

**Third Session – Forty-First Legislature**  
**of the**  
**Legislative Assembly of Manitoba**  
**Standing Committee**  
**on**  
**Legislative Affairs**

*Chairperson*  
*Mrs. Sarah Guillemard*  
*Constituency of Fort Richmond*

**Vol. LXXI No. 5 - 6 p.m., Wednesday, October 24, 2018**

ISSN 1708-668X

**MANITOBA LEGISLATIVE ASSEMBLY**  
**Forty-First Legislature**

<b>Member</b>	<b>Constituency</b>	<b>Political Affiliation</b>
ALLUM, James	Fort Garry-Riverview	NDP
ALTEMEYER, Rob	Wolseley	NDP
BINDLE, Kelly	Thompson	PC
CLARKE, Eileen, Hon.	Agassiz	PC
COX, Cathy, Hon.	River East	PC
CULLEN, Cliff, Hon.	Spruce Woods	PC
CURRY, Nic	Kildonan	PC
DRIEDGER, Myrna, Hon.	Charleswood	PC
EICHLER, Ralph, Hon.	Lakeside	PC
EWASKO, Wayne	Lac du Bonnet	PC
FIELDING, Scott, Hon.	Kirkfield Park	PC
FLETCHER, Steven, Hon.	Assiniboia	Man.
FONTAINE, Nahanni	St. Johns	NDP
FRIESEN, Cameron, Hon.	Morden-Winkler	PC
GERRARD, Jon, Hon.	River Heights	Lib.
GOERTZEN, Kelvin, Hon.	Steinbach	PC
GRAYDON, Clifford	Emerson	Ind.
GUILLEMARD, Sarah	Fort Richmond	PC
HELWER, Reg	Brandon West	PC
ISLEIFSON, Len	Brandon East	PC
JOHNSON, Derek	Interlake	PC
JOHNSTON, Scott	St. James	PC
KINEW, Wab	Fort Rouge	NDP
KLASSEN, Judy	Kewatinook	Lib.
LAGASSÉ, Bob	Dawson Trail	PC
LAGIMODIERE, Alan	Selkirk	PC
LAMONT, Dougald	St. Boniface	Lib.
LAMOUREUX, Cindy	Burrows	Lib.
LATHLIN, Amanda	The Pas	NDP
LINDSEY, Tom	Flin Flon	NDP
MALOWAY, Jim	Elmwood	NDP
MARCELINO, Flor	Logan	NDP
MARCELINO, Ted	Tyndall Park	NDP
MARTIN, Shannon	Morris	PC
MAYER, Colleen, Hon.	St. Vital	PC
MICHALESKI, Brad	Dauphin	PC
MICKLEFIELD, Andrew	Rossmere	PC
MORLEY-LECOMTE, Janice	Seine River	PC
NESBITT, Greg	Riding Mountain	PC
PALLISTER, Brian, Hon.	Fort Whyte	PC
PEDERSEN, Blaine, Hon.	Midland	PC
PIWNIUK, Doyle	Arthur-Virden	PC
REYES, Jon	St. Norbert	PC
SARAN, Mohinder	The Maples	Ind.
SCHULER, Ron, Hon.	St. Paul	PC
SMITH, Andrew	Southdale	PC
SMITH, Bernadette	Point Douglas	NDP
SMOOK, Dennis	La Verendrye	PC
SQUIRES, Rochelle, Hon.	Riel	PC
STEFANSON, Heather, Hon.	Tuxedo	PC
SWAN, Andrew	Minto	NDP
TEITSMA, James	Radisson	PC
WHARTON, Jeff, Hon.	Gimli	PC
WIEBE, Matt	Concordia	NDP
WISHART, Ian	Portage la Prairie	PC
WOWCHUK, Rick	Swan River	PC
YAKIMOSKI, Blair	Transcona	PC

**LEGISLATIVE ASSEMBLY OF MANITOBA**  
**THE STANDING COMMITTEE ON LEGISLATIVE AFFAIRS**

**Wednesday, October 24, 2018**

**TIME – 6 p.m.**

**LOCATION – Winnipeg, Manitoba**

**CHAIRPERSON – Mrs. Sarah Guillemard  
(Fort Richmond)**

**VICE-CHAIRPERSON – Mr. Len Isleifson  
(Brandon East)**

**ATTENDANCE – 11 QUORUM – 6**

*Members of the Committee present:*

*Hon. Messrs. Gerrard, Pedersen,  
Hon. Ms. Squires*

*Messrs. Allum, Altemeyer, Bindle,  
Mrs. Guillemard, Messrs. Isleifson, Lindsey,  
Wowchuk, Yakimoski*

**APPEARING:**

*Mr. Wab Kinew, MLA for Fort Rouge  
Hon. Steven Fletcher, MLA for Assiniboia*

**PUBLIC PRESENTERS:**

*Mr. Trent Hreno, Ducks Unlimited Canada  
Mr. Dan McInnis, Sustainable Building  
Manitoba Inc.  
Ms. Gaile Whelan Enns, Manitoba Wildlands  
Mr. Ross Redman, private citizen  
Mr. Robert Elms, Manitoba Electric Vehicle  
Association  
Mr. Ron Thiessen, Canadian Parks and  
Wilderness Society, Manitoba Chapter  
Mr. Kenneth Klassen, private citizen  
Mr. Eric Reder, Wilderness Committee  
Mr. Jeff Franzmann, private citizen  
Ms. Natasha Szach, private citizen  
Mr. James Battershill, Keystone Agricultural  
Producers  
Ms. Jasmine Halick, private citizen  
Mr. Jarvis Brownlie, private citizen  
Mr. James Beddome, Green Party of Manitoba  
Mr. Kelvin Igwe, private citizen  
Ms. Laura Tyler, Manitoba Energy Justice  
Coalition  
Mr. Peter Miller, Green Action Centre  
Mr. David Berg, private citizen  
Mr. Mark Cohoe, Bike Winnipeg  
Ms. Jean Altemeyer, private citizen*

*Ms. Georgina Garrett, private citizen  
Ms. Danielle Cayer, private citizen  
Mr. Ray Garnett, private citizen  
Mr. Curtis Hull, Climate Change Connection*

**WRITTEN SUBMISSIONS:**

*Joe Masi, Association of Manitoba  
Municipalities  
Jennifer Engbrecht, private citizen  
Barry Bisset, private citizen  
Jennifer Sime, private citizen  
Jonathan Alward, Canadian Federation of  
Independent Business  
Joshua Leonhardt, private citizen  
Kurt Engbrecht, private citizen  
Peter Thomson, private citizen  
Mark Hudson, Canadian Centre for Policy  
Alternatives, Manitoba  
Yifei Huang, private citizen*

**MATTERS UNDER CONSIDERATION:**

*Bill 16–The Climate and Green Plan  
Implementation Act*

\*\*\*

**Madam Chairperson:** Good evening. Will the Standing Committee on Legislative Affairs please come to order.

Our first item of business is the election of a Vice-Chairperson.

Are there any nominations?

**Hon. Blaine Pedersen (Minister of Growth, Enterprise and Trade):** I nominate Mr. Isleifson.

**Madam Chairperson:** Mr. Isleifson has been nominated.

Are there any other nominations?

Hearing no other nominations, Mr. Isleifson is elected Vice-Chairperson.

This meeting has been called to consider Bill 16, The Climate and Green Plan Implementation Act. I would like to inform all in attendance of the provisions in our rules regarding the hour of adjournment. A standing committee meeting to consider a bill must not sit past midnight to hear

public presentations or to consider clause by clause of a bill except by unanimous consent of the committee.

In addition, if necessary, the Standing Committee on Legislative Affairs will meet again to consider Bill 16 tomorrow, October 25th, at 6 o'clock p.m.

We have a number of presenters registered to speak tonight, as noted on the list of presenters before you. On the topic of determining the order of public presentations, I will note that we do have some out-of-town presenters in attendance marked with an asterisk on the list. With consideration in mind, in what order does the committee wish to hear the presentations?

**Mr. Rob Altemeyer (Wolseley):** Thank you, Madam Chair, and I want to welcome everyone here to your building, the Manitoba Legislature. I have a few suggestions for the committee's consideration. It has been past practice for out-of-town presenters to go first, so let me put that idea forward first. If the committee is in agreement, we will hear from all the out-of-town presenters in the order they appear on the list?

**Madam Chairperson:** Is that the will of the committee, to hear all the out-of-town presenters first? *[Agreed]*

**Mr. Altemeyer:** Thank you very much once again, Madam Chair, and just trying to inject some humanity into what will be a rather late night for all of us presenting and all of us on the committee, it is, of course, an unfortunate circumstance that the municipal election is happening.

We understand from the good work of the clerk that actually very few of the first three dozen or so names are actually in the room right now, and under normal practice, when a person's name is called once and they're not here, of course, their name drops to the bottom of the list, and once you go through the whole list, they're called a second time, and if they're still not here, then they're dropped altogether.

In trying to find a reasonable approach, given it is a civic election night, I'm wondering if the committee would be in agreement that we will go through the list in the normal practice, same as we usually do, but if we do reach the end of the list the first time through, that we will end our business there so that no one ends up being dropped from the list altogether without having a chance to speak tonight.

And then anyone who remains, of course, would be able to present to us tomorrow night, if that's agreeable to the committee.

**Madam Chairperson:** Is it the will of the committee to agree to this? *[Agreed]*

**Mr. Altemeyer:** Madam Chair, just one final word of thanks to my fellow committee members for working together. We'll have our differences of opinion. We will hear some diverse views tonight, but the most important thing is that we help our citizens talk to us tonight, so I thank everyone for the collaborative start that we have.

**Madam Chairperson:** Before we proceed, we have had three requests by presenters tonight that they are asking to be considered to present tonight because of extenuating circumstances where they are not able to join us for tomorrow night.

Is it the will of the committee to—oh, so one of our presenters is Gaile Whelan Enns, No. 36 on your list, No. 40 on your list, Robert Elms, and No. 45 on your list, Ross Redman.

What is the will of the committee?

**Mr. Altemeyer:** Yes, thank you for raising that, Madam Chair.

And, again, maybe after the out-of-town presenters have had a chance to speak, if the committee's willing, we can have those three individuals in the order that you just mentioned, Madam Chair, can present to the committee, and then we'll go back to the top of the list from there.

\* (18:20)

**Madam Chairperson:** Is that the will of the committee? *[Agreed]*

Written submissions on Bill 16 have been received from the following persons and distributed to committee members: Joe Masi, Association of Manitoba Municipalities; Jennifer Engbrecht; Barry Bisset; Jennifer Sime; Jonathan Alward, Canadian Federation of Independent Business; Joshua Leonhardt; Kurt Engbrecht; Peter Thomson; Mark Hudson, Canadian Centre for Policy Alternatives, Manitoba; and Yifei Huang.

Does the committee agree to have these documents appear in the Hansard transcript of this meeting? *[Agreed]*

Before we proceed with presentations, we do have a number of other items and points of information to consider.

First of all, if there is anyone else in the audience who wishes to make a presentation this evening, please register with the staff at the entrance of the room.

Also, for the information for all presenters, while written versions of presentations are not required, if you are going to accompany your presentation with written materials, we ask that you provide 20 copies. If you need help with photocopying, please speak with the staff.

As well, in accordance with our rules, a time limit of 10 minutes has been allotted for presentations with another five minutes allowed for questions from committee members.

If a presenter is not in attendance when their name is called, they will be dropped to the bottom of the list.

Last, I would like to advise members of the public regarding the process for speaking in committee. The proceedings of our meetings are recorded in order to provide a verbatim transcript. Each time someone wishes to speak, whether it's an MLA or a presenter, I first have to say that person's name. This is the signal for the Hansard recorder to turn the mics on and off.

Thank you for your patience, and we will now proceed with public presentations.

### **Bill 16—The Climate and Green Plan Implementation Act**

**Madam Chairperson:** I will now call on Trent Hreno, Ducks Unlimited Canada.

Mr. Hreno, do you have any written materials for distribution to the committee?

**Mr. Trent Hreno (Ducks Unlimited Canada):** Yes, I do. I have 20 copies.

**Madam Chairperson:** Excellent. Please proceed with your presentation.

**Mr. Hreno:** Thank you, Madam Chairperson, members of the Legislative committee, and good evening to everyone. My name is Trent Hreno, and I work for Ducks Unlimited Canada. I'm the lead for our boreal program efforts here in Manitoba, and I'm here tonight to speak to Bill 16 on behalf of Ducks Unlimited with a primary focus on the commitment to develop a boreal wetlands conservation policy as identified in the Made-in-Manitoba Climate and Green Plan.

I want to begin by thanking all of the honourable members of the Manitoba Legislature for your public service and for all you are doing to address the effects of climate change and to build a healthier and more sustainable province.

Bill 16 is a very good step in the right direction for Manitoba, as it enshrines into law many of the important initiatives identified in the government's Made-in-Manitoba Climate and Green Plan, initiatives that will have a positive effect on many aspects of our environment.

Now, I realize many of the honourable members before me here tonight may have been in attendance when Ducks Unlimited stood before the committee several months ago to speak to our support for Bill 7.

I would like to provide a very quick high-level summary of who we are, what we do and why we are supportive of the bill being discussed this evening.

Ducks Unlimited is a private not-for-profit registered charitable organization with a mission to conserve, restore and manage wetlands in Canada. Our boreal program is focused on conserving wetlands in Canada's boreal forest. And our conservation mission is at the heart of everything we do, and it's what brought us here before you tonight in support of Bill 16.

As the lead for the boreal program in Manitoba, I know first-hand just how critically important boreal wetlands are to our province. Boreal wetlands are very important to indigenous peoples, and they are important to people who live in urban centres, to people who live in remote or rural communities, to people who spend their days working outdoors and to people who spend their days at a desk or behind a computer, the conservation of our boreal wetlands makes a difference to every single Manitoban.

Some people might hear the term boreal wetlands and assume we're talking about an abstract place where waterfowl and other species like moose and woodland caribou make their home. However, the fact of the matter is that wetlands, which make up so much of the boreal, are so much more than that. Yes, they are very critical to providing habitat for many species of wildlife. However, wetlands also help to clean the water we drink, they lessen the impact of flooding in high-water years and, in addition—and perhaps most importantly for the purposes of our discussion here tonight—wetlands store tremendous amounts of carbon, which is an integral part of any climate change action plan.

And I want to repeat that again just to emphasize its significance to the bill we are debating. Wetlands, both in the boreal and on the prairies, store vast amounts of carbon. A staggering 19 billion tons of carbon is estimated to be stored in the peatlands of boreal Manitoba alone. Now, this amount of carbon is equivalent to almost a century of Canada's total greenhouse gas emissions. And that carbon is released when wetlands are altered or damaged.

Wetland protection and conservation is critical to protecting these vast stores of carbon. Ducks Unlimited supports Bill 16 because it places a renewed focus on the conservation of boreal wetlands through a commitment made in the plan to develop a boreal wetlands conservation policy, a policy we believe that, when developed, will help conserve boreal wetlands without hindering ongoing and future economic opportunities in the North.

We agree that there is a need for a unified policy approach that is inclusive of our important boreal assets and the valuable ecosystem, economic and societal benefits that they provide. And we support it because a boreal wetlands conservation policy commits to a no-net-loss approach for boreal wetlands. As quoted from the Made-in-Manitoba Climate and Green Plan, the development of a boreal wetlands conservation policy is an opportunity to show leadership in boreal wetland conservation and stewardship.

We agree that a proposed boreal wetlands conservation policy should be developed through public, industry and stakeholder engagement, and we agree that the development of best management practices and a commitment to a no-net-loss approach for boreal wetlands should be cornerstones of the policy. We believe that engaging indigenous communities, northern and other regional communities and resource management boards would be profoundly beneficial—and essential—in developing the policy.

I would be remiss if I didn't point out that the Minister of Sustainable Development (Ms. Squires) has already directed her department to initiate the development of a boreal wetlands conservation policy, and we thank the minister for her leadership and commitment to conservation.

Finally, we support Bill 16 because the creation of a made-in-Manitoba climate and green fund and a conservation trust fund will dramatically bolster the important environmental work that is being done by groups like ours. For Ducks Unlimited, access to

such environmental funding will allow our charitable organization to receive vital support for projects, studies and activities for the work that we are doing to conserve wetlands and help address the effects of climate change.

Bill 16, together with the passage of Bill 7 earlier this year, builds on a strong foundation to conserve wetlands in the boreal and in the prairies and by doing so will most definitely help to reduce and mitigate the impacts of greenhouse emissions. This is a positive step in the right direction for the future of our province.

Together, we are making important progress, and on behalf of everyone at Ducks Unlimited and our boreal program, I want to offer support for your progressive approach to building a healthier and more sustainable Manitoba. With the development of a boreal wetlands conservation policy, Bill 16 will conserve our important boreal wetlands—excuse me—both now and into the future. And that's something for which all Manitobans should be grateful.

Thank you once again to the honourable members of the Manitoba Legislature for introducing Bill 16. I encourage all members to support it, and I thank you for your time here this evening.

**Madam Chairperson:** Thank you, Mr. Hreno, for your presentation.

\* (18:30)

Do members of the committee have questions for the presenter?

**Hon. Rochelle Squires (Minister of Sustainable Development):** I want to thank you, Trent, and everyone associated with Ducks Unlimited for coming down here today and for your presentation. And thank you as well for your commitment to Bill 7, which we see as an integral part of our climate change plan in creating a sustainable watershed in Manitoba, and specifically since we have such a huge vast boreal forest, the need for a boreal wetland conservation initiative.

So I thank you and your team for all the work that you're doing on that front, and I just really appreciate our ongoing partnership as we build the sustainable watersheds and protect our boreal wetlands.

**Mr. Hreno:** I appreciate that.

Thank you.

**Hon. Jon Gerrard (River Heights):** Thank you. I have talked with many people about the importance

of the boreal forest and the boreal wetlands. One of the concerns, I mean, even with all we're doing in terms of climate change, the temperature has been rising and the stewardship of the boreal forest is a tremendously important idea but at the same time, what happens if the temperature rises to the point where wetlands start drying up? How does that become part of the policy as well?

**Mr. Hreno:** Sorry. It's an important issue. It's one that's foremost in our mind. We are doing research now, we have been doing research for quite some time on the effects of climate change, not just in boreal wetlands but in prairie wetlands which actually in some ways are even more significant, or most significantly affected than boreal wetlands.

We are doing research, we're looking for funding for research. We continue to look for funding and opportunities to do more research.

The bottom line is climate change will affect wetlands, there's no doubt about it. How you go about addressing that is through climate change mitigation and adaptation. On the prairies, wetlands can work very well as a natural infrastructure to offset some effects of climate change, increasing temperatures.

In the boreal it's a little tricky. There is certainly a need to be aware of the change in species composition in the boreal forest with changing temperatures. Species composition to a degree does affect the type of wetland, again, it's something that we're mindful of and there's been a lot of work on that. We're doing a lot of work on it, and we're looking to do more work if we can get the funding to do it.

**Mr. Wab Kinew (Leader of the Official Opposition):** Thank you for your presentation and certainly for everything for everything Ducks Unlimited is doing to help the environment.

I appreciate what you have to share about wetlands and water, generally. Water is life I think is not just a saying in Dakota culture but also an environmental movement, rallying cry these days. And so I'm sure you can appreciate the importance of that.

I was wondering if you could maybe share your views more broadly on approaches to fighting global warming, what needs to happen, in particular, putting the science first as a principle for action. And whether you agree that the targets set out by the

intergovernmental panel on climate change should be the emission reduction targets that we're aiming for.

So I'm wondering if you could just share your views on a few of those.

**Mr. Hreno:** Thank you for the questions. On the first—to address your first question, yes, the issue of climate change mitigation and adaptation is an important one. In as far as—and I'm hoping—I hope I am addressing your question but correct me if I'm not. I think it's extremely important that as a society, as a country, as the world, that we look at climate change mitigation and adaptation because there's only so much that's going to be done over a period of time in terms of reducing greenhouse gas emissions.

In Manitoba, we're doing a lot already by keeping carbon in the ground. If you have 19 billion tonnes of carbon stored in Manitoba's peatlands alone, that's incredibly huge, that's a tremendous amount of carbon. And Bill 16 ensures that that carbon in boreal wetlands will be conserved. So we're very happy about that.

Bill 7 also addresses prairie wetlands. And again, climate change is an issue there, and keeping carbon in the ground is very important.

With respect to emission levels and what level is right, what level is—it should be, our focus is a science-based organization, and our mission is wetland conservation. And we looked at Bill 16 through the lens of wetland conservation, and we support Bill 16 for the reasons stated.

**Madam Chairperson:** Thank you, Mr. Hreno, for your presentation. The time for questions has expired.

I will now call on Jill Verwey, private citizen.

Jill Verwey will now drop to the bottom of the list.

I will now call upon Everett Rudolph, private citizen.

Everett Rudolph will now drop to the bottom of the list.

I will now call on Dan McInnis, Sustainable Building Manitoba Inc.

Mr. McInnis, do you have any written materials for distribution to the committee?

**Mr. Dan McInnis (Sustainable Building Manitoba Inc.):** Yes, I do, Madam Chair.

**Madam Chairperson:** Please proceed with your presentation.

**Mr. McInnis:** Madam Chair, committee members, media that aren't here and fellow presenters, my name is Dan McInnis, and I am the chair of the advocacy committee for Sustainable Building Manitoba Inc. I am pleased to present to the standing committee this evening and communicate our organization's support for the proposed Climate and Green Plan Implementation Act.

First, a little bit of background about Sustainable Building Manitoba. We're a not-for-profit, member-based organization with a vision of a sustainable built environment in Manitoba. Our reach of over 1,200 people and 'normous'—and numerous corporate supporters all work towards our mission of being a leader, showcasing local innovation and inspiring our stakeholders to create life-enhancing environments.

Now in our 13th year, we actively carry out this mission by offering networking and education opportunities, by promoting collaboration in the local industry and advocating for sustainable building in Manitoba.

As a result of these activities, we are increasing the number of capacity of skilled workers in the sustainable building sector. We are the most recognized sustainable-building knowledge hub for governments, media and industry.

As mentioned, Sustainable Building Manitoba supports the proposed Climate and Green Plan Implementation Act. As most of you probably already know, buildings make up 17 per cent of Manitoba's emissions profile.

There are two sections of the act we'd like to comment on. The first is the establishment of the carbon savings account for Manitoba. The carbon savings account will keep a running balance of the greenhouse gas emission reductions during a five-year period and provide a comparison to the preset emission reduction goals. Sustainable Building Manitoba sees this as an important step in creating a longer term, more realistic approach to climate change planning and programs.

As has been demonstrated in the past, governments have typically established shorter term, unrealistic goals, usually tied to election cycles. And while it creates a flurry of activity during that government's mandate, the activity typically diminishes in the next mandate term.

To our knowledge, Manitoba will be the first subnational government in the world to create a carbon savings account and should be congratulated for doing so.

The second section we would like to comment on is the creation of the low-carbon government office and, in particular, the focus on improved building design, construction and management. It has been demonstrated time and time again that building design, construction and operation provide the low-hanging fruit for cost-effective carbon emission reductions. Many macroeconomic models—and I know the Province has many of them—have shown that greenhouse-gas-focused building improvements can actually be done with net cost savings that are actually—that are easily realized.

\* (18:40)

A word of caution, though. While all building projects can be helpful in this regard, deep energy retrofits, including building envelope upgrades, provide the highest return on the investment made. Manitoba's profile of government buildings has a number of opportunities just waiting for this to happen.

Along with the economic benefits, improved occupant health and productivity in sustainable buildings are substantial. Sustainable Building Manitoba members and supporters are comprised of design, construction and building operations professionals that are able to address the challenges of climate change. Not only can these individuals and organizations effect lower emissions, they can provide more robust and resilient buildings that will withstand the catastrophic impacts of our changing climate. Our organization is always willing to collaborate as required.

In summary, the case for sustainable building has never been stronger. Not only the environmental benefits well defined, the additional benefits of keeping investment capital in Manitoba and stimulating new innovation in clean energy, business and jobs will truly lead to a better Manitoba for all.

Thank you for the opportunity to make this presentation.

**Madam Chairperson:** Thank you for your presentation.

Do members of the committee have questions for the presenter?

**Ms. Squires:** Thank you very much, Mr. McInnis, for coming down here this evening and making your presentation, and I really appreciate the work that your organization does to ensure that we move forward with new builds as well as retrofits, ensuring that they are helping reduce our overall carbon footprint here in Manitoba.

And I know you've spoken at length about the need to move forward. I know we're not going to get to the full benefit that we can if we just focus on new builds, and that it's very important to look at retrofits to make sure that our buildings are energy efficient.

So I just really appreciate all the work that you do, the awareness that you do and the actual impact that you have on our climate here in Manitoba.

**Mr. McInnis:** Thank you, Minister.

**Madam Chairperson:** Mr. Gerrard.

**Mr. Gerrard:** My question is really this: We've been talking about making buildings more efficient for at least a couple of decades. Why are there so many buildings which have not been retrofitted now? Is the incentives or the approaches not been now, and will what's in this carbon plan actually make a difference so we start to address this?

**Mr. McInnis:** The question is—I understand, is, why we haven't made progress earlier. And I guess the second part of the question is, what's in this document that will speed things up.

I guess many people have many opinions as to why we haven't done better. I'm personally of the opinion that a lot of organizations—particularly public sector organizations—have two budgets. They have a capital budget and an operating budget. And what happens is, of course, the building gets built with the capital budget—or, improvements get made to a building with the capital budget. And that's just seen as a cost. The savings, on the other hand, are in the operating budget. And the two budgets don't talk to each other very well.

So, you know, many—or—people have proposed—and, actually, I was one of them, back in my career, that proposed setting up, like, a savings account. So you put some seed money in there, you fund the retrofits using that seed money, and then the savings pay back into the—to this account.

So, you know, that's one of the things, is kind of the—just the administration of, you know, the way governments and a lot of companies work.

And the other thing, too, is people in the private sector, and I've had some experience with this lately, is that they look at paybacks in the term of three years. So, even though they're going to own this building for the next—you know, like the Legislative Building, you know, it's been owned for forever, or a bank that's owning a building there—you know, they don't realize that the payback might be eight years rather than three years, and then the project gets cancelled, even though they're going to own the building for 20 years.

I don't think building codes have moved along fast enough, either. And I'm kind of speaking for myself as well as the organization on that. British Columbia has done a wonderful job with this thing called the step code, and—you know, I think things like just having this discussion here tonight and what's in this bill and in the plan that associated with the bill and the other mechanisms in place, it's going to make some changes, and I think it's going to accelerate it more than we've seen it in the past.

**Mr. Rob Altemeyer (Wolseley):** Dan, nice to see you. Thanks for coming down, Mr. McInnis.

One quick point of information. The legislation does talk about a carbon savings account. It does not talk about a carbon expense account. So the government will be ignoring any sector that increases its emissions. That won't even be counted or captured by this legislation. They're only going to look at areas where they think they've made progress. So that's just a point of information for you and others.

More to the point on green buildings, I really appreciate your comments about savings and capital, and we just saw another little step back here. The most recent schools that were built in Manitoba, two of them were LEED gold standard, and one was LEED platinum, as I've been informed. And the government's now dropped that back down to a minimum LEED silver requirement. So what is your thought on LEED certification? Where should we be headed? There's also BOMA. It gets complicated, but if you have any thoughts to share, I'd be grateful to hear them.

**Mr. McInnis:** So what do I think about third-party certification? We—would that be a suitable question? So it wouldn't—it'd save me getting into a lot of trouble later.

I think, personally—[interjection] I've changed. I've changed. I think Manitoba needs to develop its own sustainable building standard. You know, when you do third-party certification, there's a lot of

money that leaves this province, and there's a lot of consultants in other provinces that make a lot of money doing this. And, you know, I've seen some of the numbers on some large projects, such as the Convention Centre expansion, how much was spent there on third-party certification, and that money could've been better spent on insulation, HVAC upgrades and consultants working right here in Manitoba.

So I think third-party certification is a good thing because it gets us talking, right, gets us thinking, you know, where to put the building and stuff. But I think there's still more things we can do and just kind of focus on keeping the money in Manitoba and the people that work here.

**Madam Chairperson:** The time for questions has now run out.

Thank you for your presentation.

I will now call upon Gaile Whelan Enns.

Ms. Whelan Enns, do you have any written submissions for the committee?

**Ms. Gaile Whelan Enns (Manitoba Wildlands):** Yes, I do.

**Madam Chairperson:** Please proceed with your presentation.

**Ms. Whelan Enns:** Thank you. I can be heard. All right, I'm getting a smile.

I have sort of three tasks before me, and I'm going to watch the clock, and I'm going to also ask the Clerk's office to, you know, wave an arm at me or something when I'm down to three or four minutes just in case I'm not watching close enough. Thank you.

So the three tasks are you have a package in front of you which I'm going to refer to a little bit and then I'll go through at the end quickly in terms of what you have. And I also have a little bit of introductory comments to make in terms of, well, why I'm here, why we're all here, and then some suggestions and comments in terms of the bill.

Okay. Most of you but maybe not all of you have heard me speak before. I come and speak to bills, have been doing that for quite a while. I think this is a good thing about governance in Manitoba, that we have an open and public process to do this.

I caught the train to the environment, or the train about the environment, a little late in life, but I have been working with respect to our lands and waters

and those affected by development in Manitoba for about 25 years. That includes being a 10-year board member for Climate Action Network Canada, which is an international organization with—which now has approximately 3,000 organizations as member organizations internationally, and they are the whole range, if you will, of faith, labour, community parks organizations, science organizations, environmental organizations; single, public or community interest; multi-use organizations; you name it—very, very wide.

\* (18:50)

The stepping forward for 10 years was very, very specific to what was mattering in Manitoba, and that makes me a veteran, then, of writing letters for, you know, a good part of the 25 years in review of things that are being proposed under The Environment Act and in relation to both public policy and public works and industrial activities in Manitoba, where climate change was pretty consistently being left out of the discussion and the standards.

So that's improved somewhat. And it's improving both federally and provincially, though in a little haphazard, non-specific manner. So one of the reasons I'm here this evening is to point out that we need to have quite specific requirements, whether they be under The Environment Act or an act like this or in more than one act. Excuse me for being of the 21st century, but you don't necessarily need to put it in just one place. We need to, in fact, have much more due diligence and anticipation in terms of both economic and environmental costs, benefits, risks—the whole range in terms of climate change when we're making decisions in Manitoba.

Okay, so that is, in fact, as I said, that it was—it's improving and we're beginning to, in fact, have quite specific response, for instance, from even the National Energy Board in this regard. And it's a topic of discussion for long amounts of time in any Clean Environment Commission hearing in Manitoba.

I want to give you two examples of what we cannot afford, and I mean economically and environmentally, to ever have happen again in a licensing decision or a hearing in Manitoba. And they, of course, might both have to do with our public utility, and they're both quite recent.

So the first example is that when there was a needs-for-and-alternatives review by the Public Utilities Board of the capital works program for Manitoba Hydro, they sort of forgot about climate

change. Could have been there—certainly—perhaps intended at the early part, but the PUB can actually sort of choose in their terms of reference, I find.

The second examples are two, but they're the same sort. And they're recent, and they, in my estimation, are much more serious. And that is, Manitoba Hydro was, in fact, allowed or permitted—no pun meant—during both the Lake Winnipeg regulation hearings and the Manitoba-Minnesota Transmission Project hearings to choose a 30-year period of time as a baseline, as if there was no climate change in that 30-year period of time in order to be able to compare it down the road, except their 30-year baseline, their 30-year period of time, was a period of time when there's all kinds of climate change already happening in Manitoba. So that's what I mean about how we need standards.

Now, you're all—we're in an urban setting here. Most of the carbon isn't urban. Most of the emissions are urban or semi-urban, okay, rather than, of course, up and down our highways. So I wanted to basically make a quick, fast reference to the things that are already happening in Manitoba, okay? We have already got permafrost melting and shifting. We have a lot of discontinuous permafrost in this province, including in the Island Lakes region, in the Keewatin region and up. And it's starting to move.

We have more heat. Even the climate centre at the University of Winnipeg's telling us how many more days over 35° we're going to have. We are having more variations when it is cold, like what happened in September. We're having more extreme weather events, storms and tornadoes. We're going to have, and have already started to have, a longer growing season.

We're already witnessing some species' migration patterns. And, of course, invasive species and pests are starting. We have some not well-recognized or acknowledged yet new disease—or disease carriers in our province. And, of course, we're in the northern hemisphere, so anything you read, anything that you see that is international means and averages, means that Manitoba is going to be on the receiving end of more than that, and faster, is what we're finding out.

The ice-off dates are now earlier in Hudson Bay, and we know that, and the snow-pack dates are reducing. We know there's things happening with our forest fires in terms of earlier in the season, more of them, more intense, and the fire that caused the evacuation of Little Grand Rapids, community—I've

had a lot to do with over the last 15 years, was jumping the same way as Fort McMurray was.

So we have energy consequences, economic consequences, environmental consequences, human health consequences. They're all already on the table, so I'm—that's my second reason for being here. Let's not pretend, is the point.

So the bill presents some opportunities. There are regulations to come, Minister. There's all kinds of things in policy and through the advisory committee and so on that can happen. But we need to protect our carbon.

So I'm happy to hear comments about wetlands conservation strategies overall, but we are operating so far within the act with no—[interjection]—thank you—carbon inventories and no carbon budgets. And that needs to be in quite a few acts.

We need to electrify our energy uses as fast as we can. We've got electricity. We need to do a whole lot of things in terms of tourism that's non-consumptive but that's good for the economy. We need to figure out a way to be hopeful about the future and not be cynical and not make it all accounting and mathematical exercise, right. It's called chrematistics. We won't get very far in this century without it. And we also need to be on our toes about all of the effects of climate change on those who are living in poverty.

Okay, I'm going to go through the package fast because I got the fingers, all right. So the first page is a list of climate change presentations where I've brought experts into hearings in Manitoba—

**Madam Chairperson:** Ms. Whelan Enns, you actually cannot be displaying any papers.

**Ms. Whelan Enns:** Oh, sorry. Okay. All right.

**Madam Chairperson:** Thank you. Continue.

**Ms. Whelan Enns:** The first page you have in front of you—thank you for the correction—is basically an expert, Paul Beckwith from the University of Ottawa who we've been bringing in to hearings here in the province for some time now to talk about climate change—globally, regionally, specific to Manitoba. And so you have what we—what he provided to the MMTP NEB hearings on the back page and CEC presentations on the top of that page.

The title or, rather, the top cover page for the recent emergency IPCC global warming 1.5° target report is here to remind us all. Right under that you

have a short summary from within the report in terms of how to understand what this is all about.

You have a media clip from the University of Winnipeg in terms of their new climate change, the most recent stage of their climate change atlas, which has got a lot of stuff about Winnipeg in it and what's going to happen to the city.

Then there's a little bit of more media coverage that is—you know, it's the 21st century again, so there's lots of Twitter here, lots of opinions.

And one of my other reasons for being here today is because there's nothing radical. The only thing radical about climate change right now is ignoring it or denying it.

We really, really need to be on our toes and we need to be thinking about the rest of our lifetimes and the next generations and stop pretending, like our utility does, that nothing's going to happen 'til 2050.

The next page you have is the summary of recommendations from the Manitoba Auditor General's report that was released in May in a national Auditor General's report regarding climate change across the country. And then, this is just a reminder, and it's her—sorry—their recommendations page.

The next item that has the sort of a gold cover on the top of the page is the Winnipeg report from the Prairie Climate Centre—

**Madam Chairperson:** Ms. Whelan Enns, your time for presentation has expired.

**Mr. Kinew:** Thank you for the presentation, Ms. Whelan Enns, and I certainly agree with your statement that the only thing radical to do with climate change these days is ignoring it and postponing action. There certainly is a fight for our future and this is the defining issue of our time. So thanks for coming out to make your views known on this issue.

You kind of touched on it in a cursory matter when you were referring to some of the materials and just kind of passed on it briefly, but I was wondering if you could maybe talk a bit more about the impact of climate change on people living in poverty and whether you can spell that out a bit for the committee. *[interjection]*

**Madam Chairperson:** Ms. Whelan Enns.

**Ms. Whelan Enns:** I'm sorry, I know that rule. Thank you.

Let's try both urban and northern Manitoba, quickly. We are learning gradually about heat islands, and the city of Winnipeg is going to have a lot more days of more than 35° before you get into the humidity. So let's take that assumption that we're going to have heat islands and those kinds of days—and, by the way, I think that the University of Winnipeg is quite conservative, but their important atlas work is still here. It's not going to—we're—don't have to wait 'til 2050 is my point.

\* (19:00)

So, if you're living in poverty, you're not as lucky to have air conditioning. If you are living in poverty, you're likely to have quite a few more people living in the same living space. You may or may not have adequate insulation. You may or may not have windows you can open at night. And so if you're dealing with that kind of heat and you're living in a heat island that's urban, then you're—any health issues you have start to increase and accelerate. So that would be, then, a generalized kind of suggestion that we're going to need cooling centres in Winnipeg very soon.

Second thing, then, would be in northern Manitoba, on the same question. It's a little more complicated because if you have diabetes and emphysema both—I'm just thinking about somebody I've known for about 20 years—if you have existing health conditions and you're in the middle of the Little Grand Rapids evacuation and the people from the Red Cross don't have a clue about anybody's medical history, you can have very specific individual or family accelerated responses to the stress, to the existing health conditions, to the heat—and then you can't go home as—go home normally because you've—or, your health's worse and you can't even go back because the—it blows around.

So the water issues in northern Manitoba and water contamination issues and air pollution issues and so on are all ones that could, in fact, quite thoroughly affect people in isolated or northern communities.

I'm thinking isolated because they can't get out easily in the time of the year when the heat's the worst, fire risks are the greatest. I think there's about 20 or 25 communities in Winnipeg right now who need—in Manitoba, rather, who need fire barriers that are 21st century ones, not like Fort McMurray had

that literally—you know, and the federal government's starting to fund them, but there's 25 needed now.

There's also a lack of access to information, Mr. Kinew, in terms of people in northern Manitoba and in isolated communities and people just knowing what they're dealing with and what might affect them. And the people who are in the nursing stations aren't trained in any of this. So there's the public—there's the information and then there's, like, services and knowledge for those communities.

**Mr. Gerrard:** You talk about Manitoba Hydro, and I would like to know, moving forward, what is the critical things that need to be done to make sure that Manitoba Hydro is included in a climate change green plan?

**Ms. Whelan Enns:** This is an evening for a short answer, right?

I think that the starting place is—and we had heard a reference from Mr. Hreno this evening about the resource management boards and—which related to the Northern Flood Agreement. I think the starting place is for every and any entity, organization or process that Manitoba Hydro is a party to to become more transparent with measurable goals and measurable outcomes, all of which are known by everybody. The RMAs have not been particularly productive, and they could be a very good vehicle for learning about climate change, having climate change and emergency plans and then making that real in how Manitoba Hydro operates.

Now, I'm going to voice an opinion, but having watched the national inventory of emissions for quite a long time, I watched it go through a period of time where Manitoba was listed and some of their emissions were acknowledged, and then it was—then there was no information and no numbers because it said private. And then we went through a period of time where Manitoba Hydro's emissions disappeared from Canada's inventory.

So the blunt answer to your question is Manitoba Hydro needs to count their emissions and stop pretending there aren't any because they do hydro power. And that would be such a culture change that it might well make a significant difference in how they function all the time. They self-congratulate to the point where it's hard to sit in the hearing on this topic. So it needs to change. You know, and I think counting their own emissions would be a start.

There's—2005 was the most water in northern Manitoba in 300 years. And that is tons and tons and

tons and tons of methane, none of which was ever reported or counted.

**Madam Chairperson:** Thank you very much for your presentation. Question time has ended.

I will now call upon Mr. Robert Elms, Manitoba Electric Vehicle Association. Mr. Robert Elms?

Was he just here? *[interjection]* We'll go to the next one? Okay.

Okay, we will call on Ross Redman at this point and see if Mr. Elms comes back after.

Mr. Redman, do you have any written submissions for the committee?

Please proceed with your presentation.

**Mr. Ross Redman (Private Citizen):** Thank you for allowing me to speak to the committee about our green plan. My name is Ross Redman and I have driven an electric car for seven years. It's quick, it's nimble, it's really fun to drive. It's an excellent winter car. It always starts. Electric heat comes on right away.

The important part is it used one megawatt hour of electricity last year, costing me \$80—quite a bargain. Better still, its CO<sub>2</sub> emissions were 0.001 tons; yes, one kilogram of CO<sub>2</sub> for a whole year of driving. Compare that to my little gas car that I had before which had a CO<sub>2</sub> emissions of 2.8 tons per year.

I do not buy my fuel from outside the province; I buy my fuel local. My fuel is electricity from Manitoba Hydro.

Transportation generates 39 per cent of Manitoba's CO<sub>2</sub> emissions. More than two and a half billion litres of gasoline and diesel fuel are consumed in Manitoba every year, creating eight million tons of CO<sub>2</sub>. This is a huge opportunity for CO<sub>2</sub> reduction.

Manitoba has clean, renewable electricity with a tiny CO<sub>2</sub> content. As a result, a vehicle powered by electricity creates 2,000 times less CO<sub>2</sub> than a similar gas- or diesel-powered car.

Switching most of our transportation to electric would reduce our greenhouse gasses significantly, literally millions of tons. This would have a very positive effect for our climate. We need to encourage people to drive electric. Part of that is education. Part of that would be help with the initial cost. I recommend a \$7,000 rebate starting immediately. It should decline every year to zero at the end of 2025.

There is a bonus hidden in here as well. We would not spend \$3 billion a year on imported fuels. Manitoba Hydro would see an increase in revenue. For the majority of people, they will charge their EV at night at home. Our power grid has excess generating capacity and excess transmission capacity at night, so no additional infrastructure would be required.

My second point is that today I cannot drive to Portage or Winkler or any other Manitoba city or town, and that's because there is no place to fill up so that I could come home. When people travel across Manitoba, they will need places to fill their electric vehicles. For those people, we need charging stations in every city and every town, much like gas stations exist today.

I see two options: We could convince Hydro to sell power to Manitobans for their EVs, or we could encourage other companies to sell power to Manitobans for their EVs. Either way we need charging locations throughout the province. I recommend we decide who will provide electricity for EVs away from home; once we know who that is, we should aggressively pursue expanding the charging infrastructure to every city and every town in Manitoba. The costs are very affordable. Electric vehicles can make a difference, a huge difference—not just today but for generations to come.

Thank you for your time.

\*(19:10)

**Madam Chairperson:** Thank you, Mr. Redman, for your presentation.

Do members of the committee have questions for the presenter?

**Ms. Squires:** Thank you very much, Mr. Redman, for coming down here tonight, presumably in your electric vehicle here. And just really want to thank you for making your thoughts known and also for pointing out the infrastructure challenges that we have. And we, certainly, are going to be moving forward on upgrading the infrastructure so that we can have the capacity to have more electric vehicles in our—on our roads in Manitoba. So thank you very much.

You said you've been driving one for seven years. That must mean you were one of the first to get an electric vehicle in the province and are definitely a leader, and I commend you for that. And thank you for your presentation tonight.

**Mr. Redman:** Yes, I own the first Mitsubishi i-MiEV in Canada. It happens to be the second factory electric EV in Manitoba.

**Mr. Altemeyer:** Ross, thank you so much for coming down here. You really are a hero in the work that you do. I'll give you an opportunity to talk about your electric boat, if you wish. You've done an incredible amount of advocacy pushing for just basic logic to finally come forward.

And, you know, my hope—and I've shared this with the minister, I'll share it with everyone tonight—is that climate change ends up becoming a much less partisan issue than it is right now, that all of us get to the point where we realize what the science is telling us we have to do and that all political parties start doing it.

And we do get a little frustrated sometimes down here, because we keep hearing from folks in question period: Oh, we're not going to take a third of the vehicles off the road overnight. And it's like, well, you just help people convert to electricity, you know, it's—as you just identified, that's exactly what we need to be doing.

So let me give you a chance—some of the major myths that people may have about electric vehicles. You've got a roomful of people here may or may not be familiar. What are some of the most common questions that you get in your advocacy work and the answers that you provide?

**Mr. Redman:** Yes, I drive an electric boat. Not only do I use electricity for my car, I also use electricity for my boat. It's a cute little boat. It seats 11. It hauls 2,700 pounds. It handles Lake of the Woods no problem at all. And it runs on solar in the summertime because we have solar power at the cabin.

Electric vehicles are not only about cars; they're also about trucks and buses and semi-trailer trucks. Boeing is currently testing a 777 jumbo jet which is a plug-in hybrid. The whole world is changing to electric vehicles, and we could be a leader because we have such clean, renewable power.

About the myths: clean, renewable power. Everybody says that I just have a longer smokestack, and that's simply not true. I'm 2,800 pounds cleaner than I was the year before I got my electric vehicle.

There's the one about electric vehicles do not work in the wintertime; nothing could be farther from the truth. Electric vehicles work just fine in

winter. I have dozens of friends who drive electric vehicles every single winter, even when it's -30° below, -40° below.

The myth about you're going to be stranded in the middle of nowhere with no electricity; that myth is also simply not true. You have a fuel gauge on your car. It acts just exactly the same as the fuel gauge on your gasoline-powered car. You fill up before it goes completely empty and you won't be stranded. If you ignore your fuel gauge, it doesn't matter whether it's gas or electric, you will be stranded.

**Mr. Gerrard:** Yes, I wonder if you'd comment on two points.

First would be why Manitoba Hydro has not already built a lot of electric charging stations. This is obviously a market for them. And this would seem to be a, you know, natural thing for them to be doing, to expand their electricity market.

And second, would you expand on the role of plug-in hybrids? I mean, we couldn't—I couldn't drive an electric vehicle at the moment because of the restrictions of where there's charging. So we have a plug-in hybrid, and I've gone from five litres per 100 kilometres on my previous car to roughly 0.50 litres per 100 kilometres now, which is a 90 per cent reduction in fuel. And the plug-in hybrids, it would seem to me, can be at least an intermediate step.

**Madam Chairperson:** So, Mr. Redman, the time for questions has expired, but I will give you a moment to briefly answer the question, so go ahead.

**Mr. Redman:** I've talked to Manitoba Hydro several times, and they have never given me a good answer why they're not installing charging stations. Plug-in hybrids are an excellent stepping stone until Hydro or somebody else in the province starts selling electricity to us.

**Madam Chairperson:** Thank you very much for your presentation.

I will now call upon Robert Elms, Manitoba Electric Vehicle Association.

Mr. Elms, do you have any written materials for distribution for the committee?

**Mr. Robert Elms (Manitoba Electric Vehicle Association):** I do.

**Madam Chairperson:** Please proceed with your presentation.

**Mr. Elms:** I, too, like—would like to begin by saying thanks very much to the legislator and all—Legislature and all the members for considering this. This is long overdue.

Transportation is going electric. The General Motors chairman has said: We believe in an all-electric future. We'll have more than 20 EVs by 2023. By 2022, Ford will debut 16 battery-electric models, and Volkswagen promises 27 affordable electric models. Daimler will provide electric versions of all its models by 2022; Jaguar and Land Rover will do that by 2020; Volvo, by the end of 2019.

But whether or not the switch to electric power happens quickly enough to slow down global warming is a decision over which governments have enormous influence. Because of government leadership, last year, over 20 per cent of the new automobiles sold in Norway were battery-electric vehicles. Battery-electric vehicles are usually recharged at home using level 2 chargers, but on long trips, as Ross has said, BEVs need to be recharged rapidly. To make that possible, in BC, Ontario, Quebec, New Brunswick and Nova Scotia, utility companies and other partners are installing province-wide networks of level 3 quick chargers.

In Manitoba, a pan-provincial network of 34 strategically located quick-charge stations could serve all electric vehicle drivers on our provincial highways for several years. The total cost of installation: less than \$4 million. By investing in a quick-charge network with private sector, provincial government would be enabling many more Manitobans to switch to fully electric cars, SUVs, trucks and more.

That small investment could have the collateral benefit of helping the financially beleaguered Manitoba Hydro. Over 783,000 automobiles are registered in Manitoba. Switching just gasoline-powered cars to battery-electric power would boost demand for electricity by as much as 2,500 gigawatt hours per year. That's over \$200 million annually. The Keeyask station will generate approximately 4,400 gigawatt hours per year. When all Manitoba vehicles are powered by electricity, the increased demand will utilize all of Manitoba Hydro's excess production capacity and more.

In the Climate and Green Plan, Premier Pallister said, quote, we can gain jobs and economic opportunities by making smart investments in clean technology. End quote. By investing modestly in the switch to EVs, the government of Quebec has already leveraged hundreds of millions of dollars in related investments by the private sector. Many Quebec companies are becoming world leaders in the development and manufacture of a wide range of EV products and services.

Here, New Flyer and its supply chain have proven that Manitoba companies can do that too. With appropriate provincial government facilitation, several other Manitoba companies could be developing and manufacturing electric vehicle technology for agriculture, mining, construction, aviation and so on.

Until recently, only Tesla made long-range battery-electric vehicles, but they were expensive. Now a second generation of battery-electric vehicles, such as the Tesla Model 3, Chevy Bolt, Hyundai KONA, Kia Niro, are mid-priced, charge faster and have greater range than most of their predecessors.

\* (19:20)

Within two weeks of Tesla unveiling its Model 3, almost 400,000 people, including dozens of Manitobans, had deposited \$1,000 US to pre-order that second-generation, battery-electric sedan.

This year, 20 per cent of Americans say their next auto will be electric. That's an increase of 15 per cent since last year.

As folks discover the superior handling and performance of BEVs and learn that BEVs could save them thousands of dollars per year on fuel and maintenance costs, a growing number are enthusiastically expressing their desire to drive these fully electric vehicles. However, many Manitobans are stopped by two things: a lack of a pan-provincial, fast-charge network and the comparatively high price of BEVs.

The Manitoba Electric Vehicle Association is recommending ways to overcome those obstacles. Based on our members' experience and measurably successful strategies deployed in Quebec, Ontario, British Columbia and many other locations around the globe, especially Norway and California, here are our recommendations:

Invest in private-public partnerships to create a network of strategically located fast-charge stations throughout this province.

(2) Incentivize builders to install the wiring to make all new parking facilities EV-ready, especially for new, single-unit and multi-unit residential housing. Being EV-ready makes it relatively simple and inexpensive to install level 2 charges at a later date at each parking stall as demand grows. It's cheaper than retrofitting.

Provide an-additional 'centives'-excuse me-to offset the extra costs associated with the installation of level 2 charging equipment at existing parking facilities, especially for residential housing units.

(4) For a few years, until battery-electric vehicles are more affordable, as Ross has said, reward Manitobans who purchase or lease emission-free battery-electric vehicles with substantial tax rebates.

(5) Eliminate sales taxes on the cost of all parts needed to convert internal-combustion-powered vehicles to electric power.

(6) In its Climate and Green Plan, the MB government declares its intention to, quote, "lead by example," end quote. To accomplish this, the government should purchase or lease only battery-electric vehicles for government and Crown corporations and install level 2 destination chargers for those vehicles.

The Manitoba government Vehicle and Equipment Management Agency manages approximately 2,600 vehicles, which use tens of millions of litres of fuel per year. Many could be battery-electric, which would save the Manitoba government over \$100 million in fuel and maintenance costs annually and result in enormous reductions in greenhouse gas emissions. No doubt, those financial and environmental benefits would motivate other fleet operators to switch to battery-electric vehicles. And I give the example of the Winnipeg Fleet Management Agency, which manages approximately 1,700 vehicles.

(7) Enable school divisions to switch to battery-electric buses. Manitoba's served by over 2,400 school buses, which use tens of millions of litres of fuel per year. Those vehicles could be battery-electric, providing much healthier transportation for students while saving Manitobans over \$100 million in fuel and maintenance costs annually.

(8) Facilitate the acquisition of battery-electric buses for public transit. In 2017, 386,000 e-buses were in service around the globe, and Bloomberg New Energy Finance predicts that will go to 1.2 million buses by 2025. Within seven years, 47 per cent of the world's transit buses will be electric. It's time we do the same.

Include electric representatives from Manitoba's electric vehicle community on all boards and committees making transportation policies, plans and decisions. Governments in Norway, California and other locations have discovered that to accelerate the switch to BEVs it's essential to have effective partnership with their electric vehicle associations. There's a wealth of experience and expertise in the Manitoba Electric Vehicle Association, and I don't mind saying, it's time to plug in to this resource.

(10) Partner with the Manitoba Electric Vehicle Association in the development and implementation of an effective community-based BEV public awareness campaign. Folks are always asking Ross and my other members, what's it like to drive an electric vehicle, and who are they going to trust more than somebody right here in Manitoba that's already doing it?

In conclusion, our vast province—in our vast province, pardon me—transportation is vitally important, but internal combustion engines produce almost 40 per cent of the greenhouse gasses emitted in Manitoba. Fortunately, as the Climate and Green Plan states, quote, "one of the greatest opportunities for reducing transportation emissions is through electrification." End quote. And quote again: "Manitoba is an ideal place for the adoption of electric vehicles that plug-in." We say, absolutely.

For several years, members of the Manitoba Electric Vehicle Association have been happily driving battery-electric cars, trucks, SUVs, motorcycles and more, proving that in the true north, battery-electric motors are superb replacements for internal combustion engines.

Premier Pallister reminded us that from producing hydroelectricity to protecting forests and wetlands, quote: Manitoba has always punched above its weight as a clean, green province. End quote. Then he bluntly informed us, it's time to do even more. We couldn't agree more.

**Madam Chairperson:** Thank you for your presentation.

Do members of the committee have questions for the presenter?

**Ms. Squires:** Thank you very much, Mr. Elms, for your presentation tonight and for your advocacy work in being a champion of electric vehicles and how they can reduce our carbon footprint. And I just really appreciate you coming down here tonight to share your viewpoint and provide some practical suggestions and recommendations for our government to move forward on. And I greatly appreciate these recommendations, and I look forward to partnering with you as we implement some of these recommendations.

**Mr. Elms:** Thank you, Minister.

**Mr. Kinew:** I also want to thank you for your presentation and appreciate the perspective that you're sharing.

So, the question I want to ask is a little bit devil's advocate; like, I want to push you a bit. But first I want to say, you got me. Like, there's no debate there; like, I'm on your side. In fact, like, some of my friends on this side, when they heckle me in the House, they, like—one of the things they like to yell is, like, are you going to buy everybody a Tesla, Wab? Because last year we announced our support for financial incentives, including no-interest loans to help people get into a Tesla or maybe another form of electric vehicle.

But I was in Thompson last week and talking to people there about the challenge of reducing their carbon footprint. So, in the North, you have to drive long distances often to get between different communities. A pickup truck comes in handy on a lot of the roads, particularly on gravel roads. And so, you know, the thing that I said to everybody was, like, if you could have an all-electric pickup that had the same range and utility as a gas vehicle, would you do it? And then, overwhelmingly, they're like, yes, for sure we would do that.

So I was just wondering if you could, with that in mind, and that sort of northern challenge and rural challenge to adopting an electric vehicle, talk through some of the recommendations that you're making and how the things that you're calling on us to do might help address some of those challenges that people living outside of an urban centre have to face.

**Mr. Elms:** First I have to ask, did Ross send this question in to you? I feel like I've been set up here with too good an opportunity.

One of the great pleasures of—that I've had, along with other members, in putting together these recommendations, is realizing exactly that this is an opportunity for all of Manitoba. And one of the things that we were determined to do was to find a way to make these vehicles accessible to the far north.

And so, in the map that I unfortunately forgot to include in this presentation—I'll send it on—Thompson is at the top of our list. And one of the great advantages is if we can get this network set up soon enough, Thompson will be the farthest-most location in North America connected to the level 3 fast chargers system that extends right on down through Mexico.

So that introduces not only opportunities for things like tourism, which is terrific because ecotourism is growing and it's a big industry with a lot of money, but, as we all know, Thompson is the cold-'westing'—western, sorry, cold-weather testing centre, and this would provide access for EV-developing companies across North America and, indeed, around the world, to do their cold-weather testing at Thompson. So we see this as a big opportunity.

And the other side of electric 'vehic' development, of course, is that electric pickup trucks are on the horizon. They're, literally, they've been developed. In fact, the one that actually may be the first one marketed and manufactured was developed here in Canada. It's called the Bison.

But that aside, folks living in rural Manitoba will probably get the biggest benefit if they are given some financial incentives to buy electric vehicles, because, as we all know, it's folks in rural Manitoba who have to drive the longest distances, so.

**Madam Chairperson:** Mr. Kinew, on a follow-up—quick follow-up?

**Mr. Kinew:** And they'll work on, like, a dirt road that's really bumpy?

**Mr. Elms:** They do. They work on extremely bumpy roads. It's one of the nice things about electric vehicles. They seem to be more resilient than the vehicles you and I are used to driving, so.

**Mr. Gerrard:** You talk about switching school buses, right, to electric; you talk about switching transit buses; and you talk about incentives and so on. What—and facilitating. From a practical

perspective, what is the best way to enable or facilitate that switch?

\* (19:30)

I mean, what we're hearing is that the small number of buses that Winnipeg has got in Transit, most of them are not being used because we don't know exactly what's happening. But where are the problems and how can we overcome them?

**Mr. Elms:** With regard to transit, that discussion is one that probably will take a little more time than we have to go into here. Suffice to say that there are enough locations not just around the world but right here in North America, cold-weather locations in Alberta, for instance, where they are using electric vehicles, electric buses, on a regular basis. It is possible to do it here. It takes a little bit of out-of-the-box thinking compared to what we've done recently, but it's very possible and it's very economically feasible.

With regard to the costs, we've now got some very substantial, reputable evaluations of the costs that show that the overall costs of operating and owning the electric bus now compare favourably to the diesel buses and, in some cases, they're less. With regard to school buses, that's a beauty. The savings in school buses alone make it really worthwhile doing it. And one of the things that we are doing as an organization is right now going to have conversation tomorrow morning with folks at Red River College—Ray Hoemsen, as many of us know, and I'm going to be talking with Jonathan Beddoes out at the University of Manitoba. The organization really wants to put together a team to develop a made-in-Manitoba conversion project to make it possible to produce kits here in Manitoba that would allow the existing school buses to be converted.

**Madam Chairperson:** The time for questions has now ended. Thank you very much for your presentation.

Before I recognize our next presenter, I want to remind the guests in the audience that there aren't—to be no photos taken of committee tonight or used on social media. And I thank you for your co-operation.

We will now move to Mr. Zach Fleisher, private citizen.

Mr. Fleisher will be moved to the bottom of the list.

I will now call upon Aleem Chaudhary.

Aleem Chaudhary will now be moved to the bottom of the list.

I'll call on Ron Thiessen.

Mr. Thiessen, do you have any written materials for distribution to the committee?

**Mr. Ron Thiessen (Canadian Parks and Wilderness Society, Manitoba Chapter):** I do not.

**Madam Chairperson:** Please proceed with your presentation.

**Mr. Thiessen:** Sure, thank you.

Good evening, everyone. Thank you. Hope you're all doing well. I'm sure it's been a long day for everyone, and it's only going to get longer, right.

So thank you for the opportunity to be here tonight to speak to all of you. I'm with the—I'm the executive director of the Manitoba chapter of the Canadian Parks and Wilderness Committee. We're a non-profit registered charity wilderness conservation organization. We have chapters all over the country, and I head up the one here in Manitoba.

Thank you for the Climate and Green Plan and working to enact this legislation. We believe the—the framework has the appropriate pillars and keystones, and we're pleased to see, as we're a wilderness organization, wilderness conservation organization, that expanding our parks system and reviewing our protected areas network to ensure that nature is adequately protected and our wildlife is adequately protected—we're happy to see that that's included in the plan as a key component.

And our organization here in Manitoba is largely focused on the boreal region of the province, and, you know, it's kind of funny because a lot of people refer to Manitoba as a prairie province, but only about 20 per cent of Manitoba is prairie and the other 80 per cent is boreal. So we're in fact much more of a boreal region. And the fortunate thing is that many of the areas within our vast boreal region in Manitoba are still intact and fully functioning, operating according to the laws of nature.

There's a lot of jurisdictions on the planet that have lost this opportunity. Europe, for example, has less than 1 per cent of its original landscape remaining, that hasn't been modified in some way or another. And now there are efforts to re-wild Europe, which are—which is hugely politically challenging, as it's turning out, and also highly expensive, and that might be part of the reason why—and it's

experimental. We don't even know if it's going to work.

So, in any case, the most cost-effective way to ensure that we have a healthy balance of conservation and developments in the province is to do careful planning for our nature so we don't find ourselves in a position—and, you know, might be after we're all long gone—but in a position where we're fighting for scraps of wilderness or trying to re-wild because we don't have access to cleaner water and clean air and that sort of thing.

Our organization believes very strongly that Manitoba's greatest opportunity for making a significant contribution globally to fighting climate change is to conserve large areas of boreal forests and wetlands. As Trent Hreno had mentioned earlier, the boreal stores tremendous amounts of carbon in its trees and soils, and, in fact, one acre of boreal forest stores twice as much carbon as an acre of tropical rainforest, so it has tremendous potential, and of course there's many peatlands in the boreal which have a high concentration of carbon that we need to work to conserve, identify those areas and conserve them.

The boreal forest also produces much of the oxygen that we breathe and its wetlands are extremely important. I'd like to point out the Lake Winnipeg watershed where that's surrounded by the boreal forest region and, in fact, the Lake Winnipeg is a boreal—is a lake in the boreal forest and the lands that—or, rather, what I might say, if I'm going to throw in a fact and figure in, is that over 70 per cent of the water that enters Lake Winnipeg travels through the boreal forest region first. And what the boreal does is it holds water on the land so it—Lake Winnipeg receives it at a more slower rate so it's not inundated with too much at one time, but also what it does is it filters out a lot of the excess nutrients that would otherwise damage the lake and further exasperate the huge algae blooms that we've been experiencing over the last decade and more.

We have a global opportunity to conserve large areas for species that require large places to exist. The woodland caribou is a sort of icon species of the boreal forest featured on the backside of our 25-cent piece, a celebrated icon in that regard. They require large areas to make a living, essentially, to avoid predators and find enough food. And so we have an opportunity to preserve this species, as well as the many other species that enjoy and live in that habitat as well.

In 2007, over 1,500 scientists from across the globe wrote Canadian governments a letter saying that the baseline for protection for the boreal forest is 50 per cent. Now, that sounds like a lot, although governments in Ontario and Quebec have pledged to protect at least half of their northern boreal regions. And it makes good economic sense as good as—as well as good environmental sense, because if you do proper planning, you know where to conserve, you know where economic development is allowed, you have certainty for the business landscape as well as for conservation.

And this goal of protecting 50 per cent or more of the boreal forest across Canada is something that's endorsed by members of the Boreal Forest Conservation Framework, and that framework is a group of many Canadian conservation groups as well as 25 Canadian-based First Nations and more than 75 major businesses with annual sales of over \$30 billion.

Right now, only 11 per cent of Manitoba is protected. I think a little more than, in terms of the boreal, it's a bit higher percentage of perhaps 12 or 13 per cent of the boreal is conserved. So we've got a long way to go.

And how am I doing for time? Sorry, I wasn't watching. *[interjection]* All right. I'm doing good. Okay, thank you. Too bad I can't display anything. I was going to show you my grade 6 bowling trophy to try to win your favour this evening.

\* (19:40)

So, one of the challenges that we face, of course, is that there's no international or international mechanisms yet that are quite developed to give us credit for protecting the vast stores of boreal that we have here in Manitoba. Unless you can demonstrate that those areas are immediately threatened, you can't get a carbon credit or an economic benefit from it. So we're certainly—our organization and others are working to change that situation so hopefully in the future that will be the case.

However, in the meantime, I think the Manitoba government can get the credit where the credit counts, and that's with Manitoba citizens by, you know, ensuring that nature is properly looked after, and also the carbon stores, as much as possible, stay in the ground as to not further accelerate climate change.

Back to woodland caribou for a second. We're eight years late on creating woodland caribou

recovery plans. The initial provincial commitment was in 2010 to have these plans done. It's 2018 now and we still don't have any. So we're hoping that, because this is a threatened species and time is of the essence, that the government will place a higher priority on accelerating the production of these plans.

Equally concerning is the moose. Probably all of you have heard, of course, the many moose populations are in trouble here in Manitoba. So we need to develop moose recovery and sustainability plans in co-operation with regional rights holders and stakeholders.

Very pleased—I'll echo what some others have said—the conservation trust, fabulous idea, really happy to hear that. And we're certainly hoping that it helps to advance the Manitoba Protected Areas Initiative, which has been crawling at a snail's pace for, well, my entire career, and I've been doing this for a long time.

We are very pleased that the Manitoba government has committed to helping Canada achieve the pathway to 2020 goal which is protecting 17 per cent of Canada's terrestrial inlands and waters by 2020. And so Manitoba has committed to, once again, help Canada achieve that goal.

Somewhat concerning, though, is that we don't have a goal here provincially. So the Manitoba Protected Areas Initiative has no targets, no timelines.

So, you know, simply put, it seems challenging to achieve something when you don't know what the goal is or you don't have any timelines or work plan.

So I would certainly encourage the government to make that a higher priority so we all know what we're working towards and organizations like mine can better understand how we can support the government and others in achieving a balance of nature and sustainable developments here in the province.

Lastly, I—well, actually, two more things quick. I certainly support the boreal wetlands policy. I won't get into it too much, as Trent Hreno talked about it quite a bit and knows, actually, far more about it than I do. However, certainly happy that it's going in the direction of a no net loss policy—

**Madam Chairperson:** Mr. Thiessen, your time has ended for your presentation. So we're going to move on to our questions.

**Mr. Thiessen:** I'm done. Okay, well, thank you. I was almost done anyway. I had 20 more words.

**Madam Chairperson:** Okay, and the honourable minister.

**Ms. Squires:** Well, thank you very much for coming down here tonight, and I appreciate the work that you've done and continue to do. And I appreciate the advice that you've provided to me as the minister responsible. And I was very pleased in my mandate letter that we had just released today. There was a priority on enhancing our protected areas network. And so I really look forward to the collaboration and advice from you and your organization as we move forward on those initiatives.

And my only question is, is I'd like to hear those final 20 years—20 words that you didn't get to say in your final presentation. So please proceed with that, if you may.

**Mr. Thiessen:** Thank you, Minister Squires. I appreciate that.

So I just wanted to briefly mention that in terms of the boreal wetlands policy, developing best management practices in and around wetlands is a key thing to do.

And in terms of—also, it's an—this is an accolade, so it's a great thing that you asked, I think. We're very pleased that the Manitoba government has committed to engage in discussions and consultations with affected Manitobans regarding conservation efforts to do with the Seal River watershed, moving forward on polar bear provincial park, that proposal, as well as looking at establishing additional conservation areas in the south central Interlake. So thank you for that.

**Mr. Gerrard:** You mention the importance of targets and timelines for the Manitoba Protected Areas Initiatives. Do you think that targets and timelines are needed for the various initiatives within the green—Climate and Green Plan? *[interjection]*

**Madam Chairperson:** Oh, Mr. Thiessen.

**Mr. Thiessen:** Sorry, and thank you. I certainly believe that targets and timelines are important—an important basis of any plan. I guess just, you know, fundamentally, structurally, that being the case, I realize that it is challenging in some situations to do so, but I think, at the very least, we should aim for aspirational targets so we all know what we're

working towards. And that would be quite helpful, I believe. Thanks for asking that.

**Mr. Kinew:** Thank you for your presentation and for everything CPAWS is doing. I certainly like your calendar—so. That's probably the most visible, regular interaction I have with CPAWS, but anyway, I want to maybe push you just a bit more on that point that our colleague here just raised.

A lot has been made about the recent report by the Intergovernmental Panel on Climate Change. Very dire predictions, much shorter runway for us to take action to fight climate change. Do you think that that's a target that we should be aiming for, the emissions reductions that are pointed to in that most recent report from the IPCC?

**Mr. Thiessen:** Hey, look, I did it right this time. I'm learning.

Yes, certainly, I think we need to expedite all efforts and take this a lot more seriously than we have been, and not just as a province or as a nation, but internationally. There's a lot of, you know, fighting about, oh, well, they pollute more than we do, or faster than we do, or that sort of thing, but per capita, certainly here in Canada, we're huge polluters. And considering we are a very highly educated and well-resourced country, comparatively speaking, we have a tremendous opportunity to be a leader in the world.

**Madam Chairperson:** Seeing no further questions, thank you very much for your presentation.

I will now call on Molly McCracken, private citizen.

Molly McCracken will now go to the bottom of the list.

I will call Kenneth Klassen, private citizen.

Mr. Klassen, do you have any written material for the committee?

**Mr. Kenneth Klassen (Private Citizen):** Yes, I do.

**Madam Chairperson:** Please proceed with your presentation.

**Mr. Klassen:** How we produce and use energy must be at the heart of any climate change strategy. This includes proposed legislation such as Bill 16.

A generation ago, beginning in the 1980s, there were two jurisdictions in North America who were considered leaders in energy policy and innovation.

Do you know who they were? California and Manitoba.

I was fortunate to be part of that era. My views about Bill 16 are shaped by more than three decades of experience, working first with the provincial energy ministry and the Government of Canada's CANMET Energy Technology Centre, plus, more recently, as an independent consultant developing energy efficiency and renewal energy strategies, legislation, regulations, energy codes and product standards, plus programs and services.

However, my advice about Bill 16 here tonight is also informed by my experience doing a lot of international work, primarily in Europe and in Asia. This has exposed me, in many instances, to what other jurisdictions are doing to meet both global energy and climate change challenges, but also strengthening their economy and competitiveness at the same time.

Now, given my background, I was thrilled when I read Premier Pallister's pledge in the Made-in-Manitoba Climate and Green Plan that his government has, quote, "a bold new vision for a clean, green Manitoba," and that our province, quote, again, "will be Canada's cleanest, greenest and most climate resilient province."

How after—however, after reading Bill 16, my excitement turned to disappointment. The proposed legislation certainly does not go far enough and will not deliver what the Premier (Mr. Pallister) has promised.

I'm going to talk about six issues. The first issue I want to address is the issue of flat versus a rising carbon tax. I've done a lot of reading on the subject, and there's two schools of thought. The Province has proposed a flat, \$25 levy, which the federal government has rejected. The federal government is going to impose a \$20 levy, rising to \$50.

Of the two, I prefer the federal government approach. I know from my perspective and the people that I work with in Canada's billing industry that they would prefer a period of adjustment, and they would prefer it starts out low and it rises.

\*(19:50)

However, the differences, whether it's a flat or rising carbon tax, the impacts are fairly small between the provincial and federal plans, actually. What really impacts how effective these measures are is how you spend that money that is raised. The

truth of the matter, though, is that whether it's a \$25 tax or a 20-rising-to-50-dollar carbon tax per ton, that we're going to be facing a need for much higher carbon taxes in the future. And again, if we refer back to the UN Intergovernmental Panel on Climate Change, you know, we're talking about taxes like \$135 or even higher per ton. So I think we need to get that message out that we're seeing a steady increase; not a flat tax, but one that will be increasing over time.

Second issue I want to talk about is Manitoba's clean electricity grid. Bill 16 really fails to take advantage of our made-in-Manitoba hydroelectricity. One of the things that I've distributed to you is an annual heating cost comparison. The lowest cost for heating a home in Manitoba right now is electricity when used in conjunction with a geothermal heat pump. If you compare the two options in the Manitoba Hydro annual space heating costs sheet, you'll find that there's about \$120 annual savings in using electricity and a geothermal heat pump compared to the most efficient natural gas furnace. At today's interest rates, you can borrow about \$24,000 with that difference.

So it's really, really important, I think, to—in Bill 16—to set the expectation that what we're going to be doing in Manitoba is we're going to be limiting the use of natural gas in any new construction of homes and buildings, with certain limited exceptions, and give the industry maybe a five-year period to get ready for that and to phase it out.

The other thing is—issue No. 3 is the provincial gasoline excise tax and PST exemption. This—you know, I wholeheartedly support what the other speakers said about the electric vehicles and how electric vehicles make so much sense in Manitoba. And again, as I travelled around the globe over the last several years, I'm just astonished at the uptake of charging infrastructure, future-proofing projects. I have a project in Tianjin, China—the whole thing is future-proof so that people can put in electric vehicles and chargers and so on. We are falling badly behind in that aspect, and I would encourage you to strengthen the bill in that regard.

However, we, really, in Manitoba, we have one foot on the accelerator and one foot on the brake when it comes to vehicles—electric vehicles. And the thing that I was really quite astonished at is at a comparison of gasoline taxes for all the major cities across Canada, which is in the handout. So in Winnipeg, we pay—total all in—all our taxes—roughly

about 29 cents a litre. If you look at the other page, average gas tax for Canadian cities, when we weight it by population, the national average is 45–45.

Of the 36 OACD countries, Canada has the third lowest gasoline taxes in the world—third lowest in the world. Manitoba has the lowest gasoline taxes in Canada. So I don't know anybody—any policy analyst would say, you know, it's compatible—if you want to accelerate the adoption of electric vehicles, if you want to be the cleanest and greenest province, you should have one of the lowest gasoline taxes on the face of the earth. It makes no sense. We need reform on how we charge for gasoline in this province.

The fourth thing I want to talk about is something that has bugged me for 30 years: the PST exemption on the home heating fuels. We currently exempt imported, non-renewable fossil fuels from Alberta, natural gas—look at your energy bills when you go home tonight—from provincial sales tax. But ironically, the electricity that's required to have a fan motor in your furnace, your natural gas furnace, we tax that. But, more importantly, what we do is we tax anybody who wants to make their home or building more energy efficient.

And that doesn't make sense. Why are we exempting from tax non-renewable fossil fuels, but efficiency measures—if I hire somebody to put a made-in-Manitoba window with Manitoba labour—I get taxed? We should do the reverse. And we need, of course, if we do institute the PST—or eliminate the PST exemption on home heating fuel, we need to have appropriate protections for lower income households.

The fifth item I want to talk about is provincial government capacity. Efficiency Manitoba has a vitally important role in seeing that Bill 16 succeeds. It's been almost two years now to the day in the Throne Speech—I guess November 2016—that Efficiency Manitoba was announced. Two years, and it still isn't operational. So I implore you to make that a priority to accelerate getting this agency up and running.

The last thing I want to talk about is support for innovation. And again, when I go across the globe and, you know, I go to China, I go to South Korea, you would not believe the investments that these jurisdictions are making in the green economy. And they're doing it—you know, on one hand, they're doing it for reducing greenhouse gas emissions and good things like that, but to a large extent, what

they're doing is they want to export this. They see that whether it's electric vehicles, green building products and services or whatever, that that's growing much more on a global basis than the general economy, and they want to be an exporter, not an importer.

So by—you know, even if you don't believe in climate change, you've got to believe in the economic opportunity that presents on a global basis. And more than a third of every job in Manitoba is dependent upon exports. So we need to redouble our efforts in supporting a greener economy.

I'll close with this remark: more than 2,000 years ago, the famous Chinese philosopher, Lao-tzu, said, quote, truthful words are not beautiful; beautiful words are not truthful. The truth is that Bill 16 has some positive aspects, no doubt, but it really does not go far enough. It falls short, and it simply will not achieve what the Premier (Mr. Pallister) has promised.

Thank you.

**Madam Chairperson:** Thank you for your presentation.

Do members of the committee have questions for the presenter?

**Mr. Altemeyer:** Yes, thank you very much, Ken, for coming down here. And for the benefit of the committee, if you missed it, Ken is a world renowned consulting expert on energy efficiency. For him to give us his time and his 10 minutes here is really quite a very generous offer on his part, and we would all be very wise to be listening to what he's had to offer in six beautiful and very concise points. It's why I remain so hopeful about this issue. The solutions are there. The economics are there in many instances. And for goodness sake, we know the planet is screaming for us to smarten up.

In your work, Ken, the potential for energy efficiency, if you want to just touch on that, whether—let's talk about efficiency in buildings. What are some of the economic benefits of going in that direction, you know, the job creation, the savings, the employment opportunities, the reduced emissions, because I'm not sure everyone in the committee realizes that, you know, though here you say, oh, we have to have a carbon tax for \$135 or something, and they'll just shut off. I—we've got a government which can't even wrap their head around \$50, never mind cutting our emissions in half in 12 years. But if you have a chance to explain

to them some of those benefits, you know, maybe we can make some progress here tonight on where we're headed in Manitoba right now.

So I'll give you that opportunity. Sound off as you see fit.

**Mr. Klassen:** I've had a lot of opportunity to make presentations to, you know, for example, government officials in the UK, China, South Korea and so on, and one of the things that they really like about energy efficiency is how labour-intensive it is and how the employment impacts of energy efficiency are distributed equally throughout jurisdiction.

So, when we build a Manitoba–Manitoba Hydro builds a hydroelectric dam, it creates a lot of employment, very short burst. A huge fraction of that employment is people who come from out of the province. It is completed, and once the dam is operational, it requires very few people to maintain and operate.

Energy efficiency is different in that it not only creates a lot of employment, it allows you to ramp up or ramp down. Once you pull the trigger on a hydroelectric dam, you're kind of stuck. If your forecasts are wrong—and look what's happened—you're really in a pickle.

So energy efficiency has that ability. It creates more employment; it's more flexible. Perhaps most important of all is the government that doesn't have unlimited resources—it is one of the only climate change measures that we can take that has a negative cost. It saves more than it cost. It's not a free lunch; it's a lunch you're paid to eat.

**Mr. Kinew:** Thank you for your presentation. Thanks for making us laugh. Certainly makes the evening proceedings go by a little more smoothly.

\* (20:00)

You talked about the, I guess, price signal that you can put on dirty energy, but then you also are talking a lot about hydro in your presentation. So I'm wondering if maybe you can talk about the importance of the price of hydro, the rate that the average person pays from that perspective, in terms of trying to help us meet the challenge of fighting against global warming.

And I guess, you know, one of the things that we raised a few times is why is the climate green plan over here and why is the hydro policy over here?

Shouldn't the two things be working together or in conjunction? I think you see where I'm going with this. You know, if you can talk a bit about the importance of hydro rates and also how central should that be to climate policy. *[interjection]*

**Madam Chairperson:** Mr. Klassen.

**Mr. Klassen:** Sorry, my apologies.

I began my career with the government of Manitoba doing energy audits on community centres, churches, public building and so on and so forth. What I quickly realized is that people are more concerned with energy bills than rates. So, if your rates go up 10 per cent, but your bill goes down 15 per cent, that's what matters to people. So we need to get away from the focus of rates and we need to lower bills. *[interjection]*

**Madam Chairperson:** Mr. Kinew, on a follow-up.

**Mr. Kinew:** Oh, sorry, yes.

Yes, so I guess second part of the question is point taken: keep energy bills low, but right now hydro's over here, climate action's over here in the government's plan. Shouldn't the two—I think things—the two things should be connected.

Do you agree with putting the, you know, affordability of hydro and the broader future of hydro at a very prominent place in our fight against global warming? *[interjection]*

**Madam Chairperson:** Mr. Klassen.

**Mr. Klassen:** I did it again. I'm sorry.

Yes, Manitoba Hydro obviously has—if we're going to eliminate natural gas eventually as a heating fuel for homes and buildings, at least in new construction, and if we're going to convert vehicles, Manitoba Hydro has a huge role to play. But I don't know that Manitoba Hydro—you know, I've dealt with that organization for over 30 years, and I don't think that organization has the culture to embrace that kind of change. They're very supply-side oriented; they're not demand-side oriented. And I think that's the role for Efficiency Manitoba—is that they can address some of these shortcomings and they're more neutral in this, so that Manitoba Hydro should focus on its knitting, which is, you know, creating an abundant, affordable supply of clean hydro. Efficiency Manitoba should deal more with the things on the demand side.

**Madam Chairperson:** The time for questions has now expired. Thank you very much for your presentation.

I will now call on Eric Reder, Wilderness Committee.

Mr. Reder, do you have any written materials for distribution for the committee?

**Mr. Eric Reder (Wilderness Committee):** Yes.

**Madam Chairperson:** Please proceed with your presentation.

**Mr. Reder:** Good. Thank you for having me in here today, giving me an opportunity to speak. Like to thank the signatories of Treaty 1 for an opportunity to meet here today as well.

The Wilderness Committee, if you're not familiar, is Canada's people-powered, award-winning environmental organization. We're working on protecting wild places and wild species, and we've been doing this for 38 years, and I've been the director in Manitoba for 12 years.

So, with that out of the way, now you know who I am. I have a folder here full of stuff I'm going to talk you through.

Right off the top, we have Zero Carbon or Bust, which is a paper that we wrote—

**Madam Chairperson:** Mr. Reder, I'm just going to remind you that we can't hold up materials. Thank you.

**Mr. Reder:** That's very good.

**Madam Chairperson:** Go ahead.

**Mr. Reder:** Sure.

Off the top, we have a report called, Zero Carbon or Bust, which is looking at how our society has to move to a zero carbon economy. The Wilderness Committee's a national organization. My climate campaigner, Peter, in Vancouver, is the one who wrote that.

And next in the file folder, you'll find a picture that I shot, that was taken for me the morning that we were supposed to present two weeks ago, which is of the drowned soybean crops outside of Lac du Bonnet with six inches of snow sitting on top of them.

I shot another photograph—it's on my phone here that I can show you. I think it went out in the email to our supporters yesterday, which was also the same soybean fields, or a different soybean field, still

underwater two weeks later because of the intense changes that we have because of climate chaos that we're experiencing.

The climate and green plan and implementation act and the climate and green discussion paper and the government's comments about climate action—a lot of—has often involved farmers, and I also want to make a very stark and scary point is that it's expected that we will have an increased number of farmer suicides due to the stresses of climate chaos; that was a report that was mentioned last week. I think the Manitoba government, Manitoba Agriculture, was even talking about it.

Next in this pile of paperwork I have: Keep it Wild! The reason that is in there is that was a paper that we published in 2016 which goes to hitting the 17 per cent protected areas goal that the world is aiming for, 17 per cent by 2020. This is a road map that shows exactly where do we need to work in Manitoba and how to do it. We actually started working on this campaign in 2012 and laid out a specific plan where we get to 20 per cent by 2020.

The next piece in the paperwork that I'm presenting there is Lake Overload. This talks about how agriculture—two very respected voices, the International Joint Commission and the Environmental Commissioner of Ontario have both said there's similar problems in Lake Erie and in Lake Manitoba we need to—pardon me—Lake Winnipeg we need to address. We need to have regulations in place for the agricultural runoff.

So that takes me through the publications that we've done recently.

The next pile of paperwork is the results of the climate and green discussion paper town hall that we ran in November of last year with six or seven other environmental organizations. The reason we ran that is because the Manitoba government hadn't given the public an opportunity to discuss this 70-page report. We pulled the 100 different suggestions out of this report. We put them up on the walls.

We gave everybody some dots and said, go to the walls and tell us which ones of these planned ideas that the government has put into their plan do you support. And some of the—one of the biggest ones out of all of this was that people support protecting more area as a way to act on our Climate and Green Plan, so you can see that in these results.

The IPCC report, which you've already heard about tonight, I'm sure you're all familiar with, said

two things. We said we had—two of the many things it said was that we have 12 years to have our fossil fuel use, and the other thing it said is that trees and nature are one of the only ways that we are going to be able to continue to have a functioning society that we have now.

Manitoba is uniquely positioned to offer to the world protected area, protected forests, so that the carbon stays in the ground and so that we continue to provide a healthy society for people.

The—as mentioned, the climate and green implementation 'mact' and the climate and green discussion paper, there's two different reports on it here, they're both devoid of a protected areas goal. The government has said they won't meet the 17 per cent protected areas goal that the rest of the country is meeting and many jurisdictions around the world, and we don't think that's right. That should be something that is in the Climate and Green Plan.

Going further on here, A Lonely Landscape is a report that discusses the loss of species and biodiversity and the threat that it faces. There was a report that came out this summer that said that the loss of species and the biodiversity is as great a threat to humanity, to society, as climate change is, so that's something that needs to be addressed in the climate and green implementation act.

So that's gone through my folder, and I have two or three more things to mention in this document that's still sitting on my computer at home.

Very first, there has never been a crisis like this. There is no precedent for the thing that we're facing right now and it is so essential that we communicate that to people, and as elected leaders you need to communicate that. The IPCC report is a very stark warning and we need to hold that up so that people understand. For more than a decade Germany has been using the term climate catastrophe, and I, myself, have been able—been using climate chaos a lot recently, but we really need to impart unto people that there is a serious problem that we need to address.

Another point to this problem that we're facing, Dr. Sarah Myhre is a paleoceanographer and a climate thought leader in Washington State. She is a fierce and competent individual. She wrote an article for—she's written several of them for scientific America that called out part of the climate problem as mediocre men in power. And I agree with that statement, and as my agency—as a man in power, I

need to raise that and look around the table and realize that we don't have enough females in the room, and the climate crisis will only be solved if we have more females in the room.

As I mentioned, natures and forests are seen, in the IPCC report, as one of the only ways to get a handle on carbon emissions and so that the—Manitoba needs to do more to protect our forests. There is a 15-year-old climate activist in Sweden. Her name is Greta Thunburg, and her quote from this last weekend when she spoke to a crowd in Helsinki, was that the policies that need—that are needed to prevent the climate catastrophe—the politics that's needed to prevent the climate catastrophe—it doesn't exist today. We need to change the system, very clearly.

\*(20:10)

The partisanship is a great problem. It's an impediment—it's an impediment to our action, to our ability to move forward. There will be enough difficulties without partisanship. We need solutions and we need them on the table. I believe that Manitobans—only a very small number of them want to hear partisan sniping back and forth. We need action.

We put out a news release last week—two weeks ago when this bill first came out, when the hearings were first scheduled. We're calling for a meeting—a closed-door meeting from the elected leaders of the three parties in the Manitoba Legislature. We want them to sit down at the table and talk in a closed door. There's never been a meeting like that. There's never been a risk like we're facing right now.

So we can be leaders in Manitoba, but to do so we're going to need to reinvent the society if we're going to survive.

And the last thing I have here was that, as the last speaker at the town hall that we filled at the University of Winnipeg a year ago, the first thing I said, that I was excited at the size of the crowd and the number of people, the very knowledgeable people in the room. I talked through some of the things I've just given you. And the last thing I said here is that there's hope. The government is going to act. We have a price on carving—carbon, and I have hope for the number of people who are coming out. Just like when the price on carbon was cancelled, the number of letters, the number of people who've reached out, the number of people who've signed up for this committee—I have hope that there's this many

people that are going to drag the government to progressive action. And that's what's required, and that's what I'm here to ask you for.

Thank you.

**Madam Chairperson:** Thank you for your presentation.

Are there questions from the committee members?

**Mr. Altemeyer:** Eric, yet another hero. The work that you and your organization do is just absolutely incredible. The—and the public education piece, I really want to hit on that. I fear that there's just a lot of folks who don't yet know that we are facing climate catastrophe. You know, the UN report has sent a shockwave through all of us who have been paying attention, to those who've been concerned for a long time. But the general public just isn't there.

And you know, here at the Legislature, I fear the debate has been more about dollars and not about emissions. It's been more about optics and not about science.

Do you have any thoughts on that? Like, when we—if we're going to manage to bring this government to the realization that, at a bare minimum, it's got to meet the IPCC recommendations, cutting Manitoba's emissions—annual emissions—total annual emissions—in half in 12 years. That's the path we have to be on.

Do we do that by focusing on how much we're willing to pay or what we think people will like, or do we need to focus on what the planet is telling us we have to do?

**Mr. Reder:** Yes, thank you for that, Rob.

The—when I flip on my Instagram account, the second ad that comes up is the Manitoba government advertising that we need to have the flu shot because of the risks. In my mailbox, I got a lovely colour piece of paper that tells me the risks of cannabis.

So the amount of discussion, the ability to communicate to Manitobans, exists. The avenues to communicate the severe risk that we're facing exist. And the very first climate meeting that I was in, David McLaughlin was chairing the meeting. This was two years ago in November. And I asked at the time for this exact thing. I said the—Manitoba can be a leader. We have the opportunity to do this because of Hydro, because of the amount of protected land that we can put in place. We can displace coal from other provinces with our electricity and get

Saskatchewan off their coal habit and do a huge change—one of the biggest changes that could happen in Canada. But we need to begin to speak to Manitobans.

And at the Wilderness Committee, we do that. We speak to a lot of people. There's 60,000 people across the country who chip in every year to make sure that we can keep talking and having conversations, but the Manitoba government has a role in that. They have a big role, right? The things that need to happen in society—flu shots and ensuring people are safe with cannabis—those are just perfect examples. We need to communicate the risks of climate chaos. And that's a role the government has to take on.

**Mr. Kinew:** Thanks for your presentation. I appreciate what you're saying about getting people fired up. It's super important. This is, you know, the issue of our times. I also like how you end your message with hope, and we were kind of talking about that in the hallway a little bit earlier.

But, you know, going off what Rob was—or what our colleague from Wolseley was saying—correct myself, there—there is a challenge of reaching some people across the province, whether it's, you know, the average suburban family that's more concerned with, like, the day to day, getting kids to the rink, as you and I do sometimes as well, or, you know, folks in rural Manitoba who maybe—there's a bit of the Perimeteritis that kind of gets in the way, and then they're worried that, you know, people inside the city are making decisions without considering their best interests.

How do—what advice do you have? You're saying communicate; you're saying the government has a role to take this up, but what do you advice, not just in, like, the fact that we need to do that outreach, but, like, how do we actually reach out to people, and how to you persuade somebody who's either uninterested or somebody who's still skeptical of the action that's needed?

**Mr. Reder:** Thank you for that question. The—you guys might have heard of somebody who was cycling across the country this summer and had their bike stolen, fancy tri bike. Bobby was the name. And I had a meeting the night before, and we chatted for hours about this. And Bobby had an exceptional line that I'm using and I've been telling people. And her question when she was—when they were going and meeting people across the country was, what is possible?

So, when I go, which I'll be doing this winter—when I go into a small community, whether it's Boissevain, whether it's going to be Dauphin or Morden or any of these small communities and I have a town hall and say here's the environmentalist from the city; come take your potshots at him, the question for those people, the ball caps in the room, the plaid shirts, the farmers who are concerned about what this all means to them—the question is, what is possible?

Do you think that they're going to sit there and say nothing is possible? No, there are ideas. And that question—you ask every single person you know, what is possible? How can you act? What is possible to change in our society, because we don't have an option. We're being told by very smart people that we don't have an option, so take that message to everybody.

When the leaders of the Manitoba Legislature sit down at a table in a closed-door, I hope, in the near future, I want them all to bring to the table that exact thing: what is possible? What can we collectively do?

**Madam Chairperson:** The time for questions has now expired. Thank you very much for your presentation.

Before I recognize the next presenter, we have a request for No. 35 on your list. Jeff Franzmann has requested that he be able to present earlier, as he is unable to present tomorrow due to child-care issues.

What is the will of the committee?

**Mr. Altemeyer:** All in favour of more child care. Yes.

**Madam Chairperson:** Is it the will of the committee to call him at this point before our next presenter? *[Agreed]*

Okay, so I now call on Jeff Franzmann.

Mr. Franzmann, do you have any written material for the committee?

**Mr. Jeff Franzmann (Private Citizen):** No, actually, I don't.

**Madam Chairperson:** Please proceed with your presentation.

**Mr. Franzmann:** I just want to first of all thank you all for giving me the opportunity to speak tonight. I appreciate the fact that you're allowing me to present early. I am a lifelong Manitoban raising three

children here. If you discount the time I spent in Saskatchewan and Alberta, a prairie boy my whole life.

I'm not actually up here to do more than give you a bit of historical context to the importance of climate change. You're going to hear a lot from experts in many fields, and I want to give you a bit of background of myself so you know where I'm coming from. I studied cultural and physical anthropology at the University of Manitoba for 12 years, eventually going into forensics before deciding to raise a family instead. And, as a result, I've spent a good portion of my educational life learning, studying human culture.

Climate change isn't actually anything new. Humans have been altering the environment around them for centuries. Ten thousand years ago, the first civilizations grew around the Tigris and Euphrates rivers. Those civilizations fell by their actions. The Marsh Arabs today that live at the—at delta of the Tigris and Euphrates rivers, that marsh did not exist 10,000 years ago. The ongoing damming and irrigation efforts of those ancient civilizations altered the entire region for centuries and centuries to come. Those civilizations that grew around those rivers collapsed by their very own actions on the environment.

\* (20:20)

If you look at the Little Ice Age, Viking settlements in L'Anse aux Meadows in Newfoundland—Vikings arrived in North America, and much to the relief, most likely, of the First Nations, were forced to retreat due to the Little Ice Age.

Their settlements in Greenland, which had crops, which had sheep, which had large communities, collapsed in the course of about 10 to 15 years due to a small modification in global climate that anyone here who has an experience in that would know as the Little Ice Age.

Climate change, in and of itself, is not new. It has had disastrous consequences in the past on human culture. Entire civilizations have collapsed due to minor changes in their local environment, and the only difference between then and now is we have the technology, the information, the education to be able to intercept those changes and do something about it.

We can spend years arguing about whether humans caused it, whether it's a natural cycle in the

environment, but as people are wont to say, the only time that you actually take action on something is when something that you love is threatened.

So I do have a bit of preparation here, because I did want to go over the impact that global climate change is currently having on Costa Rica. In an indisputable reality, there are significant changes taking place in that country due to results in—changes in the climate.

The province of Guanacaste saw rain for the first time in living memory during the dry season, and winds are blowing down sugar cane fields. Beaches are being scoured of their sand by winds that are increased by the increased temperature of the ocean off of the coast.

Coffee is a \$300-plus-million export from Costa Rica. Coffee farmers are now changing their crops over due to intermittent flooding, droughts, storms and floods that have never been seen before. They are now switching over to things like oranges. This is an industry that has thrived in that country since the 1800s.

And, finally, Monteverde cloud forest, one of the most-visited eco-destinations in that country, is facing disaster. Rainfall patterns have shifted and the rainforest now goes entire weeks without seeing a drop, due to the cloud for which it is named moving further down the mountain due to the increased temperatures off of the coast.

Scientific American in 2015 listed the cloud forest as one of the most at-risk eco-destinations in the world. While Costa Rica itself has committed to aggressive, high-impact policies to 'mitigate' climate change, nations with far more capacity and ability to make changes continue to do nothing or make excuses as to why it will be economically unfeasible.

In Manitoba, we're already witness to the impacts of modified climate. I work for Manitoba Public Insurance. In the last five years, hail claims in the province have increased and cost the insurer tens of millions of dollars. Just two—I believe, three years ago was the hailstorm that impacted Winkler; cost \$86 million.

When we look at the overall cost of not doing anything, those costs get passed on to Manitobans every bit as much as a carbon tax in the form of increased premiums, in the form of damage to their vehicles and in the inability to live their lives and they—as they have become accustomed.

So, last of all, I'll just say this. In Canada, we often hear that we commit a—contribute a fraction of global contributions to pollutants, and we should be exempt from mitigating that. Every nation in the world can use that excuse right on up until China.

If no one takes action because someone else is doing it worse, no action will ever be taken. We have the ability today to take action and do something about it, and for the sake of my three children, I don't want them growing up in a world that isn't the one I grew up in.

Thank you.

**Madam Chairperson:** Thank you for your presentation.

Do members of the committee have questions for the presenter?

**Ms. Squires:** Thank you very much, Mr. Franzmann, for your presentation, and I appreciate your—the historical perspective that you brought here tonight to the discussion of climate change.

And, oftentimes, we do focus on the here and now. And it's very important to also look back and see what's happened over the history of this earth, but I appreciate you pointing out that today, like never before, we have the knowledge, we have the technology and we have the capacity to make meaningful change.

And so I appreciate your comments and your leadership on this file and certainly look forward to partnering with you and many citizens like you as we transition to a low-carbon future here in Manitoba.

**Mr. Franzmann:** Thank you.

**Mr. Gerrard:** One of the big changes that we're seeing here in Manitoba is the increase and the number and severity of forest fires in the boreal forest. And, clearly, part of this is we've got to address the big picture in terms of climate change, but part of it is we've got to do something different in the way we approach boreal forest and boreal forest fires. How do we do that? *[interjection]*

**Madam Chairperson:** Mr. Franzmann.

**Mr. Franzmann:** Sorry.

So there's multiple approaches not just to—I—there's a lot of talk because it is very important in Manitoba about protecting the boreal forest. That extends right up into the permafrost. As some people

may or may not be aware, permafrost, boreal forest not only are giant carbon sinks, but, when we get up into the northern regions, they're also trapping methane, which is 86 times more powerful as carbon in terms of global warming percentages. So, as ground heats up, methane is released and carbon, which would—had previously been trapped is also there. So there needs to be a very proactive approach. I'm not going to get into it a lot, because there are people here who have presented who have gone into it in a lot more detail in terms of what can be done.

What I think should be done is more education. As someone here just pointed out before me, the government has the capacity to educate or miseducate people, as they choose, through the various programs and initiatives that they release: vaccinations, cannabis; there's all kinds of methods available to government. The most important thing government can do is educate people about the impacts of what will happen.

So there's no debate about, you know, is it happening? It's happening. You can argue all you want about whether it's human-caused or whether humans are doing this. We have the capacity to mitigate those changes, regardless of the sources or the cause. So, when you hear permafrost is melting and it's releasing methane, you need to pay attention. When people hear that they're losing the valuable natural resources that we have, they will pay attention. This is my first time ever speaking to committee, and I consider myself very politically informed, and one of the reasons is I want a better future for my children, not no future.

**Mr. Kinew:** Thanks for getting us fired up there at the end. That was a nice rhetorical flourish you had at the end of your talk, and I appreciate you bringing your kids into it, because that's what this is all about, and that's who we're fighting for in trying to combat global warming. And you also got some snickers for raising Costa Rica, too, from both sides of the table. So I think all around, full marks for your presentation.

You hinted at it, in what your remarks were, about your view on the government doing a one-eighty and abandoning the carbon-pricing component of Bill 16—well, they haven't done it yet, but, apparently, at the end of the committee, they're going to walk away from the carbon pricing.

I'm just wondering if you can, explicitly, just talk about your views of the need to put a price on

pollution, or not, to have a carbon price or not.  
*[interjection]*

**Madam Chairperson:** Mr. Franzmann.

**Mr. Franzmann:** Sorry.

Everything has a price, and, when you're talking about whether it's carbon, methane or anything that we're putting out into the environment, it's an environmental debt, and it's a debt that we will not be able to pay if we do it at a rate that is not sustainable. So, when we talk about carbon pricing, British Columbia implemented carbon pricing in 2008. It had no negative impact on their economy. In fact, between 2008 and 2016, British Columbia saw growth more rapid than almost any other province in terms of its economic capacity, much of it due to renewables.

Now, you also look at Alberta, which recently implemented carbon pricing in the midst of an oil crash, which—for which they were criticized, and much of that 'criticim'—criticism is warranted in that people have to be critical about those issues. However, the disaster that everyone was predicting did not take place. Alberta's recovery from the crash in oil prices has been significant; economically speaking, they have grown at a faster rate than many other provinces that do not have carbon pricing. So this idea that a price on carbon is going to be some sort of unmitigated disaster is fear mongering.

Now, I disagree with the placement of an imposition of a flat rate without considering each province, because each province has its own unique capabilities and its own unique capacities.

We 'abdicate'—pardon me—we abdicated our responsibility, both in government and as citizens, to have a made-in-Manitoba carbon-pricing plan or pollution-pricing plan, whatever you want to call it—by saying, ah, I'm going to have a snit and not do it after all.

\* (20:30)

It was going to happen one way or the other, and we had the opportunity to implement a made-in-Manitoba plan that may not have been perfect and may not have been to everyone's satisfaction, but would have been a plan. And instead, we have it imposed by Ottawa with no say.

Now, some people might agree with that or think that plan is superior to ours. We can have that debate. But what should happen is that we implement a made-in-Manitoba plan that Manitobans can

discuss, debate and argue over, rather than have it implemented by a federal government that is not going to be fully aware of all the issues, all of the benefits and all of the cultural differences that in Manitoba itself exist.

**Madam Chairperson:** The time for questions has now expired. Thank you very much for your presentation.

I will now call upon Natasha Szach, private citizen—Szach.

Ms. Szach, do you have written materials for distribution for the committee?

**Ms. Natasha Szach (Private Citizen):** Yes, I do. Thank you.

**Madam Chairperson:** Please proceed with your presentation.

**Ms. Szach:** Good evening. My name is Natasha Szach, and I'm here before this committee to voice my opposition to Bill 16 on the basis of the bill's inadequacy for the task at hand.

The primary shortcoming of Bill 16 is the Premier's (Mr. Pallister) recent decision to cancel his own government's proposed carbon tax. It's difficult to understand this course of action at a time when the science is definitive and the eleventh hour upon us, when weather events are becoming ever more extreme, when the Secretary-General of the United Nations has delivered an impassioned plea to nations to do more—much more—to reduce emissions before we enter a phase of runaway climate change and, most recently—as several other speakers have already addressed—when the international panel on climate change—the IPCC—has reported that humanity has a mere 12 years to take unprecedented action.

The alternative is catastrophic global warming in excess of 1.5°C. This is not alarmist rhetoric. Bob Ward of the Grantham Research Institute on climate change assessed the report's warnings as incredibly conservative, which I've attached at appendix A. In fact, the report spared politicians from the IPCC scientists' worst findings, such as the potential for climate change to result in mass displacement and migration, conflict and irreversible environmental shifts. In spite of overwhelming evidence of the need to rapidly decarbonize our economies, the IPCC concluded that political will stands in the way.

This government's Climate and Green Plan outlines the hard science and the severity of climate change and notes that doing nothing is not an option.

That's page 15. If this government believes the text of its own plan, and I choose to believe that it does, then what the Premier has lost is the political will to act.

I appreciate the Progressive Conservative philosophy generally promotes a reduced role for government in managing the province. However, there are times when the role of government—and, in particular, its leader—is to take a long view and skillfully educate the public on why a particular course of action is required. This is one of those times.

While the Premier has all but ensured that Manitoba will be subject to the federal government's carbon tax, I'm suggesting that this government opt to be on the right side of history and put forward a robust and effective climate and green plan.

Without committing to a plan that legislates strict total annual emissions monitoring, accounting and reductions, facilitated by an aggressive carbon tax, this government is fiddling while Rome burns.

Politically, this entails explaining to Manitobans why a carbon tax is necessary and ultimately beneficial. There are many reasons to choose from: the revenues that will be generated and reinvested, predictability for business, long- and potentially short-term savings on disaster costs and growth in Manitoba Hydro if the province moves towards greater electrification of vehicles and homes, to name a few.

To summarize, I'm suggesting that this government choose to actually lead on this defining issue, climate change.

On the matter of Premier Pallister's rationale for cancelling the carbon tax, with respect, I do not understand why Manitoba should get credit from Ottawa for having invested in hydro. Having hydroelectric power simply positions our province as fortunate enough not to have to make greater changes. It does not absolve us of any responsibility to act. Unfortunately, the commitments under the Paris accord, of which Canada is a signatory, are inadequate to limit warming—warming to 1.5°C. If collectively we are already not doing enough, we cannot argue that individually we should be doing less.

By joining other leaders who are turning their backs on climate change laws and policies, the Premier is contributing to a dangerous domino effect.

What is required at this point in time is the greatest collaboration.

To close, there are many reasons why I chose to come here today, but the one I want to share with you is my son. He was born in early July of this year on a blazing hot day. Over the summer, there were many days too hot to take him outside. On other days, the haze from wildfires burning as far away as British Columbia kept us indoors.

Once September hit, most days were too cold to venture out. These weather conditions have been attributed to climate change by David Barber, a University of Manitoba scientist and Canada research chair in Arctic systems science—please see Appendix B—and he is not alone. Other reports by reputable institutions such as the Prairie Climate Centre and the University of Winnipeg forecast such conditions as the new normal for Manitoba going forward.

I have wept at the thought of my son never knowing an environment unaffected by climate change, and I am genuinely afraid for his future. How will I explain to him that at the critical moment humanity did not have the political will to save the planet? And I'm confident that he will be one of the lucky ones. How will millions of parents and grandparents around the world explain to their younger generations why they have lost their homes and been forced to migrate, why they struggle to access clean water, grow or afford food, or why legions of species are extinct? How will this committee explain these phenomena to their children and grandchildren?

Bill 16 will enshrine a new environmental plan for Manitoba, subject to potentially gutting amendments. There is no merit in selling a climate and green plan to Manitobans that does anything less than what the science demands of us. I believe that everyone should make today's decisions with tomorrow in mind, particularly those with the greatest power, ability and responsibility.

On that final note, I am imploring the Premier (Mr. Pallister) and the government to seriously rethink its approach to environmental policy under Bill 16.

Thank you for your time tonight.

**Madam Chairperson:** Thank you for your presentation.

Do members of the committee have questions for the presenter?

**Ms. Squires:** Thank you very much for coming down here tonight and presenting your thoughts and—in what is a very well-articulated presentation tonight. And I just really thank you for using your voice and being a leader in your role in advocating for serious action on climate change. And you've given us an incredible amount to think about, and I appreciate you sharing with us the reality that you're looking at your son and contemplating the type of planet that we're leaving for him. And so I appreciate your words tonight and, certainly, do have a lot of thought here in your presentation. So thank you.

**Ms. Szach:** Thank you, Minister Squires.

**Mr. Altemeyer:** That was beautifully done. Thank you. I mean, I've worked on climate change issues for almost 30 years, and I'm, again, am impacted by what I'm hearing tonight, and, of course, it's our kids that will motivate us the most, I hope.

I don't want to have that talk with my kids, you know. They're the reason why I'm not going to be running in the next election, is to try and spend more time with them, but they're age three to 14. So 12 years from now, they'll be 15 and in their mid-20s, just starting, and they won't have a chance if we don't smarten up. And we're moving in the opposite direction, and I take your gentle, but serious prodding, of the government to heart. I think that's a very appropriate way to summarize it right when we need strong leadership and strong action rooted in science. Our province's representatives, unfortunately, have jumped on the anti-climate bandwagon, and I really thank you for coming down tonight and encouraging them to reconsider that approach.

\* (20:40)

One of the things I would ask you to expand upon, if you don't mind, is say a bit more about the IPCC report, because it is a softer version of what the scientists originally come up with. They are all government appointed, so it's not that the IPCC report is inaccurate after that process happens, but it is changed. So I sense you may have some more info that the committee should probably hear, because just meeting the IPCC report, that might not do it either.

**Ms. Szach:** I mean, truthfully, I haven't had the opportunity to read the 700-plus-page document right now, but yes, my understanding is that the

conclusion is that even the 1.5°C that we have committed to is perilously close to disaster. And appendix B that I've attached to my presentation—I think it's the second-last page—sort of has some brief bullet points about what we could see if it's 1.5 or more, and it's pretty disastrous.

So I think probably the biggest takeaway from the IPCC report is that the commitments, the targets that we have made thus far, are likely to be inadequate. And the time frame that we thought we had is much shorter.

Thank you.

**Mr. Gerrard:** Thank you. Your comments are inspiring.

You say that we need a plan which legislates strict total annual emissions monitoring, accounting and reductions. Maybe you'd just speak to why that's so important.

**Ms. Szach:** Again, I'm going to probably leave the specifics of the science and the math and the economics to those who are professionals and experts in those areas, but I think the—one of the problems with the legislation is the approach to emissions counting, and it needs to be total annual as opposed to looking at five-year periods.

Doing an annual accounting and targets and reductions is in line with what is required and what the international community is doing.

**Mr. Kinew:** Thank you for your presentation. It is certainly very sobering the way you frame the emotional and personal impact of climate change, and it's also cogently argued. So a good piece of logic in laying out the forceful case that you make tonight, so I want to thank you for that.

You have called on the federal government—or the provincial government to take greater action, put a price on pollution. We've talked about putting the science first. I accept all that. Realistically, though, the government's likely not going to reverse their position again. It's possible. It's not outside the realm of possibility, but realistically, the position they currently occupy is more tenable for Conservative politicians in Canada right now, so it seems unlikely that they're going to change.

You have come out to make your voice heard as part of the democratic process, but I'm wondering, what other actions can you, can we, can other Manitobans take, to try and get the government to do more or perhaps reconsider a second time?

**Madam Chairperson:** So, the time for questions and answers has expired, but I will allow a brief response to the question. Go ahead, Ms. Szach.

**Ms. Szach:** Certainly showing up to events like this, writing, doing all the traditional routes to government, to reach government.

But I also got my hair done today, and I was—ended up in a conversation with the stylist doing my hair about why I was coming here tonight. And that can be very uncomfortable when you sense that somebody is not on the same page as you. But I thought, you know what, this is an opportunity to have those kinds of conversations with my fellow Manitobans and not let the, sort of, emotion cloud, but just say this is my understanding of the issue, and this is why I feel we need to do something.

**Madam Chairperson:** Thank you very much for your presentation.

I will now call on James Battershill—or Battershill.

Mr. Battershill, do you have any written materials for distribution for the committee?

**Mr. James Battershill (Keystone Agricultural Producers):** I do.

**Madam Chairperson:** Please proceed with your presentation.

**Mr. Battershill:** Good evening. My name is James Battershill, and I'm the general manager of Keystone Agricultural Producers, commonly known as KAP. Our organization is the voice of Manitoba farmers on public policy issues. We work with government, industries and other stakeholders to ensure that primary agriculture in this province remains profitable, sustainable and globally competitive.

KAP is funded and directed by more than 5,000 farmer members, which include producers from across the province, along with 25 organizations that represent specific crops, livestock and specialty commodities.

KAP has a grassroots democratic structure. Members from 12 districts across rural Manitoba meet to discuss current issues in agriculture. They develop resolutions to address their concerns and take them to one of the three advisory council meetings held each year or to our annual meeting. Commodity group members may also put forward resolutions. At these meetings there are discussions and debates about the issues and proposed solutions.

When the majority of delegates support a resolution, it passes and becomes official KAP policy. It is then the responsibility of KAP's elected executive to take action on the issues.

I am very pleased to be able to present KAP's position on Bill 16, The Climate and Green Plan Implementation Act. KAP has worked extensively on the issue of climate change and has always aimed to be a leader on environmental issues.

Last year, 44 per cent of our policy resolutions were on environmental issues, including climate change, because KAP members are committed to doing their part to protect our air, water and land. This includes both mitigating and adapting to climate change.

We have partnered with the Province to administer the Environmental Farm Plan program, which is an initiative that helps farmers identify environmental risks and adopt best management practices on their farms.

As well, KAP has signed a memorandum of understanding with the province and Fertilizer Canada to promote the 4R Nutrient Stewardship initiative. This helps farmers place the right kind of fertilizer, at the right rate, at the right time and in the right place. The result is the protection of our waterways and a reduction in greenhouse gas emissions, while maximizing benefits to crops.

Further, KAP, with funding assistance from the Province and in partnership, also created the Manitoba Agricultural Climate Initiative to assess how climate change is likely to change production conditions in Manitoba, and to understand farm-Manitoba farmers' priorities for managing these changes.

So how much is climate change expected to impact agriculture and Manitoba farmers? There are both threats and opportunities. Models from the Prairie Climate Centre indicate that the number of frost-free days in Manitoba may increase up to 19 over the next 30 years. And while this presents farmers some opportunities to grow different crops and increase yields, it also presents challenges, including an increase in days hotter than plus 30° from the current 14 to more than 30-49 in the same period.

More heat makes well-timed rainfall even more important to farmers, and, unfortunately, we have been told that between 2050 to 2080, we're likely to see a significant change in spring weather, with

22 per cent more precipitation expected compared to today. More winter precipitation is also expected, increasing concerns over spring flooding.

Furthermore, it is expected that we will see a decrease in the overall rainfall during the summer and an increase in the fall, just like we saw this past year. It is going to be critical for farmers to find innovative ways to manage water, including the storage and irrigation, if we are to be resilient to the effects of climate change in this province.

At KAP, we have not only taken the time to assess the potential impact of climate change on Manitoba farms, but considerable effort has been made to assess the impact of climate change policy on our sector. There is concern that the policy tools being considered to encourage the reduction of greenhouse gas emissions, including carbon pricing, could make Manitoba farms uncompetitive with other jurisdictions and would be unlikely to result in a decrease in emissions from our sector.

KAP does recognize that action must be taken, but we must stress that it must be done carefully as to not force carbon and investment leakages out of this province into other jurisdictions don't-do not have a carbon price. Nor should it cripple the ag industry, which is a major driver of the economy and a creator of prosperity for all Manitobans.

Broadly, our policies on this issue are for government to exempt agricultural emissions from carbon-pricing systems to protect our competitiveness and to give special consideration for emissions-intensive, trade-exposed emitting sectors, including those manufacturing agricultural inputs and processing agricultural products.

We want to see investment in resources that support farmers in their efforts to reduce greenhouse gas emissions, as well as investments in resources to support their efforts to adapt to the impact of climate change and the-that it may have on production conditions in Manitoba.

We do understand that the government's original Climate and Green Plan, which was to be enabled by Bill 16, has been changed somewhat, as speakers have mentioned, and that while the Province does not intend to implement a carbon tax in Manitoba, that many of the other outstanding elements do remain.

\* (20:50)

The comments that we'll make today will really be focused in on a number of issues that we would

like to see some amendments to, or feel that there is some priority for and would like this committee to give consideration to.

In schedule A of the bill, we are supportive of section 2(1) that requires the government to "develop a plan with a comprehensive framework of programs, policies and measures." We do, however, ask for an amendment to this section to match the purpose of the Climate and Green Fund, outlined in section 12(2). The difference is minor; it's just that 12(2) specifically refers to "measures to adapt to climate change." And these may just be six words, but given the magnitude of the impact that climate change will have on the ag sector, it is our position that the government programs, policies and measures must explicitly address adaptation and that there is never confusion in the future that it needs to be considered distinctly.

For example, there are lots of initiatives under way to build our adaptive capacity as a province. A number of farm groups, including the Manitoba Canola Growers Association, the Manitoba Wheat and Barley Growers Association and the Manitoba Pulse & Soybean Growers Association have submitted a research application to 'agag'—Ag Action Manitoba program to address the challenges farmers face with extreme moisture. KAP is strongly supportive of this project, as it will bring together specialists from a wide range of disciplines, including engineering, agronomy and genetics, to solve the problem that is likely to get worse in the future.

There are hundreds of adaptation projects such as this happening in the province, and the government must support them and stay engaged in their activities.

Looking to section 3, the carbon price being set at \$25 per ton. We do understand that the provincial government no longer intends to proceed with this based on comments by the Premier (Mr. Pallister) but—and that the federal government has recently announced how it intends to implement its backstop carbon pricing program starting in 2019. We do have concerns that the federal backstop does not grant the same ag exemptions from the carbon tax as the provincial plan did, specifically with respect to space heating fuel use for barns and grain drying equipment. We've seen from this fall just how important having cost-effective tools to address cold and wet production conditions are, and it is our plan to continue to work with both levels of government

to protect our industry's competitiveness and to help us build resiliency to climate change, regardless of the pricing mechanism implemented by either level of government.

Moving to section 5(1), Carbon savings accounts. It's important to recognize the vital role that ag will play in successively achieving the emission reduction goals the province has set. We can identify a number of initiatives and opportunities for the agriculture sector to contribute to greenhouse gas emission reductions, such as increasing the biodiesel mandate from 2 per cent to 5 per cent, improving fertilizer management and the promotion of the adoption of practices that encourage biological nitrogen fixation. These 'incuse'—include the use of legumes and intercropping. Beef production, through enhanced grazing management and the use of feed additives, it—is another opportunity. However, these initiatives will require support from the government in terms of research funding and education.

Referring now to section 8, the Expert advisory council. KAP is very supportive of the establishment of an independent advisory council. However, we know that consultation is key to the development of effective programming and policies, and we want to ensure that the council has a budget to perform adequate research and public consultation to fulfill its mandate.

In section 12, the climate and green fund, KAP supports the establishment of such a fund to achieve the activities listed in 12(2). Specific to agriculture, again, it is critical to have appropriate incentives to offset the costs of farmers reducing greenhouse gas emissions and delivering other ecological goods and services, along with support for building the industry's adaptive capacity to climate change.

Moving now to schedule B, The Industrial Greenhouse Gas Emissions Control and Reporting Act. Again, based on recent comments, we assume that this portion of the bill may be withdrawn, but is still under consideration by the federal government. We recently made a submission to the Province on the design of an output-based pricing system, and we will make our position with that respect known to the federal government as well.

This is a very important tool to helping producers engage in greenhouse gas emissions reductions, specifically because we believe that the emissions trading system that an output-based pricing system is expected to establish will provide some of that incentive that farmers need to take steps

to reduce emissions and help the province achieve its emission reduction targets.

Thank you.

**Madam Chairperson:** Thank you for your presentation.

Do members of the committee have questions for the presenter?

**Ms. Squires:** Thank you very much for coming down here this evening and for the work that you've done. I've gotten to know you quite well over the last year, working with you on a variety of initiatives. And just—you know, our government recognizes that the folks that you represent, our agriculture producers, have been good stewards of the land, by and large, for the last century, and really pleased that we have a strong partnership to continue working together with producers. And I couldn't agree more with you in your concluding remarks that we certainly need to work together, and I can say that about all Manitobans, that we all need to work together to achieve our goals of reducing our carbon footprint.

So thank you again for coming down here tonight and for the work that you've done on helping us work together on climate mitigation.

**Mr. Battershill:** Thank you.

**Mr. Gerrard:** Thank you for your presentation. Certainly aware that you've produced your own climate change plan in terms of agriculture, which, I thought, was very well put together.

I think, from your presentation, what I'm understanding is that you would prefer to have Manitoba government impose a carbon tax so that there could be better adaptation to agriculture and so that there would be better made-in-Manitoba plan. I want to specifically ask about nitrous oxide, which is 15 per cent of the total and because there are now excellent research showing that you can—it's very feasible to reduce that nitrous oxide production by about two thirds with farming changes, putting the fertilizer deeper into the soil, using, say, urea, encapsulated urea, which is slow release, as opposed to anhydrous ammonia and so on, and that I know farmers who are using that are finding that they're actually applying much less nitrogen and getting just as strong effect.

Would you comment on that because two thirds reduction in nitrous oxide would be a 10 per cent

reduction in the total greenhouse gas produced by Manitoba.

**Mr. Battershill:** Thank you for the question. Absolutely, nitrous oxide emission reductions is going to be a key component of any plan that achieves the goals that the Province is setting forward for emission reductions. The 4R Nutrient Stewardship program that I mentioned in my report is exactly that; it is the tools in the framework to help support farmers to take those steps to reduce their emissions reductions. I also mentioned the establishment of an offset marketplace. We know from experiences with producers in Alberta and the establishment of the Nitrous Oxide Emission Reduction Protocol, or NERP, that with small incentives through—that are paid for through an offset market, that farmers will make some of the changes necessary to reduce their emissions.

The key lesson that I think this committee should hear is that the way that that offset market and those incentives are structured really are critical to achieving success. We saw in Alberta claims of enormous returns back to farmers when their offset market was initially established more than a decade ago now. And the farm gate return was nowhere near what the expectation was. So uptake in participation was less. So—and that's why we talk about how critical it is to carefully design these policies and programs and understand all of the consequences and incentives that they provide because we won't see the reductions that we're looking for without them.

**Hon. Steven Fletcher (Assiniboia):** Two quick questions: In the bill, you went through clause by clause, which—on some very specific wording. The—by removing the carbon tax, there's no revenue to pay for the other items in the bill, which may be worthwhile, but then there's no revenue, and, of course, collectively, that means either debt or a higher taxes, which affect the economy and farmers and so on. And I'm wonder if you have a suggestion about that revenue shortfall which exists, even if and when the government has—takes out that provision, there's still an additional 30 hundred and—30-odd-million dollars plus whatever they don't get from the federal government transfers.

\* (21:00)

And, secondly, more academic, every year, there's a harvest. Every oil seed is a carbon sink, and we do this year after year.

Has there been research into the effect of how much agriculture takes out of the whole Gaia-type system, because unlike peat bogs and boreal forest, which tend to stay, we plant and harvest and store what seems to be a carbon sink every season at a huge volume?

**Madam Chairperson:** Mr. Battershill, the time for questions and answers has expired, but I will allow a brief answer.

**Mr. Battershill:** Thank you. I'll cherry-pick which of your questions I reply to and go with the easier one. Absolutely agriculture is an enormous carbon sink in this province. It's one of the reasons why we argue for certain exemptions for the industry, which some people question.

The emissions profile of this province that Environment and Climate Change Canada typically points to is the gross emissions coming out of the agriculture sector and the other industries in this province. It's very difficult to point in a single year and articulate just how much additional soil carbon has been attributed to a particular cropping practice on a particular farm in a particular field.

We do much better when we look at the aggregate impact of various changes in production systems across the province, but I think that it is critical that we continue to recognize the fact that agriculture is one of really only two industries—us and forestry, that is that positive contributor.

The diesel that gets burned to run a combine and to run a tractor, to pull a seeder is vastly different from that that fuels a Jet Ski cruising across the lake. There is a positive environmental impact that's derived from that, so I'm quite confident that we'll be able to be a significant contributor to the solutions for climate change in a very cost-effective way.

**Madam Chairperson:** Thank you for your presentation.

Before I move on to the next name on the list, there's come a request for the No. 33 on the list. Jasmine Halick has requested that she be able to present because she has a class tomorrow night and is unable to attend tomorrow night.

Is it the will of the committee to allow Ms. Halick to present at this time? *[Agreed]*

I will now call on Jasmine Halick, private citizen.

Ms. Halick, do you have written materials for distribution to the committee?

**Ms. Jasmine Halick (Private Citizen):** Yes.

**Madam Chairperson:** Please proceed with your presentation.

**Ms. Halick:** Okay. Hi, I'm Jasmine. I'm 23 and a second-year student at the University of Manitoba studying environmental science. I'm here tonight to hopefully enlighten you and to help you gain scientific knowledge of the world around us.

Over time, people are learning to get the things they want done without relying on governments. The separation between leftist and rightist political views is growing every day. In North America and around the world, organizations that fuel our existence are saturated with climate change deniers.

For thousands of years, human beings have been taking too much from the environment, to a point of inevitable degradation in which people of my generation are not able to feed themselves, struggle to provide themselves with clean drinking water, and fear for the severity of natural disasters.

We want change. We're disgusted with the fact that for generations our ancestors have not taken sustainability into consideration and limited our needs to make it harder for us to be happy and healthy to live, all for the sake of their own individual gain.

Canadians have one of the most substantial ecological footprints worldwide. If all 7.5 billion people on earth lived the way Canadians did, we would require the resources from roughly seven–3.9 earths to support our lifestyles.

Our—other countries see Canada as a global leader in environmental precaution and well-being, but living here, growing up here, I don't understand what they're seeing. As a nation we've continued to fall short on agreements such as the Kyoto Protocol, the Earth Summit in Rio de Janeiro, the Berlin Mandate and our very own Montreal Protocol.

When are we finally going to step up and do what we should have done decades ago?

Bill 16 proposes far too lenient of a price on pollution, and I much prefer the federal plan, which increases tax over time and spreads wealth among social classes. Why are carbon emissions and other greenhouse gases such taboo topics among governments? It is an economically efficient option.

Corporate giants see a carbon tax as just another cost of doing business, but put that price too high, and they'll threaten the jobs of citizens. However, with the revenue pollution can bring, jobs can be created, jobs for people like me, environmentalists, conservationists, ecologists, who strive to better our environment to fix the chaos that our predecessors have created for us.

Everyone should pay because everyone emits carbon. For example, it's been over 10 years since the province of British Columbia has implemented a carbon tax. It has since proven effective, with refined petroleum product use far below national levels.

In the 2017 publication of a Made-in-Manitoba Climate and Green Plan, it states Manitoba will be Canada's cleanest, greenest and most climate-resilient province. I'd like to know how Premier Brian Pallister is hoping to achieve this now that he's turned his back on this quintessential environmental movement.

My issue with Bill 16 is that this is not a green plan. This is just a legislation to impose a new tax. Don't get me wrong; I support a carbon tax, but what about methane, nitrous oxide, sulphur hexafluoride, other emitting gases contributing to climate change? Carbon isn't the only greenhouse gas, and it's not the only thing contributing to change.

I understand there are different laws in place meant to protect wildlife and habitat, water resources, et cetera, but they're not good enough. Neither is this bill. We need to do more. The state of our environment is deteriorating rapidly and is nearly at the point of irreversible effect. We need to act now before there's nothing left to save. I'm asking you to have a sense of urgency in matters such as this.

The effects of climate change directly affect our province. Ecotourism showcases perceived natural spaces to be enjoyed by visitors but also protected by governmental organizations. Manitoba is known for our ecotourism industry. The polar bears and beluga whales in Churchill are visited often by people from around the globe. According to the annual Parks Canada attendance report for the 2017-2018 fiscal year, Wapusk National Park saw a 53 per cent increase in tourism.

With climate change, we're seeing the clear destruction of habitat, which is met with the demise of creatures people know and love. Without the perennial arctic ice, permafrost and tundra, animals living in the northern portion of our province will

starve. Even people, citizen of Manitoba who rely on subsistence hunting to feed themselves and their families, will starve.

Better environmental laws need to be put in place to prevent these things from happening. A real green plan would offer savings to consumers, incentive to live an eco-friendly life. Manitoba Hydro already has rebates in place for things like solar panels; insulation and HRV, or a heat-recovery ventilator system; and a water and energy savings program. They need to be improved. People need more incentive. For example, there are still plenty of people who just don't recycle, even though every single-family home in the city of Winnipeg is given a blue bin.

If our province had a—had bottle depots like other places in Canada to incentivize waste reduction, more people would recycle. You're buying into a higher bottle deposit, but you get a portion of that money back if you dispose of the material properly, much like the federal carbon plan.

Why hasn't our provincial government introduced an electric vehicle rebate? With the rising costs of fuel and a relatively inexpensive electricity cost, which are actually the second lowest in the country, Manitoba should be a national leader in the promotion of electric vehicles.

\* (21:10)

We're not an oil province like Alberta, so why are we shunning such a revolutionary technology?

Likely, it's because the majority of government officials aren't scientists. And of that group of non-scientists exists an astonishingly large group of people that don't understand what's good for them. We call these people non-believers, climate-change deniers, people against a price on pollution and, of course, a few terms I won't list that criticize their intelligence and moral values.

Our addiction to fossil fuels needs to end. When a human gains an unfortunate dependence on drugs, alcohol or gambling, they're told to cut off supply. But with oil consumption, when humans are addicted, we increase the supply, opening new territories to oil exploration such as the Arctic. These large exploration vessels fragment perennial Arctic ice, which increases the rate ice will melt.

In Canada, we produce what is often called the dirtiest oil, and only recently has been considered a true oil reserve on a global scale. I'm talking about

the tar sands. The environmental cost associated with extracting usable oil from the tar-like substance is incredibly destructive. Visible effects are seen in water bodies across northern Alberta, where fish have been found with visible tumours, bulging eyes and discoloured scales.

Waste water from the tar-sands operations runs into the Lake Winnipeg watershed, and I've provided a map. Lake Winnipeg, according to the Province of Manitoba's website, is home to more than 23,000 permanent residents in 30 communities along the shores. Seven provincial parks are also located around the lake.

Over time, water flows from Lake Winnipeg into Hudson Bay, and then into the Arctic and Antarctic—and Atlantic, sorry, oceans. Isn't keeping our lake healthy enough incentive to use less oil?

The answer is an obvious no. Our lakes are polluted by much more. Winnipeg's sewage overflow is directed into the Red and Assiniboine rivers, on average, 22 times per year, citing the City of Winnipeg's website.

Fertilizers from agricultural fields and residential gardens and lawns run off into water that flows into the lake. The fertilizers contribute to excess phosphorus levels. It's estimated that 7,900 tons of phosphorus enter the lake each year.

Neurotoxic blooms of cyanobacteria—common name: blue-green algae—are a result. This particular species of algae is linked to diseases, including ALS, Alzheimer's, and has been the cause of many deaths of dogs. These blooms can be seen from space.

The economic value of Lake Winnipeg has been compromised by these human activities. Algae are the cause of mass fish kill, decreasing biodiversity of our native species. The fish literally suffocate while the algae consume all available oxygen. This puts our largest provincial fishery at risk. From 2002 until 2012, on average, 1,057 fishers per year depended on the lake for income—

**Madam Chairperson:** Ms. Halick, the time for your presentation has now ended.

We are going to move on to questions.

**Hon. Blaine Pedersen (Minister of Growth, Enterprise and Trade):** Thank you, Ms. Halick, for your presentation, lots of information in there. We look forward to you finishing your studies and getting out in the workforce and applying those studies here in Manitoba.

Thank you.

**Ms. Halick:** Thank you.

**Mr. Gerrard:** Yes, thank you, and it's inspiring to have you here talking about—you know, with your background in environmental sciences.

One of the things that you talk about is the fact that we're ignoring the electric vehicles. What do you think we should be doing to enhance the use of electric vehicles? *[interjection]*

**Madam Chairperson:** Ms. Halick.

**Ms. Halick:** Sorry—one of the earlier speakers mentioned placing more charging stations around the city, around the province. That would be ideal. Right now, Polo Park and The Forks are pretty much the only public spaces that have those options available.

I've recently taken a trip through western Canada, and they have charging stations at hotels on the side of the Trans-Canada Highway, at gas stations, at tourism sites like aquariums, zoos, things like that. If we provided the public with more of these charging stations, incentive for people to purchase these vehicles—and the costs of these vehicles is getting much more reasonable compared to what they used to be when they were first released. So—yes.

**Mr. Altemeyer:** Ms. Halick, thanks very much for coming down here.

One of the—one of many things that struck me about your presentation—you are, I think, perhaps the youngest person to present here tonight. And you're going to be living with the impacts of decisions and non-decisions that are made in places like this. And we hardly ever have young people come down to the Leg. to do that. I know this place can look intimidating and out of touch—and it is both, I can assure you—but you've managed to get through those barriers and brought a very important message to the committee. And I really want to thank you for that.

The piece I want to pick up on—and I actually want to thank the minister for raising it in his comments—is that, in an ideal world, if we are going to become a sustainable place to live, we're going to have to change a whole bunch of things, and we're going to need this next generation to have the opportunity to work in green jobs to help society transition to that sustainable future.

What type of work do you want to do when you're done your degree, and does that job exist now? I mean, we have a local government here which just decided it's not going to use any carbon tax revenue to create new jobs. So what message does that send you, and what would you like to be able to do?

**Ms. Halick:** Well, my dream job: working for an organization like Parks Canada.

My focus area is the stream of biodiversity, which I think is one of the most threatened aspects resulting from climate change. I think it would be amazing if, you know, the Province of Manitoba opened up more jobs for conservationists, more ecologists to study the land, to study the animals, to study migration patterns, to protect biodiversity, to maintain populations of animals that exist in our province, to keep them around for people to enjoy, for communities to hunt or fish, whether for subsistence or recreationally—like pickerel in Lake Winnipeg—because things like that won't be around much longer if we continue doing what we're doing now.

**Madam Chairperson:** Seeing no further—oh.

**Mr. Rick Wowchuk (Swan River):** Ms. Halick, I just want to commend you. As an educator for 35 years, and in the environmental studies and—it was just like back in the classroom, to see the passion. And the things that you shared here was really gratifying. And I really commend you, and you've got a great future ahead of you.

**Madam Chairperson:** Okay. Ms. Halick, thank you very much for your presentation.

I will now call upon Jarvis Brownlie.

Mr. Brownlie, do you have written materials for distribution to the committee?

**Mr. Jarvis Brownlie (Private Citizen):** I do not.

**Madam Chairperson:** Please proceed with your presentation.

**Mr. Brownlie:** I'm just going to put on a timer here.

Okay. Well, I'd like to thank you all for spending your evening here listening to citizens. I'd—I'm sure you have many other things you could be doing, and I do appreciate it. It's my favourite thing about Manitoba, my adopted province, that you have these committee hearings on bills. So I appreciate it.

I did not have time to prepare properly, and I wish I had—I'd had time to produce a polished presentation, maybe something with more information. Well, the truth is you have more access to information than I do, and much better ability to process it and integrate it. And that's part of your job, to keep up on current developments and take action as a government to deal with the threats and dangers that we face as a society and, above all, to ensure that the planet we pass on to coming generations is livable, vibrant, biodiverse and as beautiful as the one we inherited. And it was moving to me to hear some of the young people speaking here tonight. I think often of what we're passing on to them, and I don't feel good about it.

\* (21:20)

So, as I say, I wish I'd had time to prepare properly, be eloquent and organized and say all the important things, but I'm an academic, and I should be at home right now marking papers. And I really see this as one of the imbalances in our political 'structures' that—structures that most people aren't in a position to spend a lot of time interacting with members of government and sharing our views. And I'm pretty sure that you hear more from business people who have an economic stake in your decisions than you hear from anyone else. And there's nothing wrong with them sharing their views with you, but I wonder if you hear disproportionately from people who want to continue with the status quo, who want to continue virtually limitless resource extraction, and I wonder if you hear enough from the people, the many, many people, who want to change our economy to be sustainable and to stop destroying our planet.

So please remember as I speak that I don't have any friends who are coming to present to this committee. They don't have time either. But I also have almost no friends who are not seriously concerned about climate change. Everyone I know wants to see vigorous action from government. So I guess they're here in spirit.

I was actually relieved when I read the material about Bill 16, the little I had time to do, not because I'm particularly happy with its contents, but mainly because its naming and its optics were clearly about trying to appear to be doing about—something about climate change, and that indicated to me that the government understands how much the public wants something done about climate change. And honestly, I wasn't really sure if the government did see it that

way, so that's good. But I'm basically here to say you have to do so much more.

You know, I was really disappointed about the carbon tax, and I didn't have time to figure out all the ins and outs of carbon taxes. I started to look it up, and there were different views on it. And people here have talked about, you know, the different versions. But replacing it with nothing, that's not hopeful. I didn't really like the plan to use a carbon tax to cut other taxes, especially when the benefits fall more to the rich. I didn't think that was the best way to approach the problem, but I want something in place. We need to be making polluters stop polluting. We need to be doing very active things to reduce the greenhouse gases and all the other pollution that we're producing.

We need vigorous, immediate measures to reduce greenhouse gas emissions in Manitoba, and everyone knows that's not going to happen without significant government intervention. We need governments to make polluting and emitting greenhouse gases much more expensive, especially for those who can afford to pay. And I agree with the comment that we have to take into account low-income people in approaching these measures.

We need governments to make it much more affordable to switch to renewable energies, especially solar power, but also others such as wind, to the extent that they're viable. We don't need a single energy source that does everything; we just need some combination that provides the energy we need without destroying the planet at the same time.

And it's all possible. I see it all in our grasp. You know, the prices of these energies have come down. People have presented information on that tonight. It's in reach, but just out of reach for many people because of affordability.

I'd like to add a note about hydro power. Everyone here has mentioned Manitoba Hydro as, you know, a great thing and a source of clean energy. I dissent from that. It's not green. I'm a historian. I work directly with people from indigenous communities in northern Manitoba who are affected by the operations of Manitoba Hydro. They're suffering. Their economies have been destroyed; their lands and waters have been made unsafe; they're dying from their boats running into debris on their lakes; they're watching animals around them being killed by the raising and lowering of water levels, especially South Indian Lake, but other places as well. It's not really green energy. It doesn't produce

as much greenhouse gas as coal-burning plants, but we need to be moving to other measures too: solar power, wind power, geothermal.

And also, I didn't like Premier Pallister implying that Manitoba Hydro is a reason for us not to do more. I agree with others it's an asset and we can use it in important ways, but it's not a reason not to do more.

So renewable energy's on the verge of being affordable, but it isn't quite there yet. And government action can significantly alter that equation. Now, what I understand is that some of these programs have actually been withdrawn, programs to support switching to solar power. Instead, we need to go in the opposite direction. We need to increase those measures as others have noted.

Second, I believe big polluters aren't in a position to decrease their emissions unless they are forced to. One company with a visionary leader who wants to cut emissions can't usually do so alone or their competition will just continue destroying the planet, undercut them, and put them out of business, so they need to be forced by government and they all need to be forced. And I think a lot of them would actually welcome such measures.

You know, my sense is that there are lots of business leaders who are trying to make changes environmentally, and they need your support to do that.

I lie awake at night over what's happening to our planet and I want to see government move. I want to see so much more done. You know, I decided not to have children in part because I could see years ago that our governments were failing. They failed for years. It doesn't matter what party's in power; they've all failed to take the measures we needed, and that's why we're in so much trouble now.

And I do ask you all, what are you going to tell your children? What are you going to tell your grandchildren when they ask you what you did?

So, I began by saying it's your job to ensure the planet we pass on to coming generations is livable and vibrant and as beautiful as the one we inherited. It doesn't seem that likely that we're going to be able to do that, but we need to move as much as we can to mitigate the effects that are already happening and to prevent it from getting worse. And there's so much that can be done.

The government has the greatest power to change our economy. We all need to do things, but the government is the body that has the greatest power to change our economy, to change our fossil fuel use, to change our use of resources, to preserve areas, to set areas aside. You can do all these things. You can pass laws. You can set incentives. You can set targets and timelines, which you haven't done yet. You can use tax policy, and you have many other tools.

I'm here to ask you to use them all to the fullest and not to hold back and not to hesitate and not to let anything get in your way, not partisan politics, not fear of voter backlash. Use your tools to educate people, please. Let's stop this bus from driving off the cliff.

That's all I have to say.

**Madam Chairperson:** Thank you for your presentation.

Do members of the committee have questions for the presenter?

**Ms. Squires:** Thank you very much for your very passionate presentation and your pleas, and I agree with you in that not everybody has an opportunity to come down here to committee and to present due to time constraints in their own life, and I do recognize that you're here but behind you are thousands of others who are represented by the views you have just shared with us, and so I take that very seriously, and your comments very seriously, and thank you for sharing that with us and for being here tonight.

**Mr. Brownlie:** Thank you. I appreciate that.

**Mr. Gerrard:** Thank you for your presentation and your eloquence.

You spoke about the need for improved monitoring and reporting and timelines and targets. We heard an earlier presenter talk about the need for a minimum annual instead of five-year targets timelines in reporting. I'll give you a chance to comment on that.

**Mr. Brownlie:** Yes. You know, I'm an academic. I live on deadlines and we're all busy. It's just human nature. You have to have targets; you have to have deadlines; you have to have someone watching even with the best will in the world, you know, and I think there are a lot of people who want to make change, but you have to have someone watching; you have to have targets; you have to make a plan and make people stick to it.

\*(21:30)

**Mr. Altemeyer:** Thank you very much, Jarvis, for coming down again. You were one of many here last time hoping for a chance to present. I think we've all benefited greatly from what you've shared with us tonight. I, in particular, applaud your comments on Hydro. It is an asset but an asset that has come at an enormous cost to people and that needs to be—we need to continue to acknowledge that as we move forward to create better relationships, to repair broken relationships, broken communities, and yet also try our best to make best use of the advantage that a carbon-free source of electricity does give us.

I also have got to think your students are benefiting greatly from your lessons on these issues. Can you give us a sense of where they are at when these types of topics come up? It is grim. I remain hopeful. I'm inspired by the passion and the knowledge and the ideas that people have brought forward. The students—when you think of the students that you have in your class, how are they viewing their future given what is becoming so readily apparent is coming if we don't smarten up?

**Mr. Brownlie:** Well, there's a range. Some of them just have their heads in their books, but the ones who have things to say are feeling pretty ripped off and they're fighting a sense of despair. They're worrying about their kids and they're worrying about their own futures.

**Mr. Len Isleifson (Brandon East):** Thank you for your presentation. I love sitting and listening. We've heard a lot of passion tonight. I was fortunate in my past to chair the Brandon Environment Committee, and we had lots of passion around the table and lots going on.

You opened up your comments by saying, thank you for allowing me to speak here tonight, I know you have other things that you could be doing. But I just want to reiterate, I think all of us around the table that, whether we have other things to do, there's nothing more important than listening to Manitobans. So I want to thank you for coming out tonight. I know you have papers to mark.

So my question more for you is: As in a lot of ideas, when we reach out to Manitobans, we hear a lot of ideas. And you presented us with a bunch, and I appreciate that. I want to ask you, though, out of that list, what would be your No. 1 priority that you think us as legislatures around this table should consider first?

**Mr. Brownlie:** Number 1 priority: It's tough, isn't it? And that's exactly what you had to do in your jobs. I know you have a lot to weigh.

But it does seem that the greenhouse gas emissions are the most urgent thing, you know, in terms of climate change. We have a lot of environmental challenges, as I'm—I know you're very well aware. But the one that seems most urgent in terms of protecting the planet and all the other life on it—not just the humans—all the other species, and protecting coming generations, is to get the greenhouse gases under control so that the planet remains livable so that the—I mean we're stuck with climate change, clearly. We're probably stuck with climate disaster if not catastrophe, but if we can switch off the fossil fuels really quickly, it's clear we can mitigate it.

**Madam Chairperson:** The time for questions has now ended.

Thank you very much for your presentation.

I will now call on James Beddome, Leader of the Green Party of Manitoba.

Mr. Beddome, do you have any written materials for distribution to the committee?

**Mr. James Beddome (Green Party of Manitoba):** No, I do not, Madam Chair.

**Madam Chairperson:** Please proceed with your presentation.

**Mr. Beddome:** I want to begin by acknowledging that we're on Treaty 1 territory in the homeland of the Metis nation. I also want to acknowledge that Manitoba is on the lands of the Cree, the Anishinabe, the Dene, the Oji-Cree, the Nakota and the Dakota. It's important to start with that.

I also want to follow up on the comments of the honourable member from Brandon. I'm sorry—Brandon East or West. But he commented on how important this process is, of having public citizens come here to speak, and I completely agree. As a politician outside of the Legislature, I've availed myself of the opportunity many times. But I also think it's a very unique and important process.

And to that, I want to highlight some points of process, and that's that I would suggest—I came here a week and a half ago, wasn't able to speak, as many other presenters. I would suggest to this committee that they look at their practices and improve them. Give the public at least two weeks notice of all bills

before they come forward, provide for more time. Try to do better scheduling, both with stuff inside the Legislature and civic elections like tonight, maybe Jets games too, but that one could be hard.

I also want to highlight what the process—that there's a real issue—there's a lot of Jets games, let's be honest. But I also want to highlight with the process that it's difficult for me to speak on this bill tonight because although this bill was originally enacted last spring and the opposition, much to my dismay, decided to delay this bill, creating a terrible opportunity for a political flip-flop that we've seen on this government in terms of the reversal of its decision to impose a price on pollution. And that creates some real changes because this bill is six sections, all in number of schedules, schedules A through E, and it's not clear what amendments are going to be made to each six sections. So it's not even clear what I'm speaking to tonight. And for that, I would suggest that this should bill be withdrawn and reintroduced.

Now, the point, though, that I think we have to highlight is we're reaching a crisis point. For 10 years, I've been the leader of the Green Party of Manitoba, and I've been equally critical on both sides of the table of inaction. And I haven't seen that action. And we're at the eleventh hour. And I had the benefit of listening—I don't know how many others—listening to my colleague, federal leader Elizabeth May, speak in Parliament. And she highlighted the crisis that we're in. And she drew the comparison to the Dunkirk evacuation.

At a moment at the—in World War II, there were 300,000 men on the beach, and people were saying, no, we can't do it; we're not going to do anything. But, no, Winston Churchill showed political will, and he said, no, we're going to get every civilian boat we have and we're going to go rescue those people off the beaches. Well, right now, it's our planet that's in peril. Are we going to let humankind, our entire species, all the species on this planet, peril, or are we going to take action? That is fundamentally what is at issue here today.

So it's really disappointing. We have calls from the United Nations Intergovernmental Panel on Climate Change, as others have mentioned. And we need vast reductions in greenhouse gas emissions, reductions that are not even contemplated in the government's current plan, notwithstanding its changes with respect to the carbon tax. So we need much, much vaster reductions.

So I wanted to highlight sort of a top 10 list, you might call it, of some of the initiatives that I think we could do because I want to see this government take action.

One of the things to highlight on the bill that could be changed is, I would note, there is a penalty in your balanced budget legislation for this government not meeting its balanced budget targets. Why is there no consequence in this bill for the failure of this government to meet its emissions reductions targets? I was equally critical of the climate emissions reductions act that the previous government brought in for not having any consequences. This is far more important than balancing our budget. If we don't deal with this planetary crisis, if our hospitals are overrun, if our economy isn't working, it's not going to matter.

You probably guessed, a carbon tax: certainly one of my top 10 as well. I'd highlight a carbon tax because we need to put a price on pollution. The Greens would start at \$50 a ton. We'd apply it across all sectors, including ag and forestry and including industrial emitters. We'd increase it year after year to create incentive. But let's be frank, price alone is not going to entirely change peoples' behaviour. We can't entirely price it out on the price-demand elasticity because what we need to focus on is also creating substitutions that are possible for people.

So one of the lowest hanging fruits—and you've heard presenter after presenter tonight bring this up, so maybe I don't have to go into this much detail—but the conversion to electric vehicles. That's 40-plus per cent of our emissions in Manitoba, largely personal automobiles. This is a win-win opportunity for us to both have Hydro see more revenue; Manitoba residents will still be able to transport in much the same way. I, myself, have been looking at some EVs; they are getting quite affordable, but it needs that final push.

Give you some ways that you can do it. You could have a feebate program: High mileage vehicles, there's a surcharge. That surcharge then gets applied to electric vehicles or other low-emission vehicles. You could put in a mandate for dealerships that 4 per cent of all electric vehicles—for instance, if we did that by 2030, we'd be at 52 per cent of our fleet, and that's about a 6 per cent fleet conversion rate in Manitoba; that's why the 4 per cent—but 4 per cent of all vehicles should be sold at electric dealerships should be electric. The effect of that—takes some political will.

You'll get some 'backlax' from the car dealerships, I'm sure, but the effect of that would likely be to drive electric vehicle prices down and there would be a cross-subsidization on other vehicles. Yet another way could be to cut the PST on electric vehicles. There's many ways to do this. We've talked about \$4 million of charging stations. It's right there.

Another issue to look at: landfills. Some of our largest emitters are the Brady landfill, the Summit landfill, the Kilcona landfill. What do we need to do? Start flaring right away. That's not that much money, 40 to 60 per cent reductions right away. Beyond that, implement composting programs. Divert the organic waste from getting to the landfill in the first place. If we were to hit PEI's rate of organic waste making it to landfills, that would be about 356 kilotons of emissions per year.

\* (21:40)

I want to quickly highlight it's problematic that the government is using cumulative emissions. It's not that I don't understand that the math still adds up, but everyone else uses year-to-year emissions, so I think that there needs to be both those numbers presented in future plans for the ease of conversation.

One of the things we look about landfills—we look at Brady; it could be the district heat for the University of Manitoba. We've seen experts such as Nazim Cicek, university professor at University of Manitoba in engineering, put that forward. So, beyond that, though, that brings the next issue: the conversion off natural gas heat moving towards vacuum solar thermal, air source heat pumps, geothermal. All of that's going to rely on more electricity and less natural gas. And I'll acknowledge, in the green plan, that's acknowledged, but we have to be firm. We have to stop expanding natural gas right now on new buildings. We need to make sure that we're putting not natural gas heating systems, but renewable heating systems in place.

We could aim to reduce fertilizer application rates back to 1990 levels. If we could get to when I was seven years old watching Captain Planet, you know, going to bring pollution down to zero, that would be over a kiloton, 1.1 kilotons—or—sorry—megatons-per-year reduction. That's a massive reduction that we can do, and it needs to be done working with farmers. And we're going to need to work with them for green manure, legumes, perhaps even taking some marginal lands out of production, reforesting them.

So you take a look at that; that's also initiative where we need. But that's going to cost money. Then we can also look at restoring wetlands, preserving our boreals—we've heard people talk about that—improving our building codes. We've got to get people out of their cars and onto the buses. We think we should make transit fare free. Also, we should convert the buses to being electric. Active transportation—I rode my skateboard here, if you want me to be honest. I'm still young at heart. And the words of Weezer stick kind to my mind, which is: You take your car to work; I'll take my board. When you're out of fuel; I'll still afford. Have a little bit of fun here.

But, ultimately, I want to highlight to this government that we can do this, that those emissions, if we got half the fleet to Manitoba to electric vehicles, that's about three and a half megatons of reduction, about—almost—just shy of one megaton from landfills, 1.1 from fertilizer. This is actually very easy for us to do. So I get dismayed when I hear this government recycling the same excuses that I heard the previous government say and that other people have brought up.

We're a hydro province. Firstly, the last presenter, I think, correctly pointed out that although the greenhouse gas emissions from hydro may be less, there certainly are impacts to the generation of hydro. But, beyond that, just because we're a hydro province is not an excuse. Quebec is a hydro province, and it has reduced its emissions below 1990 levels. BC, also a hydro province, has brought in a carbon tax. Not only has that been good for its economy, they also have the lowest tax rates for people earning under \$100,000 a year in Canada.

I think—you know, what I hope that people realize is that a carbon tax isn't the end of our economy. In fact, it's the opposite. If we don't do this, if we don't take this drastic actions, we're not going to have economy. And the reality is, gas prices, we've seen them move more than 10, 12 cents a day from time to time here in Manitoba.

And I want to close about talking to a country that's had a carbon tax since 1997. I don't think it's been the end of that country, and I was actually lucky enough to visit in November of 2016. I thought it might improve my odds of becoming premier. It was Costa Rica.

Now, one of the amazing things about Costa Rica is that Costa Rica has had a carbon tax since 1997. They've used it to protect lands, to encourage

ecotourism, to create an economy. It obviously didn't dissuade our Premier (Mr. Pallister) from investing in Costa Rica and purchasing a property. I understand he's got a tenuous relationship with Costa Rica and taxes, but I'm pretty sure he still had to pay that—

**Madam Chairperson:** Mr. Beddome, your time for presentation has ended. We'll move on to questions and answers.

**Ms. Squires:** Well, thank you very much, Mr. Beddome for coming down here. And I regret that I was unable to catch Ms. May's presentation, but I'm certain that your passion and well-articulated and high-energy presentation here this evening would rival hers, and I appreciate the many points that you did provide in terms of suggestions on a path forward. And I greatly respect the voice that you bring to this table and for your presentation tonight and providing some really good suggestions for moving forward, so thank you very much for coming.

**Mr. Beddome:** Thank you very much, Madam Minister, and I'd highlight to you, I'd be more than happy to send you the 10-minute YouTube video for you to watch at your convenience, and I sincerely hope you take these initiatives to heart. I'd be more than happy to sit down and work with this government and put these in place, because these are very achievable initiatives that will make a real difference right now and will also drive our economy forward.

**Mr. Altemeyer:** I think, first thing I just want to say is, Mr. Beddome didn't get a chance to finish his presentation there. Do you have anything written? Because we can just accept a written submission, whether you managed to read it all or not. *[interjection]*

**Madam Chairperson:** Mr. Beddome.

**Mr. Beddome:** Sorry, my apologies. I even have a wait-for-Speaker note.

Thank you to the honourable member for Wolseley (Mr. Altemeyer). Unfortunately, no. I didn't present a written presentation today. I simply reviewed the act and I actually got to my last point, more or less, at the end, so I think I was sufficiently able to get out what I wanted to.

**Madam Chairperson:** Mr. Altemeyer, on a follow-up.

**Mr. Altemeyer:** Yes, and I think I'd be remiss if I didn't also observe that I think our previous presenter, Ms. Halick, didn't quite get through her entire presentation.

Is it the will of the committee we could retroactively just accept her whole written submission as part of our deliberations? Or did she have it all? Okay. I couldn't remember. Oh, yes, of course. Okay, good. Alright, never mind.

My question for Mr. Beddome is, taking—everything that you've brought tonight is very solid, and what would you be looking for, what would tell you that—because we struggle with this all the time as we try to raise this issue in question period, as we hold media events highlighting different opportunities, like you've identified, we haven't had buy-in yet from the government.

What signal do you need to see from this building that says that all the political parties have finally got it, and that, you know—what type of message would convince you that this is a place where change can actually happen and that it's going to happen?

**Mr. Beddome:** Thank you, once again, to the—Madam Chair and to the honourable member for Wolseley (Mr. Altemeyer).

Well, I mean, I've been equally critical and I didn't see the action in the previous government, to which the honourable member was a part of. It really comes down to commitment of funding. One of the initiatives I did forget, actually, now I think about it, is cutting any subsidies that we have to fossil fuel companies. So for instance, the vertical drilling tax credit: \$66 million a year.

And I think it often does come down to committing the funds. So, in our \$50-a-ton carbon-tax proposal, we'd put \$166 million towards a green infrastructure fund. We'd use about \$250 to reduce the lowest income-tax bracket. We'd also have a guaranteed income-supplement program. We'd use, then, the remaining \$50 million left over to reduce—to health and support a levy, also more commonly known as the payroll tax, so for industrial users, also giving them ways of doing it.

But what it comes down is having that money. So if we invest \$166 million a year, I could start to see real action. With the new Liberal plan—backstop plan that's been proposed, I'd still say it's inadequate. But I see \$190 million or \$38 million a year over five years. That was more than I ever saw from the

previous NDP government and more than I've seen from this Conservative government.

I guess part of the message I want to make is that we don't need to be afraid of a tax because it's right in the government's green plan: it's a way of recycling and creating the needed revenue. If we're willing to spend \$400 million on our roads and we're not willing to spend \$50 million on protecting our planet, something is wrong.

We've got to get our priorities right. If I saw maybe 10 or 15 per cent of the government's budget going towards combatting climate change, there wouldn't be a need for a Leader of the Green Party of Manitoba. But I haven't seen that yet.

**Mr. Gerrard:** Yes, thank you for your presentation.

Just a couple of things. One is, in terms of your plan for \$50 a ton, is that to be escalated, and how high and how fast?

And second, in this, there's a five-year reporting approach, and it's been argued earlier that this needs to be one year. It could actually even be quarterly, but what is your approach, in terms of reporting what's adequate monitoring and reporting timelines?

**Mr. Beddome:** Thank you, once again, to the honourable member for River Heights (Mr. Gerrard) for their questions.

I guess the first thing is, right now inside our policy committee, we are working on what exactly that increase would be, starting at \$50. We know it has to increase and it has to continuously increase. I'd note the government's own modelling programs highlight that we need at least a \$7-per-year increase just to hold emissions level. So I think that gives us a starting point where we'd probably need to be beyond that.

With respect to your reporting of the five year—it's not so much that I'm—I understand why they want to look at cumulative, but I think we also have to be looking at annuals, so that we're—so, I would like to see annual reporting and five-year reporting. I understand the need to do it cumulatively, but I think we also have to, sort of, be talking the same measures.

\* (21:50)

So right now the federal government is talking 30 per cent below 2005. I think that's woefully inadequate. They probably need to double that target, but those are the ways that we have been talking

about targets, and my worry isn't so much that they're looking at cumulative; I think there's value in that, but they also need to express it in per annum terms because that gives us the comparative terms for us to have a proper discussion.

**Madam Chairperson:** The time for questions has expired. Thank you very much for your presentation.

Before we move on to the next person on the list, we've received a request from No. 25 on the list, Kelvin Igwe, who has a midterm to write tomorrow and is unable to attend.

Is it the will of the committee to hear from Mr. Igwe at this time? *[Agreed]*

I will now call on Mr. Kelvin Igwe.

Mr. Igwe, do you have any written materials for distribution?

**Mr. Kelvin Igwe (Private Citizen):** No, I don't.

**Madam Chairperson:** Please proceed with your presentation.

**Mr. Igwe:** Madam Chairperson, committee members, media and fellow presenters, my name is Igwe Kelvin, a student of environmental studies at the University of Manitoba.

First, I must commend this Legislature for taking a decisive step towards climate change mitigation. As you know, this is a serious issue globally today, considering the high rates of carbon emissions, which, of course, is not in line with sustainable development.

The world is talking about SDGs today. The UN is taking serious consideration about this, and I must commend you guys for standing up to be counted.

I have some commendations and also recommendations to make to this committee. I read about the expert of advisory council. The bio simply said the minister may appoint such persons as the minister considers appropriate to an independent expert advisory council.

I think there should be a clause in the sense that a person or persons to be appointed must be certified in that specific field, because we have seen, in some provinces or countries, where those appointed into these advisory boards are actually politicians that end up making politically correct decisions to satisfy some interest.

I am saying this because I am actually from Africa–Nigeria, to be precise—and I understand the

high-level politics and compromise that goes into these decisions. They actually make decisions. They come in the guise of being an expert, actually working for big corporations, because my country is—Nigeria is actually very rich in oil, so these companies compromises people without, so I think this committee should make sure those coming in are people that are known to be—to have integrity to make decisions in the best interests of everybody.

Also, for the schedule B, The Industrial Greenhouse Gas Emissions Control and Reporting Act, it talks about the output-based pricing scheme to reduce greenhouse gas emissions from industrial operations in Manitoba. It stipulates that participants receive credits if they emit less than the emissions limits set by regulation, that those who emit more than the limit must remit credits or pay a \$25-per-ton levy on the excess emissions.

I think these industries who prefer to remit more greenhouse gases to increase their production, which, of course, in turn, guarantee more profits for them and pay the levy to the government—I think this committee should consider a more stringent condition or, if possible, set the limit at 50,000 tons, at least for now.

These industries are willing to pay this money, so it shouldn't be about the money, but about solving the problem decisively.

I think, because of time, these are the few conditions of mine, and I must say thank you, honourable members of Parliament, for this opportunity to stand before you today.

**Madam Chairperson:** Thank you for your presentation.

Are there questions from the members of the committee?

**Ms. Squires:** I want to thank you very much for coming down here tonight, and I wish you all the best in your paper or your exam that you have tomorrow. I know that, as a student, it can be very challenging to juggle all the demands on your time and make time to come and exercise your democratic right to present to this committee. So your words are certainly noted, and we really appreciate the time that you took to come down here and present tonight.

**Mr. Igwe:** It's a pleasure, thanks.

**Mr. Altemeyer:** Thank you, sir, for coming down here tonight. Best of luck. If your professor needs a note from any of us saying where you were and

valuable study time you gave up to come down here, we'll vouch for you.

If I may, I would love to tap into your international perspective. None of us are in another country right now studying and getting ready for a mid-term and sharing thoughts on global issues.

So if you'll allow me, I'd like to tap into that, because here in Manitoba, in Canada, we are blessed with many advantages that Nigeria also has—it's a very sophisticated society. Not many people realize that. Other parts of the world; not as fortunate.

And we are faced with this global challenge. So if Manitoba, one of the few jurisdictions in the world where almost all of our electricity is created without carbon being generated, if we only do the average, that means that everyone else in the world has to do that as well because we're not doing anything additional despite being in a developed country, an industrialized country responsible for the emissions much more than other places.

What would your advice be to us when you think about your home nation, others? You know, who has a bigger obligation to make a difference in reducing dangerous greenhouse gas emissions? Is it someone on the other side of the world, or should we be asked to do more?

**Mr. Igwe:** I think it must be, like, a collective action. You see, like, the parliament has to make regulations, of course, and the executive must have the political will to execute these policies. We know political will is a very serious issue. Like, for my home country, we have the issue where the executive makes the Legislature—comes up with legislation and—but the executive, most times, lack the political will to do these things.

And you said here that most of your electricity comes from other sources outside carbon. Back home, like, most of our electricity actually comes from carbon and not renewable energy. So you see—and certain interests are in the carbon sector with those people who make these things, so they are trying frustrate other sectors from operating because, of course, the money involved.

So answering your question, I think the legislate—like, this bill you come—you came up with is actually very good and very important. It shows you are taking action towards this. And it must have to be a collective effort between the Legislature, the executive and these corporations. Everybody must understand that they are stakeholders in this project.

Like, we must come together to make sure that we achieve a common goal. Of course, some interests are going to be lost, but we are looking at a long run, what's going to happen in the next 30 years. Like, for me in school, in Canada, we want to see some changes in the coming years. So that's why, for me, I took out time from studies to come here and say one or two things, so it should be on record that this action was taken and I was involved in the process in one way or the other, like, no matter how little it is.

So I think this legislation, or the—this committee is doing fantastically well. So you just have to be, like, a collective effort.

**Madam Chairperson:** Mr. Gerrard, and we have 20 seconds left of questions.

**Mr. Gerrard:** One of the things which has come up earlier has been the potential to develop technology here which could be used elsewhere around the world. If there was technology where there's a lot of potential in Africa, solar power, are there things we could be doing here that could be—technology we could export to Nigeria?

\* (22:00)

**Mr. Igwe:** As a matter of fact, Manitoba Hydro actually got a contract in 2016 to undo Nigeria's transmission side of the power generation. And I think something happened. And I think the Legislature here had to tell the company to pull back. I think you have to look at it. I think something happened there. But we gave the contract to Manitoba Hydro here.

So the—like, he—like, your colleague said something about other sectors of electricity. Like, Nigeria, in particular, Africa, they have this money to invest. And they want to see this climate change to be—they want to hear about it. So if you can develop—like, you said electric cars and other sources like solar and some other things if you can push it through, I believe it's going to break to the African market and it's going to be more profit to Manitoba and Canada at large.

**Madam Chairperson:** Thank you for your presentation.

I will now call upon Jane McDonald, International Institute for Sustainable Development.

Jane McDonald will be moved to the bottom of the list.

I will now call on Laura Tyler, Manitoba Energy Justice Coalition.

Ms. Tyler, do you have written material for distribution to the committee?

**Ms. Laura Tyler (Manitoba Energy Justice Coalition):** I do.

**Madam Chairperson:** Please proceed with your presentation.

**Ms. Tyler:** Good day, and thank you for having me here today, giving me and all the other speakers a chance for our voices to be heard.

I recognize these as traditional lands of the Anishinabe, 'Dakotay', Cree, Oji-Cree and Dene peoples, and the homeland of the Metis Nation. I am thankful to live here as a settler.

I'm speaking on behalf of a—as a volunteer member of the Manitoba Energy Justice Coalition. We're a community-driven grassroots group who are fighting for energy justice in the province. This means we care that energy is produced and used in environmentally and socially just ways.

We believe this plan does not go far enough. We need to—plan that supports the carbon tax. We need to see swift and big action on emissions reductions. We need to see more investment and solutions in transition away from fossil fuels. And we need leadership from you to help the people of Manitoba embrace this change.

The tabling of this bill comes at a critical moment. Others will get into the details of the United Nations report, but I will take this moment to remind you that it—the calls for action are urgent to prevent catastrophic environmental breakdown. The report should be considered a wake-up call.

Here in Manitoba, we have a great responsibility to be a part of this transition, and the opportunity to be a leader in it. As our elected leaders, it is your responsibility to listen on behalf of your constituencies and act. Actions to date have not been strong enough, but this climate plan and the bill is an opportunity to correct our course. Our first critical step is to make the biggest polluters pay. Putting a price on carbon pollution is essential to curb our consumption and emissions, and it is at minimum, but we must go further. We must incentive alternative energy development, 'support' 'wate' diversion, efforts in composting and increased investments in jobs creation in the environmental sector. We must increase our energy efficiency

by implementing policies to support building retrofitting.

We need to think beyond this plan. We need to have climate change at the forefront of our minds in all areas of policy because it affects all aspects of our society: housing, infrastructure, health care, transportation—climate change affects all these systems, and we must do more to lessen the 'nevic'—negative impact climate change will have on these already pressing issues.

We need to talk about using Manitoba as an excuse for why our—reason why we are a green province. Yes, it is wonderful that we do not burn fossil fuels for the bulk of our electricity, but we know that—the huge price there is for our hydro development from the destruction of the land, from the flooding to the loss of indigenous cultures and way of life. Did you know that Minnesota does not categorize Manitoba's electricity as clean energy?

What about Manitoba Hydro's natural gas interest? How can you praise Manitoba Hydro for being a green company when it is actively 'promotevng' installing more natural gas? Do not let the name natural gas fool you; it is not good for our planet. Because it burns cleaner than natural gas—yes, it does, but that does not make something cleaner—does not make it clean. It does produce methane, and your plan already recognizes the harms of methane and how it locks in 25 times more heat. This was the hottest year on record; the last thing we need is more heat.

I assume you know that there's a big opportunity with Manitoba Hydro to be a true leader on the environmental stewardship. The people living in the North have great ideas on how to strengthen the eroding shorelines from the flooding necessary to generate our electricity. Methane—that pesky gas that locks in more heat than other fossil fuels—is produced from the trees falling into the water and the other plant material decomposing underwater from flooding. By investing in the care of our shorelines affected by Hydro flooding, it is a way that we can reduce our emissions. Plus, jobs in the North. Win-win.

We now have the carbon tax from the federal government. Please be careful with how you talk about this plan. Please rise above partisan politics. Help Manitobans embrace it. We must enter an age of co-operation.

Nobel Prize-winning economist Paul Romer says carbon taxes are the solution to climate change. Why would you ignore the knowledge and recommendations of a Nobel Prize winner? How can you justify that? What he says is not about partisan politics. It's not about 'ideology'. It's about the truth: that carbon taxes work.

So you're not convinced that it's not ideology? So fine. The Canadians for Clean Prosperity is a non-partisan group led by Mark Cameron, who is an ex-policy director for Stephen Harper, and they promote putting a price on pollution. So even Stephen Harper's people are saying to put a price on carbon is the right move.

So I understand that there are a lot of people who think that taxes are a bad thing. I also get that many of the people are—who-vote Conservative. So please show leadership in helping them to understand why carbon taxes is necessary. Call it a necessary evil, if you need to.

Like you, they are conservatives who don't like taxes. So maybe just by talking about it as a price on admission—or sorry, on carbon would be better. Just try something. We must reduce our reliance on fossil fuels now, and all the research and data tells us carbon tax is an effective way of doing so. Help Manitobans understand this. That is not what you're currently doing, so please use this moment to correct your course.

Help Manitobans understand that the carbon tax cannot be revenue neutral. It has to go into paying for the transition and being prepared to cover costs of the already-inevitable effects of climate change. This year we had a drought, and droughts have economic costs. And things are only going to get worse. We are going to need more emergency-response funding.

Our workforce needs to know that there are risks of continuing to ignore climate change and perpetuating the production of fossil fuels. They need to know that the—their government is there to support them to 'crean'—transition to clean energy jobs, to provide them with jobs that have a future in a world with a future.

As of 2017, there were already 300,000 high-paying, clean-tech jobs in Canada. Manitoba needs to continue to move—with-forward and towards move those jobs. With all the infrastructure that we need updating, there will be plenty of jobs. We need to stop using the economy and the false claim of job loss as a reason for inaction.

I'm really happy that this plan includes electrification of buses, but, so far, we've seen no action on this, and that's cause for concern. We must aggressively increase our electric bus fleet and, with it, our made-in-Manitoba electric buses—use those: would be a win-win for our province.

All this rhetoric about the economy, and yet we're limiting our investment in our own businesses. What kind of confidence is that showing in our companies, products and workers? Please take swift and 'definited' action here and expand your plans.

After all, electric vehicles are 2,000 times cleaner than gas and 2,500 times cleaner than diesel. We know in Manitoba that our largest emissions are from transportation and agriculture sectors, two important economic contributors, so we need to build up that new infrastructure. Plus, it provides more uses for the electricity we produce.

The warmer we allowed—allow the planet to get, the bigger the financial costs will be. Global warming is expensive. Dealing with drought, forest fires, 'mastive' storms and floods cost us all. For example, it will cost \$540 million to build a 23-kilometre channel to prevent flooding at Lake Manitoba and Lake St. Martin.

Some of the costs include \$49.5 million on housing. That's a big price tag. The more money you spend now on solutions, the less you will be having to spend on problems that arise from climate change.

I work at a grassroots level, so every day I hear from people of all political persuasions that they are hungry for solutions. They want to stop the flow of oil and say no to pipelines. They want greener forms of transportation. They want to see better public transit. They want incentives for electric vehicles. They want infrastructure for these electric vehicles. They want to improve the energy efficiency of their homes and their workspaces. They want alternative forms of energy, and they are looking to you, their government, to lead the way.

We need to be reminded—no, we need to be inspired that the better world is possible and that you can do this. Climate 'chaince'—change is a massive and daunting issue but one we need to face head on. I plead with you to not just think about this in relation to this bill. Please think about climate and our collective future in every decision you make, because when I first moved to Manitoba, I was proud to live here and that is becoming less and less the case.

*Mr. Vice-Chairperson in the Chair*

I would like to take—just ask you to take a moment to think about planet Earth. How do you feel about the planet? Are you thankful about the rivers, the lakes, the fact that it grows food so easily? Now, do you believe in climate change? Do you believe that the future is in peril? Do you—how do you feel about the fact that you grew up on a planet that no longer will be as it was?

Can you accept that the changes we are seeing in our climate are because of how humans have been living on this planet? Because if you do not, you need to get on board with reality, and I don't just mean that intellectually. Know it in your heart, and know in your heart this catastrophic climate change is because of the failure of action from our leaders.

I cannot tell you how much it pains me to point this out, but that's what's happening here. You are our leaders, and you are not taking action. This so-called plan is your decision to take—not take action against climate change and for our environment.

How do you think history will remember you? Do you ever think of the way your descendants will talk about you? Because you are elected officials, your names are in the history books. People will actually be able to name you as part of the group of people that did not stop the destruction of this planet. I don't want that for you, and I am befuddled by why you seem to want it for yourselves.

\* (22:10)

But it does not have to be this way. You can go down in history for taking action. I've heard you all call the planet—well, not all of you—some of you call the plan ambitious, but that is not what people are seeing—or, that's not how they're seeing it. We are being looked down by the rest of the country and even the world. I do not envy you. Change is hard, and it's going to be hard to force change on people, really hard. But it's the right and necessary thing to do for our economy, for the planet and for the future.

We have 12 years. That is not a lot of time. Show us the best humanity has to offer by doing the right thing for the future of life, all life. Inspire your constituents and all Manitobans to change for the sake of the planet. Make us proud; lead us to the best possible tomorrow where we can all live comfortably on the planet we call home. Please be a leader and take much-needed action.

**Mr. Vice-Chairperson:** Thank you very much for your presentation.

Do any of the committee members have a question for the presenter?

**Ms. Squires:** Not a question, just my sincere appreciation for you coming down here and presenting a very, very lengthy presentation. And I commend you for getting it all, and I thank you for also providing us with written copy, because you've got many good points here—something that I will read over again. And just really, you know, can't agree with you more that change is hard, and collectively, we all need to make that change towards a low-carbon future, so thank you for your views tonight.

**Ms. Tyler:** Thanks.

**Mr. Gerrard:** Thank you. You emphasize the important of urgent—the importance of urgent action and say we've got 12 years. And, I mean, this is not very long. We've got, in this plan, a plan to report in five years. It seems to me that we probably need to have at least annual reporting, because five years is almost halfway to 12.

**Ms. Tyler:** Yes, absolutely. I think that you're right that we do have to have more regular reporting. And one of the benefits of more regular reporting is that you'll all have the opportunity to celebrate how good you're doing, because I assume you're going to take drastic action here, and so people, as I said, need to be inspired, so they need to know they're making a difference. If we hit some people with some hardships, it's going to be—change is hard. Like, we've just talked about that. But if we're able to kind of report back to people and let them know that their efforts are paying off, that's going to be really important. So there's a lot of reasons to increase the number of reporting, as other people have mentioned here tonight as well.

**Mr. Altemeyer:** Thanks very much for coming down tonight. I am struck yet again not just by the passion that we are seeing, particularly from another member of the younger generation, but the intelligence behind it and the facts and the knowledge that you're putting on the table here. It is, you know, indisputable what our path is, and it's indisputable that the vision you've outlined is where we have to go. Like, that's—and we totally support you in calling out the government's current plan and current legislation as woefully inadequate, so we will try to help them in strengthening it and improving it.

And one other area that I wanted to ask you about for tonight—you hit on a really good point that I don't know that we've heard yet, and that is this whole challenge of being revenue-neutral. How on earth do—how on earth does the government have any additional capacity to do something if there's no money available? So, if you want to expand a bit more on that, please do.

**Ms. Tyler:** Yes, it shouldn't be revenue-neutral.

**An Honourable Member:** Exactly.

**Ms. Tyler:** Yes. So—oh, okay. So we just saw from the Liberals the fact that they're doing a carbon fee and dividend kind of plan, so that's a really good example of how it should go, because we don't want—we know we need to make polluters pay, but the last people that we want to have be adversely affected are the poorest and those who are already struggling the most. And so it's really important that we take steps to be as inclusive as we can, that we not leave people behind in this, because part of what we have to do here is change not just the way that we're living on the planet, but also the way we're thinking about each other.

Let's make no mistake that this is not an isolated issue. What we're dealing with right now, we're seeing the increasing divides between people. We're seeing the lack of care for people where the fact that we can't have increased empathy, that we're becoming more polarized is a huge problem.

So, when the government had first announced that they were going to make a revenue-neutral carbon tax that was very troubling because the dividend is a really helpful thing to help pull people along and make sure that they survive this added pressure on their wallets, but also we need to be able to pay for all of these solutions somehow.

Money doesn't come out of nowhere, so we do have to make sure that we use it in effective ways to not just penalize people for using the carbon but also incentivise businesses help fund the solutions. The transition's going to cost money and so let's get on it.

**Mr. Vice-Chairperson:** Thank you.

**Mr. James Allum (Fort Garry-Riverview):** Yes. I thank you for coming, too, and I echo my colleague as well in his question.

The one thing that strikes me about listening to everyone tonight, that while there's a kind of—there's a doomsday scenario hanging over our heads, and I quite agree with that, I'm struck by the potential for

opportunity going forward if we make the proper kind of investments that you're describing.

Do you think that there's reason also in the midst of this great doomsday dark cloud over us that there is hope and opportunity ahead of us if we take advantage of it? *[interjection]*

**Mr. Vice-Chairperson:** Ms. Tyler—

**Ms. Tyler:** —oh, sorry.

**Mr. Vice-Chairperson:** We're out of time on it, but please go ahead and answer the question, if you will.

**Ms. Tyler:** Well, I think that our opportunity to act is becoming shorter and shorter, and so things are becoming more urgent, but I really do believe in the possibilities of humans. I think we see it all of the time in the great things that we've managed to accomplish, and I think that if we start to see a little bit more diversity around the table of who's sitting there, not just in terms of what we all look like, but also our backgrounds and our aspirations, then we'll be able to do some really incredible things.

**Mr. Vice-Chairperson:** Thank you very much for your presentation this evening.

I'll now call on Mr. Ben Hanlon-Dearman. Mr. Ben Hanlon-Dearman?

Okay, seeing no one, we'll move Mr. Hanlon-Dearman to the bottom of the list.

Karlo Aguilar? Karlo Aguilar?

We'll move Mr. Aguilar to the bottom of the list.

Joseph Kornelsen? Is there a Joseph Kornelsen?

We'll move Mr. Kornelsen to the bottom of the list.

Mr. Peter Miller. Have a Mr. Peter Miller?

Good evening, Mr. Miller. Do you have any written materials for distribution?

**Mr. Peter Miller (Green Action Centre):** I do.

**Mr. Vice-Chairperson:** Thank you very much.

Okay, you may now proceed with your presentation.

**Mr. Miller:** Hi. I'm Peter Miller, volunteer member of the green action policy committee, and I'm speaking for Green Action Centre here.

I'll highlight a few points in the document that's being passed around, because there isn't time for the whole. First we salute the federal government for

keeping its 2016 promise to implement a back-stop carbon tax in Manitoba to fill the void created earlier this month. The feds will return 100 per cent of the proceeds to Manitobans and the Manitoba economy. Indeed, before Rob Ford cancelled Ontario's cap and trade, 86 per cent of Canadians were covered by a carbon tax. It's past time for Manitoba.

Second, we support the remaining non-carbon tax measures in Bill 16, as enumerated in the bottom of the first page of the handout. As I understand it, cancellation of the Manitoba carbon tax should in no way jeopardize the climate and green fund, since last spring's budget speech assigned all carbon tax revenues to the reduction of other Manitoba taxes.

Other funding for green initiatives includes \$67 million in federal green funds contingent upon Manitoba following through with this Climate and Green Plan, and the modest annual proceeds from the new conservation endowment fund at the Winnipeg Foundation.

Third, we are concerned about gaps and deficiencies in the legislation that should be remedied by amendment. I'll focus on just one of these, the problems with the carbon accounting scheme.

The carbon accounting system, described in sections 5, 6 and 7 makes comparisons with other jurisdictions difficult, has potential bias, and fails to link to national and international commitments and scientifically assessed limits to carbon pollution. One or two other speakers have made that point as well.

\* (22:20)

If you turn—just turn your—the document over to page 8, the appendix at the back, you'll see on the table at the top that—this is back—2015. Manitoba was fifth up in terms of greenhouse gases per thousand population and also fifth per dollar GDP. We've heard a lot about Manitoba being the greenest, cleanest province, and you need comparable figures in order to back up such a claim. We're not there; we're fifth. We're about in the middle. And that's given provinces like Alberta and Saskatchewan on the other side.

So it is important to—for the sake of measuring progress towards that vision of being the cleanest, greenest province, and also to link to the federal commitment to 30 per cent reduction by 2030, international climate goals and so on, we need to have a comparable basis of calculating. And so I guess I'm agreeing with what I heard Mr. Beddome

say. Explore the cumulative accounting procedure, but don't leave it at that. Include the standard annual emissions, both global and sector by sector, subsector by subsector, so you can analyze where the problems are and act on them.

The cumulative emissions reduction metric described in 7(2) is one-sided. It considers only policy measures that lead to a reduction in emissions, for example, increasing support for public transit—and not policy measures that lead to an increase in emissions, for example, reducing support for public transit. So you can't just count measures that are—and designed to reduce it and ignore everything else that is done to the economy that might expand the emissions. You need—now, the annual accounting—how many emissions in each sector and globally—doesn't face that same problem.

So we recommend, basically, a double accounting system. Explore the cumulative, but keep with the standard annual emissions. And, if you do retain the cumulative emission reduction metric, initiate research on how to make it less one-sided and also how to link it to global carbon budget accounting that measures planetary limits for global emissions. 'Accumulation' was designed as a way to point out that we have only so much space for emissions. And we—it matters not just when we get to a particular level but how we're filling that space.

Fourth—I'll skip the carbon pricing coalition principles and go directly to the reasons for imposing a price on carbon. First is the polluter pays principle. Economist Nicholas Stern noted climate change is the result of the greatest market failure the world has seen: those who damage others by emitting greenhouse gases generally do not pay. No price on carbon, or too low a price on carbon pollution, is, in effect, a perverse subsidy for using fossil fuels. Emissions costly to victims and governments are made free to the polluter. A carbon price lowers that subsidy.

So, when folks say axe the tax, that really means keep the subsidy on fossil fuels; instead, our cries should be axe the subsidy, or make polluters, not victims, pay.

Another purpose of a carbon tax is the—level the field for innovation. Too low a price creates unfair competition with lower emission alternatives by not charging for social costs, creates a headwind for the rollout of green innovation such as electric vehicles. It continues dependence on fossil fuel imports from

Alberta by subsidizing the old economy instead of the new, based on Manitoba clean energy.

Another reason for a carbon tax is climate and social reinvestment. If polluters pay, they generate revenue that can make a difference in a variety of ways. Whatever is collected from carbon pricing is returned to the economy on some other basis than a fossil fuel subsidy.

By investing in greenhouse gas reduction, truckers can immediately get off diesel. They pay a tax. That tax could be used in the agricultural sector to promote sequestration practices, and so, indirectly, the 'truckers' would be reducing their emissions by getting someone else to do it on their behalf.

Efficiency: Again, I'll use the trucker example because the Manitoba Trucking Association has developed it. They were proposing a carbon tax on diesel before any government was—a much lower one—and they wanted that reinvested in making vehicles more efficient. And they figured that they could get, on average, a 22 per cent increased fuel efficiency, which means lower emissions. So that reinvestment can—

**Mr. Vice-Chairperson:** Mr. Lindsey, you have one more minute.

**Mr. Miller:** Okay.

Finally, my plea, in the last section, is to pursue constructive, not destructive, carbon-tax avoidance. Trying to get rid of a carbon tax is destructive because all the destruction that comes from fossil fuels continues on and it prevents the move to a better economy.

We're—we—the constructive, basically, is a way of avoiding carbon taxes—is to reduce your emissions, and so government should do everything they can to help Manitobans do just that. Our electricity gives us a great advantage and means that, unlike Alberta, we don't have to pay carbon tax on our electricity. We've already got that advantage that Mr. Pallister was seeking.

**Mr. Vice-Chairperson:** Thank you, Mr. Miller. Your time's up, and I—before I go further, I want to apologize. I called you Mr. Lindsey earlier. I've called people some things before, and I guess it's not that bad, but I do want to apologize to that.

So, with that, though, we will now open up the floor for questions from the committee.

**Ms. Squires:** I just want to say that I really enjoyed your presentation, and, regretfully, we only have limited time, but it helps that you brought your presentation here in written form, so I will take the opportunity to read the rest of this.

And I certainly do look forward to meeting with you again in the near future. I know you've provided advice and assistance and opportunities to share your opinion in the past, and I look forward to working with you in the future.

**Mr. Altemeyer:** Yes, thank you very much, Peter. Great work, as always. Please pass on our entire committee's thanks to the Green Action Centre and the policy committee in particular.

I wanted to touch on the counting system because several have alluded to it. We haven't really jumped into it. Under Bill 16 and under the government's climate plan, I see three major problems with what has been brought forward.

As you point out, this government is using a cumulative emissions approach. I'm not aware of any other jurisdiction in the world that uses that approach. It's not what the United Nations requires when nations have to report annually; it's not on a cumulative basis, it's on an annual total basis.

We also have grave concerns that this government is only counting, as you point out correctly, reductions, and ignoring any other sector of the economy where emissions might be going up.

And thirdly, the notion that they're only going to report on emissions after five years and, in fact, it'll be up to 18 months after the five years are done before we would ever get a Manitoba publication on it. All of that says to me this is a government that doesn't quite get it yet, and they're trying to look for ways to make it appear that they are taking action when, in fact, they won't be.

\* (22:30)

When you look at this plan—what they've brought forward so far in this bill, is this bill going to be enough to reduce Manitoba's emissions to meet what global science is telling us we have to do?

**Mr. Miller:** What you have is a legal framework; you don't have a plan.

The legal framework calls for the creation of a plan using an expert advisory committee. And as part

of that plan, there will be various goals, if understand it correctly. So, obviously, an empty piece of legislation or legislative framework is not a plan and won't do a thing. It depends on what actions that are taken under that framework.

So I've pointed out one problem, which is the cumulative accounting thing.

**Mr. Gerrard:** Yes, one of the areas which I think you didn't get time to adequately talk about is relative to the trucking industry. And the trucking industry is an important one in our province. And I think you had some suggestions for what could be done in terms of the carbon tax that would help the trucking industry to adapt.

**Floor Comment:** I'm sure the minister's heard this from the trucking industry directly—

**Mr. Vice-Chairperson:** Mr. Miller. Mr. Miller, go ahead.

**Mr. Miller:** But—so I'm going with their proposals. I mean, they don't like being the largest polluters in the province. They don't like to be in that status. And I guess riding in the cab with a diesel engine also has problems. So they are very conscious of it, and also because fuel is the biggest cost perhaps. So they want to get off diesel as fast as they can, or use less of it. And their proposal was, let's do this in a staged way. There are lots of things that could be done to make a rig more efficient, you know, the—just the covering the wheel wells sort of thing, I don't know; I'm not a trucker. But—so not everyone's doing that. An appropriate incentive program might get more truckers to do that. If they do that, their Manitoba trucks will be performing more efficiently. And that will give them a competitive advantage when they travel to the States, for example.

So that's the thinking of the Trucking Association, and it sounds great to me. And then down the road, they're looking at electric conversions and all those things.

**Mr. Vice-Chairperson:** Thank you very much, Mr. Miller. The time for questions is over, so I again thank you for your presentation.

I would now like to call on Jazmin Alfaro. Jazmin Alfaro?

Hearing none, we'll move Jazmin Alfaro to the bottom of the list and we'll call on Derek Koop.

Mr. Koop? No, we'll move Mr. Koop to the bottom of the list.

Call on a Mr. David Berg.

Mr. Berg, do you have any materials for distribution? Thank you very much.

And please proceed with your presentation.

**Mr. David Berg (Private Citizen):** Well, not I'm not really an expert in any field at all, but hopefully I can share something of value. I shared the following statements today with my sister and brother-in-law, who farm in the Winkler area, and my mother-in-law, who owns a farm in the Boissevain area.

I think most people would agree with most of the following. We'll see, though.

Nobody wants climate change. I wish climate change deniers were right, don't you? If in 30 years, global temperatures remain consistent or get cooler, the happiest people in the world would be those most concerned about global warming. Can you think of any issue where you wish that your perspective was proven wrong? Nobody wants a despairing future. Everybody needs hope to face the biggest challenges we'll meet individually and together.

No one in our community wants to harm our children and our grandchildren. Everyone wants their children and grandchildren to thrive now and 30 years from now, and nobody wants to be arguing with their brother and sister about global warming.

Nobody wants to be viciously divisive in contributing to a disheartening lack of unity in our community. No MLA from any party wants to misinterpret future trends. Nobody wants to put our province in grinding, unsustainable economic debt.

*Madam Chairperson in the Chair*

Nobody wants to put our province in grinding, unsustainable environmental debt, and nobody wants our province to miss out on a technological revolution, whether it's in the area of communication, energy or transportation.

Nobody in Manitoba wants to wake up 30 years from now enviously viewing other regions of the world that are thriving because they invested in high-tech, high-paying energy-renewable-energy-related fields such as zinc and lithium mining, wind energy, electrified transportation.

No one wants low-tech, low-paying, insecure jobs based on unsustainable and outdated solutions, and nobody wants this for their grandchildren.

Nobody today wants to look back to the '50s and remember themselves saying, a floodway for \$63 million? I'm against spending that money. Who wants to admit that they said, quote: you can buy a lot of rubber boots for \$63 million?

Everybody wants to be Duff Roblin. He saw the future trend when many didn't, and he saved us over \$40 billion. The right solutions are not only sustainable economically, they pay off in the billions. And the 1950 flood was a hint at what was to come.

I don't know if you can see the picture in the printout here. Similarly, this 2016 picture of a man in Morden mowing his lawn in December in his shorts is hinting at what's to come. By itself, it doesn't make sense. However, in the context of the following chart, it starts to become understandable.

The following graph shows the changes in global temperature since 1850. Darkest blue are coldest years, darkest red are the hottest years. This is printed in black and white, you can't understand what's going on here. On the far right, it's all red. On the far left, it's all blue.

It shows the past 170 years, but you may be asking where's the previous 200; the previous 1,000; the previous 3,000; 10,000. Take a look at the next page and we'll go through history here. You'll notice that the change of temperature. It stays pretty level for the last 10,000 years, and you get to page 3 and in the last hundred years, you'll see an enormous jump ahead.

So you can see climate change—normal, natural climate change happens very gradually over a very long period of time. The end of the ice age 10,000 years before this was a long, gradual change. It was big, but it was gradual. So what's happened in the past 200—especially the past hundred years—is a dramatic, unnatural shift that's clearly different than other types of shifts.

So the dramatic change in our climate which we've experienced is like the Winnipeg flood of 1950. That event prompted Duff Roblin to propose building the second largest earth-moving project in the world, which cost 25 per cent of Manitoba's entire budget.

Twenty-five per cent of our current budget is over \$4 billion, so if we had a Duff Roblin today—an environmental Duff Roblin, or someone that was aware of what was—we're facing now, he'd be asking for billions of dollars in spending on new approaches to agriculture, agriculture-related technologies,

maximizing our renewal energy and developing electrified transportation.

Now, let's put aside just for a moment the very good, pure and moral motive—and very worthwhile discussing at length—for how our inaction will create suffering and chaos for hundreds of millions of people that live in the world's low-lying lands, such as Indonesia.

Putting that aside for a moment, developing high-paying, high-tech, renewable, sustainable, secure jobs for the next few decades will be highly beneficial for our province. Predicting future trends isn't all that hard in this case, because we've seen huge price drops on renewable energy and electrified transportation in the past 10 years.

The massive revolution we're seeing in these 'industries' is about to become a tsunami in the next five to 10 years, so committing to action on what will, in the long run, pay off takes courage, but it will be worth it. All the signs point to it.

\* (22:40)

Okay. Imagine how great Manitobans will feel about their government when they hear their leaders are talking about how to support development of high-tech, high-paying, green-friendly jobs that will be secure for decades. Imagine how great Manitobans will feel about their government when they see how much they're saving because they've reduced—they've received support for their geothermal system.

Globally, if geothermal was adopted at a cost of \$155 billion, the net savings over a 30-year period would be \$1 trillion. So this—this projection and others I'm about to cite come from The New York Times bestseller, *Drawdown*, written by top scientists and researchers in the world, edited by Paul Hawken. You can go to that link and get lots of information there.

Imagine how great Manitobans will feel about their government when they hear about Manitoba clean energy companies changing the world. Imagine how great Manitobans will feel about their government when they hear about how Manitoba zinc and lithium mining is getting talked about worldwide as significant for the future of global battery production. Imagine how great Manitobans would feel about their government when they discover that their leaders had the foresight to build and offer free province-wide EV charging stations to all tourists. Manitoba was just announced as the

No. 8 destination on the Lonely Planet's top 10 regions in the world. Build on that extraordinary press, that momentum, with an announcement about free EV charging for tourists.

Going to jump down here. Imagine how great Manitobans would feel about their government when they find out the many millions of dollars they will save over a period of decades because of funding for fully insulating our homes and businesses. Imagine how great Manitobans will feel about their government when they look at their hydro bill and see how much they saved because they were educated about the value of LED lighting.

If LED lighting was adopted worldwide at a cost of \$100 billion, there'd be a net savings of \$2.8 trillion. Eight—sorry—five gigatons of CO<sub>2</sub> would be eliminated.

Imagine how great Manitobans will feel about their government when they read about how Manitoba has followed France's lead and banned grocery stores from throwing away edible food. Across France, 5,000 charities depend on the food bank network, which now gets nearly half of its donations from grocery stores.

The people of Manitoba and their government care not only about those who don't have enough to eat, they also care about reducing how much pollution we're creating. They do both by simply not throwing away so much food, globally reducing food waste, which is as much as 30 per cent of all food. We'd save 70 gigatons of carbon dioxide. That's the fourth best solution for combatting global warming.

And there's a number of solutions here: smart glass, bike infrastructure, smart thermometers, building automation, district heating pioneered in Denmark worth looking at, landfill methane—global savings, altogether, those ones are over \$8 trillion if done worldwide.

Then let's look at agriculture. Like I said, I'm not an expert, but I'm getting quickly educated on this. I did not know that if cattle were raised with the right techniques, they could actually contribute to significant reductions of CO<sub>2</sub> levels. For example, managed grazing, at a cost of \$50 billion, the net savings would be \$700 billion worldwide.

In the book, there was an example of a farmer in North Dakota, Gabe Brown, who switched to high-density grazing and has seen organic matter increases from 4 to 10 per cent in six years, an increase of 50 tons of carbon per acre. This approach reduces

pesticides, herbicides, fungicides, fertilizers, increases the 'sorial'—soil's ability to retain water. High-density grazing soil can absorb eight to 14 inches of rain per hour, whereas previously hardened soil would pond and erode with a mere of one inch of rain—16 gigatons of reduced CO<sub>2</sub> worldwide.

Wind turbines, cost of \$1.8 trillion—net savings: \$7.7 trillion—

**Madam Chairperson:** Mr. Berg, your time for presentation has ended. We're going to move on to our question.

**Mr. Altemeyer:** Yes, thank you very much, David, for coming down. It's just been so neat to watch how all the different presenters have taken their own approach, and you've done a wonderful job of staying rooted in Manitoba, but also showing the economic opportunities just by paying attention to what's going on in the world, what's actually possible.

What does it say to you and your community that—you know, folks that you hang out with that there's all these great ideas ready to go, and yet we're stuck in this crazy impasse where it's like, no, I don't want to pay for this. And we've got to get governments and everyone else to realize there are opportunities here, especially for Manitoba—opportunities for savings, opportunities for job creation, opportunities to save the planet, that we all kind of need.

What—you know, what does that say to you that we're just—we're still stuck at this silly debate at that level when we have so much good stuff to get to if we can just get there?

**Mr. Berg:** Yes, I'd say that the thing is that it hasn't been in the forefront of our minds. It's sort of been in the background of everybody's mind, kind of slow burning, and now suddenly we're aware of it and—but really, it's that discussion piece that I'm finding is critical, like talking to people with opposing views. And it's not going to happen overnight, of course, but somehow that—the belief that, in discussion, we could actually get somewhere, which is—you know, it's a bit of a leap sometimes. But you have to—I think that getting over that emotional piece there is important.

**Ms. Squires:** Thank you very much for your presentation tonight and for coming down here, and I appreciate the—you know, some of the inserts, and I'm glad that this is going into Hansard. I hope the links are going into Hansard too because I think

everyone would benefit from seeing some of the charts that you've excerpted in your presentation.

I was very pleased that you mentioned the aspect about managed grazing and other opportunities for the agriculture sector and cattle producers to help, you know, lower their carbon footprint. And just last week—or two weeks ago, I was at the University of Manitoba working with the dean of the faculty of agriculture. And some of their practices and some of the testing that they're doing there right now is really cutting-edge. And so I do want to give a huge shout-out to the University of Manitoba and that faculty in particular for the work that they're doing on sustainable agriculture practices and was really pleased to talk with them about some partnering initiatives. And I know that there are many agriculture producers in our province right now that are implementing some of these sustainable practices, and I think that we've got a lot of carbon emission reductions to be had in that aspect of our province.

So thank you for highlighting that and making that one of your priority points on your presentation.

**Mr. Berg:** Thank you.

**Mr. Gerrard:** Yes, thank you for such a carefully thought-out and detailed list of proposals. I'd just like to give you a chance to expand on one of the things which you mentioned here, which is silvopasture; this is cattle living in forests—cost of \$41 billion, a net savings of \$700 billion. Just explain to us where the savings come from in that instance.

**Mr. Berg:** My understanding is—again, I'm not an expert; I'm just getting to—getting familiar with some of these solutions, but, yes, that somehow the—it has to do with the animal's involvement in the soil and, of course, what they emit and how that becomes a fertilizer and the working together; it's an ecosystem piece. But I'll—I can give you the full three-page summary of that from the book. Yes, I'll email it to you.

**An Honourable Member:** Thank you.

**Mr. Berg:** Yes.

**Madam Chairperson:** Seeing no further questions, thank you very much for your presentation.

I will now call on Mark Cohoe, Bike Winnipeg.

Mr. Cohoe, do you have written materials for distribution?

**Mr. Mark Cohoe (Bike Winnipeg):** Yes, I do.

**Madam Chairperson:** Okay.

Please proceed with your presentation.

**Mr. Cohoe:** Yes, thanks very much for having—providing this opportunity to speak on Bill 16. Certainly, if you don't know, I'll let you know a little bit about Bike Winnipeg. We're a voluntary, inclusive group of concerned citizens working to make cycling in Winnipeg a safe, enjoyable, accessible and convenient transportation choice year-round. We envision a city where cycling is embraced as the preferred mode of transportation, where cycling is integrated into urban design and planning and where Winnipeg is recognized as a leader in cycling infrastructure and programs.

So, certainly, I'm sure some people have spoken about this, but the urgency for action to reduce our greenhouse gas emissions, I think, has become very apparent.

The October 8th, 2018, international panel on climate change release with a special report on global warming of 1.5° outlines that urgent need for governments to make rapid and unprecedented—take rapid and unprecedented actions to reduce emissions of greenhouse gases if we are to limit increases of our temperature—or global temperatures to 1.5°C.

\* (22:50)

Beyond that 1.5°C increase, even half a degree will significantly worsen the risks of drought, floods, extreme heat and poverty for hundreds of millions of people. Failure to hold global temperature increases to 1.5°C above pre-industrial levels would have severe consequences.

And that graph shows some of those consequences, including the near-extinction of coral reefs; certainly, significant increased flooding along rivers; and damage to the Arctic. So, significant consequences that would be felt here—not necessarily coral reefs, but some of the others—in Manitoba.

The report notes that urgent and unprecedented changes are needed to reach the target, which they say is affordable and feasible, although the 1.5°C target lies at the most ambitious end of the Paris Agreement pledge to keep temperatures between 1.5 and 2°C.

As noted in the October 8th article in The Guardian, carbon pollution would have to be cut by 45 per cent by 2030 to do that, and that's compared with a 20 per cent cut for the 2°C pathway, and it needs to come down to zero by 2050.

So there are significant reductions required. Manitoba's climate and green action plan, we feel, needs to align its implementation targets with that 1.5°C target.

In setting targets, we think long-range targets need to be based on the Paris Agreement. They need to provide a level of transparency and certainty on carbon pricing. If we are reaching or surpassing intermediate goals, there may be no need to increase pricing, but if we're not meeting goals, we'll see a clear need to increase pricing and take other actions.

To align with that 1.5°C target, given the IPCC report, we suggest the target of 45 per cent below 21—the 2010 level by 2030 and carbon neutrality by 2050. Targets should be for annual emissions, and should include all sectors to make sure we're as wide as possible on that.

Short-term and intermediate targets need to be based on actions as well. In addition to long term and intermediate targets, we also think that short term targets are needed, and those targets need to be set on a sector-by-sector basis, and they need to be based on targeted actions. So there needs to be action leading to the targets that you're mandating.

And putting a price on carbon, that's been stated in numerous reports and studies. Carbon pricing is an effective tool that can be used to help reduce our annual emissions. We encourage the province to implement a carbon-pricing strategy, and make plans to increase the price of carbon to increase the incentive to reduce emissions in line with short term, intermediate, and long term targets.

We think that the tax should be applied as widely as possible, and that an important principle in the carbon pricing should be that polluters pay for their emissions, with those producing the most emissions paying the highest price on carbon.

While pricing carbon is a cost-effective way to reduce greenhouse emissions, the resulting higher prices for home energy, gasoline, as well as food or other energy-intensive goods and services can reduce household purchasing power.

This increase in prices will be felt most by low-income households, who spend a higher proportion of their income on goods and services that will rise in price due to carbon pricing. We would not want to see a price on carbon make any family put into—poverty poorer, or push any family into poverty.

So we are therefore recommending that climate rebates should be designed to fully offset the impact of carbon pricing on low- and median-income households. It's estimated the cost of fully rebating the cost of a carbon tax to the lowest two income quintiles would amount to only 15 to 20 per cent of revenues. Certainly, it leaves a lot of room for other actions if you include that goal of fairness and equity in that carbon tax pricing.

Higher income households spend a smaller proportion of their income on necessities: shelter, food, transportation. They also have more ability to reduce emissions than those with lower household incomes without affecting their basic needs, and they also tend to have a higher per capita use of carbon emissions as well. So certainly, that polluter-pays principle is in place if you're rebating on those lower two quintiles.

Thinking of ways that, certainly, we can make changes; I wanted to say here as Bike Winnipeg, so I want to talk to you about what we feel is a strong potential and remind you of a poll that we conducted in association with CAA Manitoba and Probe Research, and some of the results that came from that poll that we feel really show that there is a demand and a willingness among at least people in Winnipeg—and I'm sure throughout the province as well—to change their habits, to change how they're moving around in the city and to use carbon-neutral forms such as biking in their transportation choice.

So, in that recent poll conducted by Probe Research for CAA Manitoba and Bike Winnipeg, it revealed a solid 21 per cent of Winnipeggers polled said they are already cycling daily or a few times a week for transportation. So that's some of the highest self-recorded modes that we've ever seen, so it's—a part of that is certainly some of the investment we've been making into the bike network in the city of Winnipeg.

But, even more than that, what we—what—the poll also showed that Winnipeggers really do have an appetite to bike even more often. When asked about their habits, if infrastructure and conditions were right, fully 45 per cent of respondents indicated that, given a safe cycling network with more bike paths, they'd ride their bikes daily or a few times a week in good weather. So there's a lot of opportunity to really increase the number of people that are biking, reducing our emissions, and that's given that safe, comfortable network.

So, obviously, the safe cycling network isn't there now. It's in progress as a 20-year plan. We're funding at the City of Winnipeg approximately 40 per cent of what's needed—called for in the 20-year pedestrian cycling strategies to move forward for that bike network.

I think one of the things that we do, given the urgent need to reduce our emissions, we're recommending that a significant portion of revenues collected from the province's carbon pricing mechanism, or—be earmarked for actions aimed at reducing emissions. For instance, programs to improve energy efficiency in buildings, to expand and 'subsidize' public transit and, of course, to provide walking and cycling infrastructure are some of the things that might be used with that fund to help get us to those goals. Certainly, other people have other recommendations on that. So we do feel that there is that urgency, there is that demand and there is that potential. We think that it's a chance and certainly we think it's something we need to move forward on. So we hope you will consider that.

And, again, we think carbon pricing is a way to go. You know, there was a question that came about priorities. I think one of the things that the green plan had called for was looking for co-benefits where we do create our spending and where we do try and reduce our emissions. Certainly with walking and cycling, we know that's creating physical activity, which has significant impacts on health, especially around diabetes, around mental health, around heart and stroke. Really, that does come back and save the province money, so a certain co-benefit there.

Reducing our reliance on fossil fuels that tend to be imported, again, creates an economic impact in the province and in the city that allows us to really increase our economic activities, so we think there are strong co-benefits providing that, but we need help to make sure that we're creating the environment that people will feel safe to walk and bike in.

So thank you for your time.

**Madam Chairperson:** Thank you for your presentation.

Do members of the committee have questions for the presenter?

**Ms. Squires:** Thank you very much, Mr. Cohoe, for coming down here tonight and presenting to us and also for touching upon the importance of active transportation. And I have to personally say that out

of all the initiatives, active transportation is one of my personal favourites. And this past year, particularly, I was astounded at how many other commuters I would sometimes, literally, bump into on my cycle into work every day. And it was very encouraging to see the amount of people choosing active transportation as a way to regularly get to work.

And I really appreciate all the efforts that you and your organization have done to make active transportation a real viable option for many people. If we make it easier for people, it's going to be something that is fully utilized. And I think that there's so much potential in terms of reducing our carbon footprint and just so many other benefits from having an active—healthy, active transportation corridor and system in the province.

And so I commend you for raising that and bringing this to the committee tonight. *[interjection]*

**Madam Chairperson:** Mr. Cohoe.

\* (23:00)

**Mr. Cohoe:** I've been watching this all night and I forgot that.

Yes, certainly we do think, like, there is a growing number of people that are cycling. That poll that we did with CAA—who are also pushing for protected bike lanes as well and for more cycling infrastructure, they see it as something that their members want to see as well, so I think it is something that we need to be funding, though.

And that's an important part and certainly part of—I think one of the green dividends that we can see from the carbon tax is to put investments into things like cycling infrastructure. I think the province has a role to play in that through tax-sharing agreements and through revenue-sharing agreements that—where they can really triple up, sometimes, the funding that they're generating.

**Mr. Altemeyer:** Mark, thank you very much for coming down. Your advocacy was noted when we were in office. You pushed our government. You did a good job of it. It led to some good things, and you're here continuing to do the same now. So thank you very much for that.

The—I guess the thing that strikes me about your presentation and a few of the others tonight is, I mean, you just articulate so well how far off we are right now compared to what we need to be doing. I mean, right now, our provincial government is—has

joined in the anti-tax, sort of anti-science movement that is prominent with Doug Ford's Ontario and the rest.

At a bare minimum, we need to be putting a price on carbon, which they seem to be opposed to. And then what we actually need to do is put a price on carbon that's appropriate and then use the revenue to make sure vulnerable people, as you properly note, are cushioned—to use your word, that's a good way to phrase it—and then use the remainder to actually do additional things.

Because we all got to know that even \$50 a ton, which kind of sends our Premier (Mr. Pallister) into an 'apolectic' shock, is not going to be enough by itself to meet what climate science is telling us we have to do.

Like, first, it's active transportation. How—what has this provincial government done since coming to office that has added to the—any cycling infrastructure in Manitoba? There's been some good initiatives at the city level, but can you educate me on what this Province has done since coming to office to fund cycling infrastructure? Because I haven't heard anything.

**Mr. Cohoe:** Yes. I think, similar to the previous government, where a lot of the funding has come in is probably through matching funding for infrastructure renewal such as Waverley Underpass or the regional and local street renewals.

However, I think we have to recognize, with the walking and cycling network, we're working on a system that we're retrofitting. With the street renewals, with some of those infrastructure projects, we're really focusing our efforts on where the auto demand is rather than where the demand to create those links in the walking and biking network and to overcome some of the barriers that we have within the city—and across the province as well—have certainly—aren't being met.

And I think that's where a role for government comes in, for the provincial government to come in to be sort of a bit of a carrot for the city to make it hard to avoid, I think, creating some of those opportunities and putting some of that funding in that the city will be hard-pressed to avoid. I think that's a good point.

**Mr. Gerrard:** I note that in your survey 21 per cent of Winnipeggers are now regularly biking, that that would move to potentially 45 per cent if there was a safe cycling network with more bike paths. Give us a

vision of what that means in terms of what we need to do.

**Mr. Cohoe:** Yes, certainly, I think part of it means—with the pedestrian and cycling strategies the City passed in July of 2015, they lay out a framework and sort of a network for the 'creation' on that. But it means that we're really creating low-stress, separated bikeways that are separating people from traffic, which is one of the things that really discourages people from walking or biking, getting too close to that traffic.

That's making it accessible, so something that's close by, so sort of a minimum grid that's attached to that network that's connecting to the higher-density destinations—the things like the schools, the community clubs, our education and our workplaces. And it needs to feel comfortable, and it needs to be funded. The project on—the costs estimated on that were \$334 million. That works out to about 17 and a half million dollars a year.

The City of Winnipeg last year, \$5.4 million. There was some money that went in as well through some of the infrastructure projects that we're including improved walking and cycling facilities. But, again, that's really not targeting where the biggest barriers for walking and biking are. It's often targeting where the biggest need for an improvement to potentially move more vehicles—and—which tends to encourage and induce more demand for driving.

**Madam Chairperson:** The time for questions has now ended. Thank you very much for your presentation.

I will now call on Gloria Taylor, private citizen.

Gloria Taylor will now move to the bottom of the list.

I will now call on David Taylor, Concerned Citizens of Manitoba.

David Taylor will move to the bottom of the list.

I will now call on Jean Altemeyer, private citizen.

Ms. Altemeyer, do you have written materials for distribution for the committee?

**Ms. Jean Altemeyer (Private Citizen):** I do not.

**Madam Chairperson:** Okay, please proceed with your presentation.

**Ms. Altemeyer:** Well, I've certainly learned a lot tonight. I—you guys are in a much more important

position than I am, so I'm going to share what I was thinking about before I heard all of these.

So I wish to express my deep disappointment at the dearth of Manitoba leadership regarding climate change. As we've heard, evidence around the world has been mounting for years with little to no evidence of appropriate response and effective actions which have been well planned and which are sustainable.

And, of course, since I'm one of the geezers, I—it means part of that responsibility lies on me. We didn't do enough. We thought we were. Clearly, we weren't.

The lack of leadership reminds me way too much of previous head-in-the-sand responses. We now look at past events like the Grassy Narrows mercury poisoning, the internment of Japanese citizens in the '40s, the residential schools disasters, the use of Agent Orange in Vietnam, the huge plastic island floating in the Pacific Ocean. These were all thoughtless things that had been done that people thought would be okay. And the list goes on and on and on.

I've often found myself wondering what it is we're doing right now that our descendants will view with a WTF-did-they-think-they-were-doing kind of fury. We think it now about some of these things. Clearly, people at the time thought it was okay.

So what are we doing now?

One of the big things we're doing is ignoring or minimizing or rationalizing the impacts we're having on the Earth. Why do we think we can soil the place we live and have there be no consequences? Some individuals certainly have changed their behaviours, but with the deny, deny, deny folks in full bray to the south and with missed opportunities both now and in the past to ensure that polluters pay and that the funds are directed to initiatives that will support alternative industries, that will retrain those currently working in high-pollution industries to have non-polluting jobs and to make investments in low-emission transportation, about which we've heard a lot tonight.

\* (23:10)

The current government has ensured things are not going to get better. Lack of action means this government is disregarding the UN Intergovernmental Panel on Climate Change's report that we, the world, are facing catastrophic

consequences: rising ocean levels, loss of the ice shelves, warming of the North, increasing numbers and severity of storms and on and on.

Given that the World Bank, that well-known radical, left-leaning organization, estimates that there will be 140 million internally displaced people by 2050. How many will be Canadians who have been living on our three coasts, on our lakes, on our islands? And this doesn't even mention those millions of externally displaced folks who will be looking for safe havens.

As for the how to pay for this issue, investors, as we've heard, are looking for green initiatives. Other governments around the world have implemented policies and provided resources to develop low-carbon alternatives, to train workers and to give subsidies to low-income or other folks, along the lines of the current plans to soften the impact of the USMCA on various Canadian institutions and industries.

If we don't pay now, our children and grandchildren will play-pay later. So the current government's sort of surly-my-way-or-the-highway reaction doesn't seem to help. We've heard about our touted disadvantages around hydroelectric power, and I'm glad some of the presenters have challenged the point that it's clean energy, clean at a huge cost.

But we should be leading in policy, and we should be leading in funding. Meaningful responses would include reducing the amount of waste sent to landfills and capturing the methane that's being produced; ensuring that our consumerism tendencies, we have to pay for it; using the total annual amount of emissions as a true measure of the global greenhouse gas reductions; establish a functional resourced impartial panel on sustainable development and require the government to meet with, receive and act on their analyses and recommendations. We've heard about the importance of setting targets, establishing realistic timelines and to report annually on the progress, or lack thereof, on those targets.

What in the world is the rationale for omitting large polluters from paying for the impacts of their business practices? School kids are encouraged to recycle, to walk or bike to school, to compost, to bring reusable containers for their lunches, and yet we let the big polluters walk away unimpeded.

Those school kids, including—we're parenting a grandchild who is 16; we have a granddaughter

who's three. Those school kids will be the adults in those 30 years. How furious do you think they will be at our ineptitude, our disinterest and our perverse refusal to make changes?

Thanks.

**Madam Chairperson:** Thank you for your presentation.

Do members of the committee have questions for the presenter?

**Ms. Squires:** Not a question, but certainly just a comment from one mother to another. I know the greatest gift that we can offer is to pass down our values and our passion for advocacy to the next generation. And so I commend you for your contributions here tonight and for your advocacy work and for being a real leader. Thank you.

**Mr. Altemeyer:** So your son is also nocturnal, a bit of a rabble-rouser at times, both within his circles and outside of them, and known to use colourful language on a few occasions. Is that his fault or someone else's?

**Ms. Altemeyer:** I have no response to that.

**Madam Chairperson:** Mr. Altemeyer, on a follow-up.

**Mr. Altemeyer:** Sure. Mom, you inspire me; you always have, and if I can tell you without a doubt that the work that you have done in your life has bought us the most precious resource that we now have, and that is time. Every good action that you have done, every good action that everybody else has done has meant that the bucket of crap we now face is not quite as bad as it would have been.

And I am also quite certain that if more people, somehow, had had the benefit of living with your guidance and with your values and with your actions, we actually wouldn't be needing this type of legislation or this type of conversation, and that gives me great hope amidst the challenge because it means we can still do this and I got that from you.

So thank you for everything.

**Mr. Gerrard:** Thank you for your contributions, including allowing us to have your son here in the Legislature. I think what you're saying, if I may condense it down, is that in the area of climate change for too long we have done too little and now we need to start thinking about doing much more, including much more than is in the current Bill 16.

**Ms. Altemeyer:** You have that correct.

**Mr. Gerrard:** Thank you.

**Mr. Allum:** Well, I don't know about anybody else, but I was waiting to see just what the interaction would be between my friend from Wolseley and my constituent from Fort Garry-Riverview, and I thank you for your presentation. I am a historian, and in the smugness of the ivory tower that I once occupied, I often wondered what people in the past were thinking and why they made the decisions that they did, so I thank you for raising that.

To my colleagues around the table, I hope you will listen to the presenter very clearly and very closely and then act on what she recommends and do it, not out of fear, but do it in the way that I try to do it as her MLA. I fear ever disappointing her and I would like her to go away tonight feeling that there's some hope and some optimism that we will listen to you. I'm not expecting you to comment. I'm sure I'll hear from you later, but I do thank you for coming down here tonight and making such a good point to us all.

**Ms. Altemeyer:** Those are very kind words, and, of course, the best thing we could do is do the right thing, and it's going to take all of you. It's not going to be this side of the table or that side of the table or us; it's going to be everybody and doing a way lot more, and I controlled my language.

**Mr. Blair Yakimoski (Transcona):** Thank you very much for your words, Mrs. Altemeyer. It's truly nice to see you again, and I encourage you to return again next summer to Transcona and continue our discussion that we had this year when you came to the farmers' market.

And what you've instilled in your son and what you want us to all strive to I'm proud to say I'm working towards that with my children. My daughter just completed an environmental science degree in University of Victoria, and we have the discussions about composting and cycling. She lives in Canmore now and it's all about cycling and taking care of the environment and I look forward to the positive changes that we can make all together here, and I thank you again for coming and speaking.

**Ms. Altemeyer:** Thank you. I'm going to go hop on my bike and go home.

**Madam Chairperson:** I will now call on Georgina Garrett, private citizen.

**Mr. Gerrard:** Just on a point of order, sort of planning.

\* (23:20)

### Point of Order

**Madam Chairperson:** Mr. Gerrard, on a point of order.

**Mr. Gerrard:** Yes, well, we have—now we are roughly three presenters away from midnight, and I sense that there's probably more people here willing to—wanting to present than three, and so we need to let people know if we are going to stop at our customary time of midnight, or whether we're going to say—and which basically would limit us to about three more presenters, or whether we're going to continue.

**Madam Chairperson:** In response to your concerns, we had agreed when we began committee that we would listen and hear from as many presenters up until midnight, and then we would reconvene for tomorrow's committee. So we will go until midnight, at which point we have agreed that we will rise, and we will meet again tomorrow night for those who have not yet presented. *[interjection]*

\* \* \*

**Madam Chairperson:** I'm just going to remind our guests in the public to ask their questions of the staff at the back, please.

Okay. Ms. Garrett, do you have any written material for distribution—

**Ms. Georgina Garrett (Private Citizen):** No, I don't.

**Madam Chairperson:** Okay, please proceed with your presentation.

**Ms. Garrett:** Okay, well, good evening, Madam Chair, the honourable minister and committee members.

In the interests of time and in recognizing the extremely late hour, my comments will focus on the need to price carbon pollution by a carbon tax in Manitoba, and I'm simply skipping to the end of my presentation.

The Globe and Mail wrote in a editorial, this morning's paper, that a carbon tax is the most efficient way to tackle climate change, and it's the right thing to do. It further suggested that the federal government should simply have imposed a national

carbon tax on the provinces right from the start, and I agree.

Climate change is part of our national energy policy, as well as our national environmental policy, and it requires a national approach. I don't mean to be harsh, Ms. Squires, but there's no place for made-in-Manitoba solutions that undercut federal carbon-tax targets and take a silo approach on climate change.

Canadians develop and use fossil fuels intensely. We need national standards, benchmarks and timelines to meet our international obligations to reduce fossil fuel consumption. There's also no place for picking fights with the federal government on this critical issue.

In conclusion, I'd like to see Manitoba work with the federal government to implement the policies on the pan-Canadian framework on climate—sorry—clean growth and climate change, including a robust and comprehensive carbon tax that meets national targets.

Climate change is too important for partisan politics. That's my Coles Notes.

**Madam Chairperson:** Thank you for your presentation.

Do members of the committee have questions for the presenter?

**Ms. Squires:** So I want to thank you for being here and apologize that you felt you needed to rush through your presentation in the interest of time, but I do value the fact that you stayed here as late as you have tonight and shared with us your views and your perspective, and I certainly want you to know that I appreciate your time, and I appreciate you coming down here tonight and certainly look forward to hearing from you more in the future.

**Madam Chairperson:** Mister—*[interjection]*

Oh, sorry. Ms. Garrett. Did you have a response?

**Ms. Garrett:** No. Thank you.

**Mr. Altemeyer:** Yes, thank you very much, Georgina, for coming down here. You may have truncated your presentation, but you certainly hit it. Like, you just nailed it. We on this side of the House are powerless to enact anything on our own. We do not have that ability. That ability lies with the government that won the last election. And yet a non-partisan approach to climate change is what we need, one where the wisdom and experience and

science that's—that you have brought to the discussion tonight, along with everyone else. That's what needs to be acted upon. And yet we've seen just barrier after barrier and, you know, the partisan aspect dominating the substance of what needs to happen.

So I'll just ask a broad question: How disappointed have you been in how this has played out so far in terms of what Manitoba could have been doing, what you would have liked to have seen us do on climate change versus where we're at right now?

**Ms. Garrett:** I'm not a would-have-been, could-have-done, should-have-done person. I think that the government now has an opportunity to move forward. It can make a decision to join in the provinces that are fighting the federal government on carbon tax, or it can make a decision to co-operate with the federal government, to work with the provinces that have progressive policies on climate change and greenhouse gas emissions.

So that's a choice that the government has. It has a large majority; it can exercise leadership on this issue if it wants to.

**Mr. Gerrard:** Thank you for your presentation and the clarity of your message.

I—just to be sure that I understand part of it—I mean, what you're saying is that we should have the same framework for the carbon tax as nationally, but there—is there room for allocation of the funds coming from the carbon tax differently from province to province?

**Ms. Garrett:** Well, one thing—and I regret that I didn't bring The Globe and Mail editorial here—is it pointed out that the—what would have been ideal in hindsight is for the federal government to have one uniform climate change—or, carbon tax.

But it acknowledged that, given that—I believe it was British Columbia and Quebec already had very robust carbon pricing in place—the federal government chose to respect that and to allow provinces to decide whether they were going to go with a cap-and-trade system or a carbon-tax system.

So—and then that also impacted—so I'm not sure I'm answering your question, Mr. Gerrard, except that we do have something of a hybrid system in Canada. It's not ideal, but I think it can work with good faith and co-operation by the provinces.

**Madam Chairperson:** Seeing no further questions, thank you for your presentation.

We've been notified that a previous presenter—No. 40 on your list, Mr. Robert Elms—had forgotten to include a page in his written submission. Is it the will of the committee to allow—oh, and we're going to distribute it right now for you. Okay.

I will now call on Matthew Lawrence, private citizen. Matthew Lawrence will now move to the bottom of the list.

I will now call on Danielle Cayer, private citizen.

Ms. Cayer, do you have any written materials for distribution for the committee?

**Ms. Danielle Cayer (Private Citizen):** I do not.

**Madam Chairperson:** Please proceed with your presentation.

**Ms. Cayer:** Hi, I would like to thank you all for your time. I know as probably the second-last presenter tonight, you are all probably quite tired. I'm glad that everyone is here physically and mentally with me.

I come from a perspective as a student and a young person. I'm a recent graduate of the University of Manitoba. I graduated from the Faculty of Science, the department of biology. And I think I speak on behalf of a lot of young people when I say that we have a lot of concern with the way that the climate—with the status of the climate right now and the general lack of action that is being proposed by the provincial government.

As someone who's recently graduated, I will be looking to enter the workforce, and I want to make sure that the city and the province that I live in is a sustainable province. And, with Bill 16, I'm not convinced that that is the future for Manitoba. When I first read Bill 16, I'm—I don't really come from a political background, so I was kind of unsure as to how that was going, but it seemed as more of a pre-emptive document outlining what a climate action bill should look like. Because there was so little action proposed in the bill and such kind of vague wording, it seemed more so that it wasn't quite the bill that it should be.

\* (23:30)

Right now, as it stands, there is no timeline or greenhouse gas emission reductions stated. As mentioned many times earlier tonight, the UN IPCC has recommended a 45 per cent reduction in greenhouse gas emissions by the year 2030. I think that climate science, which comes from multiple,

objective studies, peer review and intense, intense review, needs to be tightly intertwined into the bill that we put forward.

Right now there is a lack of clear-cut objective wording in terms of reporting. It appears right now that the government can report on the proposed decreases in greenhouse gas emissions, but there is little to no accountability in terms of reporting to any maintaining or increases in greenhouse gas emissions. As mentioned many times earlier tonight too, I think, total emissions, absolutely, on an annual basis need to be reported versus the cumulative emissions that are put forward right now.

As a science student too, I think the importance of frequent consultation and updating of Bill 16 in terms of the international—the UN international panel on climate change is absolutely pertinent. As more and more information comes out, I think this bill should be subject to update and that there needs to be strong action today due to the lack of action that we have had in the past and in the present.

I think the bill lacks the ability to hold industries accountable. Bill—our industries also need to be held accountable to report increases as well as maintaining emission levels as stated.

So things that I would like to see as a young person, and I think, in consultation with many other people who perhaps did not know that this opportunity exists for them, I think we need to have much more accessible transit. Thankfully, I live in the centre of the city, so for me, transit is relatively doable. I think for people living in suburban areas, it's absolutely not a way that they can get around. Buses come every 40 minutes, if they come at all. In -40°C weather, no one wants to walk 20 minutes to a bus stop that a bus might not even come.

I think there needs to be incentives for waste reduction in small businesses. I've worked in the restaurant industry for five years now, and I can say it is incredibly devastating the amount of waste within those industries. One of the restaurants I work at now, every piece of—everything that comes in goes out as garbage. There's no incentives for these businesses to adopt a recycling program. It's either too expensive or it's too inaccessible, and I think that kind of—that goes across small restaurants in Winnipeg on—by local business owners.

I think we need to follow suit to other cities across Canada. We need to ban single-use plastics such as Vancouver, Victoria, PEI and Montreal all

have done. It seems like a very simple thing we can do that is clearly being urged by a lot of people in the city.

As mentioned tonight, too, we do absolutely need to have an investment into clean energy in terms of solar energy, electric cars. I think there are people who are much more educated on that who shed some good light on that topic tonight.

And, lastly, I think bike lanes are a huge thing that we need to put forward as well. It's been really fantastic seeing the increase in bike lanes in the Exchange. I know even on Pembina. But we're not there yet. I don't have a car. I either transit—I get around by bus or by bike, but I would not bike to South Osborne or I would not bike certain areas because it is—I don't feel that it is safe, and I think safety is a huge concern that a lot of people have.

To conclude, I think, for too long, we have operated on a basis of convenience. We are at a point now where that's no longer an option. Maybe 20 or 30 years ago we could have conveniently reduced our emissions and conveniently acted on climate change, but now the unfortunate option is that we will have to be inconvenienced as citizens in order to make a change.

I feel sad because I think people of my generation do feel very powerless in this situation. They feel very much at a loss as to what they can do in light of what's going on in the south, what's going on here, it's—it can be kind of an isolating feeling when you don't feel like you have much of a say, so thank you for having me here.

And, lastly, I think as much as we can all make our individual choices in terms of how we get around, the food we eat, that kind of thing, what it comes down to is that, as an individual, we do not have enough power to enact the amount of change that is necessary to mitigate climate change today.

And I'm urging you as our provincial government to please, please take into account all of the people who have presented today, all of the amazing things they've had to say, and to please put that forward in Bill 16 because we really need change to happen now.

Thank you.

**Madam Chairperson:** Thank you for your presentation.

Do members of the committee have questions for the presenter?

**Ms. Squires:** I think you being here tonight and expressing your opinion and your voice, you're showing leadership and demonstrating to everyone in your circle that you're certainly not powerless. You have an opportunity to come down and have your voice heard, and I want you to know that we're listening and really appreciate your voice.

I also really appreciated what you had to say on the recycling piece. I believe you're the first one tonight to really drive home the importance of reducing our, you know, reliance on single-use plastics and ways that we can enhance our recycling initiatives.

And that's something that I'm certainly—was very eager to hear your opinions on that, and our government is taking action on some enhanced recycling initiatives and very pleased to know that we have your support in that.

**Mr. Altemeyer:** That was awesome. Thank you very, very much for coming down here. Another voice of the future; I mean, literally, this is one of those tables where decisions are going to be made that is going to have a huge impact on what kind of future you can have, and that's not fair. It's not fair to you, to be clear.

And I just hope that this government listens to what you have offered them. So far we have not seen any indication that they get it. We'll find out, as we go through this process, if they are willing to move in a good way, but don't doubt for a second that you absolutely did your part down here tonight. And I commend you for your individual lifestyle choices as well that you've clearly made.

I guess my only question for you: as a recent science graduate, would you like to see legislation in Manitoba require this province to reduce emissions according to what climate scientists are telling us have to happen?

**Ms. Cayer:** Absolutely. I think that we have the—we have a bucket full of evidence that is saying that we need to take action, and there's proposed initiatives that, if we were to follow, will absolutely help with the impacts of climate change, and I think we can't ignore those any further.

We need to heavily introduce the science into Bill 16, and future legislation in general.

**Mr. Gerrard:** Thank you, and I'm particularly interested in your comments on the restaurant industry. We had a presenter earlier on who gave us

a paper—I'll just read a little bit from this: France has banned grocery stores from throwing away edible food, and across France, 5,000 charities depend on the food bank network which now nearly—gets nearly half its donations from grocery stores.

They act by simply not throwing away so much food, and it is suggested that globally reducing food waste would save some 70 gigatonnes of carbon dioxide, one of the best solutions anywhere for combatting global warming.

So would you suggest that we follow the lead of France?

\* (23:40)

**Ms. Cayer:** Absolutely. I think—I heard a statistic today, something that—something along the lines of 61 per cent of manufactured food is thrown away, and I think France, in terms of banning grocery waste, is huge, and I think that is something that we could really use in Manitoba. It would help tons of charities and organizations for sure, especially speaking in the restaurant industry, I do believe that there is a huge amount of food waste. I've heard of certain restaurants that will kind of have, like, a charge if, you know, if you go to a buffet or something and you don't finish your food, that there is a charge, and I think things like that should absolutely be mandated more frequently.

**Madam Chairperson:** Thank you for your presentation.

I will now call on Ray Garnett, private citizen.

Mr. Garnett, do you have written materials for distribution to the committee?

Please proceed with your presentation.

**Mr. Ray Garnett (Private Citizen):** I, for one, am happy that the Manitoba government has opposed the federal government carbon tax, and I'm actually grateful for the hearing that—you know, that we can present our views on this subject.

I'd like to say I've worked in the field of climatology for 43 years. I worked 25 years at the Canadian Wheat Board with their Crop Surveillance Department and subsequent to leaving the Canadian Wheat Board, I've worked as an independent consultant, researcher, and such, and you'll see lots of things in that handout.

The first thing I want to say is that carbon dioxide is not a pollutant. It needs to be repeated: Carbon dioxide is not a pollutant. Carbon dioxide is

not a pollutant. If only our Prime Minister knew that simple fact.

Carbon dioxide is a tiny fraction of the atmosphere at .04 of 1 per cent. Six per cent of carbon dioxide of the air is anthropogenic and 94 per cent of that .04 of 1 per cent is from natural outgassing, implying the temperature effect of human emissions is negligible.

Carbon dioxide is essential to life on this earth. The sunlight plus water plus carbon dioxide, the basic process that creates all plants. Plants need and thrive on carbon dioxide. If we want to go green we need more, rather than less, for photosynthesis.

Where would we be without plants? Think about that angle, and photosynthesis.

Carbon dioxide has nothing to do with the temperature of the Earth. The sun controls the temperature of the earth. An absence of sun spots usually means the earth cools. I went to a conference in Portugal. There was fellow by the name of Camille Veyres. He presented, and he presented and it's in your handout there—11 facts you must know to avoid being deceived by anthropogenic global warming.

Greenhouse effect myth: it is hypothesized that only greenhouse gases, water vapour and carbon dioxide absorb infrared heat given off by the earth. This 150-year-old hypothesis falsely claims that oxygen and nitrogen do not absorb infrared heat. All gases absorb infrared heat by convection, conduction, and radiation. This is a big secret that has been confusing humans for the past 50 years. That comes from Hughes—well, it's a co-author; Hughes is—it's in the literature that I've handed out.

Anthropogenic global warming can be refuted in one sentence: The Roman warming, 250 BC to 450 AD, the Dark Ages of 535 to 900 AD, the Medieval warming of 900 to 13 AD, and the Little Ice Age of 1280 to 1825 invalidate all arguments supporting human-induced global warming. That comes from Ian Plimer in the book *Heaven and Earth*, which is in the literature that I have just handed you.

They say 97 per cent of scientists state that human-induced—this figure's thrown—oh, 97 per cent of the scientists think that we've got a global warming problem. Science is not done by taking a survey. Science is about testing hypotheses and reproducing results.

To quote Don Easterbrook, who is in those papers if you look—says this: Because of the absence of physical evidence that carbon dioxide causes global warming, the only argument for carbon dioxide as the cause of warming rests with—entirely in computer modelling. And I might include the University of Winnipeg's so-called model on that one.

Forecasting skill—the dismal forecasting has been done by the IPCC climate models for years. The period of 1980-2005 has shown. Dr. Khandekar and I wrote—have a peer-reviewed publication in your papers there, and Mörner has as well.

The forecasts of global temperatures have been 200 per cent or more higher than the observed. Now, you get into seasonal forecasting; the best approaches are the statistical approach using climate optimal normals, and the coupled oceanic models are right at the bottom for skill. So, when you think about these models, just think about the skill factor. They have very little skill.

Who's going to test a forecast made 20 years into the future? Are we all going to be here 20 years in the future? If you can't test it, it's not science. That's the end of it. If you can't test it, it's not science. Northern hemispheric snow cover has been increasing since 1967, especially the last 10 years. This is contrary to IPC predictions. Again, it's in our paper that Khandekar and I did just this past spring.

Cooling of global temperatures, 1960 to '75 levelling off since 2000 to present is not consistent with rising carbon dioxide. Again, it's in a publication we did in 2018, Dr. Khandekar and I. Increasing cold-weather extremes on a worldwide basis have occurred since 2000 with high economic impacts. Records have been broken on a worldwide basis and not reported in the media. Again, that's in that 2018 paper that Dr. Khandekar wrote. It's peer-reviewed. There's three peer-reviewed papers in that handout that I've given you.

Two thousand nine saw the deepest solar minimum in 95 years. The Canadian prairies experienced the coldest summer in over 60 years. That summer, we had two sunspots. Canadian prairie temperatures, May through July, have cooled 2°C between 1985 and 2015.

Alternative sources of energy such as windmills and solar are expensive and too often end up being subsidized by the taxpayer or tax victim. A case in

point is Ontario, the most indebted jurisdiction in North America.

Increasing carbon dioxide favours plant life. There's a 2016 report in your handout: The Positive Impact of Human CO<sub>2</sub> Emissions on the Survival of Life on Earth, published by Patrick Moore of the Frontier Centre for Public Policy. It's in the handouts. Solar activity is the cause of little ice ages and changing climate. You may have heard of the Oort. These are solar minimums. I don't know how well you know your solar minimums: the Oort, the Wolf, the Spörer, the Maunder and the Dalton solar minimums.

When the Earth cooled—I'm talking going into—going back hundreds of years. Global cooling occurs during times of few sunspots and low solar radiance. They tend to occur about every 210 years. The De Vries-Suess cycle, which is described in the literature I've given you—this and the Gleissberg cycles are well known to geologists and climatologists and are grounded in carbon-14 dating. Cosmic radiation is high during low solar activity, and low cloud increases and temperature declines. Easterbrook again, one of the—a great scientist from Washington State: A cooler world awaits us. We are now in year 10 of the Eddy solar minimum that commenced in 2010. Solar activity expected to be very low in the next few years.

September just passed—three sunspots. That's what we had. The average is about 60, 65, okay? Northern hemisphere in September was 12 per cent above the 50-year mean in September 2018. Three billion dollars of prairie crop is still in the fields on the Canadian prairies because they can't get it harvested because it's too cool, and there's been records set for early snow in Calgary.

One trillion dollars has been spent fighting the wrong threat, Easterbrook. If it only were a trillion.

Mr. Mörner, who's in there—who is a peer-reviewed scientist—and others are very confident a little ice age conditions will prevail 2030 to 2050. To quote the Friends of Science, the sun is a major driver of climate change, not you, not CO<sub>2</sub>.

And there you have it.

\* (23:50)

**Madam Chairperson:** Thank you for your presentation.

Do members of the committee have questions for the presenter?

**Ms. Squires:** Thank you very much, Mr. Garnett, for coming down here this evening. And one of the—this committee room is the hallmark of democracy in that we hear differing opinions all the time in this committee room, differing perspectives, and make space and room to hear all those perspectives.

Our government undoubtedly believes emphatically in climate change and we've—we personally in my role in working with the experts that I have the privilege of working with on a regular basis, whether it be folks on the front line of forest fires or folks that are managing a polar bear population that is feeling the impacts of longer land times and shorter ice times because of climate change. There have been irrefutable, you know, facts and realities that we have seen.

And so our government believes that climate change is a reality, and we're feeling it very acutely here in Manitoba and are taking action on climate change.

**Madam Chairperson:** Mr. Garnett? Mr. Kelly—oh, Mr. Bindle.

**Mr. Kelly Bindle (Thompson):** Thank you for your presentation.

My question is in regards to solar flares and sunspots.

Now, like, I'm from the North, so I'm familiar with the northern lights, and they're from solar flares that occur, I believe, because the liquid of the sun and their rotation changes. And every 11 years, I believe, there's more activity.

How is a solar flare and a sunspot—like, what are their differences? Like—

**Mr. Garnett:** Auroras happen with high solar activity, and we can get up into 200 sunspots a month. But right now we're at three, and it's going to be—diminish in the next few years.

If you study the documents that I've given you, especially the one that I did with Dr. Khandekar.

**Madam Chairperson:** Mr. Bindle, on a follow-up.

**Mr. Bindle:** Yes, but that's 210 years—like, I'm just trying to understand. That's a 210-year cycle, yet the solar flares are every 11, like—*[interjection]*

**Madam Chairperson:** Mr. Garnett, I need to first recognize you before you speak, so—Mr. Garnett.

**Mr. Garnett:** Go ahead.

If you—I've got data going back to 1750 and we're now on cycle 24. And those are 11-year cycles. The Gleissberg cycle's important, so is the DeVries-Suess cycle. I believe we're in the DeVries-Suess cycle of 210 years. And you can back that up.

If you read the literature I gave you, it's backed up with carbon dating. This isn't some cute computer model that doesn't work. And there's all kinds of it don't work if you read those papers. They're garbage. Some of those international panel on climate change models are just sheer garbage. *[interjection]* No.

**Mr. Altemeyer:** Yes, I just want to acknowledge your commitment to your point of view. I mean, you stayed here for almost six hours to have a chance to present it.

And I don't agree with your conclusions, I'll be honest, but this committee room is about giving the public a chance to talk to us directly and I thank you very much for taking the opportunity to do that with us here tonight. So thank you.

**Mr. Gerrard:** Thank you for coming and presenting and for giving us a whole lot of material to read, which I will read with interest.

I think part of what we have to deal with as politicians is the precautionary principle. And we also have—I mean, in fairness, there is a lot of science which links carbon dioxide levels to global temperatures. And, you know—

**Floor Comment:** Show me one.

**Mr. Gerrard:** Well, I can—there are many, many papers. I have seen good science which makes that link.

**Floor Comment:** They don't know whether it's the sun or the carbon dioxide.

**Mr. Gerrard:** Well, there are two alternate theories, and whichever, you know—time will tell, obviously. *[interjection]*

**Madam Chairperson:** So, if I have not recognized people before they speak, their comments will actually not be reflected on the record. So we are following the rules of the committee, and, unfortunately, our time for questions and answers has expired. So thank you for your presentation.

Before I recognize the next presenter, I would like to let the committee know that we are now at 11:56 p.m.

Is it the will of the committee to recognize the next presenter and allow them to complete their

presentation, which would take us past midnight? Agreed? *[Agreed]*

I will now call Robin Bryan. Robin Bryan will now be put at the bottom of the list.

I will now call Edward Burgener—or Burgener.

Oh, Edward Burgener will now be—*[interjection]*—are you Mr. Burgener?

**Floor Comment:** Yes, I am.

**Madam Chairperson:** Okay, we will move you to the bottom of the list then.

Mr. Burgener will now be moved to the bottom of the list.

I will call Curtis Hull.

Mr. Hull, do you have written materials for distribution to the committee?

**Mr. Curtis Hull (Climate Change Connection):** Yes, I do.

**Madam Chairperson:** Please proceed with your presentation.

**Mr. Hull:** So I have the enviable position of being last this evening. Thank you very much. And I have to say I'm so impressed with the stamina of the committee. I mean, I only do this every now and then, but I understand that you do this for a living, and so thank you very much for staying and for hearing me.

I—my name is Curt Hull and I work the Manitoba Eco-Network on a program called Climate Change Connection. So I work to educate Manitobans about climate change and to—I work with a large number of organizations and individuals in a lot of different sectors as they move towards climate solution. And my purpose for being here tonight is not to speak directly to the bill but rather to put some information before you to put into perspective the actions that are needed with respect to the bill. So—and the information that I'm putting before you is the Intergovernmental Panel on Climate Change, their recent report that came out in—at Thanksgiving and the 1.5° report and hopefully give you some idea as to why I was so moved by this report.

This—I've been working on climate change now for 12 years, having—I'm an engineer and I spent an entire career in manufacturing, and I've been working on this serious issue. But, having read a number of different reports in the past, this one moved me the most profoundly and, hopefully, I will be able to explain that to you. In order to understand

it, just—if you turn the paper over and just take a look at the figures, I will walk you through them.

The report that I'm reporting on is a 34-page summary for policy-makers. So there is a much longer report, but then they have a 34-page report called Summary for Policymakers, and I'm going to, if you will, summarize the summary.

Now, I've extracted three what I think are key figures from that report. The first one is a record of recent temperatures, global average annual temperatures, and then projections into the future based on a number of climate models that have been aggregated showing an envelope of potential temperatures for the globe, whether or not—like, with respect to the 1.5°C of warming since pre-industrial as the objective, and the report is intended to show the difference or the comparison between 1.5°C versus 2°C. And you can see with that curve, it shows an envelope of potential future temperatures that does level off.

\* (00:00)

Now, the consequence of that temperature, either at 1.5°C or 2°C, is what the second figure is all about, and you can see that there's differences in the tone of the colours with respect to these different aspects of concern. And you can see that between 1.5°C and 2°C there is a significant increase in the risk and impact in these different sectors.

So, for example: warm-water corals. If you want to go scuba-diving in the Caribbean, do it now, because in the next few decades that's unlikely that it'll be very colorful. Coastal flooding: also significant difference, et cetera.

So that they—just in general terms, you can see that there are a number of impacts of—primary impacts of climate change that become more severe even with that half degree of difference between the 2°C, which has been a target for so long, and now a realization that even 1.5°C of warming is quite dangerous and has significant impacts.

But those are primary impacts of climate change, and it doesn't take into account—this report doesn't take into account the secondary impacts of climate change, which are actually in many ways more troublesome. And I'm talking about when people can't feed themselves as a consequence of these primary impacts, they wind up as climate refugees.

And we're starting to see the impacts of that globally, in Syria, where—the number of people leaving Guatemala. One of the reasons for them to leave has to do with climate change. And so we have to be cognizant of those risks that are coming our way.

But the thing that really is startling is this, is that third one. Basically, the curve that you see in figure 1 levels off because of the reduction in emissions that is shown in figure 3. If those reductions don't take place, instead of that red line at the centre of figure 1 that levels off, it would continue to go up.

And the report itself doesn't talk about what's called positive feedback mechanisms that come into play when the loss or the melting of the permafrost and deep ocean clathrates—methane—start to bubble up and cause more warming on its own. It doesn't indicate those, but those are the consequences of an ever-increasing average temperature.

So this is what's the—I want to draw your attention to. If you look at that third figure, it shows how rapidly the world needs to reduce its emissions, starting no—the later we wait, and the latest they show in these models is 2030, but if we wait 'til 2030, we've got more overshoot. More into the two—we go into the 2°C of warming, and it lasts for longer.

Instead, we're talking about a precipitous decline in emissions and reaching a zero point somewhere around 2050, and then de-carbonizing, actually actively removing carbon from the atmosphere at the point—they're talking about 10 gigatonnes a year. That's a phenomenal amount of carbon having to be removed from the atmosphere.

So that's why I'm freaked out by what I read when I discovered this document and went through it. And the reason for me to stand here before you is, hopefully, to impress upon you what I have learnt from the science here as to the urgency of the issue and how deep the action needs to be and how quickly it needs to be taken.

And so I—that leads me to the recommendation I have. Given the current political reality, the likelihood of that third scenario is, at this point, unlikely. And, therefore, I'm recommending that the actions that we take is focused on building our resilience. And what I mean is, resilience means providing for our essential needs ourselves without fossil fuels.

And so I'm suggesting to this committee, to this government, to ourselves, to our society, that we need to focus on these three things.

We need to be able, in the next very short number of years, be able to feed ourselves without fossil fuel—without diesel for the machinery and without synthetic fertilizers. We need to be able to heat and cool all of our buildings, old and new, without natural gas, and we need to be able to move all goods and people without gasoline or diesel.

And I'm suggesting, as we move forward to solution, if we focus on metrics relative to those objectives, we will not only provide for a reduction in our emissions—dramatic reduction of our emissions, but we will also build a real resilience here in our province.

Thank you very much.

**Madam Chairperson:** Thank you for your presentation.

Do members of the committee have questions for the presenter?

**Ms. Squires:** Thank you very much for sticking it out with us for so long on this late evening. And I really appreciate your partnership in Manitoba in helping people transition to a low-carbon future. And I appreciate your perspectives and for working with me personally and—over the last year. And I look forward to that continued partnership.

I do have one question. In terms of your recommendations, feed ourselves locally without synthetic fertilizers or diesel for machinery—and I think about the richness that we have here in Manitoba where we actually do have that opportunity where I could envision us eating locally and enjoying the bounty of our harvest. But the other aspect to what we do here in Manitoba is we are—you know, we do it with great pride, we put food on the table around the world.

And I just wonder if you envision how we could continue to help feed other people around the world that are less fortunate than we are here in Manitoba that don't have that opportunity to grow locally.

**Mr. Hull:** Thank you for that question.

Here in Manitoba, we do pride ourselves on being an agricultural province, but we are largely an agricultural exporting province. And I don't propose that we stop exporting the necessary nutrients to our—the customers in the world. But I'm just suggesting

that we put more emphasis on to ensuring that, first and foremost, we're able to provide the food that we put on the table ourselves.

And, when we think of what we produce, we actually don't put very much of the food that we put on our table—we don't produce that much ourselves. If you—Hellmann's, the mayonnaise people, have a really good local food video that they show which quantifies for us the—on—at a Canadian perspective how little of the food that we put on the table comes from our own producers in Canada.

So I'm just suggesting that we ensure that, with our metrics, we have a handle on how much of the food that we put on the table is coming from ourselves locally and then continue to export, but not with the same gusto, if you will. Like, I mean, do both is what I'm suggesting.

**Mr. Altemeyer:** Thanks very much, Madam Chairperson, and you, Curt.

Absolutely, you should get a gold star for being our last presenter, staying here the longest and delivering a really important message. I mean, others have alluded to the report. This is absolutely the most detailed piece of it and presentation that we've had tonight on the science specifically—the different pathways that are required. So I definitely thank you for doing that, taking the time to lay these out for the committee.

And I love the fact that you're talking about how we've become carbon negative. We can't lose sight of that part of the path. It requires a dramatic drop starting, you know, yesterday. And getting us to carbon neutral as soon as possible and then continuing—we have to find ways to run our economy in a way that we actually put more carbon back into the soils or sequester it in other ways to be able to have a chance of restoring balance.

And, you know, the—just to double check that I am on the right path here, this report says we got to limit global warming to 1 and a half degrees average temperature rise. We're already at 1°. And if we did that, it would still only give us a two-thirds chance of avoiding runaway climate change, right?

The Paris Agreement calls for it to be limited to 2°, but the commitments made by nations so far won't get us there. We're on a path to, like, 4° to 6° warming right now based on what the countries of the world have said they will do.

\* (00:10)

And then there's the question of whether the countries will actually do what they said would do, and in Canada, one of the most developed and technologically sophisticated countries in the world, we're nowhere close to meeting our own commitments under the Paris accord.

And then there's the question locally of what role is Manitoba going to play in all of that.

So I think if you have any comments on that, I would love to hear them, but mostly just a word of thanks for making your last presentation a very impactful one for our deliberations here tonight.

**Madam Chairperson:** I will allow an opportunity for a response if that is what is chosen. We are at the end of our question time, but I will allow a brief response.

**Mr. Hull:** Thank you for that summary of the global inaction and how even the aspirations are—we're under-committed globally, and that's why what I'm suggesting here, if you look closely at the resilience measures that I'm proposing, if we meet them, we can provide for our essential needs regardless of what is coming our way, and that inaction is actually making it more likely that some of the more severe consequences are coming our way anyways.

**Madam Chairperson:** Thank you for your presentation.

Before we rise, it would be appreciated if members would leave behind any unused copies of the bill so that they may be collected and reused at the next meeting.

The hour being past midnight, 12:11, committee rise.

**COMMITTEE ROSE AT: 12:11 a.m.**

### WRITTEN SUBMISSIONS

Re: Bill 16

To Whom It May Concern,

On behalf of the Association of Manitoba Municipalities (AMM), which represents Manitoba's 137 municipalities, I am writing to provide some comments regarding Bill 16: The Climate and Green Plan Implementation Act.

As municipalities are front line stewards of the environment, the AMM urges the Province of Manitoba to partner with local communities to invest

carbon pricing revenues in municipal climate-resilient infrastructure, particularly water management, flood mitigation and drought adaptation infrastructure as well as public transit. With this in mind, the AMM commissioned Probe Research to conduct a poll asking Manitobans how much, if any, of the revenue from a carbon tax should be earmarked for municipalities. Out of the 1,000 people surveyed, more than two-thirds—67 per cent—indicated that municipalities should receive between one-half and all of the revenue from a carbon tax.

In addition, the AMM welcomes the exemption extension to municipalities for select marked fuels as this affects municipal public works and emergency vehicles. Based on preliminary data gathered by our office, costs incurred by individual municipalities for select marked fuels may represent up to 80 per cent of total fuel costs on an annual basis. However, the AMM believes the exemption should apply to all municipal vehicles, including public transit unless carbon tax revenues are reinvested in zero-emission fleet vehicles and transit buses. Otherwise, the carbon pricing scheme will have significant and negative financial implications on municipal budgets. Thus, increased provincial investments in public transit in the City of Winnipeg and other Manitoba municipalities are vitally important, particularly for supporting the goal of transitioning to a lower carbon economy and building more sustainable communities.

Moving forward, the AMM encourages the Province of Manitoba to closely consult with our organization and municipalities. Municipal representation on the Expert Advisory Council and other municipally-relevant committees is vital as municipalities are on-the-ground experts that best understand community needs, public sentiment and potential barriers to the development and implementation of regulations. Moreover, a municipal lens should be applied to all aspects of the Made-in-Manitoba Climate and Green Plan to better assess and address any implications for municipal decision-making and planning processes.

Thank you for the opportunity to provide these brief comments.

Sincerely,

Joe Masi  
Executive Director  
Association of Manitoba Municipalities

Re: Bill 16

Dear Committee members,

I am very concerned about the decision to not have a carbon emission tax. We all have children and grandchildren who need to live in the world we leave for them.

From the Wilderness Committee:

"This week a stark warning was issued by the UN Intergovernmental Panel on Climate Change—the global leading team of experts on climate change—stating we have merely a dozen years left to take serious actions to limit carbon emissions."

A dozen years. We are already experiencing extreme weather events that point to climate change. There are floods, and extreme heat causing fatalities in the world and in our own country. We cannot afford to think about what money this saves us if we don't have a planet to live on.

Please reconsider this decision for our children, and the future of our planet. "There is no planet B."

Regards;

Jennifer Engbrecht

---

Re: Bill 16

Dear Committee Members,

I am happy about the decision to forgo a carbon emission tax.

A carbon tax is not an environmental policy, but a government revenue policy. There are other things we can do as a country to control emissions and develop cleaner energy options through technology. A carbon tax will not have an impact on fuel usage and emissions.

Regards,

Barry Bisset

---

Re: Bill 16

Dear Committee Members,

I am concerned about the decision to forgo a carbon emission tax.

This decision comes at the same time as the 2018 Nobel Prize in Economic Sciences was awarded to

scientist Paul Romer who proved carbon taxes work and at the same time as the UN Intergovernmental Panel on Climate Change have issued a shocking warning we have 12 years left to take serious action to limit climate change.

Scientist and Nobel Prize winner, Paul Romer' work has proven climate crisis can be averted through economic policy which uses taxes to encourage companies to limit their emissions while simultaneously having the benefit of naturally encouraging innovative & cleaner ways of accomplishing the same thing.

Let's not underestimate our human potential to discover better ways to do things. Failure to do so has irreversible consequences for our children and grandchildren. Please impose a carbon tax.

Jennifer Sime

---

Re: Bill 16

Good evening everyone, on behalf of the Canadian Federation of Independent Business (CFIB), thank you for the opportunity to present the small business perspective of Bill 16: The Climate and Green Plan Implementation Act.

As some here know, my name is Jonathan Alward and I am the Manitoba director of provincial affairs for CFIB. At CFIB, we are passionate about small business. Because of their massive contributions to our economy, employment and communities, we believe small businesses deserve a strong voice in government decisions. CFIB provides a credible and effective way for small businesses to participate in the political process—just like big businesses and unions do.

CFIB represents 110,000 independently owned and operated businesses across Canada, including 4,800 in Manitoba. We are a strictly non-partisan, not-for-profit organization. Our members are located in every region of the province, and in sectors that closely mirror the provincial economy.

Every CFIB policy position is set by direct feedback from our members through accurate, regular surveys, which operate under a one member, one vote system. Our views are strictly based on results from these surveys. It is with great confidence that I can present here on behalf of our 4,800 Manitoba members, and express their support of the recent changes announced to Bill 16, and many parts of the

remaining legislation that will be studied this evening.

CFIB is very pleased that the Government of Manitoba will not be proceeding with a carbon tax.

Reducing green house gas emissions and becoming more environmentally friendly is important to Manitoba's small business owners. Most are actively working to reduce their business' emissions by: recycling better; reducing their electricity usage; using more environmentally friendly products in their processes; building more efficient buildings, machinery and vehicles; and even offering employee incentives to take environmentally friendly transportation. About 80 per cent of CFIB members believe that it is possible to grow the economy and protect the environment at the same time.

However, the majority of CFIB's Manitoba members oppose a using carbon tax to help reduce emissions because of the negative impact it would have on the economy.

CFIB received hundreds of signed petitions from small business owners across Manitoba urging the government to stop carbon tax plans and focus on the better tools to reduce emissions. Small business owners understand that the ensuing cost increases would have a significant impact on their business and employees. For example, a small local gravel company would be hit with over \$22,000 annually in extra taxes and forced to freeze or cut salaries. An embroidering business in rural Manitoba would have seen an annual \$2,500 increase in costs and forced to reduce hours because of a \$25 per tonne of CO<sub>2</sub> emissions carbon tax.

Worse yet, these businesses didn't have good alternatives readily available to help reduce their emissions. And, what little help is available would be unaffordable and out-of-reach because they would have fewer revenues available to invest in more environmentally friendly equipment.

This is not surprising to us. CFIB's research shows that small business owners are not motivated to reduce emissions because of fear of additional government policies like taxes or fees. Instead, most small business owners are motivated to and do implement environmentally friendly measures because of their personal views.

As CFIB has said from day one of Manitoba's consultations, there are better tools to help Manitoba's small business owners reduce emissions. Minister Squires mentioned that carbon pricing was

one tool in the toolbox. We agree, and our research shows that there are many better tools available to help effectively reduce emissions without negatively impacting the provincial economy. Many of these tools are included in Bill 16.

We would however like to see more efforts focused on improving the information available to business owners and residents to help make more environmentally friendly decisions. This will further encourage participation in government programming designed to reduce emissions. While this does not require legislation, it can be an effective approach, and CFIB can play an important role in sharing this information with business owners.

As the big voice for small businesses in Manitoba, we look forward to seeing Bill 16 receive Royal Assent without a carbon tax plan included, and for the Government of Manitoba to continue saying no to a carbon tax.

CFIB, once again thanks you all for the opportunity to present this evening.

Jonathan Alward  
Director, Provincial Affairs, Manitoba  
Canadian Federation of Independent Business

---

Re: Bill 16

Regretfully, I cannot be with you to make this presentation in person, as I attend the University of Manitoba in the evening. I believe it is imperative that young people such as myself take an interest in the future of our province.

As a 21-year-old university student, I know what it is to have a low income. In fact, I net about \$ -1000 a year because of tuition costs. I want you to keep this in mind when I say that the implementation of carbon pricing is a mandatory step for this province to take. It is of the utmost importance for Manitoba to take charge in the fight against climate change. Here are a few reasons that Manitoba should keep carbon pricing as the main focus of Bill 16.

Primarily, carbon pricing should be implemented by Manitobans so that it can be collected by Manitobans. If we abandon carbon pricing, there is a significant chance of a carbon tax being implemented by the federal government. A Manitoban carbon pricing initiative will give Manitobans the ability to say how the carbon tax revenue can be allocated, instead of just shuttling money off to the federal

government, which may or may not be seen again. I've heard arguments that Trudeau is all talk and won't actually impose the carbon tax. Should we risk it? Manitoba has a chance to be a leader in climate policy while keeping Manitoban money inside of Manitoba.

Secondly, I understand that there are many climate change deniers among us. This is deeply troubling, as the academic consensus among universities and other places of research is that climate change is in fact real. A quick search can turn up much peer-reviewed literature on anthropogenically caused climate change. By implementing carbon pricing, Manitoba can allocate the revenue of carbon pricing to meaningful climate research. If we all spend an extra 5 cents on gas, we can afford to get to the bottom of the issue once and for all, by allocating funding for research. If for some reason this research vindicates climate deniers, the tax can be removed. However, using the language of the precautionary principle, where there is a risk of serious and irreversible environmental damage, a lack of scientific certainty should not be used as an excuse to postpone cost-effective measures to mitigate environmental damage.

The environmental economist believes that pollution is not caused by human immorality, rather, that people simply lack the correct incentives to reduce their pollution. I firmly believe that the only way to combat climate change is to appeal to the thing this society holds most dear, their wallets. Manitobans lack the correct incentives to limit their pollution. Be mindful that I write this from a relatively economically disadvantaged position. Currently, I can heat my house with natural gas significantly cheaper than if I had an electric furnace. This is an example of an incorrect incentive. I cannot afford to install or operate an electric furnace to utilize the carbon neutral electricity our province already produces. If carbon pricing was implemented increasing the price of natural gas, I would get a little nervous financially (which is a major argument against carbon pricing). However, by implementing a Made-In-Manitoba carbon pricing plan, Manitobans have the ability to allocate carbon revenues back to Manitobans. Revenues from natural gas can be delivered back to Manitobans in programs to install electric furnaces, and lower the cost of electricity. If we miss this opportunity, and the federal government implements their carbon pricing, we have little hope of controlling the carbon revenues in such beneficial ways. In another

example, we could use carbon pricing to subsidize other energy alternatives, hybrid vehicles, or elements of the agricultural industry. All of these opportunities go away if we fail to act now.

In conclusion, though it may be inconvenient to pay a little extra for gas, it is the incentive needed to make meaningful changes that are required to preserve the earth as we know it now. A failure to act is unacceptable. A Manitoban carbon tax is much more preferable than a federal carbon tax because Manitobans can decide on the allocation of revenues. My generation has been told over and over that the earth is screwed up and there is nothing we can do about it. Carbon pricing is an opportunity to do something about it, and I will not silently let the opportunity slip away. Thank you for your time, and I hope you take this into consideration.

Joshua Leonhardt

Re: Bill 16

Dear Committee members,

I am very concerned about the decision to not have a carbon emission tax. We all have children and grandchildren who need to live in the world we leave for them.

From the Wilderness Committee:

"This week a stark warning was issued by the UN Intergovernmental Panel on Climate Change—the global leading team of experts on climate change—stating we have merely a dozen years left to take serious actions to limit carbon emissions."

A dozen years. We are already experiencing extreme weather events that point to climate change. There are floods, and extreme heat causing fatalities in the world and in our own country. We cannot afford to think about what money this saves us if we don't have a planet to live on.

Please reconsider this decision for our children, and the future of our planet. "There is no planet B."

Kurt Engbrecht

Re: Bill 16

Hello Government of Manitoba,

I am submitting this brief statement on Bill 16, The Climate and Green Plan Implementation Act because

I sincerely believe that it does not take greater action against the threat of climate change to the province of Manitoba. I believe that this is the case because of the inefficient carbon pricing tax, which is currently set at \$25 a tonne under Section 3 of the Climate and Green Plan. This is because I believe that we need to address the threat of climate change on the environment in a substantially tougher approach by increasing the carbon pricing tax six-fold to \$150. By increasing the price of greenhouse gas emissions, industries and households across Manitoba can accelerate the transition to environmentally friendly, renewable forms of energy to provide for the needs of humanity. If Manitoba is serious about reducing harmful carbon dioxide emissions into the environment, the increase of the carbon pricing tax is the most direct way for the provincial government to take this initiative. The increased tax will see Canadians paying substantially more for carbon dioxide emitting fuel and energy sources. This tax can be a force in enticing people to change their habits, including to the switch of the use of alternative forms of transportation like electric vehicles and eco-friendly technology for household use. By increasing the carbon pricing tax, the province of Manitoba positions itself uniquely as a green province so public and private parties can make investments in clean technology and green infrastructure, to ensure high-energy efficiency standards can be met for the Manitoban environment.

High carbon pricing is the anchor policy Manitoba needs to ensure the survival of the environment and for the betterment of Manitoban society.

Sincerely,

Peter Thomson  
University of Manitoba Arts Student

Re: Bill 16

Commentary on Bill 16: A Catastrophic Failure of Leadership.

Just this past weekend, the Intergovernmental Panel on Climate Change (IPCC)—the UN body in charge of informing policy-makers about the science of climate change—issued a landmark report saying that without urgent and unprecedented action to rapidly bring down greenhouse gas emissions in the next dozen years, we will face catastrophic consequences.

The contrast between the call by the UN to rise to our moral responsibility to mitigate climate change, and this government's gutting of the already-too-weak Bill 16 couldn't be more jarring, or speak any louder about the failure of leadership in our province.

Climate change is the defining challenge of our time. Dealing with climate change is not equivalent to, say, achieving a balanced budget—whatever the merits of that goal, but about the survival of entire species and hundreds of millions of human lives. This is not catastrophism or scare-mongering. It is a clear-eyed reckoning with the increasingly ominous signals being read by a vast community of earth and climate scientists, and by people on the front lines of warming. So, we have an array of facts before us as follows, some of which are, to the government's credit, palely reflected in the preamble to Bill 16.

1) Climate change is manifesting itself now. Model projections for many of the consequences of warming have proven conservative in terms of their timing and scale. This is not a fight we can put off—and in fact we should have been engaging in it decades ago. We are late as it is.

2) The consequences of our failure to engage meaningfully are difficult to overstate. They are too many to list here, but to summarize the vast field of research on this, they are civilizational in scale. Should we continue to pussy-foot around climate change, there will be hundreds of millions of victims—victims of dislocation, sickness, and death. Already, just to take one small indicator, the World Bank estimates that there will be 140 million internally displaced people resulting from climate change by 2050, and millions more internationally.

For those whose pulse is quickened by costs expressed in dollar figures, rather than human lives and ecological destruction, the costs of adapting to increased severe weather run into the tens of trillions. A conservative estimate of the global costs of just coastal flooding is \$14 trillion. And we'll be knocking 13% off of global GDP by 2100, even if we can stick to a 2 degree target. If we blow through that target, which we are on track to do, the IPCC warns that it will be much, much worse.

3) We are well aware of what's causing this. The hard math that drives the arithmetic of climate change is unforgiving and unambiguous. The IPCC's carbon budget makes it as plain as it can be. If we continue to allow people to dig up and burn fossil

fuels without a clear and rapid plan to transition off of them we are headed for catastrophe.

What these facts mean together is that in refusing to hold to account those responsible for continuing to pump out greenhouse gases we are knowingly contributing to the dislocation, misery and death of hundreds of millions around the world. It is happening now and will accelerate in the near future. These are not comfortable facts, and a less comfortable conclusion, but they are unassailable, and confronting them is the burden of leadership.

Leadership is required here because a meaningful response to climate change (despite the Climate Plan's repetition of the myth that for individuals, there is "always a greener choice") actually requires collective, policy-led changes. Getting off of fossil-fuels does not entail individual decisions to simply turn off the carbon tap, because our economies, our physical infrastructure, and the ways we move ourselves, feed ourselves, and keep warm are carbon-heavy. We often hear people who point out this reality go on to say "so, fossil fuels will be a part of how we do things for a long time yet," and certainly many organizations behave as though that's true. Large emitters will continue to behave that way unless compelled to do otherwise. Fortunately, there are feasible, though difficult at this point, ways of transitioning off fossil fuels.

These can and should entail the up-skilling of workers in currently high-carbon sectors, as, for example, oil patch workers in Alberta are doing through the organization Iron and Earth, and the protection of low-income families who will have some of the costs of transition passed onto them. Some cities and states elsewhere are showing what can be done: Paris' climate plan, to take just one example, has over 500 initiatives to make it a vibrant, livable, carbon-neutral city by 2050. Local and sub-national governments are using public purchasing power to encourage transitions to low carbon vehicles, investing in efficient public and active transportation to move people through our cities, encouraging zero-carbon energy systems through targeted public investment, providing subsidies or support for demand side energy management, retraining workers in carbon-intensive sectors like pipeline construction, putting them to work in good jobs building the new infrastructure required for a zero-carbon economy, and providing research and extension for zero-emissions or net-negative agriculture. These bottom-line requirements

of our collective responsibility for climate change require policy leadership.

If the "Climate and Green Plan" is the sum total of Manitoba's response—and so far it seems to be—it represents an epic, even catastrophic failure of such leadership. If we are in a fight with climate change, we're sending a kindergartener out against a title fighter, and should only expect a beating.

There was much to say about the insufficiency and poor design of the carbon tax that initially appeared in Bill 16, but which has now been cut out. It was utterly insufficient to produce any meaningful change, had no plan to use revenues in innovative ways to encourage a shift off of fossil fuels, and failed to protect low-income Manitobans from regressive effects. However, it was a signal that Manitoba was at least willing to take a baby step. With the removal of the carbon tax, we now have a bill utterly devoid of significance or effect.

Premier Pallister justified the removal of the carbon tax by saying that we should be given credit for our investments in Hydro. Our electricity source is, indeed, relatively low-carbon. Yet still in 2016 Manitobans managed to produce about 16 tons of CO<sub>2</sub> equivalent per person—well over 10 times the global equitable level. Looking at territorial emissions, our neighbours to the east in Ontario and Quebec perform much better. Our emissions from agriculture are almost 40% higher than they were in 1990. On transportation, our other major emissions source, emissions from 1990 are up as well, almost 70%. There is simply no basis for the claim that we are already pulling our weight—and one can only imagine how such claims are heard in a place like Tuvalu, being swallowed by rising seas, by people in the Philippines, hammered by superstorms made more powerful and frequent by climate change, or in the arctic, which has already warmed 3.5 degrees on average since the beginning of this century, and where communities are slumping into the sea.

Due to our small size, we might say that there are others who should be leading the way—others who are more culpable than us. The problem with this logic is well-known, and derives from the global and collective nature of climate change. The necessary political condition for a coordinated and global response to climate change—one that is adequate to the enormous nature of the challenge—is visible cooperation. Everyone must see that everyone else is pulling as hard as they can pull toward the objective. Laggards—the most obvious being the Trump

administration in the US, but also the Manitoba government's comrades in resisting climate action, like Premier Doug Ford and Opposition Leader Jason Kenney—don't just undermine the project through their refusal to reduce their own emissions. They undermine it by signalling that efforts won't be reciprocated, encouraging others to minimize their efforts in turn. While we can't do anything about Mr. Trump and his Canadian counterparts, we can send a different signal—one that demonstrates that we are willing to lead, rather than foot-drag.

If everybody follows the climate resisters' lead, the logical endpoint is crystal clear. A provincial government concerned enough about the deficit situation to cut funding to education and health care should be very concerned about the ballooning future costs to the public of adapting to the 3.2 degree warming forecast for this province under even a low-carbon scenario. Now is not the time for penny wise, dollar foolish public policy. If we peg our ambition to those who do nothing to combat climate change, the future economic costs will be astronomical.

The global effort to combat climate change is already well behind schedule. Funding for mitigation and adaptation has not materialized. Reductions are less than needed. This global effort, of course, is composed entirely of policies and programs like this one. It is ultimately legislation and action at local levels that make up the global effort.

Refusal to join this fight is not protecting Manitobans. It consigns us to an unsustainable and laggard economy from which future investment will shy. In June, a group of 288 global institutional investors controlling \$26 trillion in assets called the G-7 members out for their lack of ambitious climate change action. Investors are looking for policy environments in which green investment is welcome. The Manitoba government's stance on climate change generally and its withdrawal of the carbon tax in particular not only costs public coffers millions in the short term, but sends a loud signal that Manitobans prefer to stick with the fading and destructive fossil economy of the 20th Century.

It is well past time to acknowledge the stakes of climate change not in substance-less preambles but in the form of policy that will actually make a difference. The current generation should not have to face the 3 degree average warmed world in store should governments limit themselves to the current national pledges under the Paris Agreement. Nor should our children have to deal with the 6 degree

warmer planet that we are actually on target to realize, as governments put forward tragically insufficient legislation like Bill 16. I urge this government to look straight on at these stakes, acknowledge our moral responsibility in doing our part to avert the worst, and to deliver to Manitobans a piece of legislation that intends to make a meaningful contribution. That contribution should embrace and support a just transition off of fossil fuels, help us move toward a 21st century economy, and be reflective of our unwillingness to make others suffer on our behalf.

Mark Hudson  
CCPA-Manitoba Research Associate  
Associate Professor of Sociology  
University of Manitoba

---

Re: Bill 16

The future that we all want

It is so happy for me, an international student, to hear that government of Manitoba are trying to do something for our environment. We all live on the earth, rely on the environment of it. Without nature, we can't even survive! So there is no debate that how important environment is. However, nowadays our home are destroyed by our-self, especially the field Bill 16 focus on: atmosphere, air.

As human, we all want us and our families to have a better life which should be green, fresh and healthy. Yes, we buy products come from factories. It seems like that we want convenient rather than healthy life. But the true of our nature is we always chasing healthy life. Highest price of foods in supermarkets are always organic, items that seem close to nature are much more popular than not, if we have a baby to feed, best foods will be natural but not artificial. So it is not hard to conclude that as human, the greatest wish is to have a less carbon emission, better environment world.

As international student, we all want to study, work, live in a country that trying to provide a best living environment to its citizens. Maybe some people will say that the real need for international students is money, they only need a place where can offer enough jobs to earn money, such as a province which has so many factories. But as I said before, the ultimate pursuit for people is better life quality. No matter where you come from, if you have enough money to choose which place to live as your home,

flatland, lake, mountain, forest will be much more competitive than skyscrapers and factories. Only better environment can attract more population to our city.

For industry field which needs to release tons carbon per year, we all want to create more interests, but more interests are not conflicting with better environment. I can understand how big loss Bill 16 will cause to industry field in short-term. We have to buy a lots of equipment and facilities to cut down our carbon emission. However, industrial transformation is inevitable in long-run, time is changing, our industry has to change either. We can't stay in the 80s, 90s forever. Sustainable development is the

main trend in the present. If we don't do anything for industrial reform, we may expand the gap with other countries. In addition, resources come from nature, nature is the root of industry. If our industry destroy the root, how long it can stay alive. As the old Chinese saying: "lucid waters and lush mountains are invaluable assets." Even industry needs support from better environment.

The future that we all want is a green, fresh and healthy place. This purpose doesn't conflict with anyone. Now what we need to do is being firmly to complete our green goals in every periods.

Huang, Yifei

The Legislative Assembly of Manitoba Debates and Proceedings  
are also available on the Internet at the following address:

**<http://www.gov.mb.ca/legislature/hansard/hansard.html>**