PRINCE EDWARD ISLAND LEGISLATIVE ASSEMBLY

Speaker: Hon. Carolyn I. Bertram **Published by Order of the Legislature**

Standing Committee on
Agriculture, Environment, Energy and Forestry

DATE OF HEARING: 6 JUNE 2013 **MEETING STATUS:** Public

LOCATION: POPE ROOM, COLES BUILDING, CHARLOTTETOWN

SUBJECT: PRESENTATIONS ON FRACKING, OIL/GAS DRILLING, AND ALTERNATE ENERGY

COMMITTEE:

Paula Biggar, MLA Tyne Valley-Linkletter
James Aylward, MLA Stratford-Kinlock
Bush Dumville, MLA West Royalty-Springvale
Sonny Gallant, MLA Evangeline-Miscouche replaces Kathleen Casey, MLA Charlottetown-Lewis Point
Hal Perry, MLA Tignish-Palmer Road
Buck Watts, MLA Tracadie-Hillsborough Park

COMMITTEE MEMBERS ABSENT:

Kathleen Casey, MLA Charlottetown-Lewis Point
Pat Murphy, MLA Alberton-Roseville

GUESTS:

Don't Frack PEI (Marie Burge, Andrew Lush); Save Our Seas and Shores (Irene Novaczek, Ann Wheatley); Matthew McCarville

STAFF:

Ryan Reddin, Research Officer and Committee Clerk

Edited by Hansard

The Committee met at 1:30 p.m.

Chair (Biggar): Good afternoon, everyone.

Welcome to the Standing Committee on Agriculture, Environment, Energy and Forestry. I want to welcome everyone here and those of you who have come to watch the proceedings today.

Members of the committee, you have the agenda before you. If I could have an approval of the agenda?

Mr. Dumville: So moved.

Chair: Bush Dumville.

Just looking at the agenda, we have a number of presentations this afternoon from groups that have requested to come before the committee and we're very pleased to have you here this afternoon.

Our first group that is with us is Don't Frack PEI. We have scheduled approximately 30 minutes for each group to allow for presentations and questions and to make sure that we do have good discussion. What I think would perhaps work effectively is for the groups to do their presentation and then I will recognize members who wish to have some questions after the presentation is done.

First up is Don't Frack PEI. If I could ask those who are doing the presentation when they come to the table to identify themselves and their role or their involvement with that particular group, and I'll turn it over to you and welcome you.

Go ahead.

Marie Burge: Okay.

Chair: It is being recorded. Just so everyone knows, everything here is being recorded for Hansard, so if any time you want to go back and look at the presentation it will be listed under the Legislative Assembly website and you can get that once it's transcribed.

Marie Burge: We'll watch our language besides.

Chair: Well, hopefully we will not be unparliamentary, because we are under the rules of the Legislature while we're here.

Okay, go ahead.

Marie Burge: Chairperson Paula Biggar, and members of the Standing Committee on Agriculture, Environment, Energy and Forestry, thank you for providing us this opportunity to hear from two organizations this afternoon whose interests and concerns are vital to PEI's future for the environment and for energy policies.

Our two related but totally distinct groups, Don't Frack PEI and Save Our Seas and Shores, will present in tandem. Then, on behalf of both groups, a member of both our organizations, Matthew McCarville, an energy policy alternatives promoter, will present a realistic vision for the future of PEI energy based on wind, water and solar sources.

We will begin with Don't Frack PEI. My name is Marie Burge and my co-presenter is Andrew Lush. We're both members of the steering committee of Don't Frack PEI. It's an interesting name, so we like it.

The beginnings of the organization. The stirrings for Don't Frack PEI began in 2010 when the now-famous American-made documentary, *Gasland*, became available in PEI. A number of groups across the Island began spreading the word about PetroWorth and Corridor Resources having exploration access to large swaths of PEI land: 440,000 acres was the estimate.

The Union of Public Sector Employees was the first to present the issue in the media in November, 2010. The following spring, 2011, the Latin American Mission Program at its annual general meeting issued a letter to then-minister of the environment, Richard Brown, along with a media statement, demanding all politicians and policy-makers to take a no fracking in PEI stand. In August 2011 a large public rally against fracking was held in front of the Legislature. The Sierra Club of Canada, Council of Canadians and many other community-based organizations were involved and quite vocal.

On January 22, 2013, after two well-attended public meetings of PEI residents addressing concerns about the prospect of hydraulic fracturing – fracking – coming to PEI it was decided to form Don't Frack PEI. There was unanimous agreement that Don't Frack PEI would become identified as the people's voice about the widespread preoccupation about the probable effect of fracking on the Island. Very early on it was clear that we are witnessing – and we were witnessing then – the development and growth of another positive community-based movement in Prince Edward Island.

The new organization, Don't Frack PEI, was mandated to press ahead with a number of initiatives to educate the public and influence our elected representatives, and other public policy-makers, about the dangers that we find in fracking.

Don't Frack PEI has roughly 80 members, both organizational and individual. We meet several times a year. The steering committee of seven members carries out the day-to-day work, responding to community requests for presentations and being present in the media, and meeting with policy makers. We have a very lively website which you'll see written in your document when you receive it: www.dontfrackpei.com.

Don't Frack PEI's community engagement work started immediately. Our community has made presentations for the following communities and organizations, averaging about 35 to 40 people in attendance in rural PEI. First of all, the one in the city, CARI Seniors Active Living Centre; Hampton; Hunter River; Friends of Covehead and Brackley Bay and Winter River-Tracadie Bay Watershed Association; Argyle Shore Women's Institute ,and friends. Don't Frack PEI participated in showing *Promised Land* at City Cinema and did numerous media pieces. These meetings and events have resulted in more requests for presentations in various parts of the Island, and we have a handout that we give to the community that we also have attached to our presentation.

We are learning the following things from the community, and this has been really important to us because we have to find a way of getting the voice of the community said in a very clear way. We are documenting what we're hearing from the community as we go around.

The community is on high alert about fracking. Islanders are developing zero tolerance towards any development that has even a slight impact on our water. People know that we are totally dependent on one source of water, that is groundwater, for our survival. People know that the porous sandstone aquifer underlying PEI is very vulnerable to any kind of interference. They recognize the potential of hydraulic fracturing to compromise or destroy the Island's water supply. People are concerned about the health of the land and of the people. People want to learn more. They know that the oil and gas industry interests are not the same as the interests of the majority of Prince Edward Island residents. Finally, we are hearing from the community that there's a very low level of trust in environmental assessments.

Many have noticed that the federal government's 2012 changes to the environmental assessment process gives undue leverage to corporate interests and very little space for citizens' effective input. These changes apply to provincial assessments as well. Therefore, people are not comforted when governments indicate that their approval of fracking will depend on the results of an Environmental Impact Assessment.

Don't Frack PEI communications with public policy makers and politicians. We are pleased to say that we have had excellent meetings with various levels of government and opposition parties. On Wednesday, May 15th, the Don't Frack PEI committee met with the PEI minister of environment, Janice Sherry. It was a very productive and uplifting meeting which exceeded our expectations.

The only negative aspect of this meeting was that Jim Young, director of environment, the only other person with the minister, left the meeting to gather up and then hand to each of us a report called: Understanding Hydraulic Fracturing, a document of the Canadian Society for Unconventional Resources. It was shocking to us that the department of the environment would feel it appropriate to be promoting the position of the oil and gas industry. We are

taking this issue up with Minister Sherry herself.

Later that day our committee met with three MPs, Sean Casey, Wayne Easter, and Liberal environmental critic Kirsty Duncan, all of whom were very helpful. We have had positive meetings and dialogues with some of the PEI political parties: the Green Party, which has made a public declaration about fracking; and the Progressive Conservative caucus.

Andrew Lush: So what is fracking? Hydraulic fracturing – more commonly known as fracking – is a process where sand, water and chemicals are blasted into rock formations such as dense shale beds, sands and coal beds. This injection process cracks the rock formation and allows gas to flow up the well. Along with the use of newer drilling technique invented in 2005 known as horizontal wells, fracking has allowed the energy corporations to exploit previously hard to reach unconventional supplies of gas. Prince Edward Island probably has a substantial amount of this gas deep underground.

So what's wrong with fracking? As the energy corporations in Canada and the United States expand their unconventional natural gas operations, questions are being raised about the health and environmental risks posed by fracking. There have been massive public demonstrations and public reaction against fracking. For instance, in New Brunswick there are civil disobedience classes being arranged, and organizations representing 50,000 people recently asked the government to put a permanent moratorium on fracking.

Industry says that fracking is safe if drilling is done properly, and if there is adequate oversight. That's not good enough. The Auditor General of Canadian environmental regulations is worried about the rise of fracking, and he stated that: Environmental protection may not be keeping pace with resource development, which we believe is an understatement.

In October 2012, for instance, a report from the US Government Accountability Office, an independent, non-partisan agency that reports to the Congress, concluded that fracking poses serious risks to health and environment. The report found that the extent of the risk has not yet been fully quantified and that there are many unanswered questions and a lack of scientific data. This is but one of many reports stating that sound scientific practice is being sacrificed in the rush for cheap energy.

Here are some of the concerns, many being specific to Prince Edward Island. Firstly, groundwater contamination from leaks, spills and truck accidents. This is our biggest concern on PEI. It's also the biggest concern of the minister. We are almost 100% dependent on groundwater for our drinking water. Our groundwater supply, or aquifer, is interconnected across the province, and our soft sandstone geology and unpredictable rock formations make us particularly susceptible. Leaks, spills and truck accidents are happening everywhere where fracking is going on. To our knowledge, only six wells have been fracked on PEI, albeit using old fracking technology, and one of those resulted in a leak of radioactive fluid. This just goes to show that accidents will happen.

Secondly, wells won't last forever. This is a new process. In spite of what the industry is saying about fracking being a long-established process, horizontal drilling with high volume hydraulic fracturing has only been done since 2005. Multi-stage fracking was only developed in 2009. Industry data shows that approximately 6% of wells fail during construction. Industry experts estimate that 80% of wells will fail in some way within 80 years. These wells, and their cement casings, have to last forever to protect our groundwater from contamination by toxic carcinogens in the unrecovered fracking fluid, as well as naturally occurring heavy metals, radioactive material, methane and other hydrocarbons. This, to us, seems like a heavy burden to place on future generations as obviously there will be some, probably many, well casing failures over time.

Dr. Scott Rice-Snow, who is a professor whose specialties are in geomorphology and hydrology, and is a research associate at UPEI, stated in a talk at UPEI that intact well casings need to last forever to protect the drinking water supply. In his own words: Accomplishing that is a bit of a stretch. Dr.

Rice-Snow wrote a short piece on the geology of PEI and hydraulic fracturing, from which we have taken these quotes:

"The high porosity and permeability of the sandstones [means that they] will have high capacity to absorb and rapidly spread tainted fluids.

"Pollutants… could move significant distances horizontally [because of the sloping shale beds].

"… even sandy-silty zones will not consistently seal off between one rock sequence and the next one above or below (that's the area on the diagram between the aquifer and the fracked region). Also, it's going to be very difficult to predict the very local directions and rates of fluid/pollutant flow through the red-beds.

"Given the character of rocks I've described above, both spill infiltration from the surface and direct leakage to rocks from leaking drill holes are significant threats to groundwater quality."

Finally, Dr. Rice-Snow says: "… the large-scale industrialization of landscape [has the] potential to affect quality of life for residents, as well as tourism."

Next point: chemicals left underground will seep into aquifers. From our research, 0.5 to 2% of the chemicals used in the fracking process will eventually end up in our drinking water. These are nasty chemicals, including toxins and known carcinogens, and in many cases the chemical cocktail is an industrial trade secret so that residents cannot find out what chemicals are being used. A large quantity of these chemicals used to frack wells are left underground permanently. In at least one documented case, fracking fluid was injected directly into an aquifer because of human error.

Environmental groups predict that it'll take tens to hundreds of years for fracking fluids to migrate into the aquifer. The unconventional gas industry refutes this, but they don't say it won't happen, they just say that it will take longer. In our opinion, if an activity has a potential to contaminate our groundwater with chemicals such as benzene and toluene, now or at any time in the future, the activity should be absolutely prohibited.

Another issue is water use. Up to 8 million litres of fresh water is needed to frack one well. A well can be fracked up to 20 times. This is the same amount, for one well, of water that is used by the city of Charlottetown in one week. It all becomes radioactive toxic waste after the fracking, and the disposal of it is a real problem. Do you leave it in open ponds for the carcinogenic volatile organic compounds to vent into the air? Do you put it back underground and hope it stays there? Do you pump it straight into a river? Do you put it in a sewage treatment plant? Do you dump it in a marsh? Believe it or not, these are some of the disposal methods being used by the industry.

Another problem is truck traffic. Between 320 and 1,400 heavy truck trips are made per well. This is mainly to transport the vast quantities of water and chemicals to and from the site. This, along with wells and other infrastructure, has to affect the quality of life of residents and has to negatively affect the tourism industry.

There's potential damage to the fishery. Because the chance of groundwater contamination is very high, and this groundwater eventually ends up in our streams. This has the potential to severely damage the fishery. Our groundwater and surface water is already under incredible stress and we really don't need yet another set of contaminants to deal with.

Toxic gas emissions is another problem. Volatile organic compounds which are known carcinogens are frequently vented from wells. Methane and other hydrocarbon gasses can find their way into domestic wells, making the water undrinkable.

And finally, climate change. It has been estimated that between 2.5% and 9% of the methane escapes into the atmosphere. While some of the fracking fluid is recovered, a huge amount of methane escapes. It also escapes during the process of being transferred to the end users. Methane is at least 25 times a worse greenhouse gas than carbon dioxide, which negates many of the benefits of this relatively clean burning fuel. Of course, our main concern is that digging

up and burning so much of our carbon-based fuels such as methane will lead to catastrophic climate change. Methane is definitely not the bridging fuel that some in the industry like to talk about. It's not the fuel that will see us through to a sustainable future. Quite the contrary, it's a fuel that will cause Prince Edward Island to sink under rising sea-levels and will create potentially unsolvable problems for the next generation.

We've gathered some opposition from other PEI organizations here. Our group's just getting started, but we already have a number of major, well-respected organizations who have asked for a moratorium on fracking.

The PEI Watershed Alliance said this: "PEI is 100% dependent on groundwater for our drinking water and we cannot afford to add any further stress to that precious resource." They also said: "…as a province we need to focus on developing more sustainable ways to meet energy needs, including the reduction of energy demand." They said:

"Given the current environmental situation – increased nutrient loads in our rivers, fish kills in recent years, reduction in wildlife habitat quality and quantity, and negative publicity surrounding water and air quality on PEI – we must not allow such an environmentally damaging procedure to go forward."

The Island Nature Trust said this:

"Island Nature Trust has developed a position in opposition to a technique … known as 'fracking.' Potential contamination of groundwater is a serious concern in PEI where virtually 100% of the drinking water is groundwater. [Fracking] must not be permitted to occur in this province."

The full text of these letters, and the report from Dr. Rice-Snow, videos of scientists supporting our position, videos of industry documentation supporting our position, links to articles in the *Guardian*, links to further resources, news of all our presentations, meetings and events, and much more, can be found on our website: www.dontfrackpei.com

Marie Burge: I guess you can conclude that we do feel that hydraulic fracturing would be catastrophic for the future of Prince Edward Island. That's our position.

We have heard from two hydrologists. One of them works in the gas industry and therefore has to remain anonymous. Has told us it would be madness for anyone to think that we could frack on PEI. In the brief four months that Don't Frack PEI has been in existence it has become abundantly clear that fracking does not have social consent of Prince Edward Islanders. There is a general feeling in our communities that PEI should not need to be compelled to follow other provinces into an unsustainable future. We are hearing a hope from people that PEI would lead the rest of the country by its example of an effective alternative energy initiative.

Don't Frack PEI therefore respectfully requests the Standing Committee on Agriculture, Environment, Energy and Forestry to recommend that:

The Government of Prince Edward Island declare and implement a permanent moratorium on high volume hydraulic fracturing on Prince Edward Island; secondly, that the Government of Prince Edward Island take advantage of its jurisdictional autonomy to develop and implement a plan for a progressive green energy sector.

Thank you again for this opportunity to speak with you, and please feel free to consult us at any time if there's anything we can share with you or with any of your communities that you come from as well.

Chair: Thank you.

Marie Burge: Respectfully submitted by the Don't Frack PEI.

Chair: Do any members have questions for the presenters?

Hal Perry.

Mr. Perry: First of all, I want to thank you very much for coming in and presenting to us. It is a very important issue. I do hear quite a bit about it from my area also. I have my own constituents that give me a call and

ask me what my thoughts are on fracking and if I could find some answers for them because they do have some concerns. Are you guys working with any of the groups from other provinces such as the anti-fracking in New Brunswick?

Andrew Lush: We're keeping in touch with them.

Marie Burge: Yeah, we're keeping in touch.

Andrew Lush: Yes, New Brunswick obviously is very important because the Premier says that he's following what's going on in New Brunswick, which to me means that what happens there may well eventually happen here. We are exchanging information and news with them, yes.

Mr. Perry: Okay, and that's great.

Marie Burge: There is a major interest also because we talk about our aquifer. We were disconnected from New Brunswick. We're not disconnected. What happens there in fracking in the area that is designed now for the possibility of exploration and fracking –

Mr. Perry: Right.

Marie Burge: – the actual fracking process, could – we're not really sure that it's a different aquifer. It's only a few miles away from us.

Mr. Perry: Absolutely.

Marie Burge: So we have to be really concerned about New Brunswick on those grounds.

Andrew Lush: We did a presentation to the Mi'kmaq Confederacy, and they were very concerned about the fracking on the borders of the Strait because that water from underground there could well end up in PEI, as does water from Cape Breton, so it's not known. Actually, we have been in touch with a group in Cape Breton as well who have passed a municipal bylaw in Inverness County outlawing fracking. Along with protests from natives on the roads they actually seem to have scared off the fracking company, which is a good thing, because they created too much of a can of worms for them.

Mr. Perry: Your meeting with Minister Sherry, I know that just this past December I think 50% of the leases, the permits, expired. Was there any indication that those may be extended for another two years? Because I think the process is they're given for five or six years with a possibility of an extension of two years.

Andrew Lush: We did ask some questions of the deputy minister, and there are no plans as of when we asked the questions, anyway, so we don't know of any plans for reissuing those permits.

Mr. Perry: The leases, I guess, is what I was (Indistinct).

Andrew Lush: The leases, they were exploratory leases, yes. (Indistinct).

Mr. Perry: There have been no permits, from my understanding, even applied for for fracking.

Marie Burge: That's what she confirmed to us, that they haven't received –

Mr. Perry: In their process, as you mentioned, they would have to do an environmental impact assessment on them, and you do have concerns over whether that would be carried out –

Andrew Lush: We do, because of the recent gutting of the environmental impact assessment process by the federal government and the fact that those environmental impact assessments have obviously been done in other areas where fracking's going ahead.

Mr. Perry: Okay.

Andrew Lush: It doesn't make up for the fact that PEI is a totally unsuitable area for fracking, even compared with other areas of North America.

Mr. Perry: Watersheds. You mentioned the PEI Watershed Alliance, and other watersheds across the Island. Are they on board?

Andrew Lush: We haven't approached them yet. We're a fairly new organization. As Marie said, we were officially formed in February.

Mr. Perry: Right.

Andrew Lush: We've been doing a vast amount of work and we have only just finished setting up a website, and we will be approaching those organizations. But the PEI Watershed Alliance was actually in support of a ban on fracking back in 2010, from which we gave the quote in our presentation there.

Mr. Perry: There's more of a voice in numbers, and I understand you guys have only been together for a short period of time, but you've done a tremendous amount of work so far.

Andrew Lush: Thank you.

Mr. Perry: It is greatly appreciated.

Thank you.

Chair: James Aylward.

Mr. Aylward: Thank you.

I'd also like to thank you very much for coming in and presenting today.

Just a couple of quick questions. You had mentioned that the fracking technology – again, in 2005?

Andrew Lush: Yes.

Mr. Aylward: Then there was new technology introduced in 2009?

Andrew Lush: That's right. The technology that they're using now for those horizontal wells and multi-stage fracking, which means re-fracking the same well over and over again, were developed in 2005 and 2009, respectively. Industry will tell you that fracking has been happening since the 1930s, 1940s, and it has, but not (Indistinct) the pressure, not with the deviated wells – in other words, just with vertical wells – and not repeatedly. So it's such a new process there are too many questions that haven't been answered, and as we showed in our presentation, there have been reports from reputable organizations in the US saying that the science is just unknown and it's too dangerous to use right now.

Marie Burge: One of the things that's really shocking to people is to realize that when you go down a frack horizontally it doesn't mean out 25 feet, it's three kilometers or four kilometers out. So you just take PEI. One well would have a – just in terms of its connection to the aquifer, it can be very wide.

Mr. Aylward: Well, yeah, as you said before, too, our aquifers don't stop at our provincial boundaries.

Marie Burge: Exactly.

Mr. Aylward: They don't see a stop sign. With the technology that's in place now – and I'm sorry, I didn't get the gentleman's name that was with the minister when you had that meeting.

Andrew Lush: Jim Young.

Mr. Aylward: Jim Young, thank you, and he gave you that handout from the –

Marie Burge: Oil and gas companies.

Mr. Aylward: – from the other side. Have you done any research or is there any research available currently of fracking that has taken place in North America that would have similar conditions to what Prince Edward Island does with our porous sandstone composition makeup?

Andrew Lush: We haven't done that yet, no.

Mr. Aylward: Okay.

Andrew Lush: What we have done is, like I say, got a report from Dr. Scott Rice-Snow, research associate at UPEI, which we quoted in our report there saying that, in his opinion, and he is a hydrologist, the shale and sandstone beds in PEI are totally unsuitable for fracking. We haven't taken it beyond that yet, but it's something that we plan to do in the future.

Mr. Aylward: Okay. One last question. Mr. Perry had asked about the leases and apparently 50% of the leases have expired.

Marie Burge: It's our understanding that they're all expired.

Mr. Aylward: Okay.

Mr. Perry: They're all?

Marie Burge: That's our (Indistinct).

Andrew Lush: We understood they had, yes.

Mr. Aylward: Okay, and that was going to be my question, because we had asked during budget estimates of the minister of energy and finance with regards to that and the leases, and I think it represented something like 440,000 acres.

Marie Burge: Four hundred and forty thousand acres, yes.

Mr. Aylward: I mean, that's –

Marie Burge: A good bit of PEI.

Mr. Aylward: That is a fair chunk, yeah.

All right, thank you.

Chair: Bush Dumville and then Buck Watts, and then we'll go on to our next group, if we may.

Mr. Dumville: How difficult has it been to get information in regards to the new methods? My understanding was that these various companies had proprietary information that they don't want to share in regards to their competitive issues with each other. What have the people that you have been talking to that – you made mention of somebody that was in the industry, you couldn't give his name. Has he said anything in regards to the new methods, the proprietary information of how they're (Indistinct) –

Marie Burge: The person that we are quoting was talking about what's going on recently, like, in the past year.

Mr. Dumville: Okay.

Marie Burge: The comment was that there was no possible way that PEI water could survive with what's going down, and not just what's going into it, but the impossibility of – the industry will often say: We are extracting that. But there's no possible way they can just extract all of that combination. It's hundreds of different combinations, what the industry calls all of that put together – and they're carcinogenic, and we can get a list of at least 300 of them – they say: It's stuff that's a little like soap.

It didn't make us feel really confident, but we don't get any indication except for comments like that, but from serious hydrologists and people who understand the fracking system, they're not denying that they're putting all of those things in and the type of pressure that they have to use.

Andrew Lush: You're right. If I can add, yes, there is a proprietary mix of chemicals used by the industry, and the first responders and other emergency measures people living in the area are amazed that they don't know if there is a poison getting into the local drinking water. No one will tell them what it is because it's proprietary protected information. They're mixing up to 300 chemicals, of which I believe 32 can be highly toxic and carcinogenic, and pumping that down underground in an area where people are getting sick. Across the US, in areas where this is being done, people are getting sick, animals are dying, water is becoming undrinkable. In a lot of cases people can't find out what the chemicals are unless they actually take their tap water off to the lab and find out what it is, and that's because of protection of the proprietary rights of the drilling companies, which is amazing to me.

Mr. Dumville: Some of these drilling companies could be using different formulas.

Andrew Lush: Yes.

Mr. Dumville: Some could be more toxic, some could be less toxic.

Andrew Lush: Exactly, yes.

Marie Burge: But if it's toxic, it's toxic.

Mr. Dumville: Yeah, no, but I mean –

Marie Burge: Yeah, but they do use that.

Mr. Dumville: Yeah, you know what I'm alluding to.

Andrew Lush: Even they admit that it will seep into the aquifers eventually, but presumably, as far as they're concerned, it's so far in the future that it doesn't bother them.

Mr. Dumville: Thank you.

Chair: Buck Watts and then we'll wrap it up.

Mr. Watts: Thank you, Madam Chair.

Yeah, Marie and Andrew, I want to thank you for your presentation today. Andrew, as you know, I was at the presentation out at the North Shore Community Centre called *Gasland*, I think, was it? Yeah, and that was an interesting film, and according to that film there's certainly reason to be concerned.

Our most valuable resource on PEI and elsewhere is our drinking water, as far as I'm concerned. If we don't have drinking water, we don't exist. Because of that and because there's been red flags raised, I have a concern, and I'd be very interested in really getting to the bottom of – I'd like to make sure that hydraulic fracking is not going to be harmful to our drinking water system or to any system before I really make any commitment to say: Yeah, it's okay. I think we'd be pretty remiss if we said: Yeah, drive 'er, there's nothing wrong with that. Anyway, that's just my personal remarks on this, and thank you.

Andrew Lush: We've addressed some of those concerns in that the industry says if it's done properly and it's regulated properly, then accidents don't happen, but presumably the same thing was going on in the Gulf off the coast of the southern US when the oil rig exploded there. It was just a series of unfortunate events, and these unfortunate events have happened already all over North America, including in Alberta, where they injected fracking fluid directly into the water supply and they didn't realize for I think it was at least 10 minutes what they were doing.

There's just no room for human error. There's no room for lack of knowledge about the ground rock, the bedrock in PEI. You're talking one or two kilometres down. It's such an unknown and it never will be known, that we consider just to be too risky for, like you say, for our groundwater to be doing this at all.

Chair: Okay.

Mr. Perry: Chair, if I may?

Chair: Oh. Sure, Hal. Go ahead.

Mr. Perry: Sure. Mr. Watts had brought up about groundwater being our most precious natural resource that we have on PEI and we have such a fragile subgrade, it's primarily sand and shale, so we have to be very careful with it.

One of my questions, I guess: When you were speaking with Minister Sherry and director Jim Young, did you happen to ask about – let's say there's an oil spill in a home. There are regulations and they go after that home owner pretty quickly to act upon it and to put – there are regulations in place, so they enforce these. Did you ask her about the parallels of that and fracking? Because basically it would be – the similarities are there.

Marie Burge: No, we didn't get into that. We just took for granted that we're not going to have it.

Mr. Perry: Do you have any comments on that?

Marie Burge: Mitigation, when we're talking about something that's so vile and dangerous, just saying that people will have to be responsible for cleanup – like, responsibility for cleanup, it's too late.

Mr. Perry: So it's proactive.

Marie Burge: Oh yeah.

Mr. Perry: Yeah.

Andrew Lush: Also, if I could add, the volume of oil from an oil tank compared to the amount of fluid –

Mr. Perry: Exactly where I was going.

Andrew Lush: It would be tens of thousands of litres if not more in a fracking truck, which would be radioactive, toxic and carcinogenic. I can't imagine if that was

spilt on a rural country road in PEI you would be able to dig up all the soil and cart that away like you can with an oil tank, and look at exactly how much fuss is created when oil is spilt. Imagine tens or hundreds of times that amount of fluid being spilt. There will be accidents, and our sandstone will just soak it up like a sponge and it'll be too late by then.

Mr. Perry: Great, thank you.

Chair: Thank you for your recommendations, as well. Our committee will bring a report back to the Legislature when it meets this fall, and we certainly will be reviewing those.

Marie Burge: We have copies for everybody.

Chair: Thank you. Okay.

Marie Burge: I'll give this to (Indistinct).

Chair: Thank you again for your presentation, and we are going to continue.

We'll just let the Save Our Seas and Shores, PEI chapter, come to the table, please, and I see some familiar faces among them.

If anyone would like to have coffee, please feel free. For those of you, also, that are participating as observers, please feel free to help yourself to the coffee.

[There was a brief pause while the next presenters prepared]

Chair: Hello. Good afternoon, Ann and Doctor.

Before we begin – we're in the dark a bit, but that's okay. I'll ask you to identify yourself for the Hansard and your role here this afternoon.

Ann Wheatley: I'm Ann Wheatley and I'm with the Save Our Seas and Shores coalition. This is Dr. Irene Novaczek, also with the coalition. We'll be presenting this afternoon on behalf of the other members.

Chair: We'll go through the presentation and we'll take questions afterwards.

Ann Wheatley: About the Save Our Seas and Shores coalition, we're a coalition of environmental groups, fishing organizations, tourism associations, Aboriginal groups and concerned individuals. The sole purpose of our group – and Save Our Seas and Shores is an Atlantic organization, but we're talking today on behalf of the PEI chapter. The purpose is really to protect the Gulf of St. Lawrence from offshore gas and oil exploration and drilling because that's something we see as a real threat to the marine environment, and in fact, to all of the industries, the people who depend on the Gulf for their living.

Today our presentation is two parts. I'll be doing the first bit and that's about the status of oil and gas exploration in the Gulf and each of the five provinces to just sort of give an overall picture of what's going on. The second part is going to be presented by Irene and she's going to be talking about just the value of the Gulf and why it's important that we protect it and do so by stopping oil and gas exploration.

You may remember that it was in April our coalition presented a petition in the Legislature, and that was actually Mr. Watts who presented it on our behalf. That petition had 1,200 signatures, and 300 were actually collected by two middle school students who are here today, Carolyn and Lilly.

The petition called on the PEI government to put into place the moratorium on drilling for oil and gas in PEI territorial waters. We also asked for PEI to collaborate with other Atlantic Provinces and the federal government to create a management plan for the Gulf to manage it in a holistic way, in a sustainable way, and to institute a permanent ban on exploration and drilling for oil and gas.

About that petition, it was tabled but there was no discussion. One of the things that we would ask the committee is that when you go back to the Legislature in the fall that there be some discussion of that petition. Clearly a lot of Islanders signed it and were in favour of such a moratorium, and I think it's worthy of discussion in the Legislature.

This is a map that shows the various responsibilities for the Gulf. You can see, obviously, the five provinces border on the

Gulf. The crosshatched area is actually the area in which the federal government owns the seabed and the resources that are underneath it. The estuary, however, is owned by Quebec, and the Bay de Chaleur you can see there is sort of half owned by Quebec and half by New Brunswick.

In 1964 the provinces sort of divided the Gulf, and you can see those grey lines sort of separated according to whichever province borders on that part of the Gulf. Of course, those are pretty artificial divisions because we know that anything that happens in one part of that Gulf is going to have an effect on every other part of the Gulf.

The federal government has never formally recognized those divisions, but they do respect them. Now the provinces, if they develop the resources in the Gulf, they can keep 100% of the royalties if they find co-management agreements. That would include setting up offshore petroleum boards, and I'm going to talk a little bit more about those boards and those agreements.

Quebec, as I said, owns the estuary. I sent around a couple of maps that you could – they're basically the same maps that are in this presentation, but you can see them from closer up. Quebec has a permanent ban on oil and gas exploration in the estuary. In 2009 there was a moratorium declared on drilling in its part of the Gulf. They did sign a co-management agreement with the federal government in 2011, but it really hasn't been implemented because the acts that are necessary for that haven't been developed.

SEA, which is an acronym for a Strategic Environmental Assessment, has been undertaken for that part of the Gulf and is due soon to be released. I think that depending on the outcome of that there will be a decision whether or not to lift the moratorium.

Newfoundland and Labrador have an agreement with the federal government and they have probably the best known offshore petroleum board. However, the role of the petroleum board is kind of two-pronged and a lot of people see that as conflicting. Not only does it promote development, but it also is supposed to protect the environment and issue licenses, but also monitor environment and safety and things. It's been criticized for that conflicting mandate.

In 2012 the commissioner of environment and sustainable development, the federal commissioner, that was Scott Vaughan – he's since departed from that post – questioned the capacity of the board to prevent and respond to spills and perform assessments.

There have been strategic environmental assessments in the western Newfoundland area of the Gulf in 2005, it was updated in 2007, and now there's another one underway and the results of that should be released soon.

Nova Scotia has an agreement with the federal government and an offshore board, but the activity in Nova Scotia is mainly – is all, actually – in the Atlantic Ocean. It doesn't have any currently in the Gulf.

In Prince Edward Island and New Brunswick we have no agreements. The area – (Indistinct) would see in one of those maps – is all under the jurisdiction of the National Energy Board. Recently, though, there was a news story out of New Brunswick that sort of suggested that they were looking at signing a federal-provincial agreement, so that raises a question for us and that would be: What is Prince Edward Island, what is our government thinking about that? Is there any thought of doing the same?

The next map is about exploration licenses. This is where companies currently have, or have had, licenses to explore for oil and gas. You can see there are a lot off the western side of Newfoundland. There are some in the Quebec side of the Gulf. The one sort of squarely in the middle that's half purple, that would be – well, it's actually two-thirds Quebec and a third Newfoundland, so half purple, half pink – is the Old Harry prospect. You would have probably heard a lot about that because that's something that we talk about a lot. Partly because it's sort of the closest to being developed and that's just – it's very close. It's between the Iles-de-la-Madeline and Cape Breton and Newfoundland and Labrador.

As far as licenses go, Quebec had 10 in 1996. These have been suspended, I think, because they ran out and there's a

moratorium. If the moratorium is lifted, they'll be just new licenses issued. Instead of going through any kind of a process it will be automatic.

Western Newfoundland, there are eight licenses currently. The ones that are closest to the coast, if you remember the previous map, the kinds of environmental assessments that are going to be required there are weakened since – was it the Bill C-30 that really kind of destroyed our environmental assessment process?

Interestingly, Old Harry, there was a ministerial order that actually allows the environmental assessment process for that to adhere to the older regulations. It's going to have a – that's better. There is concern though that one of the – there's a sort of a difference between a project environmental assessment and a strategic environmental assessment. The project environmental assessments are required but also are really done by the companies that have the licenses or somebody who is hired by the company. There's some concern about the adequacy of those assessments.

Old Harry, as I was saying, there's a license – it's Corridor Resources who has the license there, and we heard about Corridor in the previous presentation about fracking. The company doesn't really do offshore drilling so this would be new. Again, the process for the environment assessment is going to be according to the old rules. Corridor's project description that they've already submitted really caused some concern. DFO and the federal department of the environment actually both sort of wrote very lengthy critiques of it. They revised it and we haven't sort of seen the response to the revised project description yet.

There's a strategic environmental assessment also that the offshore petroleum development board had put into place. The result of that assessment should be coming any time. There was going to be a public consultation process for that assessment but it's been suspended until the results of that assessment, so we don't know what kind of public consultation it's going to be, how long it is, what kind of depth it's going to go into. We do know that in the first stages the assessment that was done by Corridor – the consulting company that Corridor had hired – they had public meetings in each of the provinces, but they were sort of the kind of non-consultative consultation type, where it was sort of posters around a room where you were just sort of given information more than asked your input.

Nova Scotia has no current licenses in the Gulf, although in 1999 Corridor Resources has an exploration license off Cape Breton, and that's actually when Save Our Seas and Shores developed as an organization. It launched a campaign to halt exploration and, in fact, exploration was not pursued at that time.

Prince Edward Island, interestingly, in 1970 a company that's now called BP Canada Energy Company did make a significant discovery off East Point. As a result BP has a permanent lease there. The exploration license did expire, but I guess what we would be interested in knowing is, going back to – we heard that New Brunswick might be interested in signing an agreement with the federal government – is PEI planning to do the same, and what would be the impact on that expired license?

When we presented our petition some of the questions we're asking – if development happens in the Gulf and if some kind of a blowout were to occur, how would be people be compensated? We know that the liability – the BP blowout that happened, the company spent over $40 billion. Yet in Canada we know that liability goes to 30 million. So there's a fair chunk of money that taxpayers would be on the hook for.

I forgot to say that in terms of the strategic environmental assessment that's going on, Prince Edward Island does have a representative on that advisory group and we wonder sort of how the interests of Prince Edward Island are being represented. What kind of policy position has that representative being asked to take on behalf of Prince Edward Island? We know that anything that happens in the Gulf, if there were to be any kind of an accident, our fishing, our aquaculture, our tourism are all completely dependent on a healthy marine environment in the Gulf. We would like some assurance that our interests are being considered in a precautionary way.

I'll hand it over to Irene.

Chair: Go ahead.

Dr. Irene Novaczek: Good afternoon, everybody.

I have been the sort of scientific and technical advisor to the Save Our Seas and Shores group since the year 2000 when they came to ask me to do some background research, provide them with scientific information, and help them track what was going on in the process, and I have continued in that capacity. I'm a marine biologist by training.

As Ann has pointed out, we have one Gulf, one of the largest and most productive and diverse in the world, surrounded by five provinces. We know we have at least 6,000 marine species in that Gulf that we've so far named and we know are there. There are probably species, especially in deep water, that we haven't even named or are aware of yet. The plan is to put a deep-water oil well in the middle.

This Gulf is huge, but it actually makes up less than 16% of all the offshore marine areas available to Atlantic Canada for petroleum development. If you put a moratorium on it, it really wouldn't make much of a dent in the industry's prospects.

Old Harry is a deep-water prospect, more than 400 metres deep. Might be 430 or 440 or it could be as much as 450, depending on where exactly they would decide to put the drill down. It's in the Laurentian trench. This is a deep water trench that comes in between Nova Scotia and Newfoundland and goes up to the mouth of the St. Lawrence River. It's where all of the migratory fish stocks come in and out of the Gulf. It's where migratory whales come in and out of the Gulf. It's where all of our shipping comes in and out of the Gulf.

We already have a very serious problem on the shores of Newfoundland and Labrador with oil dumping and disposal, illegal activities of the shipping industry as they track through that area, dumping, by various means, oil-contaminated water and causing hundreds of thousands – well, more than we know or can count because many of those carcasses sink – but deaths of seabirds oiled by petroleum contaminants.

The thing is that with any oil and gas well, you can't predict and you can never entirely prevent oil spills. They are a fairly daily occurrence, small ones, small daily spills and releases from any rig that you would care to visit on offshore Nova Scotia, Newfoundland.

Back in 1973, Professor Loutfi from McGill University was engaged in a big research project in the Gulf of St. Lawrence. At that time, he fingered the shipping industry as being a significant threat because of the risk of oil and gas contamination in this particular ecosystem, which he called the most productive marine ecosystem in Canada. You can see from all the little circles and gyres and arrows – imagine in your mind where Old Harry is close to that black arrow which is where the water comes in from the open ocean. That incoming water would pass right over Old Harry and carry any contaminants into the Gulf. It could then get picked up by that red arrow and swirled down around either side of Prince Edward Island, whirl around in circles out on that Magdalene shelf. In fact, it takes about 11 months for water coming in to the Gulf to make its way back out into the ocean.

It's a very much enclosed sea, and so the flushing rate is poor and contaminants stay around for a long time, and have lots of opportunities to hit lots of beaches and have impacts on many fisheries getting through many estuaries.

A little known fact – and this information is coming out of Department of Fisheries and Oceans to a very important document which was released in 2010. If you Google DFO 2010 30 you will find two documents. One is an assessment of the health of all of Canada's oceans, east, west and north. There's another 2010 30 document which is a specific and much more detailed assessment of the health of the Gulf of St. Lawrence. In that document you will find a description of these concentrations of krill, the greatest concentrations of these little crustaceans in the entire northwest Atlantic Ocean. That's one of the reasons why whales are attracted into the Gulf. They're at depth and they provide a critical food source for marine mammals. They're in the Laurentian trench which is where Old Harry is proposed to be as well.

There are globally important seabird colonies scattered throughout the Gulf, more than I have indicated here by stars. This is just a small number of the really enormous ones. There are others in Newfoundland that are not mapped here. But oil and seabirds – oil in tiny concentrations as slicks on the surface is absolutely deadly to birds that live and feed and dive through that air-sea interface. These are all our responsibility.

I'm sorry that something happened in the – things got jiggled around on this power point. You all know that our fisheries are in trouble, have been for some time. But even now in the Gulf they still represent a very significant contribution to local economies and jobs, and also tourism. Nobody wants to be a tourist on a beach with oil residues on it. Nobody wants to eat fresh shellfish and lobsters from water where they know there has been contamination from an oil spill or oil dispersants or any of the many other toxic chemicals that are commonly released from oil and gas drilling rigs.

Again, there's a lot of money and a lot of jobs involved in this industry all around the Gulf and very fragile coastal environments at risk because deep-water petroleum exploration is extremely risky. It seems like no amount of technology, no amount of scientific expertise, no amount of money, can actually prevent this type of blowout that we saw in the Gulf of Mexico in 2010.

I mean, BP is one of the biggest, wealthiest, most experienced global corporate players in oil and gas. Yet simple human error and inadequate technologies onsite, and totally inadequate capacity to deal with a blowout and a spill of that size, spell disaster for the Gulf of Mexico which is an ongoing disaster. People are still sick and still dying. People are still unemployed and unable to go back to their fishing and tourism employment in the Gulf of Mexico. Beaches are still fouled, animals are still dying and malformed and diseased.

This was an exploratory well. You can say: Oh well, we'll just put one tube down, we'll have one exploratory well, see if it's worth pursuing, then we'll make up our minds about the pros and cons. Forget it. Exploratory wells are the ones that are under the most pressure. They are the most likely to blow. An old well field with 50 and 60 and 100 wells in it is much less likely to have a massive blowout episode, okay?

Here we are, April 2013: Gulf of Mexico fishermen, scientists and seafood processors are finding disturbing numbers of mutated shrimp, crab and fish. I just picked that one out, but the stream of news coming out of the Gulf of Mexico is pretty constant.

The black splotch on that map is the extent of the major slick in the Gulf of Mexico placed over the Gulf of St. Lawrence. You could see that a blowout of that size would basically – well, you can see. That's where it would be.

The David Suzuki Foundation has done a simulation – simulations are based on computer models, never perfect, but this is their estimate under a certain commonly occurring set of circumstances of tide and weather, wind and rain and so on – of where oil from a blow out at Old Harry would be 27 days after the occurrence.

One of the things that really concerns me as a marine biologist is the fact that this proposed industrial development is proposed for a Gulf that has already been seriously damaged. Please read the State of the Gulf report, it's online. DFO scientists aren't allowed to talk about it publicly. They have asked me in confidence to try to get the word out, to speak to citizens, to lawmakers, to policy makers, to anyone who will listen and encourage them to go online and find this report and read it. It's a shocker.

It will tell you about persistent toxic pollutants from previous industrial – mostly land-based – activity in the five provinces and up in the watershed of the St. Lawrence River that have polluted this ecosystem over many decades. It will tell you what we in PEI know very well, that there are significant deposits of nitrogen and other nutrients into our waterways. We know that because every summer almost every estuary of Prince Edward Island rots and stinks and everything in large areas of our estuaries dies every summer, in July and August, and more recently, even in June. This is eutrophication, this is anoxia.

Okay, so we've heard that shallow water can go anoxic and kill fish in our estuaries. Do you know that probably as a result of

climate change and the changes in the circulation of ocean waters, that there is a decline in the levels of oxygen in the deep waters of the Gulf of St. Lawrence? In the days when we had a cod fishery, a ground fishery, there were significant breeding aggregations of codfish right where Old Harry is destined to be. All around there, if you look at DFO's maps of significant and sensitive areas, they're all around the Old Harry site and in that deep water of the Gulf, where there used to be codfish breeding and being fished, the oxygen is now too low for those codfish to actually survive. This is an ecosystem that is shifting and changing in very dramatic and significant ways, and ways that we should be paying attention to.

The other thing that happens, as oil and gas is burned, as we've gone over 400 parts per million in our atmosphere, which the Earth has not seen for I don't know how many hundreds of thousands of years, but carbon dioxide in the atmosphere, if you have a body of water, it equilibrates. It finds a balance. Carbon dioxide enters the water until the water and the air are in balance.

When carbon dioxide enters the sea it reacts with hydrogen atoms which are abundant and loose in water and forms carbonic acid. This makes the sea more acidic. This is happening globally, worldwide. It's happening much faster in the Gulf of St. Lawrence than in the outer ocean because the flushing rate is so slow. We have seen, since the 1930s, since scientists have been measuring these things, a 90% increase in the acidity of the Gulf of St. Lawrence. That has an impact on all kinds of things. When water gets more acidic little baby shellfish can't form shells, lobster larvae don't get along too well, lots of fish – it has physiological impacts on biological systems and behaviours.

The other thing that's already happening in the Gulf, as I said, is tens of thousands of oiled seabirds every year that are actually physically counted by volunteers on beaches around Newfoundland just from the oil that goes into the water from shipping.

We have ground fisheries that have collapsed and they are not recovering as we had hoped after the moratorium. In part that is because the food web of the Gulf and the surrounding areas – whole items have been knocked out of it. It's a much simpler system ecologically than it was. When you take a complex biological system and you simplify it by assaulting it with pollutants and acidity and warming temperatures and changing currents, it becomes more and more vulnerable to the next insult, much more easy to knock it off and flip it over into a completely different system. When it gets too simple it loses its resilience.

The temperatures are rising in the Gulf. The ice is thinning. The ice is not there as much in the winter, which we know because we get hammered now with late December-early January storms and no ice to protect us from the erosive power of those winds and waves. We're facing a very uncertain future. Prince Edward Island is one of the most vulnerable – well, it is the most vulnerable province of Canada to climate change impacts, that's for sure, simply because we are small, we're made of sandstone, we're highly erodible.

We need to wean ourselves off fossil fuels that drive these kinds of changes, and we need to find ways to restore what was the most productive ecosystem in Canada back in the 1970s and is a shadow of its former self now because of human industrial activities. To go ahead and for short-term profits and illusory jobs that might last a few years, and most of which would be in Newfoundland or people from Calgary who fly in and out, this, to me, is a beyond foolish way to be thinking of our future here in Prince Edward Island. We really need a radical rethink.

So we have Corridor Resources. They want to start drilling in 2015. Well, now, actually, as soon as possible. They got an extension on their permit, but they do have to drill before 2015 or that will expire and then they'll have to start all over again. It's Newfoundland and the federal government that get to make that decision, ultimately.

There was supposed to be a comprehensive consultation process for the environmental impact assessment on the Old Harry project. Mr. Bernard Richard from New Brunswick was appointed the commissioner. He started his work and then it got cancelled. We have no assurance that if, after the strategic environmental assessment comes to the table, in which we have had precious little

opportunity to intervene, and which is – I can assure you, I was on the federal-provincial industry national body to do a comprehensive assessment of the impacts of oil and gas development in marine waters. This was prior to the Harper government being elected. We moved from that assessment to a deliberation on what a proper strategic environmental assessment should look like in Canada because there was a growing recognition and a body of literature in academic publications that our system simply did not meet international standards.

That committee has not been convened since Stephen Harper was elected. There has been absolutely zero progress made on strengthening and revising our strategic environmental assessment process, and that was a process where we were doing really well. We had the petroleum producers association and the pipeline companies and various provincial departments of environment, and the federal environment and fisheries, and we were all – and NGOs, and I was there for the Canadian Environmental Network at that time – all at the table, making really significant progress, and at that time the industry was saying: Tell us where the sensitive areas are and then we won't go there. The Gulf of St. Lawrence was one of those sensitive areas and that work never got finished, and that Gulf never got protected.

Now, in more recent years, if there's a strategic environmental assessment in place that says: Go ahead, boys, looks good, you don't even have to have an environmental assessment on offshore exploration.

As Ann pointed out, these petroleum boards, they're located provincially. Nobody's looking after the Gulf as an ecosystem. The federal government plays one province against the other and we all compete to destroy the same ecosystem upon which we are all dependent. Because the thinking is: Newfoundland's going to take the risk and go for Old Harry. Quebec doesn't want them going sideways with their pipe and sucking oil out of their territory so they're going to go after it, too. At that point, well, New Brunswick, PEI and Nova Scotia all want a piece of the pie so they might as well send people into the Gulf as well.

This is a very dangerous moment in the development of the petroleum industry in Eastern Canada. It's a very dangerous and critical moment and the coastal land owners, the tourism industries, the fishing industries, the local legislatures, really need to pay attention to what's going on because there will be no reversal once this cart gets rolling. It will be very difficult to stop. At that point even declaring a moratorium in PEI jurisdictional waters is not going to save us. We are too close to Newfoundland. We are too close to Old Harry. The water will reach us, the oil will reach us.

The C-NLOPB, the Canada Newfoundland and Labrador Petroleum Board, has been slammed by the Wells report in 2010 for doing a less than sterling job around safety. Then there was the Senate report in 2010 saying: You're just not prepared for any kind of major spill. You have an inadequate liability regime. The role and structure of these boards needs to be reformed and to date there is no movement on any of those fronts.

We've spoken about the very limited liability, the response capacity. We have an opportunity to support Quebec in their moratorium area and to extend it to Prince Edward Island and to try to exert our influence on the remaining three provinces before they get into this downward competitive spiral. You can be sure that citizens in all five jurisdictions are deeply concerned and active around this issue.

Chair: Thank you very much, Ann and Dr. Novaczek.

We have some questions, obviously, I would think, keeping in mind that we do have another presentation to come before the committee. If anyone wants to ask, if we could just kind of keep to a couple of questions each, if you don't mind.

Hal Perry.

Mr. Perry: Just a few questions.

I want to thank you for your very passionate and educational presentation and for taking the time to come in here today and do so.

Have you had any talks or discussions with anyone from the provincial departments of

fisheries, environment or with the Premier himself?

Dr. Irene Novaczek: Yes, we have.

Mr. Perry: How did they fare?

Dr. Irene Novaczek: We spoke with Richard Brown when he was minister of environment. We then had an audience with the Premier. They both accepted our information and concern, but there was no commitment to pursuing a moratorium in Prince Edward Island waters or to – now the Premier has said that he has directed his people to try to have some influence around the table with Old Harry. But to what effect he hasn't shared with us.

Mr. Perry: So there's been no discussions in the past two years since the ministers have changed?

Dr. Irene Novaczek: Not directly. Every time I see Robert I talk to him about it.

Ann Wheatley: (Indistinct) the petition was tabled in the House and there was a public response by the Premier afterwards, then I think that –

Dr. Irene Novaczek: Yeah, that was very discouraging actually, that it wasn't a much stronger and forthright and positive response.

Mr. Perry: From the Premier?

Dr. Irene Novaczek: From the Premier.

Mr. Perry: Just a few questions about Corridor. What have they done so far at the Old Harry site? Is it just seismic?

Dr. Irene Novaczek: They've done seismic.

Mr. Perry: And that's it?

Dr. Irene Novaczek: They've never drilled a deep-water oil (Indistinct) before.

Mr. Perry: They haven't themselves.

Dr. Irene Novaczek: They're in pretty shaky financial conditions. I'm not really quite sure how they - they will probably – if get the nod to do an exploratory well, they will immediately take that to a major player like BP or Shell.

Mr. Perry: Okay, and partner.

Ann Wheatley: They're pushing to get that. They seemed to get an extension without having to do very much to 2015. They're trying to count the time that the SEA is being done as sort of a recess so that they can actually extend their permit even further so that they just have more time to get the money.

Mr. Perry: Do they even know what's there? Is it natural gas or oil?

Dr. Irene Novaczek: They are hoping for a light oil, but I think they'll be pretty happy with natural gas. But they're looking for oil.

Mr. Perry: As you said, if they get regulatory approval that exploratory well could be in place by 2015?

Dr. Irene Novaczek: Yes.

Mr. Perry: Okay, thank you very much.

Dr. Irene Novaczek: They would have to drill it under the terms of their (Indistinct).

Ann Wheatley: Or their license would expire and they'd have to.

Mr. Perry: Thank you.

Chair: Very informative presentation. That is the role of our committee, to have the people come in and express their opinion and share information.

Coming up, I think your groups are perhaps joining together to give us a presentation on alternative energy sources.

Do you need a moment to set up, Ann? I'm not sure who's doing the –

Ann Wheatley: (Indistinct).

Chair: Okay, great.

Just whenever you're ready to proceed. Are you just doing the presentation by yourself?

Matthew McCarville: Yeah, I think so.

Chair: Okay, great. Whenever you're ready, if you'd like to identify yourself, you can begin.

Matthew McCarville: I got to wait.

Chair: Oh, sure. Perhaps while you're waiting you can give a brief overview of your involvement with this particular subject.

Matthew McCarville: Do I need to turn on a microphone?

Chair: It's on.

Matthew McCarville: Okay, I couldn't see the light there. (Indistinct).

Chair: It's just for recording, yeah.

Matthew McCarville: First of all, thanks, Chair, Paula Bigger of District 23 –

Chair: Great to have you with us.

Matthew McCarville: – and members of the committee for allowing me to testify today.

I'm going to speak about a much better alternative to what I'm sure you've been hearing about today. I'm really excited to be here today.

I'm going to talk about planning for a sustainable future using wind, water and sunlight. This is a subject that I've been fascinated with for a few years now. I had been looking at it before this point, but back in 2009 I remember getting a phone call from somebody named Kent Sheen, who's the program manager at Holland College, which was – at that time he was in Slemon Park. He told me about this plan to power the world with renewable energy.

We talked about the plan, and I went to learn more. This was a cover article of the *Scientific American* publication back in 2009, and what they found was you can power the world using wind, water and solar power to provide all global energy for all sectors, and so what I'm going to do is focus in on a microcosm of that here and look at converting Prince Edward Island.

I became fascinated with the idea of trying to make this conversion to solve the energy problem because that's what we were trying to do. At the time of it, I was working at the Environmental Coalition of Prince Edward Island on an energy project. We'd try to do projects and encourage policies to work together toward a practical implementation of something that was better than what we've been doing, which causes all the problems. The idea that the solutions were within reach and that within 20 to 40 years you could convert the entire world's energy infrastructure to one using wind, water and sun, I thought was pretty amazing.

It was fascinating when I got into looking at this in more detail because I realized that this work was coming from the best place. This work was done by somebody who has been pushing the limits of our understanding of severe atmospheric problems like air pollution and global warming from Stanford University's Atmosphere/Energy program. I got looking at this in a lot of detail, and ever since I've been intensely focused on this because I was failing to figure out how to get people to take action.

As soon as the prices came down, we all remember what happened between 2003 and 2008. Our incomes grew 3.5% year over year and oil and gas was going up 10 and 15% a year. We were getting poorer. Why? Because we're growing in India and in China, 8 and 10 % a year, and you just can't do it with the way they were going.

The global demand is growing with the current fuels because the demand for energy service is growing, and it's inefficient with the current fuels, and it's a depletionary nature of those fuels, whereas the fuel is free forever with wind, water and solar power, which is wonderful. It's truly a breath of fresh air because we've been going with temporary sources. We've been burning things for 200,000 years and we can find a better way and just at the time that we need it.

I've spent a lot of time over the last little while to try to look at this. In March of 2011 I presented a plan in testimony before the Parliament of Canada's Senate Committee on Energy, the Environment and Natural Resources. The plan called for wind, water

and solar power to provide all energy across the nation.

What was really interesting is it's not that hard to imagine it would take less additional land that what's already flooded, what's already inundated by our current hydroelectric reservoirs. There's nearly 10 million square kilometres of land in Canada, and about .6%, 58,000 square kilometres, is inundated by our current hydro reservoirs.

If you look at the footprint of the solar panels needed and the spacing of all the wind turbines, you need 55,000 wind turbines to power half of Canada. Then it takes up just a fraction of the land of the Athabasca oil sands and you don't have to reclaim the muskeg. If we reverse the pipeline, we know if we get more efficient furnace and we get more efficient internal combustion engine vehicles, and we run the stuff from the tar sands through the refinery in Saint John and bring it over here and then burn it, then it's going to be no better and it may be worse, even if we upgrade our insulation, even if we get an efficient furnace, because every unit of energy we use will have 23% more warming potential embodied in it over the upstream and through to the end use.

Not only that, but if we were to replace our petroleum products with ones coming from there, then it's equivalent to a couple of per cent of all of our total water use, just the water that we need over there, which is not the stuff that we've been getting, so it's getting worse even. We're spinning the tires in the sand. We get nowhere trying to solve the problem just getting a little more efficient vehicle. Whereas an electric vehicle is four to five times more efficient. Without even driving less we already have a huge reduction in energy demand. That's why, if you want to drive from here to Summerside and back on solar PV, it would cost less than $10 today, which is a good deal, and why aren't we doing it? That is, I think is, because nobody knows.

I hope that over the next few months by going around and talking to people that they'll start to realize what the potential is. That's what I've been doing. In March, two years after I talked about this plan for powering Canada, they actually looked at, for the first time, not just powering the world, but in high resolution you telescope in on individual states. They looked at New York State, and that's just down the seaboard from us. They can do it in New York State with wind, water and sun. It's technically feasible, it's economically feasible, is what they found. These are a group of several scientists, engineers, economists and investment bankers. It's peer-reviewed, refereed journal publication paper, so it's bona fide science.

You have to wonder: If they can do it there, can we not do it here? They've got a plan for California as well which is in press and it will be published. There is going to be a plan developed for Washington.

Right now I don't have a plan to give today, but I've been working on one in a fair bit of detail for Prince Edward Island.

Chair: Matt, excuse me for interrupting.

Matthew McCarville: Sure.

Chair: Are you involved with a particular group right now?

Matthew McCarville: This is just me. I have to do this because –

Chair: That's good. I just want to kind of get a clarification.

Matthew McCarville: – because people do not know, so I have spent thousands of hours for no financial reason. Once people know, then I think they'll join me. There's a few people here – I remember I was here in late October talking coarsely in 2010 about planning for a sustainable future on PEI. There weren't many people around except us. But there's more today which is wonderful. That's my motivation, is really that once people realize what the potential is, I think it will happen.

Because I mean, to power half the world – to put it into perspective in terms of wind – the footprint of the turbine towers themselves would occupy the urban area of Charlottetown.

I think this inevitable future we're moving into is one where we have a wind-centered energy economy that bounds by the complementary nature of sunlight and water.

Similarly, if you look at New York, it'd be less than the area of Manhattan to power half the energy needs of everyone, everywhere around the world, and the rest is open space. There are certainly other benefits, but I'll talk about those within the context of Prince Edward Island.

Repowering 100% of PEI using wind, water and solar power would reduce end use power demand by one-third and stabilize energy prices since fuel costs would be zero. The conversion to wind, water and solar energy would create more jobs for Islanders than lost since most of the energy would be derived from indigenous energy sources.

PEI air pollution mortality and its costs would decline by 90 deaths per year and $33 million per year respectively. That's according to an evaluation of PEI illness costs by the Canadian Medical Association, alone repaying one-third of the nearly 1.5 gigawatts of installed wind, water and solar power needed in 30 years before counting for electricity sales. So you're getting one-third more efficient and you pay off one-third of the cost. So if it's one-third more per unit of energy, everyone's energy bill overall stays the same and your health care costs go down. People have better quality of life, you're more productive because you have less school days lost, less work days lost.

We have an older population and it's getting older as the years go on. The sensitivity in terms of the chronic relative risks of air pollution – because when you're talking about fine particulate matter that's less than one-seventh the width of a human hair, it can easily penetrate lung tissue and cause damage, as it does. When you have ozone, that's why you wouldn't do biofuels, you wouldn't do a high-blend biofuel. You can't draw a circle on PEI without touching water to do ethanol 85 because it's no more efficient. But the ozone formation near the surface is much worse, especially in low temperatures. You will worsen a problem, not make it better.

I don't know why we're doing it. I was trying to communicate that we shouldn't focus on that, there's a much better way. I still think we can try to build something positive, and I think there are a lot of positive policies that maybe we have yet to implement, but we've talked about them in the three-volume PEI environment and energy policy series in 2008. Some of these things require a simple legislative fix. We have other policies as well that would supplement that. Sort of a little bit of adaptive self-correction that we've learned a lot in the last few years. I certainly have, and I think we've all come to understand what is possible and so we can make better policies.

Now in terms of the cost – we'll get into this in a moment – so in this one scenario – there are millions of feasible ones that will work using this mix – a conversion to wind, water and solar in Prince Edward Island reduces the annually-averaged all purpose end-use power demand by about one-third down to 612 megawatts. That's about 4.85 times more electric load on average than what we have today. But then you think it's only 13.5% of our total energy use today. That accounts for projected growth, plus some additional efficiency measures like we're already doing with better insulation and people upgrading to LED lighting, perhaps. There's always other ways of doing things. Who knows, maybe we won't need that much, but this is one projection that you can make, and doing that and looking at our resources, then we figure out how to start planning the build out.

You need nearly 1.5 gigawatts of installed WWS power – wind, water and solar power – and costs are on the order of 3.1 billion spread over the next 30 years or so, resulting in affordable supplies of free fuel, including 51% wind, 37% solar, 5% hydro, 4% geothermal, 2% tidal and 1% wave, including: 7,500 5-kilowatt residential roof top PV systems powering 1%; 2,500 100-kilowatt commercial and government rooftop PV systems powering 5%. That's like the Jean Canfield Building in Charlottetown just down the road. That's 6%, on rooftops, of your energy. Then 500 1-megawatt solar PV plants powering 10%; another 50 10-megawatt solar PV plants powering another 10%; another 10 50-megawatt concentrating solar powered plants powering 11%; 80 5-megawatt offshore wind turbines powering 28%; 80 5-megawatt inland wind turbines powering 23%; 60 megawatts of hydroelectric plant capacity powering 5%; 3 10-megawatt geothermal plants powering 4%; 45 1-megawatt tidal turbines powering 2%; and

65 0.75-megawatt wave devices powering 1%. That's your 100%.

I'll just go quickly through and say that in this scenario 88% of that, all the wind, all the solar, is all installed on Prince Edward Island. In Newfoundland the lower Churchill Falls projects, phase one and two, Muskratt Falls and Gull Island, between those two you have the 60-megawatts of hydroelectric plant capacity for the 5% of the energy from hydro. As well, the 3 10-megawatt geothermal plants – well, maybe we don't have to frack everywhere in New Brunswick and Nova Scotia. Maybe we can do geothermal plants in Nova Scotia and New Brunswick where they perhaps better have the geology to make it happen at a more reasonable price. This will provide the same amount of power that what we already have dedicated from the nuclear. We know when that nuclear is going to be scheduled to be phased out and we've looked at the ramp up of building this out. We think that you can phase out nuclear and put in this and it behaves similarly, except it's actually easier to shut it down with geothermal than nuclear.

You could generate some energy effectively from wave and tidal offshore around Prince Edward Island. But in this plan it's assumed Bay of Fundy and maybe somewhere near Sable Island or off the shore of St. John's, Newfoundland, would be where you would perhaps deploy and there'd be procurement, there'd be financing and investment put. Because the point of these things is to get an energy and payback and so there's better resource there. This would allow us to optimize regionally and do transmission planning regionally for this build out.

Otherwise, will it ever happen? You're either going to build more pipe lines or beef up transmission lines. That's what we need to be engaged in as one on Prince Edward Island, across the region, across the continent, around the world, and it's smoke-and-mirrors what we're believing now, I think.

I remember watching cartoons as a kid and I tried to dig a hole one day to China. My father who taught geography took me into his classroom and explained to me on the globe: No, Matt, you wouldn't end up in China, you'd end up in Australia. He's right. You'd end up just off the coast of Western Australia.

Anyway, I'm not sure what I'm trying to say there, but there's a few simple changes that are required here that result from this conversion.

Number (1), we've already talked about it. You replace the fossil-fuel electric power generators with the wind turbines, solar photovoltaic plants and rooftop systems, a few concentrated solar powered plants, solar hot water heater systems, a few geothermal power plants, a bit of hydroelectric power plant capacity and a small number of wave and tidal devices.

Number two. That was the supply side. On the demand side you want to match the build out and, over time, replace all fossil fuel combustion for transportation, heating and cooling and industrial processes with electricity, hydrogen fuel cells and a limited amount of hydrogen combustion. Battery-electric vehicles and hydrogen fuel cell vehicles and battery-electric and hydrogen fuel cell hybrids sold in PEI will be replaced from the internal combustion based passenger vehicles. They'll replace those combustion based vehicles, the trucks, buses, non-road machines sold in the province. Long-distance trucks will be primarily battery-electric and hydrogen fuel cell hybrids and hydrogen fuel celled vehicles.

A PEI-based company, Aspin Kemp & Associates, developed its XeroPoint Hybrid marine propulsion system for tugboats which is highly scalable and allows for customization on a wide range of vessels such as work boats, offshore wind support vessels, research and scientific vessels, fishing boats, leisure craft, eco-tourism vessels, such as whale-watching boats.

Systems integration will evolve. Hybrids will run on hydrogen fuel cells and electricity. Electricity and fuel, it's the same thing as we have today. Isn't it wonderful? I thought it'd be more difficult, but it's just a clean fuel. There's no such thing as clean gasoline and yet that's all you see when you go to the pumps, on the Irving pumps. They shouldn't be allowed to do that. It's killing us. It's smoke-and-mirrors we have to see

beyond and then I think we'll really get started on this.

In terms of heating, electricity powered air and ground source heat pumps, they're much more efficient. Heat exchangers and backup electric resistance heaters will replace oil for home heating and air conditioning. Air and ground source heat pump and water heaters powered by electricity and solar water preheaters will provide hot water for homes. High temperatures for industrial processes will be obtained with electricity and hydrogen combustion. Petroleum products may still be used for lubrication and plastics as necessary, but such products will be produced using wind, water and solar power for process energy.

Number three. Reduce energy demand beyond the reductions described in number two through energy efficiency measures. Such measures include retrofitting residential, commercial, institutional and government buildings with better insulation, improving the energy-out, energy-in efficiency of end uses with more efficient lighting and the use of heat exchange and filtration systems; increasing public transit and telecommuting; designing future city infrastructure to facilitate greater use of clean energy transport; and designing new buildings to use solar energy with more day lighting, solar hot water heating, seasonal energy storage, and improve passive solar heating in winter and cooling in summer.

Number four. Boost economic activity by implementing the stated measures. Increase jobs in the manufacturing and installation industries and in the development of new and more efficient technologies. Reduce social costs by reducing health-related mortality and morbidity and reducing environmental damage to lakes, streams, rivers, forests, buildings and other things, resulting from air and water pollution. Reduce social costs by slowing the increase in global warming and its impacts on coastlines, agriculture, fishing, heat stress, severe weather and air pollution, which otherwise increases with increasing temperatures. Reduce long-term macroeconomic costs by eliminating the exposure to future rises in fossil fuel prices.

Number five. The plan anticipates that the fraction of new electric powered generators from wind, water and solar will increase starting today such that, by 2017, all new generators will be wind, water and solar generators. Existing conventional generators will be phased out over time, but by no later than 2050. It's a long ways off. Similarly, battery-electric vehicles and hydrogen fuel cell vehicles should be nearly the only new vehicle types sold in PEI by around 2020. The growth of electric vehicles will be accompanied by a growth of electric charging stations in residences, commercial parking spaces, service stations and highway rest stops.

Number six. All new heating and cooling technologies installed somewhere around 2017 to 2020, hopefully no later than 2020 – but probably sooner because these things are ready to be deployed. So by 2017, really, these heating and cooling technologies should be wind, water and solar technologies. Existing technology should be replaced over time but by no later than midcentury.

Number seven. To ensure the reliability of electric power grids, several methods should be used to match renewable supply with demand and to smooth out the variability of wind, water and solar resources. These include:

(a) combining geographically dispersed wind, water and solar resources as a bundled set of resources rather than as separate resources and using hydroelectric power to fill remaining gaps;

(b) using demand-response grid management to shift times of demand to match better with the timing of WWS power supply;

(c) oversizing WWS peak generation capacity to minimize the times when available wind, water and solar power is less than demand to provide power to produce heat for air and water and hydrogen for transportation and heating when wind, water and solar power exceeds demand – so this will be a flexible system;

(d) integrating weather forecasts into system operation better to reduce reserve

requirements, to reduce the need to have back up supplies;

(e) storing energy in thermal storage media, batteries or storage media at the site of generation or use; and

(f) storing energy in electric vehicle batteries for later extraction from the vehicle to the grid.

These energy technologies were chosen for the PEI plan and were ranked the highest among several proposed energy options for addressing pollution and public health, global warming and energy security in Jacobson in 2009. That analysis used combination of 11 criteria: carbon dioxide equivalent emissions, air-pollution mortality and morbidity, resource abundance, footprint on the ground, spacing required, water consumption, effects on wildlife, thermal pollution, water chemical pollution, radioactive waste, energy supply disruption and normal operating reliability, to evaluate each technology. These came out on top. Let's go with the low impact. These had the lowest impact and were able to provide 100% of the energy. Turned out to be more efficient, turned out to be a much healthier way forward, and it can provide energy stability because it will last forever and the fuel is free. Once you install – the price is locked in there for it, so it leads to that predictability.

In the New York state plan and the California plan, which I've had a chance to take a look at, and the Washington state plan which is pending release, these all explain why mined natural gas and liquid biofuels are excluded from the PEI plan and how wind, water and sun can do it. Related studies also explain why nuclear and coal with carbon capture and sequestration are also excluded.

Now, the plan allows for the temporary heating use of certain solid biofuels, such as wood pellets, energy crops grown on unused farmland and agricultural waste of biogas extracted from landfills and derived from anaerobic digestion of organic wastes. The use of such solid biofuels and biogas will be phased out by 2030 to 2050.

Using biomass for heat allows farmers and forest owners to produce an energy crop on land that would not otherwise be used and to make use of low-value wood, increasing economic productivity and producing agricultural and forestry jobs. However, solid biomass should be used carefully so as not to over-harvest forestlands or use high quality agricultural land. The scale of use is important as well as moving and processing solid biofuels takes substantial energy and carbon. The biomass should be used near the point of harvest to reduce this energy cost and the resulting environmental pollution.

Using landfill biogas allows methane that would otherwise escape to the air to be used for energy. Similarly, converting organic waste to biogas allows the use of material for energy that would be otherwise biologically processed and released to the air in any case.

For two reasons, the use of solid biofuels and biogas in this plan is only temporary. First, biogas for energy requires much more land than solar power producing the same electricity and heat. Second, the use of solid biofuels or biogas for electricity and heat is still a combustion process, resulting in similar air pollution health and mortality impacts as fossil fuel combustion. For these reasons, solid biofuels and biogas are to be phased out during the 2030 to 2050 period of the PEI plan's implementation.

The practical implementation of the PEI plan requires 1.3% of the land base. Zero point six per cent is spacing, 0.7% is footprint. Nearly half is open space between turbines, which remains useful land. Walking spaces between solar panels, included as footprint, can be used for grazing, and this area compares well with the 42% of PEI land used for agricultural purposes.

The conversion to wind, water and sunlight, again, will reduce demand by one-third and will perpetually provide energy stability for the economic and climate systems. This plan protects Prince Edward Island's indigenous heritage, as Mi'kmaq know the place, as Land Cradled on The Waves. And burning things, most of PEI would sooner be beneath the waves.

The costs upon conversion would similar to today: less than the current fuels when calculating the true cost of electricity

without subsidies and with the inclusion of external costs, and information can be given to try to justify that assertion.

I'll just talk about this internationally for a second. Nearby in the northeast US a study was done recently that looked at one-fifth of the USA electric load and they figured out that you could power 99.9% of the time with just wind and solar. This isn't in the desert with their solar. This is just on the coast and they use electro-chemical storage batteries and hydrogen. They found that they could supply 90% of this at lower costs.

What they also found is that the least cost optimization – because they ran billions of combinations to figure out: What's the cheapest way we can plan this and build it for our people and solve the problem? They found that you end up with a bunch of extra wind in the winter. Because when you have faster wind – a little bit faster wind – which we do, and they persist throughout the cold months, here our wind is doubly as powerful in the coldest compared to the warmest month. So you end up, it's a perfect fit. You can smooth out the interannual variations and you can do that by producing hydrogen and storing hydrogen. We know that there are cycles and one year it's sunnier or windier or there's more rain. There are cycles that you have look – it's a challenging problem but we can solve it, which is wonderful.

These are just the beginnings. Tomorrow we'll have a conversation with the Land Use Task Force which is focused on planning for a sustainable future in PEI. That's their theme, which is great, and this allows time to address land use implications of this plan further. We'll better evaluate the implementation of these plans in high resolution, ideally with the involvement among all Islanders, our neighbours, folks here and away.

Anyway, we'll make some of this information available –

Chair: Great, that would be wonderful.

Matthew McCarville: – on Don't Frack PEI's website, plan some of the maybe recommended first steps, and we'll try to meet with people in the community, with our legislators, with our elected officials, with regulators hopefully, with investment bankers. We're going to have to try to develop this plan more with the inclusion of others, but I look forward to it.

I'm much more optimistic then I was a few years ago when I came here, and so that's the message I want to leave, hopefully a positive one. I open it up to any questions and thank you very much.

Chair: Okay, Matt, thank you.

I'm not sure if we got your full name for the Hansard.

Matthew McCarville: Oh, I was just so excited to talk about this plan.

Chair: Just in case people want to touch base with you personally.

Matthew McCarville: Yes. Matthew McCarville.

Chair: Okay, wonderful.

Matthew McCarville: Thank you.

Chair: Certainly thank you for your enthusiasm in presenting your ideas. Obviously we need more of that enthusiasm and innovative thinking as we go forward in energy.

Any questions or comments from the committee?

Mr. Aylward: Just one quick –

Chair: Sure. James.

Mr. Aylward: Maybe not so much a question, but maybe an observation.

Again, thank you very much for your presentation. I thought it was very informative.

Something that you might want to include in it – I know you talk about the jobs that it would create in looking after the infrastructure itself – but I think there would be a very positive spin on tourism as well –

Matthew McCarville: Oh, I think so.

Mr. Aylward: – that you might want to consider, too. I mean, if we ever got to the point where we had a province in Canada that was completely sustainable energy-wise, I think we would be a model that the rest of the world would actually look at.

Matthew McCarville: Yeah, and the thing that I think is great is these plans – New York, everybody loves New York. If we stand up and say: We're going to outdo you. It will be a fun way to move forward. I remember a few years ago I was at the New England Governors and Eastern Canadian Premiers conference in 2009 in Saint John. I had dinner with the Governor of Rhode Island, and he talked wonderfully about his experience travelling up the seaboard, him and his wife, to tour through the Maritimes.

I think it attracts positive attention that we can be making waves, that we can change our corner of the world and actually create a ripple effect where we're helping make it happen. If we can show it can be done here, then other places will do it, they'll follow. I think that that is sort of, in a broad sense, almost like a hero's journey. We can all be heroes. We can talk positively about what this wonderful potential is to power the world for everyone forever.

Chair: Thank you, Matthew.
I know the committee has a little bit more work to do today, but I want to thank everyone for all their great presentations today and we're always here to hear from you in the future.

Thanks again, Matthew, and our Don't Frack PEI and Save Our Seas and Shores PEI organizations that presented to us today.

Committee members, there's just one other item here that is before the committee. You want to probably continue with the meeting to finish up.

The rest of you are welcome to stay to hear the rest of the meeting by all means, if you wish.

Ryan is kind of just going to brief us on what's before us in the correspondence that was left over from our last meeting.

Research Officer and Committee Clerk: Sure, thanks, Madam Chair.

In the bunch of paper you have before you there are two sets of letters. The first set goes out to – they're draft letters and they're addressed to the ministers of five different departments. Several meetings ago the committee decided it would be a good idea to request departments provide an update on the recommendations that the committee issued in its report back in the fall. There were 15 recommendations in that report, so they affected five different departments, as I said.

Anyway, these first set of letters starting with the one on the top is to Minister Webster. The letters are almost identical but I'm just looking today for just committee approval of that set.

The second set, in a subsequent meeting the committee decided that it would be a good idea to recommend or to suggest to the Department of Agriculture and Forestry and the Department of Environment, Labour and Justice that they bring three groups together on the issue of watercourse buffer zones. There were the woodlot owners who had come in before the committee to talk about those buffer zones, and then the committee received correspondence from the Environmental Coalition of PEI and the PEI Watershed Alliance on buffer zones. The committee decided to suggest that the two departments bring those groups all together to discuss their views. There are letters to the departments there and letters to those three organizations, also for the committee's consideration, approval, rejection, what have you.

Chair: Committee members, you have before you the correspondence.

Is everyone in agreement that we send the letters forward to have response back from the departments?

Some Hon. Members: Sure.

Chair: We have concurrence.

Any other new business, members?

Mr. Perry: What does our work schedule look like?

Chair: I think this was it for now.

Mr. Perry: What about after today and having some of the presenters in, maybe we should look at asking representatives from Corridor and maybe PetroWorth Resources to come in just to tell us where they're at with their exploration, what their intentions are and what the impacts may be.

Chair: We could explore where those representatives are, first of all.

Mr. Perry: Well, yeah.

Chair: Then maybe make some attempt to – we'll perhaps direct Ryan to do the research on that and get back to us as to where they're located, and if they would be willing to come and do a presentation.

Mr. Perry: Just to get an update on what their plans are.

Chair: Okay, everyone's in agreement. We'll get you to do that, Ryan.

If there is no further business I'll ask for adjournment.

Mr. Aylward: No, actually I'd like to –

Chair: Oh, James.

Mr. Aylward: – raise something as well similar to what Hal just said.

Just curious as far as our future work schedule goes, or meeting schedule. I know just – I don't want to say as of late – but recently there's been a lot of discussion in Stratford, in particular, within a group about cosmetic pesticide use.

Chair: I thought we had a law against that.

Mr. Aylward: Well, there is to a certain extent but it's not end-all and be-all. Part of the issue that this group is bringing forward is in the last year or so – couple of years – there's been three very young youth in Stratford, which is a very small geographical area –

Chair: Yes.

Mr. Aylward: – that have been diagnosed with cancer. This group is trying to find out, number one, if it can be considered a cluster, or if it would be a cluster. Number two, if municipalities can further the ban on cosmetic pesticide use within a community and things like that. I know that they're very active right now working with the Canadian Cancer Society and various other organizations. I believe they've met with different government organizations as well. I highly suspect that they're going to want to come and present to this committee as well.

Chair: Sure. They just need to contact Ryan and put the request to come in before the committee. That's what Don't Frack PEI – they approached us to come in and hear their presentation. We're always open, I believe, as a committee to that. Ask them to contact Ryan and put an official request in and we'll get back to you then as members as to what your schedules are.

Mr. Perry: I have one more to add, please.

Chair: Hal Perry.

Mr. Perry: It is a gentleman from up west, Joe Dorgan, who's using seaweed that is harvested from the shores to use as a fertilizer and/or mineral supplement. If we could ask him to come in. He has a proposal that he'd like to put forward which would be towards the agriculture and probably innovation, but it'd be more agriculture-based, is what he needs. If we could have him come in and present what his proposal is, it would be appreciated by him.

Chair: I don't believe the committee has any objections to that. Again, just have Joe contact Ryan and put an official request in, and we'll kind of look at everything and put it together for another meeting.

Adjournment by anyone?

Mr. Dumville: Sure.

Chair: Bush Dumville, adjourned.

You started and finished.

Thanks everyone.

The Committee adjourned