, I believe, to proceed.

The Chair: With a 3-and-a-half-billion-dollar total cost you will need no government intervention, no government dollars whatsoever?

Mr. Crawford: That's correct.

The Chair: That's including the land.

Okay. We will have more questions. Now we have Mr. Barnes.

Mr. Barnes: Thank you, Mr. Chairman. I appreciate everybody's input in the presentation here today. Very, very important to me whenever we're prioritizing how we're spending taxpayers' money. The other proposals and the other presenters, of course, were reprioritizing or redirecting money away from health care, education, and social services.

The idea of no government money rings true, but I want to explore that. To me, the worst possible scenario is if we misdirect taxpayers' money, but possibly the second-worst scenario in this case is if we start something that a private corporation cannot finish. I want to ask Mr. Crawford and Mr. Cruickshanks a little bit about your company and how you see this process would go.

I believe you mentioned the 3 and a half billion in capital costs, which I feel from earlier presentations is probably only about 50 per cent of what it would end up costing, so that does concern me a bit. Secondly, you mentioned going to the public for some share sales. You know, what if that didn't happen? What alternative plan would you have? When a construction company is hired to build something for the government or a private person, usually bonding can be put in place so that if the company doesn't perform, the bonding company will step in and complete the project. Is something like that available? Again, in the back of my mind is the fear that we would put in transportation corridors for this to happen, we would sterilize to some extent valuable land for Albertans, and then the project wouldn't happen.

Mr. Crawford and Mr. Cruickshanks, what can you tell me about your company? What can you tell me that would reduce those concerns, please?

Mr. Crawford: Well, first of all, let me say this. I can probably tell you nothing about our company that would give you assurance that we've got the kind of money in the bank that it would take to do this project. We would clearly have to raise money, both debt and equity. Now, having said that, my experience with these long, linear projects is that the front end is a very, very small cost relative to the overall cost.

You know, to get through the regulatory process, to do the environmental work, and to have the public hearings is a relatively

low cost. At that point in time, if you then achieve your social licence to operate and you have regulatory approval, you then have to go out into the marketplace and raise the debt and equity for the rest of the 3 and a half billion dollars. If we don't raise that money, we won't build it. It's not my conception that we would do any construction or even start construction until all the money was in place. I can tell you from experience that the banks are not likely to loan you any money until they're confident that you can complete the project.

That's likely to mean two things: one, that they're going to want to see in place contingency funding that will cover overruns and, two, that they're likely to want to see your contractors be bonded, just as you referred to. Obviously, no bank wants to put forth a bunch of money and then find out that you can't finish the project and that they're never going to get their money back.

The Chair: Mr. Crawford, speak up a bit, please.

Mr. Crawford: I'm sorry. I will try.

The Chair: Okay. Go ahead.

Mr. Crawford: Does that address your question? Is that clear?

Mr. Barnes: Yeah, clear enough to me. Again, there are a whole bunch of hurdles in a three-year process of exploring this more, developing more where we're going to go. Then I guess one of the decisions three years out would be, you know, if you guys were the best private option out there if everything else was set. I just wanted to ascertain exactly where that's at.

My supplemental, if you don't mind, to one of the people from Magnovate, please. We looked at some costs from the Washington, DC, to Baltimore corridor. It looks like the costs would correlate to around $40 billion to implement the wheels-on-steel rail from Calgary to Edmonton, based on what it cost for Washington, DC, to Baltimore. I'm wondering if you could again clarify for me, please, the difference in what your costs would be, the difference in your service. I'm a little bit unclear. Are you guys suggesting you could do this privately, without government money as well, or are you more just presenting another option?

Thank you.

Mr. Corns: I'll start off with question 1. Our maglev technology is different than the current maglev technology that I believe you're talking about. The current maglev technology is essentially a modern propulsion system applied to the old business model of trains. In other words, you have infrequently flowing trains that require massive overbuilt guideways to support them. Our system leverages a pipeline flow of lighter weight vehicles, and our system enables offline switches via the passive switches. So that's what enables the packet switching model.

In regard to how we're proposing to pay for the system, we believe the system can be funded through using advanced land-value-capture mechanisms. So this business model leverages the inherent value increases at all the transit stations. Of course, it also represents an opportunity to build smart mobility hubs. These smart mobility hubs are interchanges where people can transfer from the maglev vehicles to various other modes of transportation services such as Car2go, bicycles, buses, taxis, that kind of thing.

I'll further note that the only company in the world that successfully builds and operates high-speed rails and makes a profit is Mass Transit Railway based out of Hong Kong, and the majority of the revenue that they earn comes from this land-value-capture business model. So what we're proposing is using a new type of maglev propulsion system that allows passive switching and more stops along the corridor. Because you have more stops, you also have more value spikes, so then as a consequence your economic benefit from the system is spread out as opposed to centralized in your big-population regions.

Now, that being said, this is going to take a feasibility study of this land-value-capture business model applied to Alberta, and there is the chance under our proposal that this would be a public-private partnership. So it may require some government funding. I'll go on the record as saying that we're not proposing to fund this completely privately. However, at the end of the feasibility study with this business model of having more stations where value-capture mechanisms can be utilized, there may be the opportunity to completely fund the transportation system by using the land-value-capture business model. Of course, the benefit of that is that once we develop this business model in Alberta, the system could be proliferated to include Sylvan Lake, Banff, Fort McMurray, and some of the other big centres.

The key, in our opinion, is developing this self-sustaining, self-funding land-value-capture business model.

11:45

Mr. Barnes: Okay. Thank you.

The Chair: Mr. Rowe, please.

Mr. Rowe: Thank you, Mr. Chairman, and thank you for your presentations, gentlemen. The chair has asked my question, basically, on the land acquisition costs. But, also, going along with that land acquisition, there's compensation for stakeholders, and that could be, I guess, a range of anything: businesses affected, farming land affected, and so on. Have you built that into your costs at all?

Mr. Crawford: Yes. The notion would be that we would purchase the right-of-way. As part and parcel of that there will be considerations in terms of loss of use. The right-of-way will bisect some parcels of land, which will affect their usability, and that will affect the price that you pay for it.

Mr. Rowe: Okay. A supplemental, then: when you put together your consortium, who do you see as being part of that?

Just to follow up, then, which rolling stock will you use? Who will build your equipment and so on?

Mr. Crawford: Well, first of all, simply put, we don't see a consortium. We would do this as a private company.

As far as rolling stock is concerned, we'd be inclined to look at the low bidder. Now, that doesn't necessarily mean you'd take the cheapest cars. It means that you'd take bids from all of the manufacturers you heard from and others and evaluate which one is going to be best for your situation, and cost will be a big part of that. But we're completely unbiased as to whose system we would use.

Mr. Rowe: Okay. Just one more if I could, Mr. Chair. You said that you'll probably rely on some government funding in some area. I think we would need that to be defined a little bit better than that: what areas, land acquisition, or whatever. I think we need to attach a number to that or at least a percentage of the project or something we can get our heads around.

Mr. Corns: Yeah. I absolutely agree. Of course, you know, when we look at the studies that have been completed thus far, the Van Horne studies have been very high-level studies, so this is going to take a next-level study that gets into the actual implementation phase as opposed to the high-level feasibility stage. I absolutely

agree with you. Like I outlined before, I put the caveat on it where I said that maybe we would need government funding.

Of course, with large projects such as the ones we're contemplating, this is a situation where the province would benefit greatly from the project, so it's certainly worth considering investing in. However, I'll outline again: it's a maybe. If the feasibility study of the land-value-capture business model, where we can capture the land values at many more stations between Edmonton and Calgary, proves to be positive, then there is the chance that the complete system could be funded through the land-value-capture business model.

Mr. Rowe: Thank you, Mr. Chair.

The Chair: Thank you, Mr. Rowe.

Mrs. Sarich.

Mrs. Sarich: Thank you, Mr. Chairman. Gentlemen, thank you for your presentation. From the two perspectives, it's been quite interesting.

I have a couple of questions, starting with Magnovate Technologies. In your slide deck on page 5 you have an illustration there showing, you know, the considerations. In the notes it says, "Construction of an at-grade [high-speed] rail line will require ROWs about 40 meters wide." That would be the right-of-way that you would need. Then you have a diagram. Lots of presenters have proposed diagrams, like for the city, showing for the city of Edmonton and coming into the city of Calgary. Forty metres wide: for those who live in Edmonton, it's almost as wide or as long as the 50-metre pool at the Kinsmen, as an example, or two 25-metre swimming pools. When people look at that, that's fairly wide, and there's a reason for that.

We had Mayor Iveson here, newly elected for the city of Edmonton, and he generally was talking about the node in the city centre. When you look outward from the downtown core, when I think of Calgary and you needing that 40 metres wide to come in or leave – although, granted, your technology is up, you know, and off the ground, still there are other considerations. People have to imagine: what does that look like? How is that going to be possible? You have to cross a river, so it involves a bridge to get right into the city core for Edmonton, and Calgary is very similar. It depends on which part of Calgary you land that would be part of the city core.

My question to you. You also talk about the compatibility of upgrades to current rail, subway systems, and things like that. We've had CN and CP Rail here, and we've also had other perspectives that have studied the rail. It has huge implications and almost not a viable option. I just was curious if you had any response to possibly some of the implications about using rail.

Mr. Corns: Right. Yeah, absolutely. The route that we're proposing is using our elevated guideway, which, as it's outlined here, is two metres wide compared to the 40 metres wide, which is conventional high-speed rail. We're proposing that you could run the corridor down the median in between the QE II highways, and of course when you do get to the city centre, it makes it much easier to negotiate your corridor using concrete elevated guideways as opposed to the 40 metres of right-of-way required for high-speed rail.

Does that answer your question, or can I further speak to that?

Mrs. Sarich: Whatever information you'd like to provide to the committee is fine, so just go ahead if you have more to say on that point.

Mr. Corns: That's about it. Thank you.

Mrs. Sarich: That was pretty well it?

I guess the driving inquiry here is not as simple as just: here it is. There are a lot of considerations. That's the point. Big urban centres have complexities. When we look at transportation from point A to point B and coming into any large urban centre core, it's not impossible, but there are other considerations.

My supplemental question would be for the private company High-Speed Rail Inc. In your presentation, in your slide deck in the questions area, there's a notation on bridges required over the Bow, Red Deer, Battle, and North Saskatchewan rivers, numerous paved highways, no tunnels, requirement of maintenance facilities, and emergency response planning. We've received a lot of information about implications in this particular area. In the area of bridges or maintenance facilities I understand that that could be procured privately through your own company.

The Chair: Mrs. Sarich, can you make it brief? We have only six minutes and three more questioners.

Mrs. Sarich: Right.

Are you saying that you would absorb the cost of bridges, any implications for the emergency responses or highways, all the considerations of what would be required for the corridor preparation for that leg, that that would be all done by your private company? If it is so good, then the bigger question for the government of Alberta is: would this be an asset that should be owned by the citizens of Alberta?

Mr. Crawford: That's a lot. Suffice it to say, yes, we're proposing to build those bridges and so on. I'm not sure that we're prepared to absorb all of the emergency services, but like I said, because we're close to highway 2, I think much of that's already been factored in in terms of a limited access highway that prevents some movement back and forth.

11:55

Lastly, it's an open question, I guess, as to whether or not the public should own this utility. I think it is basically a utility. What we're suggesting is that we think this is one piece of infrastructure the private sector can build, can make money at, and given that there is, I think, a constraint on government revenues, perhaps it is better to do as the cities suggest and utilize that funding for things like LRT and, in effect, providing the feeders to both ends of the high-speed rail.

The Chair: Thank you, Mrs. Sarich and Mr. Crawford.

Mr. Cao.

Mr. Cao: Thank you, Chairman. Thank you very much for your presentation.

The Chair: Mr. Cao, please make it short and right to the point.

Mr. Cao: Yes. I'll make it very short.

The maglev: I'm an engineer, so I know the technology. I read a lot about it. First of all, maglev is useful for short range. Now, you're talking about long range, right? My question is: is there any place that has long range that you know about or has been in operation? A supplementary to that for you is on the cost, the cost per kilometre of rail, and the maglev lift up there and the coaches, relatively. That's for the maglev. If you can help.

Mr. Corns: Absolutely. The reason that thus far there hasn't been a long maglev system built is primarily due to the fact that the first applications that have been chosen in places like China and Japan have chosen locations that require extensive tunnel boring. Of course, tunnel boring is very expensive, and that's added to the cost of the systems, so they've had to be short. However, there are much longer systems that are planned. With that being said, the first-generation systems – and when I say "systems," I mean maglev systems – are much more expensive than our technology. The reason for that is because the levitation tolerances are less, so the substructures must be more overbuilt.

I believe your second question related to the cars, is that right?

Mr. Cao: Right.

Mr. Corns: Can you kind of clarify a little bit more?

Mr. Cao: Well, Siemens has a car running in Russia with insulation for temperature in-cabin and fast – 300 kilometres an hour, right? – so almost an airplane cabin, pressurized and all that. My question is about that consideration.

Mr. Corns: Yeah. With regard to the vehicles they are constructed much more like light aircraft, and for that reason through Canada's IRB program we've been exploring strategic partnerships with IRB obligors such as Boeing, Raytheon, and Lockheed Martin because the technology does actually relate more to aerospace than it does to legacy train systems.

Mr. Cao: So you have connections . . .

The Chair: Thank you, Mr. Cao. We have two more questioners.

Mr. Cao: Okay.

The Chair: Ms Olesen.

Ms Olesen: Yes. Thank you. We've spoken with many stakeholders, and we've also spoken with economic development authorities from Calgary, Red Deer, and Edmonton and the mayor of Edmonton and Calgary representatives and Red Deer representatives. My conclusion would be that Red Deer is very keen. They're very keen and would like to see anything happen as soon as possible. That was my interpretation of it. But from the mayors and the economic development authorities from Calgary and Edmonton I got a sense that they thought this was premature until they get a very robust and strong LRT, transit, and even regional transit between the cities. What would you say to them?

Mr. Crawford: I would say that they're thinking that this is a competition for money, and they're deathly afraid they're going to lose. What we're saying is: this is a win-win; everybody wins. They get their money for local transit, and we build a high-speed rail system.

Ms Olesen: Thanks very much.

The Chair: Thank you.

Mr. Stier.

Mr. Stier: Yes. Thank you, Mr. Chairman. I will make it quick. This is quite direct, and I apologize because of the time. Mr. Crawford, I'm a little confused. Earlier on we had question after question about the land acquisition and the compensation for stakeholders. You have reiterated on several occasions in response that that would be part of your proposal, to look after those costs. Yet in the letter you wrote to the committee on January 24, you stated in the first paragraph, about four sentences down, "We do see a role for the government as a regulator to ensure protection of the environment, safety and adequate compensation for affected landowners." Can you just elaborate? Am I misreading this letter that you've written and misinterpreting what you've said, or is it just . . .

Mr. Crawford: Not at all. Not at all. What we suggest as your role is as a regulator to make sure that we compensate those people properly.

Mr. Stier: Ah. I see. Okay. Thank you for that.

Just a follow-up on the maglev. Mr. Corns, you had indicated an awful lot of stuff, and I know the time has been tight, and I appreciate that. You talked about a land-capture model. Probably in terms of time, perhaps, if you want to get back to me in writing: what is a land-capture model?

Mr. Corns: I'm glad you asked that question. In my opinion, it's a business model that's vastly understudied in Canada and North America. It's a business model that captures the inherent value spikes that happen at transit stations. Simply put, many people would prefer to live at transit-oriented communities that are walk-able and sustainable and that are close to high-speed, seamless transportation systems. Because of that, there's an increase in land value, so when you develop transit-oriented communities at those stations, the developments become quite profitable.

That's kind of what I alluded to with the MTR, or mass transit rail, business model in Hong Kong. Their business model is around building transit-oriented, mixed-used developments at the stations as well as delivering the rail lines that actually create the value spikes in the first place. Under conventional thinking when governments pay for systems, the value bleeds to the natural landowner. However, when the development is done strategically, you capture some of that value which, in our opinion, is community-generated. It's generated by the people that live in the community, the businesses, all of the stakeholders, and you return some of that value to the community stakeholders in the form of the transit system.

So I can address this a little bit more in depth, you know, in a written paper if you'd like.

Mr. Stier: That might be helpful.

Thank you, Mr. Chairman.

The Chair: Thank you very much, ladies and gentlemen. Thank you, Mr. Quadri; I can't take your question.

Just a reminder: if you feel that you have not answered a question fully or if you need to add some more information to a question, please send it to the committee through the committee clerk, and she will distribute the answers to all of us.

Mr. Cao: Mr. Chair, on that subject. If I have a question, can I send it to you and you can send it?

Mr. Crawford: Please do. We'd welcome that.

Mr. Cao: Thank you.

The Chair: Well, maybe you can send it to the committee clerk, and the committee clerk will send it to them.

Mr. Cao: Okay. I'll do that. Written question.

The Chair: So, gentlemen, on behalf of the committee I would like to thank you very, very much for your presentations this

morning. I also want to thank you for taking time out of your very busy schedules to be with us here today. It was very informative and very exciting, to say the least.

I'd like to advise you that you can access the *Hansard* transcript of the full day's proceedings via the Legislative Assembly of Alberta website later this week, and the audio of the meeting is also available on the Assembly site. Thank you very, very much.

Now, members, we will be adjourning for one full hour. Please be back here at 1 o'clock sharp.

[The committee adjourned from 12:04 p.m. to 1:02 p.m.]

The Chair: Ladies and gentlemen, we will continue with our discussion here, and we will go to item 4 on the agenda instead of item 3. We will go back to item 3 at a later time. The reason we are doing that is because the presenter from panel 6, aboriginal and environmental issues, will be delayed perhaps for about half an hour or so, so instead of sitting here and waiting for them, we will deal with item 4. Is that agreeable to the committee? Great.

Ladies and gentlemen, at our December 12, 2013, meeting the committee discussed the possibility of conducting public meetings and agreed that it would revisit the issue once the written submissions and panel presentations were complete. For the committee's information, a total of seven written submissions were received, including one received yesterday from the Alberta Wilderness Association in place of its attendance at today's meeting. These are now posted to the internal committee website and will be posted to the external site tomorrow. The stakeholder letters included a statement that submissions to the committee and the identity of the authors would be made available to the general public. The committee also heard from 21 different groups and organizations during our past three meetings.

I would like to open the floor for discussion. Does the committee wish to hold public meetings, or does it believe that the panel presentations and the written submissions provide sufficient information for it to complete its review of the potential for high-speed rail in Alberta? If the decision of the committee is to proceed with public meetings, we would need to identify the locations for these meetings: Edmonton, Red Deer, and Calgary. I would like to open the floor for discussion on the idea of having public meetings in the three locations that I have stated.

Over the last few weeks my office has received, you know, many phone calls. I'm not saying hundreds of phone calls, but we have received many phone calls. My constituency office did, and my legislative office did. I'm at the will of the committee. I'll open it for discussion and see if we should go ahead with public meetings in the three locations that I have mentioned, which are Edmonton, Calgary, and Red Deer.

Mr. Barnes: Mr. Chair, excuse me. The purpose and the nature of the public meetings would be to try to gather more information from Albertans in general, anyone that wishes to come make a presentation?

The Chair: Well, that's the idea.

Mr. Barnes: Okay. Well, I for one feel that the information presented by, you know, people involved in the industry has been adequate, and I wouldn't feel it would be necessary.

The Chair: Okay.

Mr. Luan: Mr. Chair, can you hear me?

The Chair: Yes. Go ahead, Jason.

Mr. Luan: I must say, from my point of view, that I share your view in terms of: the subject we picked up certainly has a lot of public interest in it.

I think our committee clerk has done a fantastic job of finding all those panel members and grouping them in a very meaningful way. I certainly find it very informative, very worth my time. Where it's missing for me is what Joe, the ordinary citizen on the street, will see in this issue.

Part of my thinking is that the duty of our all-party committee is that before government takes any position, we can widely solicit public input and have an understanding of how urgent, how interesting this is to general Albertans. That, to me, will help us as a committee to come to whatever kind of recommendation for the House when we all finish this.

My view is that the committee has chosen such a fantastic subject that so many people are interested in. That is a good thing for us, and we should keep that as an opportunity to fully engage Albertans about this before government has any position taken.

That's my suggestion.

The Chair: Let me get that straight. You would like to see the committee going around and having public hearings?

Mr. Luan: Yeah. I'm thinking about three because Edmonton and Calgary have their own unique sort of characteristics and needs and desires in that, and Red Deer, as a middle stop, can also gather the rural perspective in the surrounding area. To me, if we do three public councils in that way, it gives us a good read on how Albertans are thinking about this.

The Chair: Thank you, Mr. Luan.

Mr. Rowe.

Mr. Rowe: Thank you, Mr. Chairman. Over the last three days of meetings we have received a wealth of information, a glut, if I could say. Until we get that melted down into something we could present at a public meeting, I think it might be a little premature to do that. I question the value that we are going to get back from the public at this stage. I'm not saying that we take it off the table, but I think it may be premature.

That's just my comment.

The Chair: Okay.

Ms Olesen.

Ms Olesen: Thank you. I would tend to agree with MLA Luan. I think stakeholders take many shapes and forms, and we've heard from many stakeholders. I've heard very strong opinions, pro and against, from the general public, and the public is one of our stakeholders, so I would like to hear what they have to say early in the process.

The Chair: Okay. You're onside with having public hearings.

Mr. Rogers.

1:10

Mr. Rogers: Well, thank you, Mr. Chairman. I, too, think it's important that we hear from regular Joe Albertan, the Marthas and the Henrys, as a former Premier used to call them. With this opportunity that we've had over the last few days here, these are people that we invited to come. I don't know, unless I've missed something, that anywhere in the process we've offered regular folks the opportunity to give us some thoughts on this.

I think it would be worth while and would probably add more credence to our final report to have some input from regular Albertans at some point. That's where I would side. I don't know

– I mean, I'm looking for others to help me – whether the term "public hearing" would be the right term. It might be a public information opportunity or something. A public input meeting: that's what I would favour because a public hearing tends to have a legislative something, that you're obliged to do something with what you've heard. So I would support something, a public input opportunity, or maybe a few of those.

Mr. Quadri: I think, you know, we're doing it for Albertans, so we should actually consult them. We should meet them and get their opinion, so I'm in favour of having public meetings or information sessions.

The Chair: We're asking for their input.

Mr. Quadri: Yes. I understand.

The Chair: We're not giving them information; we're asking for information from them, input, ideas.

Mr. Quadri: Ideas.

The Chair: On this point?

Ms Olesen: Yes.

The Chair: Go ahead.

Ms Olesen: Thank you. I think that you raised a very good point. I think we have to be very clear about their expectations so that they're not disappointed in the role and that they're not at a misconception that we're presenting a proposal to them. We're here to hear their opinion, and we would be very clear with the communications.

The Chair: We're there to hear from them.

Ms Olesen: Yes. Thank you.

The Chair: Okay. Mrs. Sarich.

Mrs. Sarich: Thank you very much, Mr. Chairman. I would be in favour of going out to the locations that you've identified at this time – Edmonton, Red Deer, Calgary – to hear from members of the public about planning or whatever information that they'd like to present to the standing committee on the issue of the high-speed rail.

I would also suggest that if that opportunity is going to be circulated appropriately, if there's a little bit more demand – in some of the presentations there was forecasting of a link to the Fort McMurray area; there may be some future interest from the public in that particular location or further south of Calgary – that we would be very open and receptive to extending, if need be, an opportunity in those locations as well if there should be a demand by the public.

I think our role is to gather as many perspectives as possible, especially from the public, when we're talking about an investment of whatever the formation of dollars in the future is and what people would actually say about that planning for the future, for their province.

Thank you.

The Chair: I hear what you're saying, Mrs. Sarich. However, the corridor that we're talking about right now is Edmonton, Calgary, and Red Deer, and if there is any interest in the future, we'll definitely consider a template to go over there.

Mrs. Sarich: Yes.

The Chair: But in the meantime it's Edmonton, Calgary, and Red Deer.

Mrs. Sarich: I realize that, but with some of the presenters in their materials – if the public goes to have a look at the transcripts and to gather some information for themselves – there were some touch points extending broader than what we are looking at. I'm just saying that should there be an interest, that would be something that the standing committee could examine.

The Chair: The presenters know exactly that the original motion deals with Edmonton, Calgary, Red Deer, you know. It says: within Alberta. But the main thing is to go Edmonton, Calgary, and Red Deer.

Mrs. Sarich: Sure.

The Chair: Mr. Cao.

Mr. Cao: Thank you, Mr. Chairman. I'd go with the public meeting with one condition, and that is that before we hear from them at the meeting, we need to present them with some sort of idea, reality, kind of substance, like what we heard, for example, about the right-of-way, sharing the track. The technical, university people said: hey, you have to think deeper than that; it's not just the track. Trigger some thought rather than just saying, "Hey, what do you want to hear?" and then, for people having dreams, saying: the reality is still something. I am thinking about something to trigger thought.

The Chair: I don't think we have the information to give them yet. The purpose of these meetings is to hear from them.

Mr. Cao: Yeah. I understand. Is there some sort of an agenda or something, a guideline that we can hear from rather than this rambling thing and focus on the subject? Somehow I have a feeling that a public meeting . . .

The Chair: Wayne, it is a public meeting, and they can talk about anything they want within, you know, the two hours, and they can give us some ideas that we can hopefully draw some good information from. We are not going there to give them any real specifics – okay? – because we don't have them yet. This is a part of the consultation that we're having. All these consultations – what we've heard from our stakeholders, what we hear from them – we're going to put them together, and hopefully it will help us in drafting our final report.

Mr. Cao: Okay. I hear you there.

Let me finish my thought here. When we ask these folks to come to present, we give them a set of questions – that's what I mean; is that right? – rather than just a blank, so something that people talk about.

Mr. Luan: Mr. Chair, can I add something to the conversation that's going on so far?

The Chair: I'll add you to the list, Jason.

Mr. Luan: Okay. Thank you.

The Chair: Phil, do you want to jump in?

Dr. Massolin: Well, it's up to the committee what they want to do, but I suppose that in an ad you could just briefly list some of

the parameters of what you'd like to discuss to keep members of the public on topic on the feasibility of high-speed rail. Of course, it's the committee's decision as to how far you want to go on that.

The Chair: Okay. Is that satisfactory?

Mr. Cao: Well, I would see the questions, like we sent to these guys, somehow.

The Chair: Yeah. Well, the presenters are all professionals in their own field, and if you ask them technical questions, they'll give you technical answers.

Mr. Rowe.

Mr. Rowe: Thank you, Mr. Chairman. If this is going to be a public input meeting, then I fully support that. If it's a public meeting in general to talk about the whole thing, then no. We're not ready to go anywhere near there yet. I will change my position on it, that it's a public input meeting I'm fully supportive of.

Thank you.

The Chair: If it's a public input meeting.

Mr. Fox: Mr. Chair, I'm in support of public input meetings. My only concern is that we make sure that when we advertise for these meetings, we do advertise outside of the area where this meeting is taking place so that people along where the corridor would be would have the opportunity to come and have input into it as well.

The Chair: Yes. We have Rhonda here. She will be discussing the advertising that we will be undertaking in preparation for these meetings. Just bear with us for a few minutes.

Jason, again, please.

1:20

Mr. Luan: Thank you, Mr. Chair. I just want to follow up on what Wayne was suggesting, that for the public input we do have some kind of background information. Here's my take on this. We can tell the public that as a committee we invited some subject experts, those panels – we can name all of them – that provided some information for us and have our clerk do a high-level summary so that people that walk in have some kind of background information to comment on. In that way, their input is very relevant to what we've heard so far. That helps us move one step further. That's my thinking. I just wanted to throw in that idea.

The Chair: Okay. Cathy.

Ms Olesen: Thank you. I think you run a risk when you're doing a high-level summary that you're making conclusions, and I think we want to keep this as clean as possible. We could let them have access to the *Hansard* and the information that's been presented because it's all very public information. But to start drawing conclusions: you're building consensus, and you're making decisions, and it may be leading the public in a certain direction. I don't think we want to do that.

The Chair: Anyway, we will stop dealing with this item right now, and we will return to item 3 on the agenda. Our presenter is here. He is from panel 6, aboriginal and environmental issues. We'll come back to it.

Okay. We'd like to have a motion that

> the Standing Committee on Alberta's Economic Future conduct public meetings in the locations identified, which are Edmonton, Calgary, and Red Deer, on its review of the potential for high-speed rail within Alberta during the specified date and that the chair be authorized to approve an advertising plan and meeting logistics in consultations with committee services staff.

Mr. Quadri: I move the motion.

The Chair: Moved by Mr. Quadri.

Ms Olesen: And with one amendment: public input session instead of public meeting.

The Chair: Okay. Public input meetings.

Okay. All in favour? On the phones? Opposed? Carried. Thank you.

Now we'll go back to our presenters. Today the committee is receiving presentations from a number of stakeholders on the potential for high-speed rail transit within Alberta. There has been a last-minute change to our afternoon schedule, and the Confederacy of Treaty Six First Nations will be the sole presenter participating in panel 6, aboriginal and environmental issues.

I would ask that we go around the table and introduce ourselves for the record. I will ask our three members teleconferencing to introduce themselves. I am Moe Amery, MLA for Calgary-East and chair of this committee.

Mr. Quadri: Sohail Quadri, MLA, Edmonton-Mill Woods.

Ms Olesen: Good afternoon. Cathy Olesen, MLA, Sherwood Park.

Mr. Rogers: George Rogers, MLA, Leduc-Beaumont.

Mr. Cao: Wayne Cao, MLA, Calgary-Fort. Welcome.

Mr. Alexis: Good afternoon. Donovan Alexis, Confederacy of Treaty Six First Nations.

Mr. Barnes: Good afternoon. Drew Barnes, Cypress-Medicine Hat.

Mrs. Sarich: Good afternoon and welcome. Janice Sarich, MLA, Edmonton-Decore.

Mr. Rowe: Good afternoon. Bruce Rowe, MLA, Olds-Didsbury-Three Hills.

Ms Robert: Good afternoon. Nancy Robert, research officer.

Ms Sorensen: Rhonda Sorensen, manager of corporate communications and broadcast services.

Ms Dean: Shannon Dean, Senior Parliamentary Counsel, director of House services.

Dr. Massolin: Good afternoon. Philip Massolin, manager of research services.

Mrs. Sawchuk: Karen Sawchuk, committee clerk.

The Chair: Mr. Fox and Mr. Luan, would you like to introduce yourselves?

Mr. Luan: Jason Luan, MLA, Calgary-Hawkwood. I welcome you all.

Mr. Fox: Rod Fox, MLA, Lacombe-Ponoka.

The Chair: Thank you, all. Thank you very much.

Mr. Alexis, please go ahead with your presentation, and then I will open the floor to questions from the committee.

Confederacy of Treaty Six First Nations

Mr. Alexis: Good afternoon, committee. I'm here as representation on behalf of the Confederacy of Treaty Six First Nations. I am the capacity development officer at the Confederacy of Treaty Six First Nations, and I work in the areas of First Nation consultation under my immediate supervisor, Bob Small, who right now is on a medical leave, so I am here today.

With that said, please accept this document, which is the Treaty 6 chiefs' position paper on First Nation consultation, as our submission on behalf of the Confederacy of Treaty Six First Nations. I have been directed to give you our chiefs' presentation. Our chiefs' positions are all stated in this paper. The issues and concerns put forward by Treaty 6 are all identified in this paper. I was directed not to answer questions, that those questions can be answered by the confederacy, and for this panel to contact Bob Small at the confederacy of First Nations. That's what I've been directed to do this afternoon. I am going to submit our position paper to this panel today, and I say thank you for the invitation. In the future please contact the confederacy again.

Is there a certain person I give this document to, or do I just leave it here for your technicians? How does this work?

The Chair: Yeah. I think what we will do is that we'll accept the presentation, and we'll treat it as a written submission since we can't question the presenter.

Mr. Alexis: Thank you.

The Chair: Thank you very much.

Okay. We will go back to item 4 since we now have a motion that we will have a public input meeting to be held in three locations right across the province: Edmonton, Calgary, and Red Deer. I would like to ask Rhonda Sorensen, the manager of corporate communications and broadcast services, to speak generally about the advertising and what is required in that regard.

Ms Sorensen: Thank you, Mr. Chair. Based on the discussion around the table, I'd be suggesting that we take a similar approach to what a committee had done back in 2007, when we were reviewing the beverage container recycling regulation, and that was to hold a series of public input meetings where we essentially met with people in Calgary and Edmonton at that time to garner their input on how they felt about the situation as a whole, to do something as discussed around the table: advertising in the dailies in Calgary, Edmonton, and Red Deer. As well, typically we do a hundred-kilometre radius within those metro areas in the weeklies to allow people to commute into those larger centres for their input.

We're probably looking at a cost somewhere in the vicinity of $25,000 to $40,000. I really won't be able to give you definitive numbers until I have a chance to contact all the publications. I anticipate that would be around 70 or 75 publications. In addition to that, we would likely suggest using media relations and social media to broaden the public input as well.

The Chair: Any questions?

Ms Olsen: Do you have the budget for it?

The Chair: Karen, would you like to address that, the budget side of it?

Mrs. Sawchuk: We have sufficient funds in the committee budget, specifically for advertising, to cover this.

The Chair: Okay. Any other questions?

Mr. Rowe: Will this be comprehensive, like newspapers, radio, and so on? Just what type of advertising will you do?

Ms Sorensen: Typically in the past we've only done print advertising, using also news releases, media advisories, and social media. If the committee wished to go into television and radio, that is not included within the budget figures that we have provided for committee advertising. However, we could look at options. I guess it would depend on the timing of when the committee chooses to hold the meetings.

Mr. Rowe: Okay. That should probably cover it. Thank you.

1:30

The Chair: On the phone lines, any questions?

Mr. Luan: No. I'm good, Mr. Chair.

The Chair: Good. Thank you.

We're in agreement.

Ms Dean: Mr. Chair, I'm just wondering if the committee wanted to have a discussion on the time frame for these public meetings.

The Chair: Shannon, can you give us an idea as to what is the best timing or available timing to have these meetings? Now we're going to have them, and I think we should have them close to each other, three consecutive days, because we will be faced with session on March 3. If we don't have it before session, it has to go past session and then past the estimates, and that will put us pretty close to the date when we would be drafting the report. Can you give us an idea?

Ms Dean: There are two obvious options for the committee. If you wanted to proceed with meetings right away, before the House resumes, we would suggest that we'd need a few weeks to get the logistics nailed down and the advertising in place, so that would be looking at the last week in February.

The other option: if you were to hold the public input sessions at a later date, keeping in mind that the activity of this committee is suspended once the estimates are referred to it, that may interfere in the calendar that you would have available to you. If we were to follow the process that we did last year, that would mean sometime in mid to late April.

The Chair: Are we talking about the last week of February, from the 24th of February till the 28th? Okay.

Ms Dean: Just one more thing I would add is that rather than having more than one meeting on one day, we need some turnaround, teardown time because *Hansard* is coming with us, and we have to rent some audiovisual equipment and so on. We would recommend that if you're doing sequential meetings, they are on separate days.

The Chair: So we're talking about three days. How about Tuesday, Wednesday, and Thursday, the 25th, 26th, and 27th?

Mr. Luan: The 27th won't work for us, Mr. Chair. We have a caucus meeting already in there.

The Chair: Well, Jason, this is more important.

Mr. Luan: I like that.

Well, for me Monday to Wednesday is wide open.

The Chair: How about the 24th, 25th, and 26th?

Mr. Luan: That works for me. [interjections]

The Chair: February, this month, the 24th, 25th, and 26th, ladies and gentlemen?
You've got a question?

Mr. Rowe: Yeah. Would we be starting in Edmonton, then Red Deer, then Calgary? Is that the rotation? If that's the way you're starting, I can do it, but I can't do the night of the 24th, so I wouldn't be at the Edmonton one, but I could do the Red Deer and Calgary.

The Chair: Well, I think that probably it's going to be hard to get the 18 members present at every meeting. If you can't attend one day, then I'm sure other members of your caucus will be attending.

Mr. Rowe: These would be evenings, I'm assuming, not days.

The Chair: Personally, I prefer them to be evenings.

Mr. Rowe: Yeah. You're not going to get much of a crowd. People are working in the day.

The Chair: That's exactly what I think: 6:30 to 9, 7 to 9.
So the 24th, 25th, and 26th, starting in Edmonton? Okay.

Ms Olesen: Sure. What's the 26th, then?

The Chair: Wednesday.

Ms Olesen: We'll be in Calgary then?

The Chair: Yeah.

Ms Olesen: We have caucus the next morning at 8:30.

The Chair: I mean, we have to squeeze it because there is no other way of doing it.

Mr. Luan: Location-wise, if you can put the 26th in Edmonton, if there isn't any other objection, I would really appreciate that because then I have two meetings in Edmonton contiguously. That may apply to any one of us.

The Chair: Can we reverse the order? Well, Mr. Rowe can't attend on the 24th.
Everybody is going to be here.
Rod is not saying anything. I'm sure Rod can attend.
Okay. So then we'll reverse the order.

Mrs. Sawchuk: Calgary, Red Deer, Edmonton, Mr. Chair?

The Chair: Right. The 24th in Calgary, 25th in Red Deer, and 26th in Edmonton.

Mr. Luan: That's beautifully done, Mr. Chair.

The Chair: Thank you.
All righty. Great.
Rhonda will take care of the advertising.

Ms Sorensen: Absolutely.

The Chair: Okay. Any other questions?
Now we'll move to B, research requirements.

Dr. Massolin: Just on that, Mr. Chair, just to inform the committee, I think, and to get the committee's consent, of course, at the end of the public input meetings, I guess we're calling them, what research services can provide to the committee is an accumulation of all the input that the committee has received. For the subsequent meeting, probably in mid to late April, we can present that information along with some of what we distill as the major issues for the committee's consideration and deliberation, to inform the next step in the process, which would be a draft report. So that's what I'd like to say.
Thanks.

The Chair: Okay. Great. Any questions for Phil? No?
Number 5, other business. Do members have any other items for discussion?

Mr. Luan: I do have a comment, Mr. Chair, if I can.

The Chair: Go ahead.

Mr. Luan: I just want to say that I really appreciate the behind-the-scenes work that, Mr. Chair, you led, I believe, with a number of our committee members and our staff. I thoroughly enjoyed the way it was grouped and the panelists that had been selected. I found that the information was tremendously informative to me. I just wanted to put that on the record.

The Chair: Thank you, sir.
Mr. Barnes.

Mr. Barnes: Thank you, Mr. Chair. I, too, really enjoyed how the group was presented and all the information, so thanks to the organizers for doing that.
Mr. Chair, I'm wondering if you or this committee has a date that you'd like to have our report and our recommendation for. I mean, obviously we can all reach out and talk to Albertans and stakeholders on our own at any time, and I just kind of want to have a date in mind where I should have that completed by.

The Chair: The date to submit the report is May 25th.

Mr. Barnes: May 25th?

The Chair: Yes.
Mrs. Sarich.

Mrs. Sarich: Thank you very much. The last presentation of the last panel today was accepted as a written submission, and I'm very grateful for that even though the person who had written that submission could not be available. Am I to understand that that written submission will be available on the internal website for us for distribution?

1:40

The Chair: And the external website.

Mrs. Sarich: And the external website. Okay. That's important.

The Chair: I think I have something from earlier here. For the committee's information, the stakeholder letters included a statement that submissions to the committee and the identity of the authors would be made available to the general public.

Mrs. Sarich: Right. Good. Thank you very much for that clarification.

The Chair: Okay. Clerk.

Mrs. Sawchuk: Thank you, Mr. Chair. We do have one submission that was received in our offices that was not a solicited request for a written submission. It was just a member of the public who made us a written submission to the committee. Does the committee want us to accept that? All the other submissions we received were in response to our letters that were sent out.

The Chair: Go ahead.

Ms Olesen: I think a way to do that is that at our public input sessions we could announce at the beginning that we have received public input in written form and have that as part of the kickoff for the meeting. That's public input, and it would be part of the public input session although they're not there.

Mrs. Sawchuk: Excuse me, Mr. Chair.

The Chair: Go ahead.

Mrs. Sawchuk: The other written submissions are all posted on the external website, but the committee has accepted them because they fit within the parameters of the whole process. This one has been made to our offices. We do have to do something with it. We either have to accept it and then it follows through in the same process, being posted externally, which means it's already out there and part of the public record, or the committee doesn't accept it. That's what we're asking for guidance on.

Ms Olesen: How do we accept it? I think accepting it would be the way to go. It's how we accept it. Do we accept it as part of the professional invitational representations, or do we accept it as part of the public input?

The Chair: Unsolicited.

Ms Olesen: That's just a difference.

The Chair: Mrs. Sarich, let's hear some more.

Mrs. Sarich: Thank you, Mr. Chair. It's a very good question, and perhaps we need to clarify this point. We've made a decision that we're going to go to Edmonton, Red Deer, and Calgary to listen to Albertans about their input on the question at hand. If someone could not be available for that opportunity, are we saying as a standing committee that we're not going to accept any written submissions? If we are willing to accept written submissions for those that could not be available in Edmonton, Red Deer, and Calgary, then this, as Cathy Olesen has indicated, is: when would we accept a written submission? That would be just grandfathered into that next step that we're going to be taking.

Ms Dean: If I'm hearing Mrs. Sarich correctly, is the idea perhaps that we could contact this individual and tell him about the decision to have public meetings, and if he wanted to participate, then he could come?

Mrs. Sarich: If I may, Mr. Chair. I haven't seen the document. I don't know what it says. But, you know, as a courtesy to that member of the public, maybe that's the appropriate thing to do because it was pointed out very eloquently that we are making information available on the public website. If that member of the public, in my humble opinion, does not feel comfortable with their written submission to go in that manner, then they would advise us. If they would like it to go public, then I'm supporting the suggestion by Cathy Olesen that when we receive written submissions is when we would unfold the next step of the process, which is opportunity for public input at a meeting, or if you can't make it, then we would accept written. But people need to understand that those written submissions would be for all the public to see if they wish.

Ms Dean: Just to follow along those lines, one thing we have done in the past is that we could advertise for the public input sessions and also advertise for written submissions from the public in the same advertisement. Does that sound like that's the will of the committee?

The Chair: Do we want to do that? You know, if we do that, we can get hundreds of them. We can have people thinking the night before the meeting about a few things that they're going to jot on a piece of paper, and they can bring it to us the next day and hand it in as a written submission. What we are advertising is for input, verbal input, for those three meetings in Calgary, Edmonton, and Red Deer.

Mrs. Sarich: Mr. Chair, the same could be true that when you advertise, we can only speculate what the take-up will be from the public to come to a public hearing. So what happens, then, if lots of people come out and we set a time frame and we have 50 other people that need to be heard? The same could be applied to physically coming out to a meeting versus written. I appreciate we could have a thousand people. We could have 100 people. But if we're opening it up to hear from the public, they need to be seen or heard or have that opportunity. I think maybe one of the underlying caveats here is that if you come out to a public hearing, it's on the public record. If you give a written submission, it goes on the record. So people may make a different type of decision. They may, if they wish, based on that parameter, but I'm just saying that lots of people could show up at a public meeting.

The Chair: I think Shannon has something to read into the record here.

Ms Dean: They're all excellent points. We have in the past used advertising that specifically mentions the fact that any submissions to the committee will be made available to the public, so I take it that would be in keeping with your comments.

If I may, Mr. Chair, just supplement that.

The Chair: Go ahead.

Ms Dean: In the past the way we've organized these public input sessions is that we've asked for anybody interested in appearing to contact the committee clerk in advance so we have some sense as to the interest. We usually advertise a start time for the meeting, not an end time, so we're a bit flexible. Then once you know how many people are going to be in attendance, you can adjust sort of the time frame for each session with each presenter, so I'm suggesting that as a way to organize the meeting. I'm not sure if that's in keeping with how this committee would like to run these meetings.

The Chair: Okay. Any other questions? Are we in agreement? Okay.

The next item is dates of our next meetings: the 24th, 25th, and 26th.

Mr. Rogers: If I may, Mr. Chairman, the logistics of how we'll get there: are we going to pile in a bus together? How will we determine how people get to these places, travel costs, and so on, staying overnight?

The Chair: You know, I think we're going to take the high-speed rail.

Mr. Rogers: Oh. Okay. Well, we're going to let those guys build it. They said that they could build it.

The Chair: The committee clerk and others will let you know as to how we're going to get there.

Mr. Rogers: Okay. Perfect. Thank you.

The Chair: Okay. Any other items for discussion?

I will entertain a motion to adjourn. Mr. Rowe. All in favour? Great.

Thank you very much.

[The committee adjourned at 1:49 p.m.]

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