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Chair

Mr. James Maloney

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● (1530)

[*English*]

The Chair (Mr. James Maloney (Etobicoke—Lakeshore, Lib.)): Good afternoon, everybody. Thank you for joining us today. We have an hour of witnesses and then for the second hour we have committee business scheduled, which shouldn't take too long.

Our witnesses are from Quebec Oil and Gas Association and Evergreen Solutions Corp.

Gentlemen, thank you for being here today. I know you came last week, and we apologize for the inconvenience. We're grateful that you were able to join us again today. The process is that we will open the floor to each group for up to 10 minutes for a presentation and then following that we open the floor to questions. You should have translation devices should you need them. You are welcome to and encouraged to speak in either official language because you will be almost certainly be asked questions in both languages.

I will open the floor to Evergreen first.

Mr. Nathan Neufeld (Chief Executive Officer, Evergreen Solutions Corp.): Thank you.

Good afternoon, honourable members of Parliament. My name is Nathan Neufeld, and this is my colleague Jonathan Dueck. We are from Evergreen Solutions, a smaller, mid-size green-chemistry innovation company located in southern Alberta in the lovely riding of Foothills. We're both extremely honoured and excited to be here today, participating in this most exciting process of advancing clean technology in Canada's natural resource sectors. Allow me to begin by sharing with you a little about who we are, beginning with our mission statement.

Evergreen Solutions creates and supplies practical working solutions with an unprecedented optimization of performance to industry, incorporating product, HS and E, and real value to the corporate bottom line. Our core focus at Evergreen Solutions is to create clean chemical technology for industry that outperforms conventional technology while being very much commercially viable. Evergreen Solutions has over 20 years of experience in developing clean chemical technology and currently supplies its products across Canada, the U.S., and throughout the world. Evergreen Solutions and its innovative products have received a very high level of acceptance in Canada's natural resource sectors.

We tackled the question, “How can the federal government effectively and efficiently influence the further advancement of clean technology within Canada's natural resource sectors?” We chose to focus on our past experiences around our efforts in developing clean technology and subsequent efforts to commercialize this technology within these sectors. More specifically, we would like to present four brief case studies, two of which we characterize as successes, meaning that we were able to achieve great commercial success. The final two case studies are characterized as misses; that is, we may have successfully developed the technology but were unsuccessful in gaining an acceptable level of commercial attraction.

In all four cases, as Jon shares them, he'll focus on where we found existing federal government policy instruments helpful in contributing to successful commercialization. We'll also share where we feel policy instruments or tools could have assisted in turning our misses into successes.

For our conclusion, we'll share four suggestions that we feel would be of great benefit to our organization and many others in the quest to de-risk the adoption of clean technology in Canada's natural resource sectors.

Jonathan.

● (1535)

Mr. Jonathan Dueck (Vice-President Technology, Evergreen Solutions Corp.): Thank you, Nathan.

The first case study we want to talk about is MegaSol. MegaSol was developed at the request of and with a lot of support from Suncor oil sands. They asked us to develop a new, cleaner degreaser that would work faster and have better EHS characteristics than what was currently available on the market. The development of MegaSol was during a period in our company when we were still quite small, without significant resources to invest, so the SR and ED credits were invaluable in allowing us to make the many blends that brought us to the final composition, and also financed the multiple trips to the site for test conditions in their wash base.

The resulting product reduced the amount of fresh water that was used in cleaning the trucks. It also reduced chemical employee sick days, due to the chemical, down to zero from however many they had before, and also reduced the energy consumption in the wash base. Most of the oil sands locations have also experienced greenhouse gas reduction emissions because they heat their wash water, and with less wash water they use less heat when washing with MegaSol.

Currently, all the mining oil sands operations are using MegaSol, but it's taken us 13 years to get the industry to fully adopt the product into their operations. We believe that a commercialization program that's tied in some manner to the SR and ED program would help to speed up the adoption of new clean technologies and will help the R and D projects that the government is already invested in to achieve full commercialization faster, resulting in quicker returns on investment for both the R and D company and the government through increased tax revenue.

The second product we wanted to discuss is called MudWash. For many years Evergreen Solutions has had a major share of the market for rig cleaners in western Canada and North Dakota. But during the downturn in the economy and the simultaneous drop in oil prices, we saw our position eroding very quickly by more hazardous, less effective, and low-cost solutions.... Initially we believed this was mostly due to low rig counts, but after a few meetings with some of our distributors they confirmed that on the few drilling rigs that were operating, they were going the least expensive option, without concern over how much product they had to use or whether the chemistry was clean or not. The rig operators said they still loved and preferred our products, but they were being given instructions to cut their costs on everything.

With that information in hand, and a target price, we quickly and relatively inexpensively developed MudWash 210 in a matter of a few weeks. We sent out the dozen or so pails of product to various rigs to get their feedback, and then based on that, we finalized a solution and proceeded to commercialize the product. Due to the nature of this market, to commercialize this product we had to supply a significant amount of product at no charge for distribution to the rigs, and in this case we had to invest much more heavily in marketing than we did in R and D in order to make this product a commercial success. We believe that incentives to help companies offset the sometimes significant costs of commercializing their new products would go a long way in de-risking efforts to bring new and clean technologies into the natural resources markets.

The first miss we wanted to talk about is AggreSol-CAP. Coal is shipped across North America by rail, and fugitive coal dust from the railcars poses not only a fire risk on the tracks, but also an unsightly environmental mess, especially in the winter. As a result, railcars loaded with coal must be sprayed with some type of capping solution that will bind the small dust particles to keep them in the railcars under extreme weather conditions and various dynamic stresses. This is typically a latex-based material that is very messy in its application, difficult to clean up, and hazardous to fish if it gets into the watershed.

We were working in southeast British Columbia to develop a lower cost, superior-performing capping agent for use on their railcars, and then expand that application to other locations across North America and globally. After significant R and D work, and development and testing in our own lab, the economics indicated a positive ROI, and we were ready to proceed with on-track testing. However, at about the same time coal prices collapsed and our customer pulled all their funding for this project. To this day, coal prices are still low, and we have not been able to get re-engaged in the project. We believe that if there were legislative guidance for adopting clean technologies when they are available, it would reduce the risk for the adopters and allow them to forge ahead even in difficult economic environments.

● (1540)

Finally, TerraSol was developed during the BP oil spill crisis in the Gulf of Mexico. We were approached by a U.S. company that was aware of our clean technologies. They were looking for a clean chemistry to help them clean up the soil contaminated by the spill. The product works very well, as you can see on the slide from the video, but it needs a mechanical component to really make it a commercially viable product for this type of application. We believe there should be some type of a trigger within the SR and ED program that automatically connects the SR and ED applicants with a technical adviser at the NRC to help connect compatible technology to companies.

Mr. Nathan Neufeld: We'll conclude with our suggestions. First, we'd like to present the need for efforts aimed at reducing ambiguity in defining and qualifying clean technology. We address this first as we believe the other policy instrument suggestions we have are predicated on the necessity for existing and new innovations to be clearly categorized as clean technology in a scientific, objective, and non-biased manner. Government assistance in qualifying clean technology will also assist technology developers by providing additional legitimacy to our technology, something especially useful in foreign markets.

Second, we'd like to present the expansion of the current SR and ED program to include a special designation for a pre-qualified clean technology and then apply a nominal premium, perhaps 4% to 5%, to related SR and ED expenses. Not only would this provide incentive and assistance for the development of new clean technology initiatives, but it would effectively utilize an existing government policy instrument to promote and drive clean technology advancement.

We would like to ask this committee to consider the value of expanding the existing SR and ED program to include commercialization incentives. As we already know, SR and ED currently applies to investments related only to R and D. Tax incentives around investment in the commercialization of new clean technology would increase both the success and the speed of market adoption.

Mr. Jonathan Dueck: Third, while we prefer incentives rather than forcing behaviour through legislation, we believe the government can adopt further legislation that limits the use of hazardous products when clean technology is available. As an example, in the paving industry, companies used to spray diesel on their rubber tire rollers to prevent the asphalt from sticking to them as they changed direction. Ontario has banned the use of diesel in this application and our ReleaSol product and other release agents are now used across the province.

Finally, we recently discovered a program with the NRC that connects companies involved in the R and D process that have compatible technologies. Having some automatic link between the application for SR and ED credits and being assigned an NRC adviser could be very beneficial in moving technologies toward commercialization and adoption much faster by connecting firms and technologies that are compatible with each other.

Mr. Nathan Neufeld: Thank you very much for listening to us this afternoon.

The Chair: It is our pleasure, thank you.

Mr. Binnion, over to you.

[*Translation*]

Mr. Michael Binnion (Chairman, Quebec Oil and Gas Association): Thank you, Mr. Chair.

Thank you for inviting me for the second time to participate in your committee's work. This is a great honour for me.

My name is Michael Binnion, and I am the chairman of the Quebec Oil and Gas Association, QOGA. Our organization was created to encourage dialogue on the development of Quebec's oil and gas industry. QOGA represents about 20 regular, associate or affiliate members.

QOGA believes that it is possible to develop Quebec's energy resources in a safe and environmentally responsible manner, while contributing to the province's economic growth and social development.

Quebec's new energy policy includes local hydrocarbons and considers them to be part of the solution for the energy transition. It is clear that, since requirements regarding local hydrocarbons are more stringent than those applied to hydrocarbons from abroad, they have much lower emissions.

Therefore, we feel that a balanced energy diet is the best way to meet the numerous needs of the Quebec society.

● (1545)

[*English*]

Before I founded Questerre Energy and discovered one of the largest and one of the cleanest natural gas fields in North America, I was in international oil and gas, and even today I'm working in the Kingdom of Jordan and Papua New Guinea in addition to Quebec.

I've worked in more than a dozen different jurisdictions around the world. In particular, I've had the opportunity to work in the republic of Georgia, working with Eduard Shevardnadze and his government to implement a new oil and gas law just after the civil war.

Over the last few years I've worked successfully through the public consultation process on a new energy policy and a new hydrocarbon law in Quebec.

I had a career before oil and gas. As a very young Albertan, I was inspired by Pierre Elliott Trudeau's words that Canada should stop being hewers of wood and drawers of water for our cousins to the south. His message that Canada should embrace a new high-technology economy captivated me, so I resolved never to work in oil and gas, thinking we would soon run out of it anyway and it was yesterday's industry. I did keep to my word for 15 years.

My early career was as an R and D tax accountant in Toronto, and I graduated to public venture capital and angel investing in the high-tech sector. Along the way I published a peer-reviewed paper in an international geology journal, *Marine and Petroleum Geology*, and also published one of Canada's first economic research papers on carbon leakage and policy options.

Technology and public policy are my main interests, occupations, and avocations, which is a good thing because, in spite of my early resolve, I ended up in the oil and gas business.

What I've learned over the past 20 years is that oil and gas is more high tech than high tech, and more importantly, there is nothing wrong with being hewers of wood and drawers of water when you're the world's best at it, using world-leading technologies, though I still agree that Pierre Elliott Trudeau was right not to be captive suppliers to our cousins to the south.

This leads me at last today to the eight priority questions. The most important thing I've learned in my public policy experience is that it's far more important to have the right questions than the right answers.

The question on how to de-risk the adoption of clean technology in the natural resource sector implies that Canada's resource sector has not been successful at adopting clean technology. Well before I started in the industry...and our earlier two presenters showed some examples of adoption of technology. The question presumes that the risk of performance of clean technology is blocking resource companies that just aren't quite able to realize the obvious benefits, so the really smart people have to help them out.

This is just simply not true. To those Canadians who say we're not the best and most resourceful people in the world with the respect to creation of resources, I say speak for yourselves. Yet there are even people in our own industry who believe the outdated narrative of our resource industries being old tech and not clean tech.

An interesting story is the story of Imaginea. Ms. West is an inspiring figure. She had a dream to start a new kind of oil company. At first I was interviewed by a documentary filmmaker from California on how Ms. West and Imaginea were going to create the zero-emissions oil and gas company. I have a lot of time for Ms. West and her imagination, and you will understand why in a moment, but her dream ran into a problem. All good stories need a villain, and her villain was the fossilized thinking of oil and gas executives.

Well into her business plan she had implemented a dozen or so clean-tech initiatives on her route to a zero-emissions oil company. The problem was, as I mentioned to the documentary filmmaker, who I think in retrospect had cast me as the villain in his film, my junior company had already implemented every one of her initiatives in our own projects. We just hadn't put it on a web page or in a documentary film. I can tell you some of my junior peers are ahead of Questerre with the use of hydrogen fuel cells and solar automated PLC controls to reduce environmental impacts and increase efficiencies.

The big companies are even further ahead and have created a privately funded technology supercluster equivalent, with over $1 billion in research a year. It is truly progressive and leading thinking on clean tech to co-operate with your competitors on technologies good for the environment and the whole industry. It's why Ms. West has had to adjust her Imaginea story, because there is no fossilized old-tech villain to make her story captivating.

I've reviewed hundreds of high-tech business plans with a view to risking my own money, which I've made from successful investments and high-risk ideas. They all have a story of how people miss the obvious. Occasionally one of them is right, but most of them are not.

“I need help in de-risking” is often code for “I need someone else's money”. When we de-risk an exploration project at Questerre using amazing state-of-the-art technologies, we need a lot of money too. Government has no business doing resource exploration with taxpayers' money. It's too risky, and those with the expertise and experience in risking their own money will make better choices.

Back to the questions, some better questions might be these. First, how can the federal government within its jurisdiction ensure that Canada's resource sector remains the world leader in the adoption of clean technology? Second, what policy instruments have been most responsible for Canada's resource sector's world-leading performance with clean technology? Could other jurisdictions benefit from Canada's leading clean technology and expertise to improve their environmental performance? Third, what institutions have been most successful in furthering the adoption of clean technology, and can the Canadian government further leverage those institutions to enhance Canada's lead in the adoption of the new technology?

I feel the final question about what recommendations the committee should have was a fair and open-ended question without any a priori assumptions, so I chose to answer that one. Here are my recommendations.

First, don't screw it up. If in doubt, when you're the world's best, the best thing you can do is keep doing it.

Second, Mayor Nenshi in Calgary has raised my taxes 30% in three years and is still taking on debt. Nonetheless, he has done a first-class job telling the world that Canada is the best place in the world to live—or Calgary is. Could we ask our government in Ottawa to do the same and promote Canadians being proud of what we are indisputably the best at—resources? International benchmarking studies would assist in doing this.

Third, I think we should keep the R and D tax credit program but consider making small reforms to tighten up credits for what are routine business risks.

Fourth, we should create a high-tech flow-through share as we have in the resource industries, making it easier to find private investment for new clean technologies by being able to pass on the R and D tax credits to investors who take the risk.

Fifth, I recognize markets do fail sometimes and also that there are times for Manhattan projects. Both recent history and economic research have shown that evidence-based regulated targets that allow the market to choose and adapt the best solutions to attain them is the most efficient solution for these problems. Our prior presenters, I think, made a similar recommendation.

Sixth, please heed back to Jean Chrétien's words on the adoption of Kyoto. Canada already does a lot to reduce emissions in the rest of the world, and could have a bigger impact globally than at home. Canada has to look at the problem of carbon leakage as a huge priority and a global problem. There are only three countries in the OECD that are net exporters of high energy-intensive goods: Australia, Norway, and Canada.

Australia realized that Kyoto production-based accounting for carbon was bad for their exports with comparative advantages in carbon and opted out. Norway realized the same and reformed its fiscal terms for its resource sector to substitute carbon pricing for government take. Canada has not done the economic study. If the precautionary principle applies anywhere, it surely applies here.

In conclusion, I'd like to return to Imaginea. I realized in talking to Ms. West and her filmmaker that her dream was possible. She only needed a zero-emission source of electricity or energy. I had seen the fully electric rigs that the Soviets had used in Georgia, and I knew where there was a large economic natural gas discovery with access to zero-emissions electricity.

We are working now to make the Imaginea dream of an emissions-free oil and gas company a reality with Quebec clean gas 2030. Using existing technology, we can drill and produce natural gas in Quebec using emissions-free hydroelectricity. My recommendation is to do the carbon leakage study so policy-makers can understand how Quebec and Canada's carbon policies create emissions incentives to import natural gas from Pennsylvania versus develop cleaner gas locally.

As far as de-risking our Quebec clean gas 2030 project goes, we're really already on it, although reinstating the Canadian exploration expense deduction of 100% for exploration wouldn't hurt at all.

Thank you very much for your attention.

● (1550)

The Chair: Thank you very much.

Ms. Ng, we'll move over to you.

Ms. Mary Ng (Markham—Thornhill, Lib.): Thank you, Chair.

Thank you to the presenters.

To Evergreen Solutions, you talked about the need to put forward legislation. Can you just talk a bit more about what that means? Is it legislation that is required? Are there other forms to encourage a greater take-up? Does it have to be legislation?

● (1555)

Mr. Jonathan Dueck: Thank you.

We believe that maybe it's not legislation but it's some way of encouraging companies so that when there is clean technology available, they are incentivized to move towards that clean technology. If it's something that levels the playing field for all the different companies, then there's no risk to them to make that investment to adopt the technology.

Mr. Nathan Neufeld: Or less risk, anyway....

Mr. Jonathan Dueck: Yes.

Ms. Mary Ng: Are there ideas for what those incentives could look like for users, to encourage a greater level of adoption of products like yours?

Mr. Jonathan Dueck: One idea could look something like the SR and ED credits for doctors. When there's a technology that's identified as a green or a clean technology, there would be some type of a credit, like a tax credit or something like that, towards adopting products that are identified as green technologies.

Ms. Mary Ng: You also talked about needing a better or broader definition for clean technology. Can you talk to us a bit more about what you mean by that?

Mr. Jonathan Dueck: I think that in order for any of the other recommendations we put forward to be adopted, there needs to be a pretty clear guideline as to what kinds of technologies would fall under that. Our thought was that in some way you would have an auditor, almost like in the work for the SR and ED credit, where they come back to you, double-check everything, and make sure you really qualify for that.

In order to do any kind of verification like that, there would have to be very clear definitions of what that would look like. Even in the request that was sent to us about appearing here, it stated a couple of key points in the definition. Basically, it's any product that remediates or prevents environmental damage or any product or service that is less polluting or more efficient, so a technology that is identified as one that would help us use our natural resources more efficiently would qualify for part of that definition. Then somebody would review that prior to agreeing that it qualifies for whatever credit—or anything like that—or for adoption or development.

Ms. Mary Ng: Good.

Thank you for your input. As practitioners, of course, it is always helpful for us as we consider what can be done.

Your company has been around for quite some time. Can you talk to us then about what some of the roadblocks might be and what a government role could look like that would help companies like yours?

Mr. Nathan Neufeld: Yes. Certainly one of the issues we've found is that we often see companies that, for various reasons, are not willing to adopt the clean technology that we have, even though it's commercially viable. There's concern about the viability of the technology as it's developed, and I suppose that's where we brought in this idea that it would be good if we could engage the current SR and ED program to effectively be a tool to qualify clean technology and provide some level of legitimacy.

We're coming from the chemical industry, and there's a very wide range of terminology that's used, and a lot of variables in play, and I suppose that's where we've seen a lot of skepticism over the years. Certainly in the oil and gas industry we've faced it for many years, and when you start using the terms that we use to try to define clean technology, we find that things get very ambiguous and sometimes challenging. That's why we're looking in general for the government to come in and support that. That's why we talked about initially creating that role perhaps within the SR and ED program of a qualifier of clean technology.

If, for example, when we submit a file to SR and ED, assuming that it's technology, if we could in a sub-form claim this new technology or this new innovation that we've developed is in fact deemed as clean technology, even using the definition that your committee has posed.... If we're able to do that, that immediately creates additional credibility for us, and again, it's proved by potential auditors from the SR and ED program. For example, we would have a chemical engineer who would come and audit our file once every couple of years, and we'd be able to have that qualified and be able to better promote our technology based on the clarity that has now been brought into our world.

● (1600)

Ms. Mary Ng: That's very helpful. If I paraphrase—

The Chair: I'm sorry. I'm going to have to stop you there.

Go ahead, Mr. Barlow.

Mr. John Barlow (Foothills, CPC): Thank you very much, Mr. Chair.

Thank you again to our witnesses for taking a second day to be with us, and I apologize for the gas leak last time. It's ironic that we're talking about clean technology and we have a gas leak in downtown Ottawa.

I'm going to start with Evergreen. You were talking about the focus and your emphasis on incentives, and incentivizing the industry. Certainly I know in Alberta we are feeling the impact of the energy downturn more than maybe other provinces, and I think we'd be naive to say that some of that, or a great deal of that, is not because of uncertainty in policy. However, things like a carbon tax, I would say, would be a punitive way to try to encourage innovation and technological advancement in the industry.

From your perspective, your company relies on the big companies being successful and having money to purchase your products. Why is your focus on incentives rather than other initiatives like a carbon tax? What do you see as the benefit of offering incentives to encourage innovation but also to apply that innovation?

Mr. Jonathan Dueck: I guess that's a little bit of our western mindset, maybe, but we just believe that when a company is allowed to make its decisions and then it gets a positive reinforcement rather than a negative reinforcement, it's going to make the right decisions to move forward and implement the things it needs to do in order to be a good steward of the environment, and also to do what's best for the company.

Mr. John Barlow: Obviously, you guys have been successful, and companies have been purchasing your product without ever having a carbon tax in place. You've been doing this type of innovation for more than a decade, right?

Mr. Jonathan Dueck: It's been 13 years. Yes, they see the benefit. They realize there are greenhouse gas reductions. They realize there are benefits from an HSE perspective to their employees, and they realize that they can consume less water. Companies have a social licence too, and they realize that people want them to be environmentally responsible. They do what's best, and incentives just help them to do that and give them a better corporate balance sheet, too. It helps in that way too.

Mr. Nathan Neufeld: Yes, and just to follow up, we certainly agree with Michael's assessment as well.

In our opinion we don't see great help with the federal government doing a deep dive into the regulatory issues around clean technology, but our approach is more at the periphery. We feel that if the government provides elements of support, clarity.... I agree with Michael as well that we're not looking for bags of money, but I think we're talking about incentives for both the technology developer and the adopter, more on the tax side where any financial gain ultimately ends up back in the government's pocket through additional revenue that the companies are producing.

● (1605)

Mr. John Barlow: Great. Thanks.

Mr. Binnion, something you said caught my attention: we have to look at ways for other countries to benefit from Canada's technology and our innovation and our very environmentally friendly way of doing things when it comes to natural resources.

I've heard you speak before at other events. Just as an example we had Chelsey from Young Women in Energy, and she talked about Singapore putting a tax on Tesla cars because of the GHG emissions on the production of those cars and the batteries. This is certainly a different perspective from what we have, especially in Ontario where you get a $14,000 rebate for buying a Tesla.

You've also talked about carbon leaks, and I know you had a second to touch on it in your presentation. Could you talk a bit more about the benefits of embracing the way we do things here in Canada, our environmental standards and regulations, and the opportunities we have that would have a true impact on global GHGs if we were able to export that technology, that innovation, and those intellectual skills to other countries?

Mr. Michael Binnion: Yes. What I think we're missing in a lot of our policy discussions is the impact that our policy at home can make internationally. We might think we're incenting people to reduce emissions by putting a tax on them, but we could just as easily be incenting people in Quebec and Ontario to import gas from Pennsylvania because you can export your carbon when you import their gas and it won't count in your own numbers. That's the carbon leakage problem. Are we incenting better behaviour, or are we just incenting the export of our carbon, our jobs, and our taxes, all to end up having made the global carbon worse while our own local carbon got better?

I've been saying for a long time that if we have the best.... As just a quick aside, we already have some of the best incentives in the world for adoption of clean tech. That's how we got to be the best, but that doesn't mean we can't be better. If we could export our resources.... Canadian aluminium has the lowest emissions per tonne of aluminium in the world. We should be finding a way to export more of it to the rest of the world to help with carbon emissions, not finding ways to produce less of it.

I could say the same thing about the technologies that go into producing our resources. If our resources are produced to the best standards in the world, often with the lowest carbon content in the world, we could not just export the resources to make the world's global emissions better; we could also export the technology and the knowledge to those other countries.

Mr. John Barlow: Michael, and maybe Nathan and John can answer this too—you both talked about it—if you could each take 15 or 20 seconds, which is all the time I have, what would be your definition of clean technology? That's certainly something we've discussed around this table as well.

Mr. Nathan Neufeld: From our standpoint, we use a lot of internal criteria, which we've gathered over the years, to define what we call “green chemical technology”. We utilize a database [*Technical difficulty—Editor*] from the Canadian government, from the United States, and from Europe as well. We can draw a very wide range of data from regulatory standards.

Honestly, I think the definition that the natural resources committee has proposed is completely fine. It's broken up into two parts: any products or services that remediates or prevents environmental damage; and any product or service that is less polluting or more efficient. Again, there are tremendous variables in determining if products meet that criteria or not, and that needs to be managed in a very professional and non-biased way, and the non-bias issue is another topic.

Go ahead, Michael.

The Chair: I'm going to have to stop you there.

Mr. Binnion, you may be able to get back to that later, but we're going to have to move on, unfortunately.

Go ahead, Mr. Cannings.

Mr. Richard Cannings (South Okanagan—West Kootenay, NDP): Thank you all for appearing before us. I won't say “for being here”.

I'm going to follow up on the gas leak and carbon leakage puns that Mr. Barlow started and ask Mr. Binnion maybe some more about the real carbon leakage and your zero-emission gas company, that plan. Talking about the methane reductions that the government had planned between Canada and the United States, now these have been put off for three years I understand, because of pressure from the industry.

I'm just wondering if those measures could have incentivized work here in Canada that we could then perhaps export to the rest of the world to reduce emissions around the world, so that those technologies developed in Canada would not only help the world but help Canadian companies and jobs in the sector.

● (1610)

Mr. Michael Binnion: I'll start with your last point and of course, there's been this new report that came out through the David Suzuki Foundation that methane has been under-reported in the industry. I think the Canadian Association of Petroleum Producers has come out quite strongly to refute the underlying assumptions of that report.

I will say that, according to the Canadian Association of Petroleum Producers, even if the United States went forward and was successful under the Obama requirements to reduce methane venting and emissions by 45%, Canada would still have been lower, so we're already well ahead.

I can tell you at the same time that, in terms of technologies, we're well ahead mostly due to regulations and requirements to flare. Restrictions on how much you're allowed to flare are just so much stricter in Canada than they are in many places in the United States, and venting as well.

I'll just offer an example where we could do better. Questor—not to be confused with Questerre, which is my company—Technology has an incinerator technology, not a lot more expensive than flaring, but it is a bit more expensive. As a result, it has not been widely adopted, even though it would clearly reduce these emissions even more.

Just getting back to the great incentive we have to be the world leader by more than 45% on this issue, it's a combination of regulatory approaches and technology that could be adopted elsewhere, and also I acknowledge that there is absolutely room to improve, as I think Evergreen and Nathan were talking about.

Then on the beginning of your question, we're very excited to take the idea of Suzanne West's, and I give her full credit for having had the idea of a new way of thinking about our industry. It may not be a new way of doing things, but a new way of thinking about what we do. I'm excited that in Quebec we do have that zero-emissions energy source. If we can eliminate all the diesel generators, which we can, if we can eliminate all the natural gas or diesel compressors, which we can, we can achieve the dream that she had of zero-emission natural gas in Quebec, yet we have people opposing it on the basis that any new local business in Quebec would increase emissions. It's true in Quebec, but we would have a massive reduction of global emissions, yet that doesn't seem to matter to some people.

Mr. Richard Cannings: Right.

Could you just expand on the zero-emissions quest, if I can use that word, and just exactly where you are there, what you have to achieve, what has to be done to reach that, and how that zero emissions is being achieved?

Mr. Michael Binnion: We have a seven-phase plan from now until 2030. It aligns with the Transition énergétique Québec, which is their plan and actually goes to 2050 but they have milestones at 2020, 2030, and 2050. We're lining up with the 2030 milestone as a target to be at zero-emissions production of natural gas in Quebec. Just with what we know and what we've been able to accomplish, there have been quite dramatic improvements in technology already, as we've seen in the United States in the shale gas.

In the early stages of our goal of being at zero emissions, zero fresh water, and 100% biodegradable chemicals, where we're at and what we've already developed is that we can electrify the compression, instead of using hydrocarbons to run compressors. We can electrify our dehydration equipment, which takes the excess water out of the natural gas. That can also be electrified. It takes that to near-zero emissions. In fact, most rigs already are called diesel electric rigs. They're electric rigs run by diesel generators. We just take those straight from the grid and eliminate all the emissions from the diesel generators.

We're already over 50% there in terms of reducing existing emissions on the drilling and completions of oil and gas wells, just by what we can do now today. We have 100% recyclable water. In Quebec, we have all the water testing, and that technology we have today. The future state would be to use grey water out of our sewage treatment plants and other places like that, and not use fresh drinking water for fracking. Then, on the biodegradable chemicals, right now, today, we can use frack fluids that are non-toxic but might not be non-bioaccumulable. But we think that by 2030 we can easily get to 100% biodegradable frack fluids as well.

The final step, which is going to take longer, is the adaptation of vapour recovery technology, already well implemented at refineries and other similar installations around the world, but of course those are very large projects, big economies of scale. The adaptation of vapour recovery technology to mobile drill sites would be really the final step toward getting us to zero-emissions production of oil and gas.

The one thing is that we get there in part by saying we're not getting [*Technical difficulty—Editor*]. We're looking at transportation as being more of a society problem and not directly related to oil and gas because everybody has to transport things. So we're not counting that when we say zero emissions.

● (1615)

The Chair: You're right on time.

Mr. McKay.

Hon. John McKay (Scarborough—Guildwood, Lib.): Thank you, both. I don't generally sit on this committee but I found what both of you had to say interesting.

Let me just ask a question that has been disturbing me, from a variety of anecdotal sources. That has to do with goods and services crossing the border in the last few months. Have any or either of you experienced any difficulties with respect to either people or goods or services crossing the border in the last few months?

Mr. Michael Binnion: I don't have enough business in the United States, personally, to be able to make a helpful comment to you on that.

Hon. John McKay: The other...?

Mr. Nathan Neufeld: As far as Evergreen goes, no, we haven't had any negative experiences. We have done a fair bit of business in the North Dakota region. We do a lot of work in the Bakken, and there's a lot of connectivity right now. There has been for a number of years, between Alberta and North Dakota and that region, so, no, I would say not. We haven't noticed anything abnormal or unusual.

Hon. John McKay: I suppose it's entirely anecdotal on my part to hear of people, particularly smaller businesses, doing business in the States and having border difficulties. But I'm pleased, actually, to hear that you're not. That's good.

Your testimony primarily talked about the role of government in both incentives and penalties, trying to encourage behaviour that reduces the carbon footprint. In the case of Evergreen, you had a couple of fairly promising technologies that didn't quite go where you wanted them to go at the end of the day. In the overall situation, had there been in place a cap and trade system where they had been trying to acquire credits to reduce their carbon footprint, or a carbon tax system, would the decision of your potential customers have potentially been different?

Mr. Jonathan Dueck: In the two misses we spoke about, I don't think a cap and trade or a tax like that would have pushed either one of those two over the top. I'm trying to think if there are any that would.

We have a positive impact on.... Water usage is probably our biggest impact.

● (1620)

Hon. John McKay: It stands to some logic that if your customer is reducing their carbon footprint for a product where you had a couple of misses, the decision might have been slightly different, because your customer would have benefited by reducing their carbon footprint.

Mr. Jonathan Dueck: Maybe in that case there was a significant impact, but the two products we talked about....

Hon. John McKay: Okay. That's fair.

Mr. Binnion, do you have an opinion on that?

Mr. Michael Binnion: First, I'll go to the end and go back to the example I gave of Questor, which has the incinerator technology. To the extent there was an additional carbon cost, it could make the difference to say maybe I'll incinerate versus doing flaring. I think there's an example that would speak to what you're getting at, that carbon taxes could create an incentive.

Going back to the question I didn't answer before though, as does Evergreen, I like the broader definition of clean tech that talks about environmental benefits and not just carbon benefits. I'll give you the example of Oslo, Norway, that has adopted, as many places in Europe did, the new high-efficiency diesel engines, which have a lower carbon footprint, but people forgot about the acid rain problems of the 1960s and 1970s, and the smog problems that our generation was able to solve. Now people with diesel cars can only drive into the centre of Oslo every second day because smog came back.

Therefore, I think we need to expand this idea of what a clean technology is to some of the things that Evergreen has, which may not be directly related to greenhouse gases but nonetheless are very germane to a better environment in terms of the potential to clean up contaminants or other actual pollutants in the environment, versus carbon. I think the point is in some ways—

Hon. John McKay: That's a perfectly legitimate point, because doing good on the left hand and doing bad on the right hand is not necessarily a good solution.

One of the problems with the flow-through shares and a variety of others, even SR and ED, is that they were gamed by a variety of companies, and they fell out of favour as policy instruments around here for a long time, because banks were claiming SR and ED credits and flow-through shares became the annual game around budgets.

I wonder whether, even given the limitations of a carbon tax and a cap and trade system, that may be a way to incent good behaviour and punish bad behaviour. The legitimate point you make, Mr. Binnion, is that it may be too crude.

The Chair: Your answer is going to have to be very brief.

Mr. Michael Binnion: I think often a broad tax on everything can act like a sledgehammer trying to solve a specific problem. As Evergreen alluded to, and as I did in my recommendations, we've seen often that a regulation limiting discharge at a sewage treatment plant, for example, will then allow people to develop the technology to meet that. That is a much more surgical answer to a problem. You could increase carbon taxes quite a lot and not have achieved anywhere close to what the EPA average mileage fleet rules accomplished.

Hon. John McKay: Thank you.

The Chair: Thank you very much.

Ms. Stubbs, we'll go over to you for five minutes to use your time as you see fit.

Mrs. Shannon Stubbs (Lakeland, CPC): Thank you. I appreciate that.

Thanks to all of the witnesses for coming back again today. I think we all appreciate the time you're taking out of your lives and out of your businesses to provide this important testimony for policy-makers and legislators to consider.

I just want to say that both of you have touched on this issue of a definition around clean tech. We've heard that from witnesses previously throughout the course of this study, in terms of wanting some specifics around the definition of clean tech, both for the purposes of this report and also for the future, for the fiscal and policy decisions government might make with regard to so-called de-risking the adoption of clean tech.

You guys had mentioned that, I think, at least for the Conservatives around the table, we do often also ask how government de-risks the adoption of clean tech and we hear that taxpayers absorb risk, rather than innovators and risk-takers and experts in the industry who know best the innovation and technology advancements that will drive the future of Canada's already world-leading environmentally and socially responsible oil and gas and other natural resources development.

On that note, in the last committee meeting, I asked the current Minister of Natural Resources directly whether or not he believed that Canadian oil and gas was the most environmentally and socially responsible oil and gas in the world. While he, about 30 seconds prior, had just rightfully been pointing out on a number of measures the way that Canadian mining is first in class in the world in terms of environmental stewardship, engagement and participation of first nations people, benefits to communities, and positive impacts on the standard of living for communities right across Canada, suddenly when I asked him the question about oil and gas, he wanted to know specifics around metrics and said he couldn't answer the question, wasn't sure, and then proceeded to talk all around it, rather than saying that Canadian oil and gas is the most environmentally and socially responsible in the world.

Michael, since you mentioned that issue in your opening remarks, and you touched on this notion of doing international benchmarking studies in order to be able to make this case on Canada's behalf, I just invite you to expand on that and any specifics you'd like to add in terms of Canada's role in the global context as a world-leading oil and gas producer.

● (1625)

Mr. Michael Binnion: The Canadian Association of Petroleum Producers has issued one benchmarking study comparing the efficacy and strictness of Canadian regulations on oil and gas to many other jurisdictions in the world, and Canada came out on top in that study, including being stricter and more effective than Norway, so there's one.

Certainly one thing that I've been saying to the Alberta energy regulator every time I can get a chance to talk to them, having worked all around the world myself, is that I think Alberta is one of the best regulated, if not the best regulated, jurisdiction in the world. But it would sure be nice if they would do the benchmarking, not only to improve their own performance but to be able to prove what we all believe to be true.

I think that investment is a critical investment and it will help to make us better, so going from best to even better than best is something that we can achieve through that process.

Also, when I talk about benchmarking studies, I was talking about Canada's comparative advantage in carbon. I think a lot of our resource industry—and I'm not going to say every single segment has a comparative advantage in carbon, but I think most of them likely do. One that I know for sure is the Canadian aluminum sector, with two tonnes of carbon for every tonne of aluminum. America produces 11 tonnes of carbon for every tonne of aluminum. We have a 500% advantage in carbon, and we need to know where we have that advantage so we don't end up putting taxes on the best, while the worst continues to produce even more.

Mrs. Shannon Stubbs: Right, and piling taxes and costs on developers and producers who are already doing the best in the world just makes things harder for them, and I think ends up in this perverse situation where sometimes the outcome of public policy is the very opposite of what the proponents of public policy say they want to achieve.

Michael, last month you wrote an article entitled “Common Sense Climate Policy”, and you highlighted three key issues for policy-makers to address as you've outlined a global impacts approach to climate.

The Chair: I'm going to have to stop you there. We're out of time. I'm sorry.

Mr. Tan, we'll go over to you for the last five minutes.

Mr. Geng Tan (Don Valley North, Lib.): Okay, thanks.

Evergreen, I'm very interested in your product MegaSol. It looks very promising, based on the notes you provided to us.

What is the share of your product in this chemical degreasing market?

● (1630)

Mr. Nathan Neufeld: Did you ask about the market share?

Mr. Geng Tan: The share of your MegaSol in this industry.

Mr. Nathan Neufeld: As we discussed, we designed that chemistry, specifically for Suncor Energy. They brought us in to do R and D work, and we developed that chemistry specifically for their oil sands operations.

Over the past 13 years, just looking at the oil sands specifically, we probably have about 75% to 80% market share right now within that narrow segment. Of course it has taken on tremendous commercial value outside the oil sands as well. We were involved in a wide range of large plant shutdowns and turnaround projects. Of course it's also very extensively used south of the border.

Mr. Geng Tan: The performance of your product looks very good in reducing the amount of chemical used and reducing clean time. What is the cost of processing the chemicals that have been washed off from the equipment by using your technology compared with other commercial technologies?

Mr. Nathan Neufeld: Do you want to speak about the cost?

Mr. Jonathan Dueck: We did recent audits of the sites up there, comparing current practices, products they're using, procedures, and things like that. I don't know their total operational cost for their wash days, cleaning, and things like that, but for one of them we identified $7 million in annual savings, which they could have by adjusting their procedures according to some of our recommendations. For one of the other sites, it was $5.5 million. That's just a portion of what they spend in those areas, and obviously that's not all chemical. There's labour, equipment downtime, things like that, and savings they can achieve by optimizing some of their operations according to our recommendations and implementing our chemicals in other locations.

Mr. Geng Tan: Is there a need to separate your MegaSol chemical from other grease or oil chemicals—I don't know what chemical it is—or just that you put them together, process them, bury them, or store them somewhere?

Mr. Jonathan Dueck: The MegaSol itself will biodegrade 100% within a month. A lot of these plants will recycle water, so when they send it back out to tailings within a month it will completely biodegrade and be gone.

Mr. Geng Tan: Is it a liquid solvent?

Mr. Jonathan Dueck: Yes. It's a blend of different components, but, yes, they're solvents.

Mr. Geng Tan: Thanks.

Ms. Mary Ng: My question is really quick to finish off the conversation we had a little earlier. If I understand correctly, you're suggesting we think about or consider or recommend adding a component to SR and ED and essentially create an incentive in that application for companies like yours and other clean techs to incentivize the use of clean tech products like yours. That was the incentive you were talking about.

I just wanted to close out that point because we ran out of time earlier.

Mr. Nathan Neufeld: Yes, that's exactly the idea we'd like to propose. We would like to see SR and ED have an additional category specifically for clean technology that would offer even a marginal premium to producers, and also potentially to be engaged by adopters of technology as well. They could apply for SR and ED credits with regard to the costs associated with adopting new clean chemical technology, further incentivizing them to bring it in.

We saw that potential even with Teck coal. That certainly could have had an impact on that project, which we shared as an example as a miss for us.

● (1635)

Ms. Mary Ng: Right.

Mr. Jonathan Dueck: Even for Suncor, with development of MegaSol, they had to invest an awful lot of their employee time, and take time in their wash phase and things like that to allow us to come on site and do that work. There was a lot of involvement there on their side.

The Chair: Thank you very much.

That's all the time we have. I would like to thank the three of you for appearing before the committee and for trying to do it twice.

We're going to suspend the meeting for a few moments and let you gentlemen go on your way. Again, thank you very much for taking the time out to join us today.

[*Proceedings continue in camera*]