

Mr. Denis Lemieux (Chicoutimi—Le Fjord, Lib.):

Thank you, Mr. Chair.

I would like to thank the two groups of witnesses for their presentations.

As has already been said, nuclear energy accounts for over 50% of electricity production in Ontario. I would like to hear the opinion of the two groups of witnesses. Why do you think using nuclear energy isn't as popular elsewhere in the country? What could the Government of Canada do to change this trend?

Mr. Colin Hunt:

Monsieur Lemieux, that's a very interesting couple of questions that you've asked. I want to deal with them separately, but head-on.

The origin of nuclear power specifically in Ontario was driven by a series of both historical and geographic factors that emerged at the end of the Second World War, and those factors have not changed one iota in the previous half-century. That's a very long discussion, and I'd be happy to address it at some future date with you or the members of this committee.

With respect to the appearance of the lack of support for nuclear power, this is something of a myth. I spent nearly two decades at the Canadian Nuclear Association prior to my role here at the Canadian Nuclear Society, and we made it our business every year to sample what Canadians thought about nuclear power, both in general and in specific provinces across Canada.

Nuclear is not unpopular. That is something of a myth generated in the media. What we found year after year—and this goes back to the early 1990s—is that, in general, citizens in Ontario are divided into three groups. There is a very small and vocal group opposed to nuclear power. There's a somewhat larger group—but again, very much a minority—of those vigorously in support of nuclear power. Then there's the vast majority of citizens in the middle who are mildly supportive, who don't know much about it, and who aren't much interested unless something hits the headlines and causes a big sensation.

As we look at the development of nuclear power in Ontario, I'm going to refer specifically to the nuclear refurbishment projects that are going on right now. These have been fairly extensively surveyed in terms of “does the public support them, or don't they?” The public is rather lukewarm about the whole business of building new reactors. This arose about 10 years ago, when Ontario was considering this. Mostly, it was not because of fear of nuclear power or its consequences. Mostly it was concerns about how much it would cost. However, with refurbishment, it's a very different thing. Year after year, survey results have consistently shown that support for refurbishment of Ontario's existing nuclear power plants runs well above 80%.

Mr. John Barlow (Foothills, CPC):

Thank you very much, Mr. Chair.

Thank you very much to our witnesses for being here.

This is going to be an interesting process. Certainly, as a member from Alberta, I'll say that this is something fairly new to us, as we don't have nuclear power in Alberta. It's been a topic of discussion for many years, but for the reasons you've just touched on, it has not come to Alberta.

You've talked about that opposition to nuclear power. In Alberta, we feel much the same in terms of the oil-and-gas side. We have that misperception of the dangers of oil and gas when we know that the safety record is much different in reality, so I certainly feel your pain in trying to promote the nuclear industry.

There are some numbers I found really interesting as I was going through some of the research. We keep talking about opportunities to find more environmentally friendly energy supplies, and nuclear is one that is not very often raised, which I find surprising. We always talk about solar and wind and these kinds of opportunities. In Ontario, you have that great app on your phone, Gridwatch, and I wish we had one for Alberta, but we don't. It's really interesting to look at. Today I clicked on it, and for Ontario, solar is at 0%, wind is at 2.4%, and nuclear is at 60%.

When you look at the cost of those energy supplies, you see that nuclear is at about 5.6¢ per kilowatt hour, whereas solar is at 50¢ per kilowatt hour, and wind is at 13.5¢. That shows you the substantial cost difference in these power supplies. Why are we not talking more about nuclear? I think we all know why, but I would like to ask the witnesses this: how do we change the public perception of nuclear?

You talked about a very vocal minority. We face much the same on the oil-and-gas side. I fear that if we start to talk about opportunities with nuclear, those same people who are opposing pipeline construction are going to be the ones opposing additional nuclear power supplies, even when it makes the most sense. It's economical. I know that the CANDU technology is safer than any other technology in the world when it comes to the safety precautions in there.

How do we change that mindset? Or can we? Is there an opportunity to do this or are we going to be facing the same battles we're having with regard to the oil-and-gas sector? Will we have a government that is going to be more supportive of nuclear than they have been with oil and gas? Do we have an opportunity here? Or is this an uphill battle? Mr. O'Dea is talking about exporting our technology to Romania and China, when we could probably be using it right here at home.

Mr. Peter Easton:

Well, if I may, I could make some points. If you look at what we call in statistics a "normal curve" of opinions about things, you will see that there is going to be a small percentage of people who you will never convince. For whatever reasons, ideological or others, they're opposed to pipelines, they're opposed to nuclear power, and they're opposed to anything except what they particularly propose.

As my colleague pointed out, when they were doing surveys of attitudes towards nuclear in Ontario, there was a percentage that was highly supportive. Most were in the middle. Then, of course, there were the ones who were completely opposed to it. There are a number of reasons for this, I think, aside from the ideologues who you just won't convince, and to my way of thinking, there's no point in even thinking you can do that.

In the case of the strong supporters, in part it is because, without this, the communities in Darlington and Tiverton would never have had access to the employment that a nuclear plant provides. The Bruce

Power plant has roughly 3,600 employees, while Darlington has slightly less, at slightly over 3,000. These jobs are extraordinarily well paid, and otherwise, without them, you would have rural communities that would not have access to those 3,000-plus jobs with salaries of \$100,000 or \$80,000 per year, so it's not surprising that the support is so high.

As for the bulk of the population, a very large part of the issue is that as a species we're extraordinarily poor at assessing relative risk. Opponents of nuclear power will get up and say that it's risky. Opponents of pipelines will get up and say they are risky. Of course it's risky, because everything is risky. You can't have zero risk; the laws of physics don't allow it.

The question is, what is risky relative to something else? I'm getting off the point of nuclear, but in terms of pipelines, we know, because we've had an event, that shipping oil by rail will kill people. It killed 47. I have not heard of a pipeline spill, ugly though the spill might be, that has actually ever harmed a human—ducks, perhaps, but humans, no.

Similarly, with nuclear power, if you take the Fukushima incident as the most recent episode, you will find that more people died from the evacuation, from the stress of leaving their homes and not knowing when they would be allowed to go back, than would have been damaged by the radiation in those homes, because in actual fact there was not that much radiation released. It was released into the water supplies, but not so much into the air.

Again, with nuclear power—and it's an educational process—there are isotopes, particularly Iodine-131, that are long-lived enough or concentrated enough in the human body to be of concern, but like all highly radioactive substances, these also have relatively short half-lives. You can prevent this by taking iodine tablets in the event of an accident, because it gets concentrated in the thyroid, which is where iodine would normally concentrate, so it never gets concentrated in your body and just gets flushed out.

Over the longer term, these are isotopes that are relatively heavy and will plate out of the atmosphere in relatively short distances from the site of the accident. The rest of it is low-level radioactivity that in fact the human body can well tolerate. There was a documentary some years ago showing the site of Chernobyl, where people are still not allowed to live, although some have snuck back. It's a wildlife refuge. The numbers of bison, boar, and whatever are far in excess of what would have been around had the plant been operating, simply because nobody is hunting them. There are no people there.

How to educate the population is a difficult thing to do, particularly in this age of Twitter and Facebook and everything else, where a negative review will blast out and find hundreds of thousands of supporters simply because it sounds true. There is an unfortunate aspect of current society that someone has described as “truthism”, where something is not true in the scientific sense but feels true. How you combat that, I really don't know, to be perfectly honest. If I had the answer to that, I might well win some kind of journalistic prize.

Anyway, that would be my comment on that.