



HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

Standing Committee on Natural Resources

RNNR • NUMBER 026 • 2nd SESSION • 41st PARLIAMENT

EVIDENCE

Thursday, May 1, 2014

—
Chair

Mr. Leon Benoit

Standing Committee on Natural Resources

Thursday, May 1, 2014

• (0850)

[English]

The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)): Good morning, everyone.

Before we get started on the business of today's meeting, I want to mention a couple of things really quickly.

First of all, there was a question by Ms. Duncan at Tuesday's meeting about witnesses from Ukraine. We have one today.

On Tuesday we will start working on the report on the cross-country benefits of the oil and gas sector, so perhaps everyone could come prepared for that. You'll probably receive the report sometime on Monday.

Yes, Ms. Moore.

Ms. Christine Moore (Abitibi—Témiscamingue, NDP): Mr. Chair, how can we be efficient on Tuesday morning if we receive the report on Monday and we have to study it? I'm sorry, but one night to study a report and be ready for Tuesday morning I find unacceptable. I think we should have at least two or three days to study a report before talking about it in committee, if we want to be efficient.

We should have a normal committee meeting on Tuesday if we just receive the report on Monday.

The Chair: I guess that's one way to view it. We have no business arranged for Tuesday's meeting, so if you want to take that time to go over the report, we could probably decide to do that.

Is that what you want to do? Do you want to come back and start Thursday with the report?

Ms. Christine Moore: For me, having just one day to study a report is.... Can we get it before?

The Chair: No, it doesn't sound like we can. It's gone to translation. That's always a slow process. It's been there for a while now. It takes time. It's a long report.

Ms. Duncan, let's not get into a long discussion on this, if we can help it. We have witnesses from around the world waiting.

Ms. Linda Duncan (Edmonton—Strathcona, NDP): I'm merely speaking to the matters you've raised, Mr. Chair.

I second the concern of my colleague. I don't think it's extreme to ask for at least two days to review the report and then we can be efficient. We may well come to agreement more quickly and just look at the issues of contention. We can start right away with "We're generally supportive of the report, but here are the issues". I have

many things already booked on Monday, so I'm not sure I have sufficient time to review it.

I'm also asking what has happened to the brief report we asked for on rare earth, and if we could have some kind of guidance on what the next study might be. For example, I know that our Liberal colleague has been waiting for his review of propane. We would be fully supportive of that. If we could gear up for that on Tuesday, that would be terrific.

That might be an option. Who knows? We may actually be able to get through the report at the Thursday meeting.

Also, I am pleased that we have somebody who has studied Ukraine, but I'm just wondering if we could have clarification on whether or not we're able to have anybody representing the Government of Ukraine.

The Chair: We have no witnesses who were asked for by committee members, Ms. Duncan, as you know.

Mr. Trost.

Mr. Brad Trost (Saskatoon—Humboldt, CPC): Mr. Chair, maybe we could take a few minutes at the end to decide if we're going to cancel Tuesday and to go through some of the other things Ms. Duncan mentioned, etc.. but now we really need to get to the witnesses.

The Chair: We do. This meeting will end on time, so we'll end maybe five minutes early and do a quick discussion on whether we want to cancel Tuesday's meeting or postpone it until Thursday.

Let's get to the business we're here to talk about today, which is the study of the opportunities for Canada to contribute to energy security in Ukraine and the rest of Europe.

I really do want to thank the witnesses for being here today. It looks like a very interesting day, indeed. I want to make sure that we have the maximum time possible to hear from our witnesses and then to have members question and make comments on what the witnesses have said.

In the room with us today, appearing as an individual, is Michael Edwards, principal, Fairweather Hill. Welcome to you, sir.

By video conference from Geneva, Switzerland, appearing as an individual we have Vitalii Dem'ianiuk, participant, executive master program for international oil and gas leadership, Geneva Graduate Institute of International and Development Studies. Welcome to you, sir. Thank you very much for being with us today.

By video conference from Calgary, we have Geoff Hill, consulting partner, national oil and gas sector leader. Welcome to you, sir. Thank you very much for being here.

There's a change here: by teleconference, unfortunately, rather than by video conference, from Washington, D.C., we have as an individual Anders Aslund, senior fellow, Peterson Institute for International Economics. Thank you very much, sir, for being with us today.

We'll go directly to the presentations in the order listed on today's agenda.

Michael Edwards, principal, Fairweather Hill, please go ahead with your presentation. You have up to seven minutes, sir.

● (0855)

Mr. Michael Edwards (Principal, Fairweather Hill, As an Individual): Mr. Chair, and honourable members, thank you for your invitation to contribute to your study.

I'm an independent policy analyst, and I focus on energy. I've been following the energy sector now for about three decades. The opinions I express today are my own.

The current political crisis unfolding within Ukraine, and between Ukraine and Russia has raised the question: can Canada play a role in Europe's energy security? If you believe this crisis might drive an opportunity, then it may be fair to ask if that opportunity will outlast the political crisis.

Those in Europe with whom I spoke this week cannot see a future when Russia will be displaced from the energy markets of Europe. Russia simply has too large a role to play in supplying Europe with energy. More than 25% of Europe's total market for gas—34% is the last figure I had—and just under 30% of EU oil is shipped from Russia. Europe and Russia have become entwined in a symbiotic relationship, a web of interlocking business and financial relationships, based primarily on energy.

Of course, we've seen disputes that have arisen between Russia and states of the former Soviet Union, and these created some collateral damage for Europe, including interruptions to gas supply in 2009.

Security issues aside, the priority need for Ukraine today is financial help in meeting debts. I fully expect that Europe will assist as this is clearly in its interest to resolve the problem.

Is there an ongoing threat to European energy security? If markets are any indication, the answer is probably not yet. We see that European gas prices have moved little on the latest Ukrainian problems, not an indicator that energy security is top of mind, or that the intensity of the current political confrontation is enough to create a willingness by Europeans to pay an estimated \$35 billion annual premium for diversification away from Russia as a supplier of choice.

It is also not likely that European consumers will be easily convinced to accept a 50% increase in their gas bills, so the energy security issue may well fade, provided the political crisis resolves itself.

After the crisis in 2009, there was increased investment to support trade with Russia, the most notable was the 14 billion euro Nord Stream project to bring gas directly from Russia to Germany under the Baltic Sea.

Some have decided to move toward less dependence on Russia. Lithuania, for instance, has commissioned a floating LNG receiving facility, and Poland is also taking steps to tap the world market for LNG.

Europe currently imports about 11 TCF of gas annually. To put it into a Canadian context, the Russian share would be equivalent to about four Sable Island gas projects exhausted every year, or about the volume of output from four or five good-sized LNG projects like the current one in Sabine Pass on the Louisiana-Texas coast.

That being said, Europe cannot afford to have uncertainty over where its energy will come from for any amount of time, let alone the decade or more it would take to transition away from Russia. During that decade there would be opportunity for an immense amount of dislocation: economic, political, and social.

The reaction from Europe on the energy security front will not be uniform, of course; we've seen that. It will reflect that individual states have to assess their own vulnerabilities, and those vary widely from the U.K., with very little direct need for Russian gas, to former Soviet Union states, which are wholly dependent on Russia.

Europe, with so much Russian-focused infrastructure, may augment a small portion of Russian gas with a little more gas from Norway, a little more LNG from the world market, a switch back to more coal, revisiting nuclear, ramping up renewables, and redoubling conservation efforts, but in the end, Russia still remains a key player.

We should therefore assess markets realistically with Russia as part of the dynamic, an entrenched player that has a competitive cost base and the infrastructure to deliver its product, and one that has demonstrated that it will defend its markets very aggressively.

● (0900)

What can Canada do? Canadian gas is not available on the east coast yet in sufficient quantities to justify the investment in LNG infrastructure. That may change, of course, with new discoveries or by making the investments in gas pipeline infrastructure required to bring more gas into the region. This is a five- to ten-year prospect.

Notwithstanding this, LNG will still go where it will fetch the highest price, and currently, that is Asia. Interestingly, we are about to repurpose the main west-east gas transmission pipeline to move bitumen, which won't really help the gas situation in Europe.

Is there really an opportunity to do something here? Well, considering the points that I've raised, the fact that there is little interest in the European market as demonstrated by the current round of U.S. LNG export project whose focus is Asia, the answer to that on the gas side is probably not. The question is if there's anything else we can do.

For Ukraine, it's been estimated that if that country were as energy efficient as western European countries, its own domestic production would be sufficient for its own needs. I see an opportunity if Ukrainians decide to take themselves off the Russian subsidized gas habit, and therefore the real opportunity may actually be Canadian energy efficiency expertise working in partnership with knowledgeable Ukrainians, not more gas to feed an inefficient energy system.

If I have time, I would like to make a short comment on oil.

Canadian producers at the moment have a negligible impact on the EU oil market. We currently export to the EU about 47% of their imports and that's light sweet crude. Perhaps there's some room to move more light sweet from Newfoundland and Labrador as more projects come on stream. However, I see no barriers to that production. It sells itself, it's very competitive.

Finally, on the matter of Canadian heavy blends, these certainly could displace imports to Greece and Turkey, but that would actually displace heavier gulf blends, not Russian Urals, and that is also true elsewhere in the basin.

I would like to leave it there and await any questions you may have.

The Chair: Thank you very much, Mr. Edwards, for your very interesting and informative presentation.

We go now by video conference to Vitalii Dem'ianiuk, who is a participant in the executive master program for international oil and gas leadership in Geneva. He is here as an individual.

Would you go ahead, please, sir, with your presentation.

[Translation]

Mr. Vitalii Dem'ianiuk (Participant, Executive Master Program for International Oil and Gas Leadership, Geneva Graduate Institute of International Studies and Development, As an Individual): Thank you, Mr. Chair.

[English]

Good morning, *bonjour*, dear madams and sirs.

Please let me express my sincere gratitude for the invitation to join you at this panel and the possibility to be an expert witness at the Standing Committee on Natural Resources. I've been in the energy sector for 15 years and 8 years in the gas sector.

The matter of energy security of Ukraine, which primarily relates to the issues of natural gas supply to Ukraine and transit of natural gas through the territory of Ukraine, could be solved only if any and all actions of the Russian Federation aimed at an increase in natural gas price, a reduction in supply volumes of natural gas, or a reduction in transit volumes don't have a significant impact on the Ukrainian economy and the political decision-making process for Ukrainian authorities.

The guiding role of hydrocarbons, first and foremost, the share of natural gas of Russian origin, should be reduced to the greatest possible extent in the energy balance of Ukraine, deploying a wide range of measures.

Ukraine must become an inherent and integral part of the European energy market.

On September 24, 2010, Ukraine acceded to the Energy Community Treaty. In doing so, Ukraine accepted and committed itself to obligations on the staged implementation of the European energy legislation. In a rather short term, Ukraine has to complete this assignment and implement on its territory the European model of energy market operation.

The integration of Ukraine into the European energy market would enable implementation of the projects related to the cross-border flow of energy resources and joint development of transport infrastructure. Even today, we may ascertain that the reverse flow supply of natural gas from the European Union countries to Ukraine can produce a tangible and economically reasonable alternative to Russian gas. Today, Ukraine is in need of support, by any and all political means, of her efforts aimed at stabilizing the reverse flow supply of natural gas as the most time-efficient tool for enhancement of its energy independence.

Let me briefly describe the potential action-oriented aspects from Canada and Canadian industry on the issue of contributing to the energy security of Ukraine by means of participation in a range of comprehensive focus areas.

First is the reduction in natural gas consumption volumes, increase in energy efficiency, and development of alternative energy sources. This area makes possible a significant decrease in energy dependence. At present, the marketing niche of energy efficiency and the alternative energy market in Ukraine can be attractive both for injection of capital and for the transfer of technology.

According to data from IHS CERA, today the energy capacity of the Ukrainian economy is, by a substantial margin, higher in comparison with that of the European Union, which provides the most unique opportunity to invest and to apply creative technology in every sector, including energy and construction. The tremendous potential of Ukraine in biomass creates an opportunity for substitution for natural gas in power and heat generation.

Second is the increase in domestic production of natural gas in Ukraine. In specified areas, mutual cooperation can occur in multiple spheres: investment in the production of natural gas and the operation of Canadian oil and gas companies in Ukraine; the transfer of sophisticated technologies related to the production of unconventional natural gas and the augmentation in production of conventional gas at the fields with the production volume decrease phase; the transfer of sophisticated technologies related to minimization of losses of produced hydrocarbons over the course of extraction and processing.

● (0905)

Ukraine requires innovation technology and it is highly important to find the appropriate partnership models in order to provide the means for Canadian energy, engineering, and service companies to operate in Ukraine.

Third is diversification of the natural gas supply to Ukraine and in general to the European market. Its increase by any possible means other than sources from Russia will automatically enhance the energy security of Europe and Ukraine, in particular.

For this purpose, contribution by the Government of Canada and participation of Canadian companies in multiple initiatives and projects aimed at the saturation of the European natural gas market will automatically cause a positive impact, including for Ukraine.

Fourth is educational programs and further professional training. This focus area of cooperation and endorsement is a key one, because the long-term implementation of the above-mentioned tasks will succeed only under this condition. International education in the energy sector, the possibility of continuing professional development, and the introduction of new technologies will enable the real sector of the economy to be filled with advanced professionals and the implementation of necessary structural reforms in the energy sector of Ukraine.

Canada already provides such kind assistance for Ukraine, which we genuinely appreciate, and many young people of Ukraine study at universities in Canada or intern at Canadian companies.

The indicated cooperation could be extended to the energy sector as well.

Therefore, diversification of the natural gas supply, the increase in energy efficiency, the increase in volumes of natural gas domestic production, alternative energy use, and improvement of the professional educational level are the key areas to be entered into by Canadian investments, Canadian technologies, and Canadian companies.

Thank you for your attention. I am ready to answer your questions.

● (0910)

The Chair: Thank you very much for your presentation, sir, and we'll get to the question part later.

We will now go to our next witness, who is with us from Calgary by video conference.

From Deloitte Canada, we have Geoff Hill, consulting partner, national oil and gas sector leader.

Go ahead, please, Mr. Hill, with your presentation, for up to seven minutes.

Dr. Geoff Hill (Consulting Partner, National Oil & Gas Sector Leader, Deloitte Canada): Thank you, Mr. Chair, ladies and gentlemen. It is my absolute pleasure to be here today.

As you may know, Deloitte is among the largest professional services firms in the world, with offices in more than 150 countries, including Ukraine. Suffice it to say, the issue we're discussing is close to us in numerous ways.

For my part, I am a partner in our Calgary office, and I lead our Canadian oil and gas practice. Services we tend to provide to all of the oil and gas companies are regarding advisory, modelling, and general consulting services, just to set the stage on where we contribute to this industry.

Meanwhile, it is important to note that our member firms are legally independent of each other throughout the globe. Therefore, today I will be speaking specifically from a Canadian perspective.

I am honoured to speak from a Canadian supply and demand, and logistics and capacity perspective of the high level of what we believe Canada could do to help out with the current crisis.

The primary challenge is really around infrastructure. By way of resources, if we set the stage at a very high level, we clearly have plenty to share.

Let us look at a quick calculation of the 2013 production in Canada versus its current domestic use, in other words the amount we export. If we were to take the high-level, somewhat impractical but illustrative exercise of diverting all of our current exports to the European Union, how much of the current European import amounts would that displace? In other words, how much of a player could Canada be in helping out this situation?

Currently we export 1.2 million barrels a day of crude oil. If Russia turned off all the taps entirely, that would be almost 40% of the potential European Union shortfall, almost 1.8 trillion cubic feet of gas per year, which is almost 33% of the EU shortfall, and 21.7 million tonnes of coal a year, which is almost 43% of the potential European Union shortfall.

Those are large numbers, but in the context of what we can reasonably do in the situation in the Ukraine, those numbers assume some very important things.

First, it's assuming there is no increase in Canadian production, even though we have significant proven reserves. I will talk about that in a second.

Second, it's assuming we have market access and all of the infrastructure to get the product to tidewaters, and then to process that to transport to Europe. It's also assuming that the Canadian oil and gas companies will consider that an economic export location versus some other alternatives.

Third, which is the largest assumption, but is for illustrative purposes only, it's assuming that all the Canadian excess capacity would be currently diverted from its current customers, primarily the U.S., to the EU.

Let's go through those issues in detail, because I think it will illustrate some of the challenges and opportunities we have in Canada.

In terms of existing pipelines, we know they're pretty well all maxed out, which is why growth, especially in the oil sands sector, needs the three-million-plus barrels a day of new capacity represented in the variety of pipeline proposals currently on the books. If the capacity does expand, production of all those resources is forecast to far outpace our current domestic consumption. In other words, the rate of which we can increase our production is a lot higher, a lot faster than the rate of which we are going to be able to build infrastructure. So production isn't our problem.

The second assumption is very fair, and that is regarding market access and infrastructure constraints. It is our belief that projects like Northern Gateway, Keystone XL, the Line 9 reversal and Energy East are all very viable and should proceed, notwithstanding some legitimate stakeholder concerns that must be addressed. Currently, of course, the pricing economics favour exports from Canada to Asia over that of Europe. That, therefore, may not make it as attractive to export to the European Union, even if we did have the infrastructure to export out of Canada.

Of course, there's the proposed fuel quality directive, which is a clear and present danger to some of our crude export hopes, particularly the oil sands.

As for the third assumption, which is diverting all of current exports from the United States, that is exceptionally impractical. But it does show that with no increase in our current production, Canada's energy independence as a country would not be threatened by an increase in exports outside of Canada.

Regardless of any of those scenarios playing through, we're still left with a very serious infrastructure deficit.

● (0915)

By any estimates, the most aggressive estimates to supply gas to Europe are for around five, six, or eight years, during which time we would have to be exceptionally busy building the needed facilities, none of which we are currently building at the required pace.

I would also like to point out that this means we are not ready to respond to any other similar situations like this should they happen in the next few years. I am talking about similar global energy crises with which Canada may come to help.

I believe we know most of this, so rather than retread over covered ground, I would like to close with a couple of short-term and medium-term ideas that we may want to consider.

For a short-term idea, we are an exporter of resources, and we have been since the founding of our country, but what about exporting our technology, individuals, people, and our expertise as well? Canada could provide not just resources but knowledge, skills, and technology to help develop local resources, proficiency, and expertise. I understand an earlier witness suggested this, but I want to mention it, because we agree it's a substantial opportunity for Canada.

We understand that we do have a skills shortage in Canada, there is no doubt, and this seems to conflict with what we're talking about. But we are talking about growing a centre of excellence, not just for resources but also for technology know-how in the areas of oil field services, energy efficiency, education, and training. This will benefit Canada as a whole. Meanwhile, Canadian expertise in these areas is absolutely world-renowned.

A medium-term opportunity would be Canada collaborating with the United States to collectively feed the EU markets. I will talk about gas first.

In terms of an LNG supply, North America offers relatively short shipping distances, relatively little political risk, and very transparent pricing. The viability of U.S. LNG liquefaction projects can be

understood by using the concept of shale spreads, which represent the price differential between shale-driven natural gas, which is a low price, and natural gas prices in other regions, including the EU and Asia. There's a substantial spread. Although in Europe it's not as substantial as it is in Asia, there is still a substantial spread. Collaboration between the United States and Canada, with its already existing interconnected natural gas infrastructure, would accelerate the export of liquefied natural gas.

With respect to collaboration with oil, pipelines such as Keystone XL would allow the transfer of Canada's heavy oil to the U.S. gulf, which those refineries are well set up to produce. It could allow the possibility of diverting some existing U.S. imports or even U.S. production of light oil to the EU, which the refineries there are better suited to produce.

Beyond those two ideas, I would like to reiterate that I believe the infrastructure is still the crux of our challenge, both in specific terms of the situation in Ukraine as well as domestically. All the best intentions in the world won't change the fact that we just don't have the means to ship our energy products to anywhere but the U.S. for the near future. If we focus on changing that, we do believe the rest will follow.

Thank you.

The Chair: Thank you, Mr. Hill, from Deloitte Canada, for your presentation.

We go to our final witness for today's meeting, who is with us by teleconference from Washington, D.C. Anders Aslund is a senior fellow at the Peterson Institute for International Economics.

I welcome you, sir, and thank you very much for being with us today. You can go ahead with your presentation, for up to seven minutes.

Mr. Anders Aslund (Senior Fellow , Peterson Institute for International Economics, As an Individual): Thank you very much. It is a pleasure, Mr. Chairman and members of the committee, to testify at this committee today.

I work at the Peterson Institute for International Economics, an independent economics think tank. I have been dealing with Soviet Russia and Ukrainian economic affairs for the last 40 years. This is where I come from. I come particularly from two perspectives, one is the dysfunctionality of Gazprom, the Russian supplier to Ukraine, and the other is the dysfunctionality of the Ukrainian gas sector. That is where I think I can add something to all the knowledge the other witnesses have already provided you with.

The European oil market is well supplied and functions well. The same is true of the coal market in Europe, which is oversupplied, and the nuclear market is minor. What we are talking about really is gas, and specifically with regard to Canada LNG.

Starting from the Russian side, the Russian state-dominated natural gas giant Gazprom stands out as the possibly worst managed big company in the world. Its market capitalization has fallen by 77% in the last six years. Its price equity ratio is as low as 2.4. It should be worth three to four times more. The reason is that Gazprom is a company that does not allow its so-called shareholders to get part of its actual profit, apart from the dividends.

Each year it spends about \$45 billion on so-called capital expenditures, which means plenty of large pipelines which make no commercial sense. In particular, Gazprom has built Nord Stream, the big pipeline through the Baltic Sea in order to avoid Ukraine. It has now started building South Stream, a large pipeline through the Black Sea in order to avoid or circumvent Ukraine. The clear intention of Russia is to abandon the relatively well-functioning Ukrainian gas transit system, and leave it unutilized.

The building of these pipelines has another purpose as well. It is to enrich the subcontractors. Out of this \$45 billion in annual capital expenditure, \$30 billion or so goes to what investment bankers delicately call value destruction, which ordinary people would call waste and corruption. Much of that money has gone to some of the Russian companies that the U.S. Treasury recently sanctioned for having financial connections with a top Russian official. In short, \$30 billion or so effectively goes to kickbacks.

The other goal of Gazprom is geopolitical, to bully countries dependent on its gas supplies. Ten European countries receive 100% of their natural gas imports from Gazprom: Finland, Belarus, Estonia, Latvia, Lithuania, Czech Republic, Slovakia, Bulgaria, Moldova, and of course, Ukraine.

Of these countries, all but Finland have experienced sudden, repeated, impermissible cuts in their gas supplies usually caused by a combination of geopolitics and corruption. In particular, in January 2006 and again in January 2009, Ukraine and much of Europe suffered from Gazprom cutting its supplies.

The reaction to Gazprom's sustained cut in supplies in January 2009 was severe and persistent. Gazprom's exports to Europe fell by 21% from 2008 to 2012. Its share of EU gas imports fell from 32% in 2008 to only 25% in 2012.

Russia has been largely crowded out by LNG supplies of some 10% of total European gas imports now largely from Qatar.

● (0920)

The European energy market is not expanding. On the contrary, it has fallen by a few per cent in the last decade, and it's likely to be flat in the future as well.

The other aspect is what is happening inside Ukraine, and it has been quite dramatic. In 1989, Ukraine consumed 100 billion cubic metres of gas a year. Now that consumption has gone down to 50 billion cubic metres or so last year. Even so, Ukraine remains one of the least energy efficient countries in the world. The short of it is that Ukraine could cut its consumption to 30 billion cubic metres, if it became as energy efficient as Poland. Then we would have a very different situation. The fundamental problem is that the household price of gas in Ukraine covers only 15% of cost recovery. It's about to be increased by 50%, but that doesn't help much.

Another side of the Ukrainian gas market is that Ukraine was a major gas producer until the early 1970s, when its production peaked at 70 billion cubic metres a year, then production was sharply slashed to some 20 billion cubic metres a year, at which level it has stayed, because the Soviet authorities turned their focus to the giant gas fields in west Siberia.

Ukraine can increase its production of conventional gas with existing infrastructure. For example, Shell is working in this area. There's no reason to believe that they couldn't increase conventional gas production by 50% within five years or so with elementary order in a very disorderly gas sector.

In addition, Ukraine has plenty of shale gas potential. Both Chevron and Royal Dutch Shell have concluded product-sharing agreements with the Ukrainian government about the development of shale gas fields, Chevron in the west and Shell in the east of Ukraine. Both of them anticipate they could reach a production of five to ten billion cubic metres a year in a decade. Ukraine could reach gas balance in five years by doing elementary things, and it could be oversupplied with exports in five to ten years, thanks to shale gas.

The rest of Europe has also reacted to the Gazprom cut in 2009. Energy savings had already gone quite far, so that is not the key element. Instead, they've undertaken four major measures.

First, they accelerated the development of LNG infrastructure that has been discussed here before. Europe has now more than a score of LNG terminals and the LNG tanker market is oversaturated.

Second, they opted for all kinds of interconnectors so that gas flows in the existing pipelines can now easily be turned around in various directions.

Third, central Europe especially has increased gas storage substantially.

Fourth, the European Commission has reinforced its competition policy, launching its biggest case ever against Gazprom, and its whole business model is likely to be disqualified.

Then you wonder what the role of Canada would be here. In the short term, there's nothing Canada can do. In the long term, Ukraine should be in good order. We don't know what will happen with the dysfunctional gas production in Russia, but in the medium term, Canada could produce and export LNG and make a contribution to the market, even if most of this went to east Asia where the prices are the highest.

If Canada declares that it is intent on exporting LNG to the benefit of Ukraine, that declaration on its own will have a positive impact on energy security in Ukraine and the rest of eastern Europe.

Thank you.

● (0925)

The Chair: Thank you very much for your presentation, Mr. Aslund.

Before we get to questions and comments from committee members, could I just ask the committee if maybe we should agree to have an hour for future business on Tuesday, to have that as our meeting on Tuesday?

It gives more time for the translation of our draft report to make sure we have time to read it. If that's agreed, we won't need to put aside any time today to deal with future business. Is that agreed?

Some hon. members: Agreed.

The Chair: Okay, we will do that then, and have some reasonable, more lengthy discussions on future business.

Thank you very much for that.

We go now to questions and comments in the seven-minute round. We'll start with Mr. Trost, followed by Ms. Duncan, and then Mr. Regan.

Go ahead, please, Mr. Trost, for up to seven minutes.

• (0930)

Mr. Brad Trost: My first question will be for both Mr. Aslund and Mr. Dem'ianiuk.

We heard from some of our previous witnesses at our previous committee hearing that if you're a Canadian company wanting to work in the Ukraine, there are—how shall we say this?—issues involving dealing with the government, dealing with the regulatory system, dealing with corruption, etc., throughout that part of the world. Having actually lived in Russia in a previous life, I understand some of the business dealings they're dealing with.

As some of the suggestions made today were about getting involved technologically with Ukraine to help them, be it for production or for energy efficiency, with that as a background, I have this question: does Ukraine currently have the infrastructure, political, legal, cultural, physical, etc., to absorb and use whatever technology Canada or other western countries would have, be it for producing more natural gas or be it for assisting them in transitioning to a more energy efficient sector? This is a problem: companies go in there, and they really don't want to deal with the business climate.

I see some other witnesses nodding their heads, but could the two witnesses who I asked start off? Then if we have a little more time, I may ask the other witnesses to comment.

Mr. Anders Aslund: The short answer is that the current situation is undergoing a massive transition. As you know, yesterday, the IMF decided on a standby program for Ukraine of \$17 billion. This is a big reform that is under way.

The answer falls into two parts.

As it was, until February, it was quite a hopeless situation for small and medium-sized enterprises. There are two good big western companies that manage to operate. Those are Chevron and Royal Dutch Shell. In order to find reasonable conditions, they have insisted on product-sharing agreements for their taxation, and they have managed to get such agreements. There are no good, small, independent companies in Ukraine that have reasonable conditions. You need the existing conditions to be big and strong, and that means when Canadian companies want to work together with Shell and Chevron, they can operate.

I'm not sure if either of these two has started the exploration for shale gas, but Shell is doing deep drilling on land and on shore. ExxonMobil was about to make an agreement with the Ukrainian government about offshore, off Crimea. I think that has fallen off the board for the time being, and for the future we will simply see how far the reforms go.

I have been dealing with Ukrainian economic reforms since 1994. From 1994 to 1997, I worked as a government adviser. I had some

hope then, and then it became clear that it was stuck. This is the best possibility of a breakthrough that I have seen in Ukraine, so I have high hopes for a substantial improvement in [*Inaudible—Editor*], but it's not done yet.

The Chair: Thank you, Mr. Aslund.

Mr. Dem'ianiuk, go ahead, please, sir.

Mr. Vitalii Dem'ianiuk: I would like to express my feeling exactly from my perspective.

Today the Ukrainian government is totally open to cooperate and to support this cooperation. If you look at internal production of natural gas in Ukraine, 90% is concentrated in state-owned companies. I strongly believe that for the moment it would be much easier to organize this cooperation and to intensify it.

• (0935)

Mr. Brad Trost: My next question follows up on that one. We've mostly concentrated on Ukraine, but we are looking at other eastern European and European countries, because they do interplay on this.

Again, I could go to the same two witnesses, but if the other two witnesses want to answer, they should indicate.

What is the infrastructure capability? How open are other countries in that area to similar measures? Are there other countries that could use a great boost in their energy efficiency, local production, etc., and are they open, for example, Moldova and Romania? We talked to Poland the other day. They seemed very open. How can we interact on that level with those other countries?

Do any of the witnesses have a comment about countries other than Ukraine, in a similar fashion?

The Chair: Point of order, Ms. Leslie.

Ms. Megan Leslie (Halifax, NDP): Mr. Chair, I have a point of clarification. When Mr. Aslund speaks, it's quite low. But if you use your earpieces, it's easier to hear him.

The Chair: Thank you. We have a volume adjustment issue there.

Ms. Megan Leslie: Yes, it works well this way.

The Chair: Thank you very much, Ms. Leslie.

Mr. Aslund, do you want to answer that question?

Mr. Anders Aslund: I'm happy to do so.

If you discuss a business environment in Moldova, it's very complicated. When we discuss energy issues, you can't have very big companies. Big companies in small economies bring about complications. Moldova has, to my knowledge, no energy findings of its own. It has, rather fast, improved its business environment. I'm thinking of a Transparency International corruption perception index and also the World Bank's index on the ease of doing business. But it is so small and it's poor, so it's difficult to operate, from that point of view. It has some substantial improvement in energy efficiency.

Romania is, to my mind, one of the most interesting countries, perhaps the one, besides Ukraine, that I would bet the highest on developing shale gas. Poland, as you mentioned, is another country that is intent on developing shale gas. Poland has introduced quite bad tax rules for shale gas exploration, and therefore, they have now changed those rules, because they scared off countries.

There are a couple of countries that have simply prohibited shale gas. They are the Czech Republic and Bulgaria. I think this reflects the strong influence of Gazprom that is going against it. Gazprom is supporting all kinds of non-governmental environmental organizations in order to make sure that shale gas does not develop. Gazprom is going about this in a very clever political way in eastern Europe.

By and large, all these countries have greatly improved their energy efficiency after the communist era, so the European Union has had a big positive impact. What has also had a great impact is the so-called third energy package of the European Union, which means that countries now have to force energy companies to divide pipelines from the production and sales of energy, which hits Gazprom directly.

This is one of the big battles that is taking place. Both east European countries that are members of the European Union and the European Union itself are very firm on these points.

We're seeing a lot of positive development, meaning more efficiency and more market orientation in this area. As Mr. Dem'ianiuk mentioned before, Ukraine is part of the European energy community, which is what is really needed in order to get into the European energy policy.

Thank you.

The Chair: Thank you very much. We have to leave the answer at that.

I'm going next to Ms. Duncan, for up to seven minutes.

Ms. Linda Duncan: Thank you to all of the witnesses. I know it's very difficult when you're at such a distance. We wish we could have brought you here personally, but perhaps some other time. I'm glad you could join us by phone at least, Dr. Aslund.

• (0940)

Mr. Anders Aslund: Thank you.

Ms. Linda Duncan: I noticed that both Dr. Aslund and Geoff Hill have mentioned that there are two sides to this issue of what Ukraine is struggling with right now. One is to ensure a secure supply of gas or other fuels, other sources of energy electricity, and the other is energy efficiency.

Some of you may be aware, likely Dr. Aslund is, that the IMF have just declared that they will give \$17 billion to Ukraine, and \$3.2 billion of that immediately. Those dollars are conditional on a substantial effort by Ukraine on energy efficiency. Certainly that's another side that Canada could readily provide.

One thing that I would add is, I had the pleasure in 2012 of travelling to Ukraine twice, including meeting with some of the local governments. Some of them are particularly struggling with trying to provide jobs in small-scale industries. There could potentially be a lot of job creation through energy retrofits, installing renewable energy, and so forth.

Interestingly, and you wouldn't know this, Dr. Aslund, unless you saw the proceedings, we were fortunate to have representatives from the Government of Poland testify before us on Tuesday. They put forward a number of recommendations. One of them was in keeping with what you've said. Because Ukraine is among the least energy

efficient and there's pressure by the EU in that direction, they strongly recommended that they move toward greater energy efficiency. Apparently the IMF is requiring greater energy efficiency, not just for large industry which might be more readily possible, but also for smaller scale commercial and home. They realize there has to be some kind of a social safety net.

I'm wondering if we could hear from, first of all, perhaps, Dr. Aslund and then Mr. Hill, who, to his credit, and we looked at his report, said that part of a national energy strategy for Canada should be energy efficiency, and certainly we have a lot of expertise that we could be exporting to Canada on that.

Dr. Aslund.

Mr. Anders Aslund: I can only support what you were saying, Ms. Duncan.

What I should add is that the price policy in Ukraine has been totally out of whack. Ukraine last year paid \$53 for 1,000 cubic metres of gas. That was produced in Ukraine by a state company, while it imported gas for slightly over \$400 per 1,000 cubic metres from Russia. This is with our transport under VAT. That means Ukraine paid only one-eighth as much for domestic production.

The idea was that this should be used for domestic consumption. The gas price in Ukraine has only been one-sixth, 15%, of the cost recovery for gas. Now it will go up to something like 23% of a cost recovery, which is still far too little, and the idea is that it will go up. You wonder, why this is. Well, it's because somebody takes about half of the domestically produced gas, say, nine billion cubic metres is my assessment, and resells it. This was somebody very close to President Yanukovich, or possibly Yanukovich himself who was in this business.

If we do the simple calculation, that was about a \$3 billion cost. This is the reason nobody has worked on energy efficiency, because somebody higher up all along has been making money on it. All the big fortunes in the 1990s in Ukraine were made on gas. In reality, Ukraine probably has 20 billionaires, and most of those billionaires have made their money on this kind of gas trade which has moved among different people.

In order to get rid of this corrupt dealing, one needs to increase the gas price all the way so that there's no difference between cost recovery prices and the prices at which gas is actually sold, both for production and consumption. Then you get incentives to save energy, and then all the techniques become relevant. Of course, Canada has a lot to offer in this regard, and this can be done in so many ways, but first the prices must get right.

Thank you.

• (0945)

Ms. Linda Duncan: Thank you.

Go ahead, Mr. Hill.

Dr. Geoff Hill: Thank you for the question. It's a very good point. Any time an energy efficiency project is undertaken, of course it requires equipment, but it also requires the skills and the knowledge and the know-how that go along with it—the skills to choose the right equipment, to install it properly, to operate it properly—and those are very highly technical, highly specialized skills that Canada does have. I think we do have the potential to help out.

There are some challenges, though. Those skills are also in high demand in North America. As was mentioned earlier in a previous question, it is easier to do business in Canada or in the United States than it is in other countries, particularly for some small companies.

I realize the Chevrans, Shells and ExxonMobils of the world are more comfortable going into newer geographies, but the small companies that might have 10, 20, or 30 engineers, and that might be the world's expert at a certain area of energy efficiency, are probably more nervous going into those areas. They would need some help. I think they would need to understand the economic potential, the economic gains they could get from going in, but I think they would need some help on how to navigate the system, to take some of the risk out of doing that. But we definitely have the skills to build the export, for sure.

Ms. Linda Duncan: If I could just follow up on that, I know that in my own province of Alberta there are a good number of energy efficiency and retrofitting companies. They're actually already working in Europe and developing that exchange.

The challenge, of course, for Ukraine is that it has a struggling economy and the people who will be the most vulnerable will be the homeowners and the small businesses that are struggling to get going. I know it's very important. If large industry in Ukraine is the biggest energy consumer, there is also the other side, and there probably is a lot of expertise. Electricians, carpenters, and so forth could potentially be assisted by Canada to go over and train Ukrainians, which would be job creation and would help with energy efficiency.

I wonder if Mr. Dem'ianiuk could speak to that.

Mr. Vitalii Dem'ianiuk: It's actually what I mentioned in my short presentation. I think that today the very wide field for small companies that have expertise in energy efficiency is open in Ukraine.

I personally can even help and can provide some additional information on how they can communicate directly with the local governments in the regions of Ukraine that are currently seeking this help and seeking these opportunities.

The Chair: Thank you very much.

Thank you, Ms. Duncan.

Now we go to Mr. Regan, for up to seven minutes.

Hon. Geoff Regan (Halifax West, Lib.): I think we're very fortunate to have such excellent witnesses for this discussion today. It's an interesting one, although it seems to be somewhat futile.

Let me ask you, Mr. Edwards, what price...? I don't know how we would do it, but let's put aside for a moment the concern you have about the fact that it would take a decade really for Canada to be able to supply natural gas, for example, to Europe and mainly to Ukraine.

What do you think the price would have to be before it would make economic sense? What price would we have to obtain in Ukraine for natural gas?

Mr. Michael Edwards: There's a lot in that question. I might dodge it simply by saying we need to get the world price. Shareholders need to get the highest price for their product, so they will take their product to the market that will provide that price.

The question really comes back to the thread that has been going through the questions and the answers this morning, which is that there's a certain amount of dysfunctionality in the Ukrainian market, so that would have to be addressed first. Really, the answer to your question is, if we were going to ship LNG from Canada to Ukraine under the current situation, someone has to subsidize it. Who is going to do that? That really doesn't make much sense.

The question then is, do we really know what Ukraine wants? At the moment we have a government in transition. We need an elected government that is, I think, prepared to govern with a mandate to change the business environment and create that environment that would allow the world price to regulate there.

What's the price? It would be roughly \$4 or \$5 more than we are currently getting for natural gas here, and that would be roughly the cost of converting gas to LNG and shipping it into that market.

● (0950)

Hon. Geoff Regan: Then it would be somewhere in the \$9 or \$10 range?

Mr. Michael Edwards: I would say so, yes.

Hon. Geoff Regan: I think we've heard that in Asia these days people are paying \$14. Am I right?

Mr. Michael Edwards: That's correct.

Hon. Geoff Regan: When you say world price, the difficulty is there's not a world price per se, in that you have different prices in different parts of the world right now.

Mr. Michael Edwards: Well, that's true, but we are moving more to a global market in LNG. As more infrastructure is in place, we can expect to see more reference to a global price, and that will definitely be higher.

One of the arguments, part of the debate in the U.S. at the moment, is the impact of exports on domestic prices. The other side of this is that if we were to open up our market entirely to the world for natural gas, then we can assume that we would pay world prices in Canada for our natural gas, less the cost of moving it to those other markets. That may be of concern to a SAGD oil and gas oil sands operator who doesn't have a captive supply. That's going to drive up the cost of new projects, and I would be concerned about that, quite frankly.

The debate in the U.S. has been sort of two-sided. One is the likes of Dow Chemicals, which is concerned about the cost of its feedstocks if too much gas is exported, and the other side of it is the shale gas operators who are looking to get more value out of their product, who want to have more exports. You want to decide whether to export jobs out of the U.S. or keep them at home. That's the debate going on right now in the U.S.

Hon. Geoff Regan: I only have seven minutes and I wish I could have half an hour for all my questions.

We've heard that Professor Mohan Malik from Honolulu has done research suggesting that over the next 20 years, 85% of the growth in energy consumption will come from the Asia-Pacific region while Europe, as we've heard today, is not expected to grow, and in fact it's likely to be flat. First, if that's true, should Canadian exporters be focused more on the Asian markets than on European markets? Second, where do we rank in LNG, considering that there is one plant under construction already in Louisiana, five others planned in the U.S., and there are three, I think, already operating in Australia?

How are we doing in that regard? What are they doing that we're not?

Mr. Michael Edwards: Canada is just getting into the game and I think it's significant that the first LNG export project is on the west coast. It's the logical route to the market you've just described.

Hon. Geoff Regan: Dr. Aslund, what levers does Gazprom have to place obstacles in the way of Canadian companies being active in Ukraine, whether it be to do energy efficiency, to assist with things like reversing pipelines, etc.?

Mr. Anders Aslund: Basically, not much.

I agree very much with what Vitalii Dem'ianiuk said here before. Ukraine is moving toward independence from Russia simply because the relationships are so bad. Economically, you can say this doesn't make much sense. Russia has plenty of gas, and it can produce gas cheaply if we looked upon it as an ordinary enterprise, but it doesn't work. There's no good relationship between these two. As I mentioned, it's quite obvious that Russia wants to avoid taking any gas through Ukraine in the future. Russian sales to Europe are falling. Russia is simply mishandling its market in Europe very badly, not being the least oriented towards it. The positive side of it is that Gazprom therefore cannot cause many problems, but there are specific issues.

Some of the biggest gas storage in the world is in western Ukraine; 36 billion cubic metres of gas can be stored there. Gazprom has an enormous interest in seizing these big storages for its supplies in eastern Europe if they were to be serious about it. We could see a sudden change of Gazprom coming in. Ever since Ukraine became independent, there has been a discussion about the status of its gas transit system through Ukraine so that it be owned by Russia or Ukraine. The current legal rule is that it must be Ukrainian state-owned, but there has been constant discussion about a consortium with Germany, Ukraine, and Russia, or with the European Union, Russia, and Ukraine. Because of the complete lack of trust between Russia and Ukraine, nothing has come out of these many discussions.

The short answer is that Gazprom cannot block it right now, but you never know how it can pop up.

• (0955)

The Chair: Thank you.

Thank you, Mr. Regan.

We go now to the five-minute round, starting with Ms. Crockatt, followed by Mr. Leef, Ms. Moore, and Mr. Calkins.

Go ahead, please, Ms. Crockatt.

Ms. Joan Crockatt (Calgary Centre, CPC): Thank you very much to the witnesses. As other MPs have said, it is really an honour to have you here and to be getting such up-to-the minute information from such excellent witnesses.

I want to start with you, Dr. Aslund.

As we know, there is a major political upheaval taking place in Ukraine right now. Much of Europe, if not the world, is jittery. In fact nine hours ago the Ukraine forces moved to full military readiness, and in news reports just two hours ago, the Ukraine foreign minister warned of a Russian invasion.

Dr. Aslund, can you tell us succinctly what is the threat to Ukraine, and indeed to Europe, of being so energy dependent on Russia?

Mr. Anders Aslund: Well, the bigger problem, which you have touched on, is what Russian policy is towards Ukraine as a whole. We have just seen that Russia has annexed Crimea. That came as a complete surprise, like a bolt from a clear sky. Nobody really expected that Russia would do it. We do expect that Russia will poke up trouble around it, which they like to do; they don't like stability in their nearest neighbourhood.

The fundamental question is what President Vladimir Putin, because it's very much he who decides in the Crimea, wants in Ukraine. I would suggest that there were two reasons for him to start the trouble in Ukraine in February.

First, he was afraid of a democratic breakthrough in Ukraine, because that would be a potential threat at home against his authoritarian and corrupt rule.

The second reason—

Ms. Joan Crockatt: Could I move you just a little—our time is very short; I do apologize—to the issue with energy? Is energy being used, is gas being used, as a form of oppression? What is the threat to Ukraine, and the threat to Europe, of being dependent on Russian gas, Russian energy?

Mr. Anders Aslund: The big point here is that it's the greatest vulnerability. Russia wants to poke up trouble in Ukraine, and nothing is more effective in that regard. Russian exports to Ukraine are about \$12 billion a year, so this is a big impact that Russia can have.

Of course, you don't store that much gas. Therefore, cutting the gas is very effective in order to cause trouble in Ukraine.

Ms. Joan Crockatt: Thank you very much.

Mr. Dem'ianiuk, I noticed you said in your presentation that the contribution by the Government of Canada and Canadian companies will automatically cause a positive impact, and that you've noticed with great satisfaction that Qatar has already publicly declared a readiness to start substituting volumes of natural gas.

Now, others are suggesting that perhaps Canada shouldn't act—I think that's an undercurrent—because it might take too long. There have been curtailments on Russian supplies of gas to Ukraine going back to 2006.

Do you believe Canada should act, and if so, why?

• (1000)

Mr. Vitalii Dem'ianiuk: From my perspective, if the world community will try to feed the European gas market as much as possible, it will help Ukraine as well. In Ukraine we don't need some specific prices for the gas; we just need prices that are not politically but economically motivated.

I will give you some examples. In the European Union, the closest gas hub to Ukraine is the Baumgarten hub in Austria, so now the prices for Ukraine, from Gazprom, are higher than the prices at the Austrian hub for the Russian gas. I think if Ukraine joins the European gas market, and if it will organize free gas flow from the European market to Ukraine, at least we will have leverage to discuss with the Russians.

Ms. Joan Crockatt: Will it provide Ukraine with leverage if Canadian companies, with the support of the Canadian government, are able to make a decision to announce that they are ready to pursue how to supply gas and other forms of energy to Ukraine? Will that help the situation, in your view?

Mr. Vitalii Dem'ianiuk: Yes, absolutely. I strongly believe it.

The Chair: Ms. Crockatt, your time is up.

We will go now to Mr. Leef, for up to five minutes, please.

Mr. Ryan Leef (Yukon, CPC): Mr. Aslund, you mentioned the volume of gas sold to Ukrainian markets from Russia. You pointed out that Russia isn't storing any gas so it's an easy leverage point, but does that export then, just sit idle in Russia? What do they do with the loss of revenue by not moving it into Ukraine?

Mr. Anders Aslund: That is a good question.

What is happening is it's not being produced. Russia does not have much possibility of storing gas at home, so Gazprom production has fallen. Gazprom is also beaten by the independent produced Novatek that is much more efficient. Gazprom's share of the total domestic market has fallen from something like... Total Russian gas production has fallen from something like 85% to 65% over the last half a decade. Those are just approximate numbers.

Mr. Ryan Leef: So that does have some impact on Russia itself.

Mr. Anders Aslund: Yes.

Gazprom is extremely poorly managed and Gazprom has missed the LNG revolution. Russia is producing LNG on Sakhalin, but that's essentially a Shell project and not a Gazprom project, even if they have muscled themselves in and taken a slight majority of it.

They have missed the Chinese market. They have missed the opportunity to control central Asian gas, which they did before. They have essentially missed everything, and of course the shale gas revolution they have denied until very recently.

Mr. Ryan Leef: Thank you.

Mr. Dem'ianiuk, a lot of our discussion in committee has been around the supply of oil and gas. We haven't really spent a lot of time

talking about what you mentioned at the end of your presentation, which was about exporting knowledge or importing Ukrainian students for professional development.

Mr. Edwards pointed something out, which is that the government is in transition and there has to be some incentive to look at a policy shift, at least for energy efficiency. We heard in a past committee testimony that there could be a bit of a challenge with that because prices are generally lower and then there could be some social economic impacts of raising gas prices, or the cost of finding those efficiencies.

What is the incentive at a government level, and what is the incentive at a consumer level to realize efficiencies in the Ukrainian market for energy consumption? How can Canada take advantage of that if that's the case, or how can Canada influence it to try to encourage an energy efficiency policy either by the consumer in the Ukraine, or by the government?

• (1005)

Mr. Vitalii Dem'ianiuk: At the current moment I think that the Ukrainian government doesn't have any doubt about how important energy efficiency is, so we don't even need to persuade them, it's true.

Further, on the level of consumers, it has also become absolutely clear because a few weeks ago the government made a decision to change the system of tariffs on the gas for consumers. As of today, the gas has become 50% more expensive. This price is more economically reasonable.

At the level of regular people, they will also start to understand how important energy efficiency is on the household level.

Canadian companies at the current time can be included in the process of modernization, power generation and heating generation companies, especially small-scale companies on a regional level.

Mr. Ryan Leef: I appreciate that.

I have time for a small question.

Do you know, or are you able to comment on Canadian expertise in terms of inviting Ukrainian students, Ukrainian professionals into Canada to take advantage of some of the skills and trades program expertise that we have in the construction and development of energy efficient things from homes to windows to doors right on up to oil and gas extraction?

Mr. Vitalii Dem'ianiuk: Yes, I totally agree. Actually, you've said what I would like to say.

The Chair: Thank you very much.

Thank you very much, Mr. Leef.

We go now to Ms. Moore, for up to five minutes, please.

[Translation]

Ms. Christine Moore: Thank you, Mr. Chair.

My questions are primarily for Mr. Dem'ianiuk.

In your testimony, you talked about diversifying sources of energy supply and reducing fossil fuel consumption. You also talked about biomass, which is of particular interest to me. In my region, we have developed a biomass energy supply chain. We currently have projects in progress, researchers and research chairs.

How can we quickly connect the people with that type of expertise across Canada who could help you with the people who need this expertise in your country? What would the best strategy be to effectively and quickly share this information?

[English]

Mr. Vitalii Dem'ianiuk: If you will take my coordinates, with pleasure I will share with you the information of non-government organizations in Ukraine which are working and are charged with the biomass energy sectors. I am ready to introduce you as widely as is possible. From our perspective, the current potential of biomass in Ukraine is at least equivalent to two to three billion cubic metres per year, so it's a huge potential for us.

[Translation]

Ms. Christine Moore: Thank you very much.

Do you have the potential for hydroelectricity?

[English]

Mr. Vitalii Dem'ianiuk: Excuse me. I didn't get the question.

[Translation]

Ms. Christine Moore: Do you have the potential for hydroelectricity?

[English]

Mr. Vitalii Dem'ianiuk: Yes, but this potential is not so high, because the current hydro power generation is quite developed in Ukraine, and in the sector where we can work, this is small-scale hydro generation.

• (1010)

[Translation]

Ms. Christine Moore: In terms of biomass, you said you have all the contacts in Ukraine. However, in your view, how could Canada make this sharing of expertise happen? Could that be done through a government mission, for instance? We realize there is a potential and that it would be possible to do something, but a plan needs to be set up.

[English]

Mr. Vitalii Dem'ianiuk: As I said, I am ready to introduce you and to introduce Ukrainian non-government organizations in the biomass sector so you'll see them. For the current moment, the Ukrainian non-government organizations work closely with the government, the central government, and, what is especially important, with the local regional governments, because the best way is to go to the regions and to start to work with the particular projects.

Did I answer the question?

[Translation]

Ms. Christine Moore: Yes.

Could other witnesses comment on the way we could apply this help in the most effective way?

[English]

The Chair: Mr. Edwards.

Mr. Michael Edwards: Thank you.

Perhaps another way of answering your question is, how do we actually stimulate a market for energy efficiency, energy conservation? To go back to a comment that was made on the other side, it seems that the most effective way of getting energy efficiency off the ground is to send a price signal through the market.

It's going to be very difficult if people are trying to do an internal return on the investment when they're getting their gas at 15% or 20% of the cost of production. That is a problem. There are market reforms that need to happen before you can go off with private companies that are trying to do business on a commercial basis in a market that is dysfunctional.

The Chair: Thank you, Ms. Moore.

We go now to Mr. Calkins, followed by Ms. Leslie, and Ms. Block.

Mr. Blaine Calkins (Wetaskiwin, CPC): I'm just going to ask all of my questions of all of the various witnesses right up front and hopefully there will be enough time during the remainder for them to be answered.

My question for Mr. Edwards is based on the regulatory environment. We haven't spent a whole lot of time talking about Canadian expertise when it comes to the regulatory environment. Canadian companies, while they sometimes complain they're frustrated with the Canadian federal and provincial regulatory environments, will say that the certainty and predictability of these regulatory environments is the best in the world, insofar as being able to allow them to operate. I'm wondering, Mr. Edwards, if you can talk about what Canada could do insofar as offering regulatory expertise is concerned.

My question for Mr. Hill is about his comments about the required pace of infrastructure construction versus the current pace of infrastructure construction when it comes to the infrastructure deficit insofar as our exporting capabilities are concerned. If the current situation in Ukraine isn't enough to prompt us to get the current pace up to the required pace, what conditions would need to change in order to get us there? If a soft invasion of eastern Europe from Russia is not enough, what would be the conditions required?

For Mr. Dem'ianiuk and Mr. Aslund, I have a question that's geopolitical in nature. I firmly believe that Russia has their eyes squarely fixed on the Transnistria and Odessa region which would effectively cut Ukraine off from the Black Sea. If they were able to get these territories within their control beyond what they already have, I'm just wondering what the impact of that control would be on the continental European energy scene.

The Chair: Mr. Edwards, we have only about three minutes for all these answers, so please go ahead, sir.

Mr. Michael Edwards: Very quickly, yes we do. The practitioners are within the NEB. They're within the offshore boards. In fact, when Australia was working on a new regulatory regime, they went around the world looking for best practices. They modelled their offshore regulatory environment off ours to some extent. Certainly within those three organizations and notwithstanding that, I suspect that even within government there is both policy and regulatory expertise that could be applied here, if it was asked for.

• (1015)

Mr. Blaine Calkins: Mr. Hill.

Dr. Geoff Hill: On the required pace versus the current pace, if you look at the economic activity currently in the oil and gas industry and how it's throttled back as a result of lack of market access, if you look at the very short window we have to compete with global LNG projects and the window is closing, if you look at all the economic potential we're missing right now and then you add into the situation what's happening in Ukraine and what will happen elsewhere, I'm actually not sure what else is required for us to increase the pace. Those are unbelievably compelling reasons.

Mr. Blaine Calkins: Fair enough.

The Chair: Your last question was for whom?

Mr. Blaine Calkins: My last question was for Mr. Aslund and Mr. Dem'ianiuk. It was a geographical question regarding Transnistria and Odessa and the potential cutoff of Ukraine from the Black Sea.

The Chair: Mr. Dem'ianiuk, would you go first, please.

Mr. Vitalii Dem'ianiuk: From my perspective, the destabilization of the situation in any region of Ukraine, what Russia is trying to do for the current moment, will have on the next step a huge impact on the stability in Europe especially in energy stability. But from my perspective, the situation in the south of Ukraine is much more stable than in the east and the Government of Ukraine will keep this situation.

The Chair: Mr. Aslund, would you make a short addition to that answer.

Mr. Anders Aslund: Yes, on Transnistria, I was there one and a half years ago. It's of course a nasty dictatorship. Russia had a referendum there in 2006 for annexation to Russia with 96% majority. It doesn't mean anything. It's a pure dictatorship. President Putin has all the legal pre-conditions and he can decide tomorrow that he wants to annex Transnistria, and that would of course greatly complicate the situation. It's true that there's little popular support in southern Ukraine for Russian action, but there is no military capability to stand up against Russia. Concretely this means you can't really rely on putting an LNG terminal in Mykolaiv or Odessa in this situation.

The Chair: Thank you, Mr. Calkins.

Thank you all for your very concise answers.

Ms. Leslie, go ahead, please, for up to five minutes.

Ms. Megan Leslie: Thanks to all the witnesses.

I'm going to start with a question for Mr. Hill and then open it up to everyone, if there's time.

There's going to be a bit of a long preamble, because I'm really excited about this discussion on energy efficiency. I'm partly excited about it because in my province of Nova Scotia we have Efficiency Nova Scotia, which is Canada's only independent energy efficiency utility, and it's a best practice nationwide. We have developed significant expertise on energy efficiency, but when we started we had to rely on other jurisdictions that had that expertise, like Vermont. We did a lot of work with Efficiency Vermont, but we have been able to develop national best practices.

So we hear about the amount of time and planning and cost and infrastructure that it would take before we could actually export natural gas to Ukraine, and I think about Efficiency Nova Scotia. It had an incredibly short ramp-up time. Basically, the utility and review board recognized that it was cheaper to produce a unit of efficiency than it was to produce a unit of energy. It put the mechanisms in place to create this organization—I was a part of creating it—and, boom, it was off to the races.

I hear concerns that Ukraine can't implement anything very quickly because there's no infrastructure in place, but energy efficiency actually prevents the need to build physical infrastructure. I'm seeing nods, and that reassures me. Actually energy efficiency optimizes the infrastructure that's already there.

The other thing I'm hearing about is price impacts, questions about price impacts in Ukraine. But if you have an energy efficiency program that targets, for example, low-income Ukrainians who don't have room in their budget to absorb those higher energy costs, you could actually design the programs to assist those low-income Ukrainians, or you can target householders. You can get to where people are really feeling that pinch.

I'll start with Mr. Hill, just because I know you have called for a national energy strategy that includes energy efficiency, but in your writings you have targeted large emitters, industry. I wonder if you have anything to add about the broader impact or implementation of energy efficiency.

Then if there's time, maybe Mr. Edwards could respond.

• (1020)

Dr. Geoff Hill: Thank you for the question. Your preamble was excellent, and I agree with you fully.

Ms. Megan Leslie: Thank you.

Dr. Geoff Hill: One of the reasons we would target the large emitters first is perhaps to set the tone, and also you probably have a better chance of making a substantial impact in a shorter period of time with some of the large emitters than you do with all of the individual emitters. That is not to say they shouldn't go hand in hand, but the chance of an individual retrofitting a furnace, as an example, is a lot less than it is for one or two albeit substantially large investments in some of the bigger power plants. Our structure, whether it's regulated, or non-regulated, as some of our provinces are currently, of the income for our power and utilities companies hasn't really fostered the environment for them to be more efficient, and now it has. This is forcing them to think a bit more and to actually be more proactive and be more energy efficient.

I would say that, if you had a 60-40 split, you could probably focus 60% immediately on some of the large emitters, with a long-term approach on the 40%, the small emitters, if I were to pick a number.

Ms. Megan Leslie: Thanks. That's helpful.

I'm going to go to Mr. Edwards, because I can't see if Mr. Aslund is nodding or not.

The Chair: Go ahead, Mr. Edwards.

Mr. Michael Edwards: The creation of fuel poverty is obviously a concern to everyone. I would argue, along the lines of what the previous speaker said, that you can segment the problem into dealing first with the big consumers, who should really be on a market basis, and then deal with the social implications of what's happening programmatically.

I think you still have to start in some way with sending price signals, and therefore, Ukraine needs its market reforms to be in place.

Ms. Megan Leslie: Mr. Regan and I were having a bit of an off-line conversation when you raised the issue of price signals, because I'm very cautious about the idea of price signals—okay, you're nodding here, too—because I don't think we can rely on price signals alone. I do think it needs to go with programming offered by government because price signals.... If you don't have the money to put food on the table, you're going to put out the money to keep the lights on so you can cook the food; you're not going to have the food to actually cook.... You are nodding. You agree they have to be hand in hand.

Mr. Michael Edwards: I agree with that, absolutely.

Ms. Megan Leslie: If I have time—

The Chair: Thank you, Ms. Leslie. You're out of time.

We go now to the Parliamentary Secretary to the Minister of Natural Resources, Ms. Block, for up to five minutes, please.

Mrs. Kelly Block (Saskatoon—Rosetown—Biggar, CPC): I join my colleagues in welcoming all of you to the table today.

With great respect for my colleague, Mr. Regan, I do want to challenge the notion that this discussion has been futile. I think we have had a number of excellent witnesses who have provided tremendous information to help us identify not only the opportunities that exist, but also the challenges for Canada to enhance global energy security, not the least of which has been the observation that Canada has an infrastructure deficit.

Mr. Hill, I guess what I would like to do is provide you with the opportunity to comment on the momentum I think you have flagged within the Canadian energy industry to reach new markets for our energy products, and then perhaps speak to the imperative that exists for Canada to act.

Dr. Geoff Hill: Thank you for the opportunity.

You know that necessity is the mother of invention, and without pipelines, we've seen the upsurge of transportation by rail. There are challenges with that as we all know. There have been some substantial accidents, as well as the fact that economically there are some challenges.

The point is we often find a way around short-term problems. We're getting to the point where we have no more short-term fixes. If Canada really wants to be an energy superpower, if Canada really wants to recover from a very depressed gas market, if Canada really wants to harness the value of the oil sands, we need to act. It's very clear.

If you look at natural gas as an example, as one of the other speakers mentioned, we are competing with Australia and a variety of other countries. We are an attractive country to do business with for a bunch of reasons, but we're not that attractive that they are going to wait 10 to 20 years. The fact of the matter is we need to act now.

One of the earlier comments was talking about what price of gas we need. Do not underestimate the denominator in that calculation and the cost to construct plants in Canada. We can make a material impact when it comes to the fiscal regime, the tax royalty regime, to make us more cost competitive than other countries.

Right now we're setting ourselves up to be a little slower than other countries and not necessarily more economically viable so then the intangibles that come to Canada, being stable politically, stable economically, etc., are put in question.

I believe we have a very short window when it comes to natural gas. With oil I think that it's inevitable we need to export our product more to the U.S. and beyond the United States. We're going to have substantial financial challenges in our country if we don't.

•(1025)

Mrs. Kelly Block: Thank you.

Mr. Dem'ianiuk, I really appreciate your participation on this panel. We recognized it was important to have someone from Ukraine providing us with some insight into what the issues are in Ukraine.

I want to give you an opportunity to expand on the comment you made. I don't know if it was in your opening remarks or whether it was in response to a question that one of my colleagues asked. You spoke to the need for Ukraine to become an inherent and integral part of the European energy market.

I want to give you a chance to expand on that, but also to identify if there is any role for Canada in assisting you in that regard.

Mr. Vitalii Dem'ianiuk: In this case I think Ukraine should perform, I would say, homework. We need to integrate our market into the European market. We need to implement European energy legislation on our territory, and this is our homework.

This is very important for us because the European market is quite huge. Even the prices for gas, as I mentioned previously, are lower on the eastern European market than in Ukraine. For us this is a real diversification. Probably you know just a few days ago, at least, Ukraine signed a memorandum with our Slovak colleagues about supplying gas from the European Union into Ukraine. At this stage it's only eight bcm per year, but it's still a very significant capacity for the Ukrainian market.

This is the answer.

The Chair: Thank you, Ms. Block.

We go now to Ms. Duncan for up to five minutes.

Go ahead.

Ms. Linda Duncan: I'd like to follow up a bit with whichever witness would like to address this, and again, thank you very much for taking the time to testify no matter whatever time zone you happen to be in. I know in Europe it's later than here.

I understand that Ukraine has signed the EU association agreement, and they're moving toward membership. That will require they move toward greater harmonization with the EU regulations. I know that the European environment commission has a number of environmental, energy efficiency, and so forth, requirements. There seems to be some agreement that the price will be the main driver, which is understandable, on energy efficiency.

I'm wondering whether Mr. Dem'ianiuk could speak to this, but probably also Dr. Aslund, or perhaps others know. I'm not sure who actually provides the electricity, or specifically the gas, directly to the clientele, whether it's different for the homeowners, big industry, small industry. The California PG&E some years back made a decision. Either they could invest in more, very expensive electricity generation, or they could choose to invest in helping small business, large business, and homeowners to retrofit, and then they could also reduce pollution and address climate change. I'm wondering if those kinds of solutions might be possible for Ukraine, given the IMF has already directed that they must move toward energy efficiency.

Can anybody elaborate for us on what kinds of options might be available, given the generation and supply regime for Ukraine at present?

Mr. Dem'ianiuk, perhaps you would like to speak to it first. Do you have any comment on that?

• (1030)

Mr. Vitalii Dem'ianiuk: Yes. Since...*[Technical difficulty—Editor]*.

The Chair: Go ahead, Mr. Dem'ianiuk.

Ms. Linda Duncan: Is he saying yes? No? Did we lose him?

The Chair: Mr. Dem'ianiuk, are you there still? Can you hear us?

Mr. Vitalii Dem'ianiuk: Yes. Sorry, I would not have liked to interrupt Mr. Aslund, but if you don't mind, I will quickly answer.

From an electricity perspective, the situation in Ukraine is absolutely different from the gas perspective. We don't have a problem with the electricity generation, and we have in our electricity energy basket.... The huge part we have is nuclear power energy generation and hydro energy generation. From this perspective, I think that in some sectors of the economy, especially in metallurgy, we need to switch from gas to electricity.

I am not sure if I answered your question.

Ms. Linda Duncan: Okay.

Dr. Aslund, you might want to also speak to the meeting that's happening, I believe, tomorrow with EU, Russia, and Ukraine, to talk about energy security, and if some of these issues might be involved in that meeting.

Mr. Anders Aslund: Yes. Ukraine has signed the first part of an EU association agreement, the political part. After the presidential elections probably in June, they will sign the economic part of it, which is a free trade agreement, also the substantial assistance agreement. Membership would come in 10 years or so, if Ukraine is successful. This is not the *[Inaudible—Editor]* process.

Therefore, what is in this association agreement, which is a big thing of 1,200 pages, is a big list of reforms that Ukraine will have to undertake, hundreds of reform laws, but the environment is, by and large, not there because the environmental regulations, as you mentioned, in the European Union are very expensive. The European Union has sensibly understood that this would not be right to impose now. This is much more about market, rule of law, and deregulation.

The electricity sector is essentially dominated by four different Ukrainian business groups. The nuclear energy is still state-owned, while other power stations, which are gas and coal heated, are privatized. As part of this gas reform, Ukraine is increasing...I think it's a 70% price increase from July 1. It's the same problem here with the gas price. That is far too low because it's related to the gas price, even if there are some other energy sources, as Mr. Dem'ianiuk mentioned. Ukraine actually exports electricity to Hungary. So it's not dependent on any import of electricity at all from Russia.

The Chair: Thank you, and thank you, Ms. Duncan.

We go now to Ms. Crockatt, followed by Mr. Trost.

Ms. Joan Crockatt: I'm going to go back again to our last witness.

One of the things we have heard very clearly, Mr. Aslund, is there are ways for Canada to help in international crises like this, other than to have soldiers' boots on the ground. We have world-class energy supplies, and oil and gas technology and expertise. What we do not have is the infrastructure. If we tell the world we are prepared to act, to move ahead, then that is a very powerful signal in what's being called an energy cold war. If we do not build the infrastructure, pipelines and LNG terminals for example, we're reducing our non-military leverage in the world. I'm wondering if you would comment on that statement, if you agree or disagree.

• (1035)

Mr. Anders Aslund: I have a similar segment in my written statement. This is exactly what I think. Canada can simply declare that Canada in the medium term is prepared to export LNG to eastern Europe and Ukraine. That would have a positive impact on its own, and it would shake up the Kremlin a little. Essentially the United States seems to be moving in the same direction. I don't think that this impact should be disregarded. It could be quite significant, even if it's not practical in the short term.

Ms. Joan Crockatt: Thank you so much.

I'll turn the rest of my time over to Mr. Trost.

Mr. Brad Trost: As we've looked at this issue, we've looked at it exclusively from the Canadian perspective in our interaction. Of course when something happens, it's a dynamic situation. Other actors are involved. The U.S. Congress is looking at the issue, etc. I was wondering, starting with Mr. Dem'ianiuk and going from there, if the witnesses could comment on what they anticipate other players will do relative to the situation in Ukraine, eastern Europe, and their need for energy security. As Ms. Duncan noted in her question, the European Union is dealing with it now, but there are other players, the large oil companies, Chevron and Shell. Qatar is going to be a player in anything because of LNG, etc.

As we go forward, Canada of course is not going to want to duplicate. We're probably going to want to coordinate with some other countries. Could you give a broad overview of what the other players are going to do that is going to influence the situation? I know it's always guesswork and crystal ball gazing, but it gives us some idea of maybe what we should study in the future. Should we specialize as Canada or should we, how shall we say it, coordinate with other nations' players in this? Could we start in Geneva, and then we'll work through the witnesses from there.

The Chair: Mr. Dem'ianiuk.

Mr. Vitalii Dem'ianiuk: I think Canada can play a huge role in the moderation of the process of diversification of the energy supply into Ukraine and into Europe. You can also play a huge role in the question of technology transfer, as I said. The next step, after you have the appropriate infrastructure ready, I think Canada will play a significant role as a supplier of hydrocarbons on the European market.

Mr. Brad Trost: Thank you.

We'll move now to the next witness who wants to take that, particularly looking at what the other players are going to do that will influence what Canada will do.

The Chair: Mr. Hill, you're indicating that you would like to answer. Go ahead, please, sir.

Dr. Geoff Hill: I think some of the other countries are better positioned to act more nimbly to export to Europe. They already have facilities and infrastructure, but remember that every time gas is diverted to Europe, it's leaving a gap for who they're currently supplying. If you overlap that with the fact that our global demand for gas and oil still shows no sign of slowing over the short term, I don't think that Canada is at any risk for overinvesting in exporting its products. The long-term focus globally still is very strong.

•(1040)

Mr. Brad Trost: Mr. Aslund, could you comment in particular on what positioning you see from the U.S. to the EU and other major players that will be involved in this? Will they be taking an active role in trying to shape the situation? If so, what do you anticipate they will be concentrating on?

Mr. Anders Aslund: Well, as you know, here the Republicans are very strongly in favour of exports of LNG, and I presume that this will become government policy. I see Canada and the U.S. as acting in parallel.

Currently, the import share of the EU is only 10% LNG. I do not see any reason for it not to rise quite sharply, because gas prices in

eastern Europe are still far too high and LNG can sharply reduce them, with a profit, also, for Canadian and U.S. LNG producers.

We have seen a stagnation in the last two years of LNG imports to Europe, simply because the prices in east Asia have been so much higher. My guess is that we will see rather soon a saturation, since so much extra LNG is coming online. Then we will see more LNG going profitably to Europe. This will be very good for energy security and diversification in Europe.

The main role of the European Union here is simply to make sure there are more possibilities for choice. Shale gas is still totally up in the air. The two big players in Ukraine, as I mentioned, are Chevron and Shell. Exxon seems to have lost its position in Ukraine with the Russian annexation of Crimea.

Mr. Brad Trost: Does Mr. Edwards want to say something?

Mr. Michael Edwards: Yes. I would say first of all that we have to be careful here between the political question of dealing with the political situation and dealing with promising help from an industry on a commercial basis. I think there is a risk that we can over-promise if we start converting political statements of solidarity into a commitment that we're actually going to deliver gas.

In terms of what others are doing, I think there is a debate in the U.S. that is still ongoing. We've seen some initial approval of gas exports, but there is that debate between balancing the needs of the owners of the resource—the gas—and the interest of how to best serve the American economy. I'm not sure that it's entirely resolved. At the end of the day, I don't think we're actually going to see a wide opening of U.S. gas exports. I think there is risk in that.

Also, between shale gas and energy efficiency, for instance, Europe has a lot of this to deal with in its own hands. They can probably reduce nearly 50% of what Russia sends into Europe through either alternate means or the other suggestions that I made earlier—

Mr. Brad Trost: Mr. Edwards, you're saying that's possible.

Mr. Michael Edwards: Yes, I am.

Mr. Brad Trost: Again, reading too much into what politicians do is always a risky thing, but either from a market-driven solution or a politically pushed solution in Europe, do you anticipate they will be pushing to assist Ukraine and eastern Europe with energy efficiency and certain other technology transfers? They may not have the ability to help Ukraine or develop shale gas, but I suspect on energy efficiency that the European Union has as much or more expertise than we do here in North America. Is that something their politicians look set to be pushing? Is that something their market players look set to be willing to deliver assistance for in that regard?

Mr. Michael Edwards: The short answer is yes. There is clearly an opportunity there because there is a need, but I think from my conversations from Europe this week there is also a caution that they will only go where they're wanted. There needs to be not only an opportunity but the business structure around it to make it happen, and a willingness on the part of that state to change the way things are being done at the moment.

•(1045)

The Chair: Thank you, Mr. Trost and Ms. Crockatt.

I just want to thank all of the witnesses today. You've given us some very useful and interesting information, and we do thank you very much for that.

I'd like to thank Mr. Edwards, principal, Fairweather Hill, who is with us in the committee room today.

By video conference from Geneva, Switzerland, we have Mr. Dem'ianiuk from the Geneva Graduate Institute of International Studies and Development. Thank you, sir, very much.

We have, from Calgary, Alberta, from Deloitte Canada, Geoff Hill.

We have by teleconference from Washington, D.C., Anders Aslund, senior fellow at Peterson Institute for International Economics.

I just want to thank you all very much.

Before I adjourn the meeting, I had some discussion with members of the committee, and the clerk said it would be easier if we passed the budget for this study. Is it agreed by the committee that we pass the budget as presented?

Some hon. members: Agreed.

The Chair: Thank you very much for that cooperation. Thank you all.

The meeting is adjourned.

Published under the authority of the Speaker of
the House of Commons

SPEAKER'S PERMISSION

Reproduction of the proceedings of the House of Commons and its Committees, in whole or in part and in any medium, is hereby permitted provided that the reproduction is accurate and is not presented as official. This permission does not extend to reproduction, distribution or use for commercial purpose of financial gain. Reproduction or use outside this permission or without authorization may be treated as copyright infringement in accordance with the *Copyright Act*. Authorization may be obtained on written application to the Office of the Speaker of the House of Commons.

Reproduction in accordance with this permission does not constitute publication under the authority of the House of Commons. The absolute privilege that applies to the proceedings of the House of Commons does not extend to these permitted reproductions. Where a reproduction includes briefs to a Committee of the House of Commons, authorization for reproduction may be required from the authors in accordance with the *Copyright Act*.

Nothing in this permission abrogates or derogates from the privileges, powers, immunities and rights of the House of Commons and its Committees. For greater certainty, this permission does not affect the prohibition against impeaching or questioning the proceedings of the House of Commons in courts or otherwise. The House of Commons retains the right and privilege to find users in contempt of Parliament if a reproduction or use is not in accordance with this permission.

Also available on the Parliament of Canada Web Site at the following address: <http://www.parl.gc.ca>

Publié en conformité de l'autorité
du Président de la Chambre des communes

PERMISSION DU PRÉSIDENT

Il est permis de reproduire les délibérations de la Chambre et de ses comités, en tout ou en partie, sur n'importe quel support, pourvu que la reproduction soit exacte et qu'elle ne soit pas présentée comme version officielle. Il n'est toutefois pas permis de reproduire, de distribuer ou d'utiliser les délibérations à des fins commerciales visant la réalisation d'un profit financier. Toute reproduction ou utilisation non permise ou non formellement autorisée peut être considérée comme une violation du droit d'auteur aux termes de la *Loi sur le droit d'auteur*. Une autorisation formelle peut être obtenue sur présentation d'une demande écrite au Bureau du Président de la Chambre.

La reproduction conforme à la présente permission ne constitue pas une publication sous l'autorité de la Chambre. Le privilège absolu qui s'applique aux délibérations de la Chambre ne s'étend pas aux reproductions permises. Lorsqu'une reproduction comprend des mémoires présentés à un comité de la Chambre, il peut être nécessaire d'obtenir de leurs auteurs l'autorisation de les reproduire, conformément à la *Loi sur le droit d'auteur*.

La présente permission ne porte pas atteinte aux privilèges, pouvoirs, immunités et droits de la Chambre et de ses comités. Il est entendu que cette permission ne touche pas l'interdiction de contester ou de mettre en cause les délibérations de la Chambre devant les tribunaux ou autrement. La Chambre conserve le droit et le privilège de déclarer l'utilisateur coupable d'outrage au Parlement lorsque la reproduction ou l'utilisation n'est pas conforme à la présente permission.

Aussi disponible sur le site Web du Parlement du Canada à l'adresse suivante : <http://www.parl.gc.ca>