



Legislative Assembly of Alberta

The 28th Legislature  
First Session

Standing Committee  
on  
Resource Stewardship

Hydroelectric Energy Production  
in Northern Alberta  
Stakeholder Presentation

Monday, November 26, 2012  
6:15 p.m.

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**Legislative Assembly of Alberta**  
**The 28th Legislature**  
**First Session**

**Standing Committee on Resource Stewardship**

Kennedy-Glans, Donna, Calgary-Varsity (PC), Chair  
Rowe, Bruce, Olds-Didsbury-Three Hills (W), Deputy Chair

Anderson, Rob, Airdrie (W)  
Anglin, Joe, Rimbey-Rocky Mountain House-Sundre (W)  
Barnes, Drew, Cypress-Medicine Hat (W)  
Bilous, Deron, Edmonton-Beverly-Clareview (ND)  
Blakeman, Laurie, Edmonton-Centre (AL)  
Brown, Dr. Neil, QC, Calgary-Mackay-Nose Hill (PC)  
Calahasen, Pearl, Lesser Slave Lake (PC)  
Cao, Wayne C.N., Calgary-Fort (PC)  
Casey, Ron, Banff-Cochrane (PC)  
Fenske, Jacquie, Fort Saskatchewan-Vegreville (PC)  
Fraser, Rick, Calgary-South East (PC)  
Hale, Jason W., Strathmore-Brooks (W)  
Hehr, Kent, Calgary-Buffalo (AL)  
Johnson, Linda, Calgary-Glenmore (PC)  
Kubinec, Maureen, Barrhead-Morinville-Westlock (PC)  
Lemke, Ken, Stony Plain (PC)  
Leskiw, Genia, Bonnyville-Cold Lake (PC)  
Sandhu, Peter, Edmonton-Manning (PC)  
Stier, Pat, Livingstone-Macleod (W)  
Webber, Len, Calgary-Foothills (PC)  
Xiao, David H., Edmonton-McClung (PC)  
Young, Steve, Edmonton-Riverview (PC)  
Vacant

**Also in Attendance**

Goudreau, Hector, Dunvegan-Central Peace-Notley (PC)  
Luan, Jason, Calgary-Hawkwood (PC)

**Support Staff**

W.J. David McNeil	Clerk
Robert H. Reynolds, QC	Law Clerk/Director of Interparliamentary Relations
Shannon Dean	Senior Parliamentary Counsel/ Director of House Services
Philip Massolin	Manager of Research Services
Stephanie LeBlanc	Legal Research Officer
Nancy Zhang	Legislative Research Officer
Nancy Robert	Research Officer
Corinne Dacyshyn	Committee Clerk
Jody Rempel	Committee Clerk
Karen Sawchuk	Committee Clerk
Christopher Tyrell	Committee Clerk
Rhonda Sorensen	Manager of Corporate Communications and Broadcast Services
Jeanette Dotimas	Communications Consultant
Tracey Sales	Communications Consultant
Liz Sim	Managing Editor of <i>Alberta Hansard</i>

**Standing Committee on Resource Stewardship**

**Participants**

TransAlta Corporation.....RS-51  
Lora Brennan, Director, Hydro Operations  
Don Wharton, Vice-president, Policy and Sustainability



**6:15 p.m.**

**Monday, November 26, 2012**

[Ms Kennedy-Glans in the chair]

**The Chair:** Folks, we're going to start. Welcome. Thank you to our guests coming from Calgary. We are enormously grateful that you made the effort to come. We will look at your materials. We have studied these issues, and we're very keen to learn more, so thank you.

We're going to start by going around the table and introducing ourselves. If you are substituting for somebody, let us know. Thanks.

**Mr. Rowe:** Bruce Rowe, MLA for Olds-Didsbury-Three Hills and deputy chair of this committee.

**Mrs. Leskiw:** Genia Leskiw, Bonnyville-Cold Lake.

**Dr. Brown:** Neil Brown, Calgary-Mackay-Nose Hill.

**Ms Kubinec:** Maureen Kubinec, Barrhead-Morinville-Westlock.

**Ms Fenske:** Jacquie Fenske, Fort Saskatchewan-Vegreville.

**Mr. Webber:** Len Webber, Calgary-Foothills.

**Mr. Fraser:** Rick Fraser, Calgary-South East.

**Mr. Casey:** Ron Casey, Banff-Cochrane.

**Mr. Hehr:** Kent Hehr, MLA, Calgary-Buffalo.

**Ms Brenan:** Lora Brenan, TransAlta.

**Mr. Wharton:** I'm Don Wharton, also with TransAlta.

**Mr. Luan:** Jason Luan, Calgary-Hawkwood. I'm here for a point of interest.

**Mr. Goudreau:** Hector Goudreau, Dunvegan-Central Peace-Notley.

**Ms L. Johnson:** Linda Johnson, Calgary-Glenmore.

**Mr. Cao:** Wayne Cao, Calgary-Fort. Welcome.

**Dr. Massolin:** Good evening. Philip Massolin, manager of research services.

**Mr. Bilous:** Good evening. Deron Bilous, MLA, Edmonton-Beverly-Clareview.

**Mr. Anglin:** Good evening. Joe Anglin, Rimbey-Rocky Mountain House-Sundre.

**Mr. Sandhu:** Good evening. Peter Sandhu, MLA, Edmonton-Manning.

**Mr. Xiao:** Good evening. David Xiao for Edmonton-McClung.

**Mr. Tyrell:** And I'm Chris Tyrell, your committee clerk.

**The Chair:** Mr. Hale, I'll let you introduce yourself.

**Mr. Hale:** Jason Hale, Strathmore-Brooks.

**The Chair:** And Mr. Lemke?

**Mr. Lemke:** Ken Lemke, Stony Plain.

**The Chair:** Okay. And Donna Kennedy-Glans, your chair.

We'll quickly go through the agenda items. Can I have a motion to approve the agenda for this November 26 meeting of the Standing Committee on Resource Stewardship?

**Mrs. Leskiw:** I so move.

**The Chair:** All right. All in favour? Any objections? Carried.

Approval of the meeting minutes from the last meeting, that the minutes of the November 19, 2012, meeting of the Standing Committee on Resource Stewardship be approved as circulated.

**Dr. Brown:** I so move.

**The Chair:** Okay. All in favour? Any opposed? Carried.

All right. Now we get to the important stuff. Don Wharton and Lora Brenan are going to present for about 10 minutes on behalf of TransAlta. You have a slide deck. We will sit here and listen, and then we will ask you questions on a rotation basis much like we do in the Legislature. The Wildrose will start, with five minutes of questions; the PC caucus will follow, with five minutes of questions; followed by the Liberals. Then the New Democrats and then back to the Wildrose and back to the PCs. So you will see a lot of movement on our part, but there is a rationale to it. We'll kind of flag when those five-minute segments of questions and answers are concluded.

We've got one more gentleman to introduce himself here. Are you sitting down?

**Mr. Barnes:** Yeah, I am. Drew Barnes from Cypress-Medicine Hat. I'm just looking for a chair.

**The Chair:** Thank you.

Pat, do you want to pipe in here?

**Mr. Stier:** Pat Stier, Livingstone-Macleod.

**The Chair:** Thank you.

Over to TransAlta. Thank you.

### **TransAlta Corporation**

**Mr. Wharton:** Well, thank you very much, Madam Chair and committee members. Thank you very much for the invitation to come and talk to you today. This is a subject near and dear to our hearts as well as yours, I understand.

My name again is Don Wharton. I'm the vice-president for policy and sustainability at TransAlta, and I am joined by my colleague Lora Brenan, who is our director of hydro operations. Together we just have a short presentation. We're going to endeavour to finish in 10 minutes, really to do three things, fundamentally. One is just to give you a very brief look at TransAlta's hydro experience and assets just to set the context. Lora is then going to take you through a description of where we are with our Dunvegan project on the Peace River in a fairly short fashion, and then, finally, some general remarks about our perspective of hydro in general. So that's essentially the program we have today. We have no paper. That's an ambition that we have at TransAlta for meetings like this, so our apologies if you like to have paper in front of you, but we are going to endeavour to do this electronically and get with the modern age, if you like.

Here we go. Very quickly, in terms of TransAlta's experience in hydro we have in total about 9,000 megawatts of generation capacity in our company. I think the key thing to say here is that it's a broad portfolio. We have many fuels: coal, natural gas, hydro,

geothermal, wind. It actually gives our company, I believe, quite a good perspective on how hydro sits against those other fuel types.

In terms specifically of our hydro operations we have hydro in Alberta, certainly. We began our company a hundred years ago with the first hydro development in Alberta, but we also operate hydro in British Columbia, in Ontario, in Washington state, and in Hawaii, actually. So we have, again, even within the hydro sphere about 900 megawatts of hydro capacity in our company in various jurisdictions. Again, I think it gives us a bit of a perspective about hydro in general.

Just to focus more in Alberta, this is a list of our Alberta hydro assets. They really break into three main categories. Our two very large plants on the North Saskatchewan River are the Brazeau and Bighorn operations, which are larger scale storage-type hydro operations; then our Bow River system, which is really, again, the basis on which our company was founded. We have a number of operations on the Bow producing both power and managing, importantly, water flows on the Bow River for downstream users. Then, finally, I guess, more in southern Alberta the generation on irrigation canals, which is an interesting subject and perhaps not the purview of this committee, but we would be happy to talk about that if you wish.

That really comprises our hydro experience if you like. We have about a hundred megawatts of generation in British Columbia, 14 in Ontario, and then some, as I said, in Washington state and in Hawaii. That, in a nutshell, is TransAlta and our hydro experience.

I'd now like to turn it over to Lora to give you a sense of the Dunvegan project, where we are with that project and some of the issues and challenges we have with it.

**Ms Brennan:** Okay. The Dunvegan project came to us, actually, through our acquisition of Canadian Hydro in 2009. The site, as we've discussed, is still under development. As we get farther into our presentation, we'll talk to you a little bit about the challenges associated with that. This slide here basically gives a bit of an overview of the area that we're in when we're talking about the Dunvegan project, and as we move into the next slide, you'll see what that actually is going to look like on the river.

This project was a long time in development to this date even. Permitting has taken a long time, a lot of consultation in the areas with the people involved there. It got to the point where we now have a plan with fish-friendly turbines and abilities to move people up and down the river as well as the fish. One of the concerns we do have in the area is transmission, and the reason for that is that there is transmission in the area, but it is tight. There will be curtailments with that site if we are running at full capacity. So that'll be one of the challenges we talk about as we move through the slide deck.

**Mr. Wharton:** Lora, maybe I can just add that this is a run-of-river project, 100-megawatt scale, using 40 turbines to generate, so a fairly low-scale impact, if you like, the footprint. There will be some flooding due to the weir requirements and so on but a much smaller scale than a typical storage-type project.

**Ms Brennan:** That's correct.

**Mr. Wharton:** Then you can see at the bottom of this slide, if you like, an artist's conception of what that might look like if it were built on the Peace River today.

6:25

**Ms Brennan:** This is a status update on the project, which basically talks about where we're at with our approvals, the process that we've gone through over the last few years in terms of working

with First Nations and landowners in the area, the work that we still have to do in terms of technical and economic evaluation. What this development project in the area means to us is – so we have the rights to build in that area. That doesn't mean that other people cannot develop on the Peace River as well. To alleviate any concerns you may have about that, this doesn't prevent upstream or downstream development as well along that corridor, so that's a benefit to run-of-river projects. In some of our locations where we have run-of-river projects, you'll see many plants along the river.

Again, as I spoke about in our first slide, Don is going to now start to talk about some of the challenges as well as the opportunities that we see with hydro in northern Alberta, and the next few slides will cover that topic.

**Mr. Wharton:** Well, thanks, Lora. Before we leave this slide, though, maybe just to close on this, it's important, I think, for the committee to understand that this is still a project under development. TransAlta acquired this project when we acquired Canadian Hydro assets in late 2009 and immediately began consultation work but also technical work in terms of geotechnical studies in the area, fish studies and so on, things that need to be done in any good due diligence on a project such as this.

The key thing for the committee that I would like to emphasize at this point as TransAlta and as a developer is that we still have to make a decision whether to build this or not. This is not a project that we've already decided to build. It will be built on its merits, both technical and economic, from our perspective. This is still a work-in-progress. I wish I could give you, you know, a certainty that we are going to move ahead with this. We actually like hydro. We think it has great potential. We certainly have experience in it. But it's important, I think, for the committee to understand that we still need as a company to make the determination to proceed or not proceed on this project. So I think that's an important issue to emphasize.

Okay. In the last part of our presentation we just wanted to focus on a couple of perspectives, if you like, from our company's point of view about hydro in Alberta. The first one, really, is perhaps just some general comments about how we see hydro in terms of, you know, the attributes. Certainly in Alberta but in many places we actually see hydro as providing great stability in terms of markets and supply. Hydro is famous for having reliable, low-cost supply in the long term. The ability to ramp hydro up and down is something that we do every day in Alberta, which goes hand in hand with the second point we make here, which is: given that Alberta is also actively building wind generation, there is a definite requirement for something like hydro to firm up or stabilize, if you like, the impact of wind, which, of course, is only available intermittently. Whether that's fossil-based generation or hydro – actually, hydro does this very well if it's available. So it's an important kind of synergy between these two particular types of generation.

Of course, I think this committee has certainly heard that one of the big challenges with hydro is the large capital investment requirement and the long period under which to recover that capital as well as the operating potential for it. But the life cycle generation from hydro – and I'm going to talk very quickly in a minute about our view of the costs of hydro versus some other alternatives – is still attractive in the long haul.

The committee may have seen this slide before. This is a slide from the Alberta AESO predicting, essentially, growth in demand over the next decade, showing around 6,000 megawatts of power requirement both because of growth and because of retirements of older units, particularly coal units and particularly because of

environmental constraints. So, really, just to emphasize, TransAlta has a view that's not dissimilar to this, a view that there is a significant requirement over the next 10 years for new generation supply, perhaps filled in part by hydro but certainly needing to be filled.

Again from the same source, the Alberta AESO: kind of, I think, an important view of how the fuel mix in this province may well change in the next 10 years. By 2022, on the right-hand side, you can see that there is a significant growth in a couple of areas, particularly in natural gas-fired, cogeneration, and combined cycle power generation, particularly in the wind area, some 1,700 megawatts if my math is right. On hydro there is only approximately about a hundred megawatts that the AESO is predicting in the next 10 years will be built and in place, so a fairly small growth in comparison to a couple of other sources. Again, it's just a forecast, but I would say that our company's forecast for growth is not necessarily dissimilar to this one.

**The Chair:** Just a warning. We've just got a couple more minutes, okay?

**Mr. Wharton:** Okay. Good.

Well, this is the one slide that I did want to spend just a minute on, and this is a slide based on TransAlta's information and our experience with different generation sources, showing the levelized cost of electricity generation from several sources, including coal-fired generation, natural gas-fired, nuclear, wind, and hydro, comparing hydro in Alberta and hydro in other areas. The first thing I wanted to emphasize is that it is always a generalization, right? Every project is different and has different economics, so these numbers by their nature are generalized.

There are a couple of things I wanted to point out. Number one, today at least the lowest cost generation options for Alberta in a deregulated market are clearly natural gas combined cycle generation and wind. If one were to build on simply the short-term economics of generation, those are the two lowest cost generation, and that's what we're saying today.

The other thing I wanted to point out on this slide, which we'll leave with you, is that there is a difference, actually, between hydro in Alberta and hydro in other places in general, and that is largely driven by the cost of building in Alberta. It simply is because of the demand for labour and because of the high price of materials. We see in the fossil-based generation as well a significantly increased cost in Alberta or a lower cost in other jurisdictions to build the same types of facilities. So it's something to keep in mind.

Okay. This slide just refers to the long lead times associated with hydro. I don't think we need to dwell on that, but certainly it does factor into the economics of a company like ours deciding to build hydro.

I did want to point out on transmission that TransAlta does not build transmission, so we don't purport to be experts in this area. I guess the only comment that we would make is that certainly as it relates to northern Alberta our view as a builder of generation is that, one, there is not a plan for transmission development to support that, and that certainly seems like a necessity. Two, in fact, there are significant constraints in the area today even with our Dunvegan project as I think Lora pointed out. But it certainly needs to be a consideration above and beyond the costs that I showed you to build the generation itself.

In summary, I guess there were two things that we really wanted to highlight as it relates to this presentation. One is that we are very supportive of your initiative to explore hydro development in the north. We think there's a great potential but also some

tremendous challenges, and primarily, from our perspective, those are economic challenges. Essentially, the competitive nature of this deregulated market in Alberta drives companies like ours to look most seriously at the lowest cost generation to be competitive. Hydro has that challenge of being good in the long haul, but it's the short-term hurdle that we face to be able to manage the huge capital investment for hydro in order to recover that over a long term. That's very challenging for a private-sector company.

6:35

The other thing I wanted to point out was maybe something for consideration. Given that this committee may be wanting to look at encouraging new hydro development in the province, while we think that's a great ambition, we would also caution that there needs to be consideration of what prescriptive requirements, if you like, to build specific types of generation might do to a competitive market in the province. I won't opine on that. It's just to say that we think that that's a consideration that this committee ought to have, to say that if we preferentially are wanting to build hydro, what does that mean, and how does that affect a market that otherwise is supposedly driven by market forces of price and supply?

Madam Chairman, that's all I have for a presentation. I'm more than happy to answer questions.

**The Chair:** Thank you. Can you believe you did that in 12 minutes? Thank you very much.

I'd also like to welcome Mr. Anderson and Ms. Blakeman here to the table. Thanks for being here.

Okay. Mr. Anglin is going to start for the Wildrose caucus. You've got five minutes for questions and answers.

**Mr. Anglin:** I'm Joe Anglin, for Rimbey-Rocky Mountain House-Sundre. Your slides touched upon it, but I would like to have you sort of comment. With the development of wind power – and Alberta is engaged in this considerably – there is something that we need to take into consideration which I always call stabilizing generators, or the stabilization of the system. Could you comment on the applicability of hydro as a stabilizing generating source to support wind power?

**Mr. Wharton:** We actually think it's probably the premier source of what we call firming or stabilizing against intermittent supplies like wind.

**Mr. Anglin:** Could you explain to the group what I mean by stabilizing generator in case someone in here doesn't understand that?

**Some Hon. Members:** We know.

**Mr. Anglin:** You know. Okay. Good.

You talked about constraints of transmission. Help me out here, but I think that's constrained by a 138-kV system or a 69-kV system? Do you know?

**Mr. Wharton:** Do you know, Lora?

**Ms. Brennan:** I would say no. We're really not the transmission people. We just know that we need it. When we build a plant, we need a transmission line to it.

**Mr. Wharton:** If you're referring specifically to Dunvegan, we are actually close to transmission. It's not so much the ability to connect but, rather, the capacity of the transmission to take a new 100-megawatt unit operating at full capacity.

**Mr. Anglin:** And that's what I was getting at. Now, is that a 138 system? I believe it is.

**Mr. Wharton:** We can get back to you on that one, Mr. Anglin.

**Mr. Anglin:** Are you aware that the province has a plan for a twin 500-kV system going up to Grande Prairie. If we develop the hydroelectric north of Fort McMurray, then we know there's going to be something coming down south, and that would be more than adequate to connect your needs through . . .

**Mr. Wharton:** Yes, it would, if there were 500-kV capacity.

**Mr. Anglin:** Okay. I just have to look at my timing here.

On the issue of capital support, we had ATCO here last week – I can't even remember how long ago it was; it seems like a long time ago – and they talked about the same issue. Could you elaborate on what kind of capital support you would need to advance these types of projects?

**Mr. Wharton:** Well, I won't answer the question quite the way you asked it because . . .

**Mr. Anglin:** Okay.

**Mr. Wharton:** . . . we actually don't look at our projects like this as needing capital support and what that should be, right? It's an interesting theoretical exercise. Perhaps we should for this committee, and we'd be happy to do that.

Simply, we look at this as a private-sector investor in generation and look for competitive ways to invest and build generation supply. I guess my point earlier was that today, as we're looking at those things to supply Alberta, certainly it's hard for us to justify the economics with today's electricity pricing and forecast of pricing to build new hydro instead of, say, combined cycle natural gas or wind. The challenge is quite great for a company like ours, and I would assume you heard the same thing from ATCO and TransCanada, that somehow if we're going to build hydro, we need to find a way to do that that's above and beyond the current economic business case, if you like, that exists for hydro.

**Mr. Anglin:** Are you suggesting a feed-in tariff?

**Mr. Wharton:** No, I'm not suggesting that. Quite frankly, our company is a bit reluctant to sort of recommend, if you like, that the government actually provide significant funding to projects like these. It simply is not our modus operandi in terms of building generation. I don't want to belabour this, Mr. Anglin, but we've seen challenges that have happened in jurisdictions like Ontario, where the government has been highly interventionist in the marketplace. It does achieve certain objectives, but it also creates significant strife within the market. So there is a good and a bad associated with government investment in that so-called deregulated marketplace.

**Mr. Anglin:** So what is your suggested solution to make this go forward?

**Mr. Wharton:** Well, look. I actually don't have a silver bullet. I think this is actually a true conundrum that we face in Alberta. I think that if we want to build more hydro for all the good reasons that this committee is examining, then it really – you know, I don't have a solution for you.

I can see that a combination of long-term contracts with off-takers for electricity supply would be really important for a company like ours and perhaps could go some distance towards

achieving growth in hydro development that otherwise wouldn't be seen. I could see some government involvement. Perhaps it is loan guarantees of some sort. We haven't contemplated a feed-in type of tariff, so I don't think I could comment on that. But there would still be something required to make up the difference and make the economics.

**The Chair:** Thank you. We'll turn it over to the PC caucus. We're going to have four questioners, and we'll see how far we get: Mr. Cao, Mr. Xiao, Ms Kubinec, and then Ms Johnson.

Mr. Cao.

**Mr. Cao:** Thank you, Madam Chair.

Thank you very much for the presentation. My question is a similar line to Joe's, Mr. Joe Anglin's, but it's more historical in a way. Other provinces don't have deregulated generation. It started out, probably, in Alberta long years ago that government built those facilities. Tax dollars, money, built Quebec Hydro and others and then paid for it during the long term. But here it's, like you said, unique in that now it's free enterprise, private capital building and having a long term. In the same light, you already told about what things can move this along on the private side. We haven't worked it out, and you haven't worked it out. So we would love to hear when you have some idea of what it is.

My question. From your experience and your operation of business – we are politicians. We don't know about that, how you run the technical side and so on. We don't even want to know. From that perspective can you give an example or something that happened in the province next door here, what kind of hydro they have and how they started and what kind of government intervention you saw?

**Mr. Wharton:** Well, actually, Alberta has the same history, quite frankly, as some of the other sister provinces in Canada. You're quite right. The original hydro generation that was built in Alberta was supported in part by government and in part by the private sector, right? You know, I think that we need to look at a couple of examples: British Columbia, a Crown corporation, a significant investment in hydro, great hydro resources, probably one of the best hydro resources in Canada, actually. But the challenge that British Columbia faces today is to actually get new generation built for what is now for them a growing load demand, which they haven't seen to the extent that they expect to see in the next 10 years. They're not seeing participants in the marketplace coming in readily to build generation in British Columbia, so that leaves the government facing, essentially, large investments in projects like site C on the Peace River, for example, and all that that entails.

Let me give you an example of Ontario, which was moving towards a deregulated environment back in the late '90s and looked to be following the same path as Alberta, more or less in parallel. However, Ontario decided at some point that they weren't comfortable with that and decided to essentially move into more intervention, I would call it, in the marketplace. Our view, TransAlta's point of view, is that the Ontario market has become a very difficult place now to do business, that the Ontario electricity consumer is facing potentially significant if not massive increases in electricity pricing because of the fact that they are neither fish nor fowl. They're not a deregulated market, nor are they completely regulated.

6:45

Then you look at Quebec, as the final example I'll give, where that is fully a regulated market. The government has invested billions of dollars in developing hydro. They have enormous hydro



resources and a great low-cost supply, but that doesn't show up in the electricity bills and rates of electricity consumers in Quebec. It shows up in large part in the tax base of Quebec. They have a tremendous debt in that province, which Alberta doesn't have, in part to pay for the investment in hydro assets.

So just a kind of a scan across the other provinces. From our perspective, at least, that's how we see that.

**The Chair:** Let's let another question here. Mr. Xiao, you have just about a minute.

**Mr. Xiao:** Yeah. Very briefly, I want to give others some more time. According to the *Edmonton Journal* this project features a 42.5-megawatt turbine. Based on what's on your website, you're talking about this as basically running the free flow of the water without storing the water.

**Mr. Wharton:** That's correct.

**Mr. Xiao:** This generates a concern for me, and I want you to comment on this. Would this prevent, you know, the future development of another hydro project on the same river? Given the potential for this river, the hydro you are planning to build, actually, is a very, very small one. There's a potential you could build a much bigger one. My concern is that this might prevent future projects from being carried out.

**Mr. Wharton:** Well, let me give you a quick answer, and I'll see if my colleague might have something to add to that. As I think Lora mentioned, this certainly does not preclude significant numbers of other run-of-river hydro projects on the Peace River in Alberta. There is plenty of room for additional hydro projects like this in the 100- to 200-megawatt scale range. However, if one is thinking of a much bigger scale, a storage project, for example, with a huge dam and flooding behind that, then, yes, it does in fact create a problem. If someone is actually prepared to build a 2,000-megawatt hydro storage facility on the Peace River, then putting run-of-river hydro creates a challenge for that.

**The Chair:** Okay. I think we're going to have to stop there.

Just a reminder to everyone on the committee that if you have questions you've not been able to get answers to, please write them down and then provide them to Mr. Tyrell, and we'll read them into the record and follow up.

I'm going to turn it over to the Liberal caucus now.

**Mr. Hehr:** Well, thank you very much for coming. If I could just sort of go back a little bit and ask my question. I guess, if I am correct, given your current economics of the situation your company wouldn't be able to commit right now to building this project. Given that, should the government of Alberta, given the long-term ramifications of population growth as well as electricity needed in this province and given that we aren't going to have coal-fired power plants and the like, should we – I use "we" in the loose sense of the term; just allow me to get rid of that – be establishing some hydro for this province right now? I realize that was theoretical.

**Mr. Wharton:** It is. Let me offer an answer. I'd say that it's very nuanced. It's very important. I would say that in principle the answer would be yes. We should look to take advantage of the great hydro opportunities we have in northern Alberta. The benefits of having hydro are tremendous in the long term. As a province I would say that we need to find a way to make that happen, but I would also sort of condition that statement, if you

like, by saying that that is not a small challenge – right? – that that has implications in terms of certainly the marketplace and the health of the existing marketplace. So we need to find a way, however we do it, to make sure that we can maintain the robustness of the current market, which is working well, keeping prices relatively low and providing supply while at the same time developing this capacity.

**Mr. Hehr:** If you could explain to me: say, if the Alberta government goes ahead with two or three of these projects – you understand this business better than I do, so let your imagination run wild – what are the implications for the marketplace? Will we see, then, less natural gas emerging like you indicated? Will it have ramifications elsewhere? If you could sort of bring those to light for me.

**Mr. Wharton:** Right. Two things, maybe, come to mind immediately. One would be that, essentially, now we, in this hypothetical example, are starting to dictate the type of generation that is to be built. We have a number of companies today in Alberta looking to provide supply in a competitive way, and that would certainly change their economics – right? – and change their perspective of what was doable. It also might change the attractiveness of the Alberta market to new entrants, but that's an interesting question in and of itself.

I guess the other part to the question would be, then, that we are now in Alberta, in your example, building generation that is costing, perhaps levelized, somewhere in the \$100, \$110 per megawatt hour range when the current market price today runs in the \$60 to \$65 per megawatt hour. We are consciously building generation that's more expensive than alternatives, and that decision has its economic implications, obviously, and needs to be rationalized in some fashion.

So those are a couple of the challenges. I'm not coming here with a solution to this because I think it wouldn't do it justice to flip off a solution, to say: well, the easy thing is for government to spend, you know, billions of dollars and support this. As one company, at least, we would say that we think that we perhaps ought to think a lot harder about creative ways of doing this, which would involve both the private sector and perhaps government.

**Mr. Hehr:** Then maybe, with your knowledge of natural gas, do we have enough natural gas in this province to say that we're not going to go down this path for some of these reasons you said, we have a deregulated market and the like? Do you think we have enough natural gas to go all natural gas? Or is that risky, too, because you never know what natural gas is going to be priced at tomorrow?

**Mr. Wharton:** I'll tell you that TransAlta has a portfolio of fuels for a reason, and that is that we believe having a portfolio balances risk and manages it just like you balance your investment portfolio in the same manner, so we wouldn't actually advocate that Alberta go largely in one direction or another. We think that we should keep coal in the fuel mix for Alberta, hopefully clean coal in some form or fashion. Natural gas needs to play a big role, and it's certainly a convenient fuel, but hydro and wind are also attractive. We believe that we should have a proper mix of all those fuels for the benefit of the province.

**Mr. Hehr:** It's as clear as mud.

Thank you.

**The Chair:** Okay. We're at five minutes.

Kent, do you want to jot down some of your questions if you've got more?

**Mr. Hehr:** I'm good. Thank you.

**The Chair:** Okay. Thank you.

Mr. Bilous.

**Mr. Bilous:** Thank you. And thanks again for coming. Much appreciated. I'll get to a question, but I'll just lead in a little bit with some of the information that you folks have shared with us so far tonight. It's clear that there is a large initial capital cost to get any kind of hydro project online. The fact that the length of time you had said – correct me if I'm wrong – is somewhere between 20 to 30 years to get a larger project from consultation to . . .

**Mr. Wharton:** Built and operating?

**Mr. Bilous:** Yes.

**Ms Brennan:** We've seen that in the industry, yes.

**Mr. Wharton:** So 20 years might be a good rule of thumb.

**Mr. Bilous:** Understandably, for private industry, especially in businesses, that's a long time to wait to start bringing in profits. Of course, you're concerned about the interest, obviously, that you're paying on whatever costs or borrowing that you've had to do to pay for the projects. It seems to me then that essentially what we're getting to is the fact that this is a great example of where the government can play a very significant role in developing hydro-electricity because the government of Alberta has a triple-A credit rating, because they can borrow funds cheaper than any industry or individual.

It seems to me that if we're looking at the future of hydroelectricity within Alberta and a way to do it, essentially what you're saying is that really this should be a government-led type of project if we want to get this done. Now, I know you brought examples of how it's not working in Quebec. I think there are other points to that story as well. What is it, then, that you're looking for? What would make it plausible for a company like TransAlta to do this?

6:55

**Mr. Wharton:** I'm definitely not avoiding your question here, but I agree. The easy answer would be to say that we need government investment to make hydro development happen in Alberta. I guess the message that I'm bringing is twofold. One, we're certainly not coming to this committee asking for that to happen because the second part of it is that it is a very complicated question. The complications arise, as I was pointing out, in that while it seems essentially, superficially at least, easy to have this being a government priority, funded and supported by government, there are real, important implications in what that would mean in the Alberta deregulated electricity market. I guess my request of the committee would be that we need to put our best brains at work to figure out how those two things could coexist well and not be in conflict with each other, which would be a perverse outcome and, unfortunately, possible if we didn't do a good job of this.

**Mr. Bilous:** For your own position, then – and I asked this to previous presenters – how does TransAlta feel about some type of either partnership or other arrangements instead of relying solely on private industry to raise capital or the complete other side, government-run, government-facilitated?

**Mr. Wharton:** Well, in all honesty that would be a new business model for us. We have built our company to essentially operate in deregulated electricity markets and bring private-sector funding and expertise to generation supply, so we actually don't have an example and don't have experience in doing business arrangements together in concert with governments. I could speculate, but I want to make it clear that we don't have the experience of doing that and aren't necessarily the best people to ask about how to do that. We'd certainly be happy to participate in your thinking about that issue, but I'm afraid I can't bring any experiential advice to your question.

**The Chair:** You have another minute here.

**Mr. Bilous:** Okay. Well, this is a more of a call to committee members to seriously look at the option. You know, I think sometimes, especially in this province, we've boiled down every argument to: industry always knows best; industry always is more efficient or more effective than government. I think that there are some fallacies with that statement. Again, applying something blanket across the board, I think, is dangerous. You know, projects like this – and as you said yourselves, because of that lead time of how long it takes to get a project online and onboard, this is something where the government of Alberta could divert some of the royalties that it brings in toward projects like this. I think your points are well taken as far as we do need to look to alternative forms of energy generation, the fact that many of our coal plants are coming to their term or end of life, and we do have great energy demands in this province.

**Mr. Wharton:** I think I would respond by agreeing with you and saying that left to its own today, hydro will not be developed in the near term in Alberta simply because it's not competitive under the current market framework, so we need to invent something new.

**The Chair:** Thank you very much.

We're going to have to conclude the questions now. Again, a reminder to those who weren't able to ask the questions: please write them down and provide them to the clerk here. Thank you.

This is a very fast approach, but I think it really high-grades the questions for us, and we will have follow-up questions and look forward to responses to those. You can follow along in *Hansard* and see how the dialogue is progressing. We very much appreciate you being here.

We're just going to finish up with some business, so if you'll just bear with us here.

**Mr. Cao:** Just off the record here . . .

**The Chair:** Mr. Cao, you're never off the record, okay?

**Mr. Cao:** I know.

**The Chair:** We'll have that conversation later, okay? We have several things to go through here. Thank you.

First, we're going to hear from Dr. Massolin from research an update on the economic and environmental feasibility panel. He provided a draft stakeholders list.

Dr. Massolin.

**Dr. Massolin:** Yes. Thank you, Madam Chair. The working group asked me to investigate organizations, individuals that would be able to speak to the committee on the economics of hydroelectricity, if I can put it that way. What research services has done is look at the stakeholder list as it was, specifically C.D. Howe,

which was on that list, and approach them. They have turned us to a professor of economics from Memorial University in St. John's who is an expert in this area, specifically in electricity economics. His name is Dr. James Feehan. He's an expert in electricity economics, the economics of public investment in natural resources and cost-benefit analysis, the impact of natural resource development as well.

Now, we made contact with Dr. Feehan, and he is interested in making a presentation to the committee. We told him the time frame might be sort of early next year, perhaps February.

**The Chair:** Not January. We know that.

**Dr. Massolin:** Yes. And he said that was good for him because he's not teaching, so he'd be available. He's, I think, keen to participate. So that is one individual.

Then we looked at the Canada West Foundation. We have a call in to them, and they're supposed to get back to us tomorrow. So no news to report on them in specific. We looked at a couple of other potential academics, and we also looked at the Canadian Energy Research Institute, but unfortunately they deal with carbon, not hydroelectricity, so they're not a viable option.

That's the update.

**The Chair:** Thank you very much. What I would ask you to do, Dr. Massolin, is provide that set of recommendations, once you've got a little bit more information, to myself, and I'll share it with the working group, and we'll bring it back to this committee.

**Dr. Massolin:** Okay. I will do. I've also asked Dr. Feehan if we could share his CV with the committee.

**The Chair:** Thank you.

I wanted to update you a little bit with respect to the approach to Jim Prentice and Shawn Atleo. Mr. Prentice hasn't yet gotten back with a time that he's available, and the protocol on approaching Mr. Atleo is quite serious. The three grand chiefs in Alberta are coming to meet with the cabinet and the Premier on December 10 and 11, and protocol from many angles of repose suggest that we not approach Mr. Atleo until that meeting has happened. So we will be making the approach after that meeting.

We've also got confirmation from Manitoba Hydro that they are coming Wednesday, December 13, in the morning. B.C. Hydro is not available that afternoon, but we'll be trying to get them in February or March. We have suggested that the environmental groups on our stakeholder list be invited for the afternoon of December 13. We're really going to have to know who's available. We understand we won't be sitting then, we hope, all of us. So if you can get back to the committee chair on your availability for the morning and the afternoon of December 13.

I would also appreciate an update from Mr. Tyrell on the environmental groups and the status of their availability for the 13th of December.

**Mr. Tyrell:** Our department left phone messages with all of the environmental groups that are currently on the stakeholder list. Alberta Water Council responded that they're a small organization, and they don't have anyone with expertise in the areas that we'll be looking at. They did recommend Mr. Mike Kelly from Alberta WaterSMART, who, I would suggest, we add to the environmental issues panel on the stakeholders list if everyone is okay with that.

The Water Matters Society has expressed an interest in presenting and has formally been sent an invitation letter.

World Wildlife Fund Canada requested additional information on the phone, and they will be getting back in touch with us shortly.

**The Chair:** Any discussion or questions on that? Okay. If you do, please get hold of Mr. Tyrell. We've got a good list that's been agreed to by the committee, and we're just working our way through it, so as we get more information, we will share it with everyone.

7:05

Finally, we were talking about travelling up to Fort Smith, and there've been two changes. Well, one is a knowledge change, and one is a factual change. There's been very recently a change in the chief. Apparently, from what we understand, the new chief is very pro investment, and the previous chief was not. For us to arrive in the middle of all of that could be quite disruptive, so we're evaluating that situation. The other thing that we've learned is that, logistically, it's quite a hike into the site, and I've been told that we would have to don snowshoes and be ready for about a three- or four-hour trek. I think, given those two sets of facts we're just going to step back a little bit and decide what we're going to do perhaps later.

The other recommendation that came to me – and I thought it was quite a wise one – was for us to be able to look at a run-of-river dam. That is something that's important to us. I asked Dr. Massolin to do a quick check, and maybe you could provide the update there.

**Dr. Massolin:** Sure. Thank you, Madam Chair. I believe the sheet has been handed out, so you should have before you run-of-river hydroelectric plants in Alberta. I don't think this is an absolutely comprehensive list, but I think this is a lot of them. You can see that there are six plants listed on the page, and you can see that many of them are run, actually, by TransAlta. On the Kananaskis River at Seebe there's the Kananaskis plant, for instance. There's the Belly River, the Oldman River hydroelectric plant, and the Waterton hydro plant. I mean, the thing is that some of them are actually nicely grouped in case the committee would like to see more than one.

**The Chair:** Any feedback on that idea, folks? Yes, Mr. Casey.

**Mr. Casey:** Bears paw?

**Ms Brennan:** Bears paw is right in the city of Calgary, too, if that's more convenient for you and if you'd like to come.

**The Chair:** Mr. Casey.

**Mr. Casey:** My suggestion was that I thought we could ask our guests, given that they have experts in the room, if they were recommending the committee see one of these. Was there an obvious choice?

**Ms Brennan:** I think the best choice would probably be the Bow Valley system, and you could probably see Kananaskis and Horseshoe and Bears paw. That gives you a generation of 100-year-old to 90- and down to about 60-year-old facilities. The stuff in the south of the province is newer, but this is probably closer to the size of plant that you'd be looking at.

**The Chair:** Thank you very much. And no snowshoes, right?

**Ms Brennan:** No snowshoes.

**The Chair:** Okay. All right. Thank you. We'll take that under advisement, and maybe the LAO crew can take a look at the feasibility of that for our group.

I want to address the issue of timing. If you can all recall, we have six months to do this inquiry. We started on September 27, so we have to be finished by March 27, and we have to write a report. I just want to keep that time frame in everybody's minds.

The other thing I wanted to remind everybody about: the next meeting, December 3, the Environmental Law Centre will be coming, so next Monday evening, same time, same place, different food, hopefully.

Thursday, December 13, from 10:30 to noon will be Manitoba Hydro and, hopefully, in the afternoon from 1:30 to 3:00, the environmental issues groups. We will talk about the logistics going forward in December.

Yes, Mr. Anglin.

**Mr. Anglin:** I just have one question for clarification. On the updated stakeholders list, have there been any changes recently?

**The Chair:** There have been no changes recently.

**Mr. Anglin:** Good. That's what I needed to know.

**The Chair:** If anyone has any suggestions, we know that this is an iterative process.

Yes.

**Mr. Fraser:** On December 13 can we hold that meeting in Calgary?

**Mr. Xiao:** No. You need *Hansard*, so we cannot go to Calgary. This is the capital.

**Mr. Fraser:** I guess we'll have to phone in, then. Nice answer, David.

**The Chair:** Okay. If there's nothing else to cover, then would someone like to move a motion to adjourn? Ms Johnson. All in favour? Carried.

[The committee adjourned at 7:10 p.m.]



