



Legislative Assembly of Alberta

The 29th Legislature  
Fourth Session

Standing Committee  
on  
Public Accounts

Energy

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8:30 a.m.

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**Legislative Assembly of Alberta  
The 29th Legislature  
Fourth Session**

**Standing Committee on Public Accounts**

Cyr, Scott J., Bonnyville-Cold Lake (UCP), Chair  
Dach, Lorne, Edmonton-McClung (NDP), Deputy Chair

Barnes, Drew, Cypress-Medicine Hat (UCP)  
Carson, Jonathon, Edmonton-Meadowlark (NDP)  
Clark, Greg, Calgary-Elbow (AP)  
Gotfried, Richard, Calgary-Fish Creek (UCP)  
Hunter, Grant R., Cardston-Taber-Warner (UCP)  
Littlewood, Jessica, Fort Saskatchewan-Vegreville (NDP)  
Luff, Robyn, Calgary-East (NDP)  
Malkinson, Brian, Calgary-Currie (NDP)  
Miller, Barb, Red Deer-South (NDP)  
Nielsen, Christian E., Edmonton-Decore (NDP)  
Panda, Prasad, Calgary-Foothills (UCP)  
Renaud, Marie F., St. Albert (NDP)  
Turner, Dr. A. Robert, Edmonton-Whitemud (NDP)

**Also in Attendance**

Swann, Dr. David, Calgary-Mountain View (AL)

**Office of the Auditor General Participants**

W. Doug Wylie	Auditor General
Eric Leonty	Assistant Auditor General

**Support Staff**

Robert H. Reynolds, QC	Clerk
Shannon Dean	Law Clerk and Director of House Services
Stephanie LeBlanc	Senior Parliamentary Counsel
Trafton Koenig	Parliamentary Counsel
Philip Massolin	Manager of Research and Committee Services
Sarah Amato	Research Officer
Nancy Robert	Research Officer
Corinne Dacyshyn	Committee Clerk
Jody Rempel	Committee Clerk
Aaron Roth	Committee Clerk
Karen Sawchuk	Committee Clerk
Rhonda Sorensen	Manager of Corporate Communications
Jeanette Dotimas	Communications Consultant
Tracey Sales	Communications Consultant
Janet Schwegel	Managing Editor of <i>Alberta Hansard</i>

## **Standing Committee on Public Accounts**

### **Participants**

#### Ministry of Energy

Douglas Borland, Assistant Deputy Minister, Ministry Services

David James, Assistant Deputy Minister, Electricity and Sustainable Energy

Doug Lammie, Assistant Deputy Minister, Strategic Policy

Coleen Volk, Deputy Minister



8:30 a.m.

Tuesday, May 8, 2018

[Mr. Cyr in the chair]

**The Chair:** Good morning, everyone. I would like to call this meeting of the Public Accounts Committee to order and welcome everyone in attendance.

My name is Scott Cyr. I'm the MLA for Bonnyville-Cold Lake and the chair of this committee. I'd like to ask the members, staff, and guests at the table to introduce themselves for the record, and then I will turn it over to the members on teleconference. Let's start to my right.

**Mr. Dach:** Lorne Dach, MLA for Edmonton-McClung, deputy chair. Good morning.

**Mr. Panda:** Good morning. Prasad Panda, MLA, Calgary-Foothills.

**Mr. Barnes:** Good morning. Drew Barnes, MLA, Cypress-Medicine Hat.

**Mr. Hunter:** Grant Hunter, MLA, Cardston-Taber-Warner.

**Mr. Clark:** Good morning, everyone. Greg Clark, MLA, Calgary-Elbow.

**Dr. Swann:** Good morning and welcome. David Swann, Calgary-Mountain View.

**Mr. James:** David James, the assistant deputy minister for electricity and sustainable energy with the Department of Energy.

**Ms Volk:** Coleen Volk, Deputy Minister of Energy.

**Mr. Borland:** Good morning. Douglas Borland, assistant deputy minister, ministry services, the Department of Energy.

**Mr. Lammie:** Doug Lammie, assistant deputy minister of strategic policy with Energy.

**Mr. Wylie:** Doug Wylie with the office of the Auditor General.

**Mr. Leonty:** Eric Leonty, Assistant Auditor General.

**Ms Miller:** Good morning. Barb Miller, MLA, Red Deer-South.

**Ms Luff:** Robyn Luff, MLA for Calgary-East.

**Mr. Carson:** Good morning. Jon Carson, MLA for Edmonton-Meadowlark.

**Dr. Turner:** Bob Turner, Edmonton-Whitemud.

**Mr. Nielsen:** Good morning, everyone. Chris Nielsen, MLA for Edmonton-Decore.

**Mr. Malkinson:** Brian Malkinson, MLA for Calgary-Currie.

**Dr. Massolin:** Good morning. Philip Massolin, manager of research and committee services.

**Mrs. Sawchuk:** Karen Sawchuk, committee clerk.

**The Chair:** Thank you.

I'd like to have the people teleconferencing introduce themselves. Mrs. Littlewood, are you on the phone?

**Mrs. Littlewood:** Thank you very much, Chair. Jessica Littlewood, MLA for Fort Saskatchewan-Vegreville.

**The Chair:** Mr. Gotfried, are you on the phone?

**Mr. Gotfried:** Good morning. Richard Gotfried, MLA, Calgary-Fish Creek.

**The Chair:** Ms Renaud, are you on the phone?

**Ms Renaud:** Yeah. Marie Renaud, MLA, St. Albert.

**The Chair:** Thank you.

I have a few housekeeping items I'd like to address as well. Please note that the microphones are operated by *Hansard*. Please set your cellphones and other devices to silent for the duration of this meeting. Committee proceedings are streamed live on the Internet and broadcast on Alberta Assembly TV. The audio and video streams and the transcript of the meeting can be accessed via the Legislative Assembly website.

We'll move on to the approval of the agenda. Are there any changes or additions to the agenda?

Seeing none, would a member like to move that the agenda for the May 8, 2018, meeting of the Standing Committee on Public Accounts be approved as distributed? Mr. Clark. Any discussion on the motion? All in favour? Any opposed? On the phones? Thank you. The motion is carried.

We'll move on to the approval of the May 1 minutes. Do members have any amendments to the May 1, 2018, minutes?

If not, I would like a member to move that the minutes of the May 1, 2018, meeting of the Standing Committee on Public Accounts be approved as distributed. Mr. Malkinson. Any discussion on the motion? All in favour? Any opposed? On the phones? Thank you. The motion is carried.

I'd like to welcome our guests who are here on behalf of the Ministry of Energy to discuss the outstanding recommendations from the office of the Auditor General and the ministry's 2016-2017 annual report. Members should have the research report prepared by research services, the Auditor General's briefing document as well as the status of the Auditor General's recommendations document completed and submitted by the ministry.

I invite Ms Volk to provide opening remarks not exceeding 10 minutes. Thank you.

**Ms Volk:** Thank you, Mr. Chairman. Good morning, everyone. As in previous years I'm here to provide an update on the outstanding recommendations from the office of the Auditor General and to present highlights from the ministry's annual report for 2016-17.

Joining me at the table from the Department of Energy are Douglas Borland, the assistant deputy minister of ministry services; David James, assistant deputy minister of electricity and sustainable energy; and Doug Lammie, assistant deputy minister, strategic policy.

I'd like to start my remarks by providing some information on the outstanding recommendations from the Auditor General for the ministry. Then I'll provide a high-level look back at some of the accomplishments of the ministry over the 2016-2017 fiscal year. I'd like to remind members that the ministry appeared in front of this committee in September 2017 and provided a detailed account of the information provided in the ministry's 2016-2017 annual report. Following these remarks, I'll be pleased to take your questions.

As you will recall, over the past few years the Auditor General made several recommendations to the Department of Energy, the Alberta Energy Regulator, and the Alberta Petroleum Marketing Commission. Let's start with the most recent recommendations for the Alberta Petroleum Marketing Commission, or the APMC. The Auditor General recommended that the APMC develop and

document effective procedures to manage risk and communicate its business plans and annual report to the public. The Auditor General also recommended providing an analysis of the lessons learned in the Sturgeon refinery agreement, and the commission formally accepted these recommendations in February 2018.

The recommendations pertain to ways that internal risk management processes can be improved. The ministry accepts the recommendations around improving internal processes and recognizes there is room to better communicate how risks are managed. The APMC is developing a more comprehensive enterprise risk management system and has engaged PricewaterhouseCoopers to assist in developing that system. The commission expects the enterprise risk management system to be developed and implemented before the end of 2018. Following discussions with the Minister of Energy and, as necessary, other relevant government bodies, the APMC will determine what is to be reported and prepare public documents accordingly.

In 2016 the Auditor General recommended that the department evaluate and report on Alberta's royalty programs. Energy appeared before this committee in November 2016 to discuss this recommendation. I am pleased to report that since then this recommendation has been fully implemented. In response to this recommendation the department did the following: provided descriptions of existing royalty programs in Energy's 2015-2016 annual report, which was published in June 2016, and reported on the royalty program's progress towards intended outcomes and performance metrics for key programs in Energy's 2016-17 annual report. This was published in June 2017 and will be updated again in this year's annual report. Lastly, the department developed and is currently implementing an evaluation framework.

The Auditor General also recommended that Alberta's resource development process be regularly and consistently evaluated. The department established a new area devoted to program standards, design implementation, and monitoring for royalty liability and diversification programs. The department advised the Auditor General this past February that we are ready for a follow-up audit.

I'm pleased to report that the department is also making good progress to improve controls over access to key business systems. During '16-17 the department completed the documentation of two of Energy's key systems, the oil sands administrative and strategic information system and the corporate accounting/reporting system. This included a description of the roles in each business system, the identification of conflicting roles, and mitigation strategies for these conflicting roles. The Auditor General has determined that this progress is satisfactory.

The recommendation will be considered complete when the department has accomplished the following two items: one, adequate controls are in place to ensure that conflicting roles are identified and documented in all key business systems; and two, access to business systems is provided according to an employee's profile, with regular monitoring of conflicting roles, and mitigating controls have been implemented. The department has committed to review and document the next two systems over 2017-2018. Specifically, the department is working on the freehold mineral tax and will start to look at the land automated mineral agreement system for land sales.

With respect to the Alberta Energy Regulator much progress was made on the Auditor General's recommendations for systems to regulate pipeline safety and reliability in Alberta. Of the four recommendations made in this area, three are fully implemented. With regard to formalizing a training program for core pipeline staff, the Alberta Energy Regulator has developed a competency library that includes competencies required for pipeline staff. They've also implemented a priority training program based on the

results of a technical competency review and skill gap analysis of core pipeline staff.

With regard to using risk management activities to make informed decisions, the Alberta Energy Regulator has prepared an operational surveillance plan for provincially regulated pipelines. The plan includes a registry of pipeline-related risks based on industry performance and activities required to reduce risks at an operational level. In addition, a risk registry containing a compilation of risks identified for the pipeline sector is used to associate risk with activities.

#### **8:40**

With regard to reviewing pipeline incident factors, the Alberta Energy Regulator created and implemented a new investigation process and an integrated compliance assurance framework. This will allow for the timely release to industry of investigation findings and information on lessons learned. The Auditor General's office will begin planning a follow-up audit of these recommendations in this fiscal year.

The Alberta Energy Regulator has developed an implementation plan for the fourth recommendation of identifying performance measures and targets for key risk areas. This includes creating a pipeline program logic model to illustrate the relationship between the planned pipeline activities and the intended results and impacts and identifying performance measures to gauge overall program outcomes. Targets for the performance measures are currently in development. Once the targets are defined, there will be an assessment of results.

I'm also pleased to report that the two recommendations related to monitoring and enforcement of pipeline safety and reliability are fully implemented. With regard to the first recommendation, on assessing current pipeline information, the Alberta Energy Regulator examined the data currently submitted by pipeline operators through the licensing and incident reporting systems. For the second recommendation, implementing risk-based compliance processes, the Alberta Energy Regulator conducted an integrity management program review, which included consideration for relevant portions of safety and loss management systems. I understand that an audit of these recommendations is planned for later this year.

The Auditor General also advised that they have nearly completed the follow-up audit on improving program monitoring to ensure sufficient security for land disturbances from mining. To fulfill this recommendation, the Alberta Energy Regulator developed and implemented a risk-based audit plan and a risk-based plan to monitor changes in the operators' activities and financial conditions.

Moving on to department activities, we put the finishing touches on implementing the modernized royalty framework in 2017. According to industry estimates there was an increase in drilling activity and the number of active rigs for the first three months of 2017, stemming in part from this framework.

There was also a commitment under the modernized royalty framework to improve transparency in the oil and gas sector so that Albertans can have easy access to information about our royalty system. Last year the Department of Energy launched a royalty website, which provides Albertans with access to more information on the royalty system. It enables them to understand the value and benefits they receive from energy development through royalties. The website also makes Alberta an international leader for disclosing royalty information.

Moving on to market access, I don't think there's any debate about the importance of pipelines to Alberta's energy industry as well as the national economy. While this committee is tasked with examining the events of fiscal year 2016-17, I would be remiss if I

did not reiterate the department's continued support for the Trans Mountain expansion project and the department's market access activities. The Department of Energy was very pleased to see more progress with the Keystone XL pipeline in 2017 as well as with the Enbridge lines 3 and 67 projects.

Another highlight from 2017 was the decision by Calgary-based Inter Pipeline to proceed with building two new petrochemical facilities in the Industrial Heartland near Fort Saskatchewan. In addition, the Canada Kuwait Petrochemical Corporation has begun design work for its petrochemicals project. Development of petrochemicals and related infrastructure was a key recommendation from the Energy Diversification Advisory Committee, which carried out much of its work in 2017.

This past year the Department of Energy undertook several public engagement sessions to solicit feedback from stakeholders to manage historic, current, and future liabilities related to well reclamation. The government was also successful in leveraging \$30 million from the federal government into a \$235 million loan to accelerate the cleanup of orphan wells.

Moving on to electricity, the government launched the first round of the renewable electricity program in 2017. This resulted in a record for the lowest renewable electricity pricing in Canada.

**The Chair:** Thank you, Ms Volk.

If we could move on to the Auditor General, you have five minutes, sir.

**Mr. Wylie:** Thank you, Chair. As auditors we are interested in whether risks are identified, studied, and dealt with. The focus of our work at Alberta Energy over the past several years has identified a number of areas where better monitoring, evaluation, and reporting were necessary to manage and mitigate significant environmental and economic risk to Albertans. As a general theme we found that improvements were needed in risk management processes and in the need to report important information to Albertans.

We are pleased to note that the ministry has accepted our recommendations and has taken action on many of them, as the deputy has just indicated. We look forward to continuing to work with ministry management as we conduct our follow-up audits in the coming year.

Thank you, Chair.

**The Chair:** I'd like to thank the Auditor General for his comments.

We're now going to follow an updated time allotment format for questions, with the first two rotations, at nine minutes each, for the members of the Official Opposition and the government members, followed by three minutes for the third-party member. The third rotation will be five minutes for the Official Opposition and the government members, followed by three minutes for the third party. For any time remaining following the rotations, we will hear from any of the independent, Liberal, or PC members in attendance wishing to participate. If none are in attendance, the time remaining will rotate equally amongst the Official Opposition, government members, and the third-party member, with the final few minutes designated for any outstanding questions to be read into the record and considering other items of business.

We ask that officials at the table as well as those seated in the gallery provide their names before responding to questions. This is for the benefit of members who are participating via teleconference, for those listening in online, and for the *Hansard* recording.

I will now open the floor for questions from members. Mr. Panda.

**Mr. Panda:** Thank you, Chair. Thank you to the Auditor General and his team and the deputy minister and her team for their service.

I have very limited time, so I'll keep my questions straight and simple. If you can give me straight, quick answers, I'd appreciate that.

The annual report says, "The Department of Energy is working closely with AESO to provide policy guidance, coordinate approvals, and ensure alignment with other climate and electricity initiatives." Is the Department of Energy letting AESO act independently, or does the Department of Energy have smarter and more experienced people that are directing and actively involved in the day-to-day operations of AESO?

**Ms Volk:** The AESO is an independent organization, and it operates independently in managing the electricity grid. We are involved actively with the AESO in terms of matters of policy but not matters of their day-to-day operation.

**Mr. Panda:** Thank you.

Did the AESO come up with the renewable electricity program on its own, or did the minister order it?

**Ms Volk:** The direction was from government to implement the renewable electricity program. What the AESO did was to design the process by which the auction would occur and awards would be made.

**Mr. Panda:** How does the minister tell AESO in what form of generation the AESO will procure electricity?

**Ms Volk:** Under the REP program, the renewable program, or generally?

**Mr. Panda:** In general.

**Ms Volk:** In general the AESO would determine the needs of the grid and would procure accordingly.

David, did you want to add anything to that?

**Mr. James:** Yeah. The Electric System Operator right now looks at all the market participants. The market participants are the ones that choose which type of generation asset to build because it's basically a competitive industry that's out there. The Electric System Operator hasn't directed a particular type of asset to be built. Generally that's how that happens. In the case of renewable electricity it's under the competitive process, and again even in that competitive process for renewable electricity, independent developers decide what they want to try to build and bid into the process.

**Mr. Panda:** Thank you.

Page 54 of the annual report says that the need for a capacity market was driven by analysis consistent with the recommendations from external experts and AESO. It looks like you had three sets of analysis done here: one by AESO, another one by external experts, and the third one by internal experts. Is that correct?

**Ms Volk:** There were analyses provided. We also discussed, though, as a group. We brought people together and had discussions as a group and did some consolidated analysis.

**Mr. Panda:** Did your department contract someone to provide the analysis that agreed with the AESO and other external experts?

**Ms Volk:** We contracted external experts who provided us with their analysis.

**Mr. Panda:** Will you undertake to provide the written internal analysis for this committee later?

**Ms Volk:** I believe that most of that analysis was verbal. We had a series of meetings and discussions. I'm not sure that there was a report by any one of the experts that we . . .

**Mr. James:** The report right now that's available or the report that's out there is the Electric System Operator's report. In the course of the consideration of the various aspects around the market transition and whether or not a market transition was necessary and what was going on, there was a series of round-table conversations between electricity experts along with input from the AESO and the work that they had done along with our internal staff. It was those discussions internally that helped us to understand the issues, the complexities, the recommendations coming out of the AESO's report and where that was going, and, ultimately, the decision by government. Most of that is in cabinet reports at this point.

8:50

**Mr. Panda:** Yeah. I'm not sure how many millions you paid to that contractor who provided that expertise and advice. I can't imagine they would only give a verbal opinion. I'm sure there should be some written reports, and I'm asking for a submission of that to the committee.

**Ms Volk:** Well, there weren't millions paid to those consultants. It was a limited engagement around round-tables, so the deliverables in their contracts would have been around the participation in round-table discussions as opposed to a report. The formal report is the report that the AESO produced. That would be your best consolidated written report.

**Mr. Panda:** Okay. My other question is: given the missing permanent heads of the Market Surveillance Administrator, the Balancing Pool, and soon the Alberta Utilities Commission, are the timelines for transitioning to a capacity market still on track?

**Ms Volk:** Yes. The timelines are still on track.

**Mr. Panda:** Page 10 of the annual report says that the Balancing Pool "allocates or collects any forecasted cash surplus or deficit to and from electricity consumers in Alberta in annual amounts over the life of the Balancing Pool." Has Alberta Energy interfered with the Balancing Pool in any way?

**Ms Volk:** No. Alberta Energy does not interfere with the Balancing Pool.

**Mr. Panda:** If not, why can't it keep the people in the top job at the Balancing Pool? Why is there so much turnaround?

**Ms Volk:** The CEO has left the Balancing Pool. I'm not aware of other departures at the senior level in the Balancing Pool. It's not uncommon for people to leave positions. You know, that sort of turnover is something that one might expect from time to time. I'm not aware of a systematic problem.

**Mr. Panda:** There were multiple people leaving the Balancing Pool multiple times.

**Ms Volk:** In the Balancing Pool? The CEO was there for six years, and as I said, I'm not aware . . .

**Mr. Panda:** The board of directors and others all quit en masse.

**Ms Volk:** Pardon me? I'm not aware of any other senior level departures from the Balancing Pool. Oh, yes. The chair of the board: his term was up. Other board members' terms were up. These are just sort of routine. One might expect that kind of turnover.

**Mr. Panda:** Thank you.

With respect to the renewable electricity program, what lessons were learned from the first auction, and what performance measures are in place to evaluate the program until the first wind is operational in 2019?

**Mr. James:** The Electric System Operator did an internal review of their program in particular as they ran the program. I don't have the results right now in terms of what that internal review showed relative to the lessons learned.

In terms of performance measures the department has identified performance measures with regard to the 30 per cent target and the intent to measure on an annual basis what's happening with regard to the amount of electricity produced in the province from renewable energy. That will be an internal-to-government performance measure, that is out there. I couldn't tell you today what the Electric System Operator's performance measures are as those are determined by their board and their management team.

**Mr. Panda:** Okay. Thank you.

Switching gears here, I'm going into coal now. Page 12 of the annual report says that coal prices have tripled, but the royalty take here is less than double. Can you explain that, please? Did mines close or exports fall?

**Ms Volk:** There was a spike in prices about halfway through the year, so the spike in coal prices translated to an increase in coal royalties.

**Mr. Panda:** But the prices were triple, and the royalties were only less than double.

**Ms Volk:** Yeah. The price tripled but was not sustained through the whole year. It was a spike at one point in the year, but it did come back. Although it did triple at one point, it didn't have a tripling effect over the entire year.

**Mr. Panda:** Was the increase or decrease in exports for metallurgical coal or thermal coal or both?

**Ms Volk:** Metallurgical.

**Mr. Panda:** Of the \$26 million in coal royalties, how much was for Alberta consumption, and how much was for export?

**The Chair:** If you could respond in writing on that one, that would be great.

Mr. Carson.

**Mr. Carson:** Thank you very much, Chair. Just a couple of questions on the PDP program. On page 35 of the annual report it states that two projects were approved under the first round of the PDP. Can you clarify if any royalty credits have been paid out to these projects so far?

**Ms Volk:** There would be no payments under that program yet. The royalty credits would be payable once the projects are in production, which they are not yet.

**Mr. Carson:** Okay. Thank you.

In regard to the two currently approved PDP projects, I understand that construction has begun on one of the projects and engineering work has begun on the second one. Do we have any estimates about the economic benefits that we'll see from these projects or what we've seen so far?

**Ms Volk:** Yes, we do.

Doug, would you like to speak to that?

**Mr. Lammie:** Sure. Absolutely. As you mentioned, the two projects are under way right now. One project is Inter Pipeline. Approximately \$400 million has been spent so far on the heartland complex as of December 31, 2017. In 2018 approximately \$650 million is expected to be invested in the complex and activities, including finalizing the engineering, continued site procurement of equipment, facility module fabrication, and site construction activities. Upon completion of the project it's estimated that this will generate approximately \$450 million to \$500 million in long-term annual average earnings before tax and depreciation. The workforce statistics: well, right now they're confidential, but we anticipate approximately 4,500 jobs created between the two projects.

The second project is the Canada Kuwait Petrochemical Corporation. The company is currently under front-end engineering design work to support their final investment decisions, which are expected in early 2019. Again, we're expecting approximately \$4 billion in total construction and operation costs associated with that project.

So we are seeing immediate reactions and positive impacts on the local community, which is very, very positive for our economic growth.

**Mr. Carson:** Thank you.

Now, the way that this program is laid out: the petrochemical companies don't pay royalties themselves, but they trade royalty credits to upstream companies who do pay these royalties. I know that some programs under previous governments allowed companies to trade credits and that there were criticisms about programs like this in the past. I'm just hoping you can clarify how the system is different and any safeguards that have been put in place to ensure that those kinds of things aren't happening in the future.

**Mr. Lammie:** Yes. Absolutely. The petrochemicals diversification program is a royalty-based credit program. The royalty credits are paid and issued to the company based on the consumption of propane within those facilities. It's a very beneficial program as it protects the Crown. Any cost overruns and delays in construction are all absorbed by the companies. The government is not at risk for those pieces. As you did mention, the credits are issued to the company. The company, if they are a royalty payer, can apply those credits to their royalties, or they can sell those credits to a royalty payer, who then can apply it to their royalties payable.

**Mr. Carson:** Thank you very much, Chair. I'm going to cede the rest of my time to MLA Nielsen, please.

**Mr. Nielsen:** Thank you, Mr. Chair. Thank you, guys, for being here this morning. I appreciate it. I just want to quickly touch on market access. I know that through the Council of State Governments I've had the opportunity to speak with many U.S. legislators about access. Specifically on pages 33 and 34 of the annual report the department references its efforts towards pipeline approvals, and I'm just wondering: what has the department been doing to support the construction of pipelines such as, you know, line 3 and Keystone XL?

**Ms Volk:** Right. Thanks for the question. The department continues to support the construction of both line 3 and Keystone XL. The construction of these pipelines will help improve access to markets in the United States and help improve access for heavy oil to the Gulf coast, one of the largest refining centres in the world.

[Mr. Dach in the chair]

Through the APMC, the Alberta Petroleum Marketing Commission, the department has committed 50,000 barrels per day for 20 years through the Keystone XL pipeline upon its completion. Both pipelines are still being reviewed under regulatory bodies in the United States, and the department is monitoring these situations to see if any action may be appropriate or not.

9:00

**Mr. Nielsen:** Thank you.

Just turning our attention towards drilling and investment, on page 32 of the report the department describes the new royalty programs. How many companies have taken advantage of the royalty programs introduced with this new framework?

**Ms Volk:** For the emerging resources program the ministry received interest from 16 companies on 11 applications. This includes partnerships. For the enhanced hydrocarbon recovery program the ministry received interest from eight companies on 11 applications.

**Mr. Nielsen:** Okay. Then on page 11 of the annual report the ministry reports on the bonuses and sales of Crown leases for 2016-17. Has the new royalty framework impacted land sales in the province?

**Ms Volk:** Based on the results of land sale auctions held by the department every two weeks, there are strong indicators for interest in the Duvernay and Montney formations. The total land sale bonus bid for the Duvernay in 2017 was \$400 million. With results for the Montney added, it totals more than \$500 million.

**Mr. Nielsen:** Okay. Well, we're flying right along here. Mr. Chair, if it's okay, I'd like to pass it over to Dr. Turner.

**The Deputy Chair:** Very well.

Dr. Turner.

**Dr. Turner:** Okay. Thanks. Thank you very much to the ministry for the good information that we've gotten already. I'm going to ask questions related to the capacity market. It's related to outcome 3, energy infrastructure and innovation. Just a quote:

The ministry manages and collaborates with other ministries, agencies and stakeholders . . . to create a modern electricity system that has reasonable, predictable prices for consumers, reduces harmful pollution . . . and remains reliable.

I'm asking these questions about the capacity market in that context.

[Mr. Cyr in the chair]

On page 54 of the annual report the ministry talks about transitioning to a capacity market. Perhaps just as an introduction, we could talk a little bit about how the capacity market works and why we have chosen the capacity market in the new electricity framework.

**Ms Volk:** Sure. I'd be happy to. I'll start, maybe, by describing how the current market works. The current market is something called an energy-only market. In this market the generators produce energy, and they get paid by the energy that they produce, so they get paid when they're producing energy and selling it into the grid.

In a capacity market it takes that same revenue stream and splits it into two components. In one market, just as in the energy market, generators produce energy, and they get paid as they produce that energy and sell it into the grid. But another part of the revenue comes from something called a capacity payment, and in that part of the revenue stream producers are being paid for their ability to

produce on demand, their ability to provide capacity, as it's called. That's the ability to produce on demand.

It's a particularly relevant concept when one is moving to renewables because not all renewables can produce on demand. Wind energy is available when the wind blows, but you can't make it produce. You can't demand that wind power be generated. It will only produce when the wind is blowing, unlike different kinds of energy that can be turned on and turned off, a gas power plant, for example.

In a capacity market part of the revenue stream comes when you're actually producing; part of the revenue stream comes just by the virtue that you can produce on demand. It provides stability to an industry. It provides certainty of revenue stream for dispatchable revenue-generating sources. It has a role to play as an energy system transitions into lower carbon and the use of more renewables. It has an important role to play in that transition. It also tends to take the volatility out of the pricing. Not all of the volatility, but it significantly reduces the volatility.

**Dr. Turner:** Thank you. We'll continue with this after.

**The Chair:** Okay. Thank you, Dr. Turner.

Mr. Clark, you have three minutes, sir.

**Mr. Clark:** Thank you very much. In my brief time here I just want to start again and pick up not so far from where my friend was there, on page 54 of the annual report, and talking about the capacity market. I have a couple of questions. You talked about it earlier, but just to confirm, the timeline for the capacity market is to award first contracts in 2020 or 2021. What are the implications if at some point either the current or, more likely, a future government were to change course on the capacity market? Are we absolutely committed to a capacity market? What are the implications should something change in the future?

**Ms Volk:** That's a very difficult hypothetical question. I don't know if I'd want to go down that path.

David, is there anything you'd want to add? I don't think it's a question I'd be prepared to answer today.

**Mr. James:** Yeah. We could never fetter the government's decision.

**Ms Volk:** No.

I'm sorry. That's a really difficult question.

**Mr. Clark:** It is. I mean, I guess what I'm really asking, then, is: have you considered any of the implications? I guess what I'm asking is: have you prepared any risk analyses as to what happens if a future government or, again, perhaps a current government through whatever circumstance were to decide to change course in, say, 2019? Are there options that you would consider in terms of rolling back to the old model, some sort of hybrid, some completely different model? Is this something the department has even considered?

**Ms Volk:** I think I could safely say that it's not something we've considered.

**Mr. Clark:** I'll just pick up, then, on questions you were answering previously in terms of the round-tables and the consultation with AESO. You talked about the round-tables. In response to my friend's question about whether you were able to table some documents, you talked about verbal advice that was given. Could you table a list of who you consulted with either in the round-tables or in those verbal-only internal discussions?

**Ms Volk:** Certainly, we could advise you as to the experts that were part of our round-tables.

**Mr. Clark:** Yeah. I'd certainly like to see some of that.

I've just got about 30 seconds here. You talk about policy and political decisions and say on page 9 of the annual report that "a shift in Canadian federal policy on energy and the environment may have both negative and positive impacts." Is that an existing shift, a shift that has already happened, or are you talking about a possible future shift? Can you talk about what the potential negative and positive impacts of that shift would be?

**Ms Volk:** Sorry. I want to find your . . .

**Mr. Clark:** Yeah. It's at the bottom of the second bullet, near the top of the page.

I'll come back to that one.

**Ms Volk:** I'm sorry. I will answer your question next time. I promise.

**Mr. Clark:** Thank you.

**The Chair:** Thank you, Mr. Clark.

Mr. Barnes.

**Mr. Barnes:** Thank you, Mr. Chair, and thanks to everyone for your efforts in being here. I want to go back to pipeline safety and reliability to start with. The Auditor General had six outstanding recommendations, I understand. Ms Volk, you mentioned that four of the six recommendations had been met. Can you speak to which two haven't been met? I understand that high-consequence pipeline incidents have been trending lower over time. Are medium- and low-consequence incidents also trending lower?

**Ms Volk:** The answer to the second question is yes. The medium and low are trending as well.

I'm just going to find an answer to the . . .

**Mr. Barnes:** Okay. While you look for that, then I'll also ask this. I'm amazed when I'm out and around and see some of the new technology that our pipeline companies have, from fibre optics to computers to safety. I'm wondering: does your department do any comparisons between how good things are today compared to, you know, when things were good but still with older technology from the '50s and '60s? Do you have any details on the incident reports just based on the age?

**Ms Volk:** I don't think we do. The Alberta Energy Regulator may. Unfortunately, I'm not joined by one of them this morning, but it is quite possible that they have that kind of information.

**Mr. Barnes:** Okay. Are the occurrences random, or do we find that it happens to one operator more than others? Are there any statistics on that?

**Ms Volk:** I don't have statistics on that. Again, I would need the Alberta Energy Regulator to help answer that question.

**Mr. Barnes:** Okay. Thank you.

I'll switch gears, then, to page 8 of the annual report, identifying that "the construction of new pipelines delivering products to other markets," of course, is a key risk. In your comments you spoke about the importance of Trans Mountain and the importance of Keystone and getting that to happen. The government has taken some criticism for not earlier engaging in, you know, the political marketing that's needed to get these things done. I'm just wondering two things. First of all, what is the risk to Albertans?

Have you ever quantified financially what the risks to Albertans are if we don't get the pipelines? Of course, I've heard the government talk about \$41 million a day to Albertans if we don't get Trans Mountain, and the Conservative Party of Canada talks about losing a school a day or a hospital a week if we don't get proper access. Has your department looked at the social program cost if we don't get these pipelines?

9:10

**Ms Volk:** Certainly, in terms of the financial cost, yes. We have the \$40-million-a-day number that is quoted. That, I think, comes from a Scotiabank study on the cost per year; \$14 billion a year was, I think, the number that the Scotiabank study quoted as a cost to the Canadian economy of not getting market access. Essentially, that's from the fact that because we don't have access to markets or the access to markets is constrained, the price of our oil is severely discounted compared to the price of oil in Houston, and it's a quantification of that differential.

Doug, did you want to add something on the analysis that we've done about the costs?

**Mr. Lammie:** Yeah. Absolutely. I'd also refer you to the recently released Budget 2018 document. I think that on page 104 it speaks to the value of market access and how that impacts royalty collections. In there there's a scenario that looks at market access versus no market access. In that no-market-access scenario the light-heavy differential is impacted by about \$7 per barrel, and that translates into about \$10 billion over that five-year period, so a significant contributor towards revenues that, again, can come, as a non resource revenue perspective, into the Crown's revenue streams.

**Mr. Barnes:** Thank you, Mr. Lammie. That's a huge number.

Again, the government has taken some criticism for two, three, four years ago not being out in front of where we're at with Trans Mountain. Is your department doing any laying of future groundwork for new pipeline opportunities, whether it be the Northern Gateway or back to Energy East or anything? Is your department undertaking any efforts for three or five years out from now as the need and the use of petroleum products continues to grow?

**Ms Volk:** Yes. The department is very active in market access. We have a group dedicated to the issues around market access. We are regularly in touch with the three primary pipeline companies who are trying to get pipelines in at the moment, who are in the process of their pipeline approvals and constructions: TransCanada, Enbridge, Kinder Morgan. We're in constant touch with those companies as they try to get their pipelines across the finish line. We're also very attuned to the other kinds of opportunities that people are presenting for market access, other ideas that people have, either for other routes or other modes of transportation, anything like that. We're in dialogue with various industry parties about how to get our products to market.

**Mr. Barnes:** Okay. Thank you.

Interesting and potentially disturbing news this morning that Royal Dutch Shell is selling out their 8 per cent stake in CNRL, again more foreign capital leaving the Canadian oil and gas industry. I'm back to a question I asked your department about a year ago, I think, at Public Accounts. Wherever I go, I hear that stuff that takes a week to get approved in Texas, two weeks to get approved in Saskatchewan can take years in Alberta to get approval. If I recall, your answer to me then was that you've asked our producers to give it to you in writing when approval periods take

longer than they think they should. If I can ask you, please: have any producers done that? What is your department doing proactively to improve our waiting time so that good producers with good environmental records can go to market faster?

**Ms Volk:** Absolutely. Thanks for reminding me that we did talk about this last year. We've done a lot of work since then. We did go out and canvass the producers directly to get very specific examples of what takes so long here versus in other jurisdictions. We were able to identify some of the areas that are some of the friction points, and we are tackling the ones that we can. I will say that in some cases it's simply that there is just a different land ownership structure. Texas, for example, has a very different land ownership structure than Alberta, so it's hard to make a direct comparison, but still it can indicate areas where it maybe takes longer here than it needs to.

After consulting with a variety of producers, we were able to identify the common themes, the common areas of concern. We had a crossministry task force – "task force" may be a strong word since we didn't formalize it that way – a group with representation from different departments that went out and spoke directly to industry participants, came back, collectively analyzed what they had heard, and put forward a series of recommendations in terms of sort of a triage: which are the things that are the biggest irritants, and how we can go about addressing them? We are now in the process of prioritizing those, determining what sort of resources we can put on what areas of the priorities. Some of them are already well in process and some are a little harder nuts to crack, but we're certainly actively working on them.

**Mr. Barnes:** Does your department have a goal? Surely we can beat Saskatchewan.

**Ms Volk:** We haven't formalized a goal like that, that general, because there are so many different parts to a regulatory process that it's hard to have one overarching performance measure like that. I wish we did. It would make it very simple. But certainly within individual parts of the process we are trying to just do our very best to improve them.

**Mr. Barnes:** Okay. Well, thank you, and good luck with that.

One specific one. Page 9 of the annual report describes the function of the Alberta Energy Regulator. Imperial Oil's Aspen project: we understand it's now been held up at the Alberta Energy Regulator for over four and a half years. Do you have any idea why? Are there any lessons to be learned? My goodness, when I look at how much the price of oil has changed in four and a half years, I just can't imagine Imperial having any confidence in their plan.

**Ms Volk:** I wish I had an answer for you. Because this is in the Alberta Energy Regulator's domain and not the department's, I can't really comment on the specifics of that. I'm sorry.

**The Chair:** Thank you, Mr. Barnes.

Dr. Turner.

**Dr. Turner:** Thank you, Chair. I'll just continue on with a discussion of the capacity market. As you were saying, basically the capacity market is designed to provide reliability and to guard against volatility. You know, as an Albertan I don't want to see a repetition of the brownouts that we saw a few years ago under the energy-only market or even the economic withholding that caused the massive spikes from 5 cents to 15 cents in a day, it seemed, on electricity bills. On page 54 of the annual report the ministry mentions that the need to move to a capacity market was driven by

an analysis. Can you give us some further information on what came from that analysis, that “the current energy-only market would not support the investment . . . generation needed to meet the projected growth in electricity use in Alberta” and to deal with those issues I just mentioned?

**Ms Volk:** Certainly. The department, working with the information gathered from the working group that I mentioned, that analyzed the current energy-only market framework, assessed that a capacity market may be the best fit for Alberta because, along with the other benefits, it will maintain a reliable grid, stabilize prices, and secure the level of investment the province needs for future supply demands.

Experts in the field of electricity systems, consisting of representatives from the department, the AESO, the Market Surveillance Administrator, analyzed the province’s current market framework and determined that the current energy-only framework would not meet the future electricity needs. The experts found that in future scenarios the energy-only market opens up two significant problems in Alberta’s electricity sector. First, it will not create enough revenue to cover investors’ fixed costs, making investment in new generation unlikely. Second, a significant portion of generators’ revenues will be dependent on scarcity events, creating an unmanageable risk for investors and increasing price volatility for consumers; as you mentioned, that economic withholding.

The department examined the four primary models for electricity systems that are currently used around the world to determine which is best for Alberta, those four models being the energy-only market, a capacity market, longer term contracts, or a regulated cost-of-service market. An analysis found that a capacity market addresses the two previously identified problems in the energy-only market by providing an additional revenue stream for generators, which places a value on their ability to generate electricity as needed, and by providing a stable revenue stream for generators, reducing the need to rely on scarcity events to earn revenue and stabilizing electricity prices for consumers.

Then government, based on the advice from the department, external experts, and the AESO, decided to implement the capacity market.

**Dr. Turner:** Thank you. That’s actually very reassuring to consumers and to the government.

Just one final question on this topic. I’m assuming that the timelines for transitioning to the capacity market are on track. Just again a follow-up to the previous questions in regard to AESO: what is the relationship between the Ministry of Energy and AESO with respect to the design and administration of the capacity market?

9:20

**Ms Volk:** I was just going to answer, but apparently I have an answer. The ministry is responsible for the overarching policy design. As outlined in the mandate letter, the AESO is tasked with the technical design. The ministry and the AESO maintain a very collaborative, co-operative relationship, sharing key information to ensure the alignment of the policy and the technical components of the design. Regular meetings are set up between us to manage both organizations along with ad hoc interactions as required. The ministry has closely monitored the progressive development of AESO’s comprehensive market design to ensure alignment with the policy framework, but it’s a very collaborative process. We do not control the technical design; we simply recommended and administer the policy level.

**Dr. Turner:** Thank you very much.  
I’m going to turn it over to MLA Luff.

**The Chair:** Absolutely.

**Ms Luff:** Thank you, Mr. Chair. I just have some questions regarding the renewable electricity program. I know that for the first RFP in the renewable program there was a lot of interest, and it was really exciting to see the price come in as low as it did. Certainly, I know lots of my friends who are interested in this field were surprised that it was as low as it was. I’m just wondering – perhaps if you could comment – why the range of the winning prices was so much lower than the price that the AESO had been forecasting.

**Ms Volk:** Well, you’re right. It was a very exciting competition. We were very happy to see the price that came in on that. The initial cost estimates were based on renewables being built in a time of significant market uncertainty in Alberta, which under the previous market conditions would result in lenders assigning significant risk premiums to those projects. REP was therefore designed with the objective of reducing the perceived risk among investors through the renewable electricity support agreements offered to the winning projects.

**Ms Luff:** Awesome. I’m just wondering. You mentioned trying to reduce risk, which is good, and one of the things that was used was the indexed renewable energy credit. It is mentioned in the annual report on page 52 that it’s possible that this is going to be something that you’ll use going forward for future renewable energy auctions. I’m just wondering if you could comment a little bit on the use of the indexed renewable energy credit moving forward in future rounds of competition.

**Ms Volk:** I can. As per the Renewable Electricity Act the AESO is required to develop a new program proposal for each round of REP. In each program proposal the AESO recommends the appropriate payment mechanisms based on their analysis. Given the significant savings to government that this approach yielded in REP 1, AESO recommended that it be retained for REP 2 and 3. It’s not guaranteed that the indexed renewable energy credit payment mechanism will be used in all future rounds of the REP. Prior to any future rounds, market conditions and other factors will be evaluated, and recommendations will be made on the best mechanism for that round as we go forward.

Essentially, the reason for selecting that particular tool is that it provides a sufficient amount of certainty to the generator, to the producer, to participate in an auction. But using the indexed credit, if there is upside, the upside will come back to the government as well. If rates are actually lower than the strike, that can be in our favour. There’s an upside to come back to government as well.

**Ms Luff:** For sure.

I guess, do you feel, like, that it will work just as well for other types of renewable electricity? Like, this one was particularly in terms of wind. It could work for solar or geothermal or any other sort of . . .

**Ms Volk:** Yes, it could work for other forms of renewable energy as well.

**Ms Luff:** Thank you.

Then I’m just wondering also if you could comment a little bit on what the relationship between the Department of Energy and the AESO is with respect to the design and administration of the program.

**Ms Volk:** Sure. As I mentioned before, in terms of the development of – well, I mentioned it in the context of the capacity market, but

generally the department is responsible for policy development, and the AESO is responsible for technical development. Government legislation and policies define the roles of agencies such as AESO in the development, operation, and management of the electricity markets and the transmission infrastructure. The AESO manages and operates the provincial power grid. They do that as an independent agency.

Under the Renewable Electricity Act the Minister of Energy may direct the ISO to develop recommendations for each REP round. Once the minister has approved the recommendations, the AESO independently conducts the various stages of each competition such as the request for expressions of interest, the request for qualifications, and the request for proposals. The final decision on the number of megawatts . . .

**The Chair:** Thank you.

Mr. Clark.

**Mr. Clark:** Thank you very much, Mr. Chair. We'll just finish off on the middle of page 9 in the annual report: "A shift in Canadian federal policy on energy and the environment may have both negative and positive impacts." I'm just curious. If you could elaborate briefly on what that shift is and what those negative, positive impacts are.

**Ms Volk:** I think that was a hypothetical risk, so I'm not sure that I would say that there has been a shift. I think this was more a forward-looking statement if I recall. What kinds of shifts could there be? I mean, a more pro-energy policy would be positive for these risks. A more constrained energy policy would be more difficult for the province.

**Mr. Clark:** So would this be something like Bill C-69, changes to the regulatory process, those sorts of things?

**Ms Volk:** Changes to the regulatory process that would detract from the investment attraction of Alberta: yes, that would be a change in energy policy that . . .

**Mr. Clark:** So it sounds like those risks are being realized. Have we calculated the potential impact on Alberta?

**Ms Volk:** The government hasn't yet formally submitted a response to Bill C-69, but the government will be responding in this window on that policy. Certainly, the government will be concerned about the potential impact on investment attraction.

**Mr. Clark:** Is there a timeline for when we might see that response?

**Ms Volk:** I believe the comment period closes early in June, so it will be before then.

**Mr. Clark:** Okay. Thank you.

Moving on, then, to page 27 and also page 56, you've talked about the carbon capture and storage program being underspent by \$172 million as a result of the delay in the construction of the Alberta carbon trunk line. What is the status of the carbon trunk line, and what impact, if any, does that have on the Sturgeon refinery?

**Ms Volk:** It is not yet operational. It's not yet been constructed. It doesn't have an impact yet on the Sturgeon refinery, but it would if it were delayed beyond the construction of the refinery.

**Mr. Clark:** You said two things there: it's not yet operational; it's not yet been constructed.

**Ms Volk:** Right.

**Mr. Clark:** Are you talking about: the Alberta carbon trunk line is not yet under construction?

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

**Mr. Clark:** Do we have an updated timeline as to when it may be?

**Ms Volk:** I do not. I don't think we do. No, we don't.

**Mr. Clark:** And what would be the implications for the Sturgeon refinery, which looks like it's going to be operational in calendar '18, should that not be there?

**Ms Volk:** Well, ultimately, if it's not there, it will have an impact on the Sturgeon refinery. I'm not aware at what point that impact would first be felt, but essentially that's part of the system that will allow the refinery to capture its carbon. That will have an impact.

**Mr. Clark:** If it cannot capture the carbon, have you calculated the cost and then the knock-on effect on Alberta's investment?

**Ms Volk:** I believe that that would be calculatable. I don't have the number at the top of my head.

**Mr. Clark:** If you could follow up on that. Thank you.

**The Chair:** Would you mind responding in writing with that, please?

**Ms Volk:** Sure.

**The Chair:** Thank you.

Mr. Panda.

**Mr. Panda:** Thank you, Mr. Chair. When Mr. Barnes was asking about the delays in project approvals – if you look at the new headlines in the last three, four weeks, all these companies coming out with their financial results, the quarterly results announcements, every single CEO talked very critically about the business environment here and the economic conditions, particularly the competitiveness, the regulatory approval process, and so on. I guess you're already working on that. You said that there are some friction points holding up the project approvals. Can you please provide that to this committee in writing, which are those friction points and how you are going to mitigate those?

9:30

**Ms Volk:** We can provide some – actually, maybe it would be useful just to have Doug speak to you a little bit about what some of those pieces are.

**Mr. Panda:** We have limited time here, but I would really appreciate it if you can provide that.

**Ms Volk:** Okay. We'll provide something. Sure.

**Mr. Panda:** Because all those CEOs – Suncor, Imperial, and Cenovus – were very, very critical about this.

**Ms Volk:** Yeah. Certainly.

**Mr. Panda:** Then switching back here to electricity, prior to this renewable energy program 1, there were already existing renewable operations in wind and solar. Will they be eligible for capacity payments in the proposed capacity market?

**Mr. James:** The Electric System Operator is looking at a variety of methods for who will be eligible inside the capacity market. Other regions that have capacity markets have looked at what percentage of the actual production of electricity from generators like solar or wind are eligible. Some markets allow that to happen at limited percentages. I think in PJM it's 7 per cent of a capacity payment for wind, for example, just by how often they're on. The AESO hasn't landed at this point on whether they would or not, but they are certainly contemplating how those generators in all instances would be able to participate.

**Mr. Panda:** Okay. Thank you.

I was talking about coal before. For the coal exported to other jurisdictions, do they have to pay the Alberta carbon tax or the federal carbon tax if they're exporting?

**Ms Volk:** I'm not sure. That would be the Alberta climate change office's domain. I don't think that Energy would be the experts on that question.

**Mr. Panda:** Okay. Thank you.

Someone talked about the petrochemical diversification program here. Are you tracking the sales of the royalty credits, particularly those from the PDP?

**Ms Volk:** Well, the PDP royalty credits aren't at play yet because the projects aren't yet in production. So, no, we're not tracking them yet, but they don't exist yet.

**Mr. Panda:** Okay. Thank you.

On page 45 of the annual report is the only mention of the carbon tax. Let me understand it here. You have the natural gas distributing companies, retailers, and the billing agents collecting the carbon tax from the consumers. Is that correct?

**Ms Volk:** Sorry. The Alberta climate change office administers the carbon levy, not the Department of Energy, so I don't really feel like I'm qualified to answer the questions on the collection of the carbon levy.

**Mr. Panda:** Okay. Let me try another one. When they collect that, do they remit the carbon tax to you or to Alberta Treasury Board and Finance?

**Ms Volk:** It's not to us.

**Mr. Panda:** Okay. I will come back. I'll yield my time to Mr. Hunter.

**Mr. Hunter:** Thank you.

**The Chair:** Forty-five seconds.

**Mr. Hunter:** A real quick question, then. What is the equation? You said that there is production and capacity. There's the production part and the ability to produce on demand. What is the percentage of each of those?

**Ms Volk:** It's not prescribed by legislation. It'll be something that the markets will work out with the AESO. I don't know it yet.

I don't know, David, if there's anything . . .

**Mr. Hunter:** On a case-per-case basis?

**Mr. James:** I think that generally PJM has landed in and around 20 per cent and sits in the space of the capacity payments themselves as opposed to the energy. But that's not guaranteed, and it has

varied over time depending on the situation in that particular market. We would expect the same here.

**Ms Volk:** That's the market in the United States.

**Mr. James:** Correct. Yeah.

**Mr. Hunter:** When will that be presented to us?

**The Chair:** Thank you.

Mr. Malkinson.

**Mr. Malkinson:** I believe it's Ms Luff that has a question.

**The Chair:** Okay. Sorry. Go ahead.

**Ms Luff:** No, I'm okay. Thank you.

**The Chair:** Okay. Sorry.

**Mr. Malkinson:** Okay. My apologies for the confusion on that one.

I'm going to talk a little bit about orphan wells here. On page 41 of the annual report there's a reference to 2,084 orphaned wells to go through closure activities. Does the department know what the estimated cost is to abandon or reclaim the 2,084 wells as of March 31, 2017, in the Orphan Well Association's inventory?

**Ms Volk:** The costs associated with abandonment and reclamation vary depending on the type of well, the age, the location of the well, and whether there is any contamination, among other factors. To be clear, when we say abandoned, we mean a site that is permanently dismantled, including plugged, cut, capped, and left in a safe and secure condition. You know, the term "abandoned" sounds much more reckless than that when, in fact, it refers to a well that has been closed.

The Orphan Well Association reported the following costs in the 2016-17 fiscal year: 232 wells were abandoned for under 12 and a half million dollars. That's an average cost of \$53,800 per well abandonment. This is just a part of the cost for some sites as it does not include reclamation, restoring land to equivalent land capability, or remediation work, which is cleaning up any contamination, that may be required. Based on these costs it could be estimated that the cost to abandon the 1,785 wells in the OWA inventory requiring abandonment would be approximately \$96 million, and then reclamation and remediation costs are separate from abandonment. In 2016-17 \$10.2 million was spent on remediation and reclamation activities on 783 sites. That year 150 sites received reclamation certificates. The process to remediate, reclaim, and revegetate a site can take several years before an application for a reclamation certificate can be submitted.

The number of reclamation certificates received in any given year doesn't account for the total value of the dollars spent in that same year. Currently the OWA has 1,062 orphan sites for reclamation in its inventory. In 2016-17 the OWA completed 25 per cent more well abandonments with 23 per cent less money compared to the previous fiscal year. The larger inventory of orphan wells provided an opportunity to plan abandonment work in area projects, which allowed the OWA to operate more cost-effectively. Where possible sites were reclaimed together and were reclaimed immediately following remediation to use the same equipment and utility for additional cost savings.

**Mr. Malkinson:** Thank you very much.

Speaking of that inventory, how long is the department estimating it will take the OWA to complete its inventory work?

**Ms Volk:** The OWA projects that this loan program will be able to significantly reduce its inventory liability, but its inventory is a nonfixed amount because it fluctuates as companies become defunct or insolvent and their sites designated as orphans by the AER. The intent of the loan is to address the surge in the OWA inventory, but the OWA will remain active to address future orphan sites that may arise through the normal course of business. When the loan was announced in March 2017, it was estimated that the loan could address up to a third of the OWA's inventory.

**Mr. Malkinson:** Thank you very much.

In regard to liability management – and I'm looking at page 40 of the annual report – does the department have any early warning systems to proactively deal with suspended inactive wells; for example, unpaid royalties, analysis of the operator's financial conditions, perhaps other warning signs, to more proactively deal with wells that are perhaps heading towards abandonment?

**Ms Volk:** That's a good question. The AER regularly monitors the current inventory of wells and provides monthly updates on the licence liability rating of companies operating in Alberta. These updates are publicly available on the AER's website. The Department of Energy also keeps track of unpaid royalties and lease rentals and has recourse for payments in arrears. We're also currently reviewing how we can better manage historic, current, and future liabilities associated with oil and gas infrastructure. As the review is ongoing, the department and the AER have taken several actions to help reduce the risk of companies in poor financial health owning and operating energy infrastructure in the province, including increasing AER's licensee transfer requirements to help ensure companies operating in . . .

**The Chair:** Thank you for that, Mr. Malkinson.

With the final rotation, the fourth rotation . . .  
I apologize, Mr. Clark. Please proceed, sir.

**Mr. Clark:** Thank you, Mr. Chair. Picking up my last question, then, on page 56 of the annual report it says that "the Alberta Carbon Trunkline Project has had some delays in construction as the final stages of financing for the project are completed." Can you update us on where things stand in terms of financing for the Alberta carbon trunk line?

9:40

**Ms Volk:** I think that line is still accurate, that they are in the final stages of financing, but it is not yet completed.

**Mr. Clark:** This is the annual report as of March 2017. It's now May 2018. That's a long final stage.

That sentence goes on to say, "Currently the project is scheduled to complete construction in mid 2018." It seems unlikely we're going to hit that date. Do you know of an updated timeline?

**Ms Volk:** I don't.

**Mr. Clark:** What happens if Sturgeon refinery starts operations before the Alberta carbon trunk line is built?

**Ms Volk:** Well, it would be operating without carbon capture in that case, but the trunk line is still in those final stages of financing. It's a complicated negotiation. It's a large financial transaction. But it is still in those discussions.

**Mr. Clark:** Have you calculated the impact of the carbon levy that Sturgeon refinery will have to pay as a result of not having the carbon trunk line?

**Ms Volk:** I haven't, but as I say, I'm sure it's a number that we could calculate.

**Mr. Clark:** When you do that, I'd like very much to see that tabled to the committee, please. I'm obviously concerned about the impact that would have on the return to Albertans from the investment we've made in the Alberta carbon trunk line.

Once that project starts construction, the Alberta carbon trunk line, do we know how long it will take to build once financing is in place?

**Ms Volk:** I don't. Douglas, do we? No.

**Mr. Clark:** Okay. What is the status of the onerous contracts review? You talked earlier about having done one every year, I believe, since 2014. When can we expect to see the status of the next review?

**Ms Volk:** That will be updated as part of the next annual report, so this summer. June, is it? Yeah, June 30.

**Mr. Clark:** Is that released as part of the annual report itself, or is that something that's released separately?

**Ms Volk:** It's in the annual report.

**Mr. Clark:** So once we see the next annual report, it will be included there. All right.

Page 33 of the annual report, market access. Very quickly here do you have an update on what specific new markets Alberta oil and gas have reached as a result of your market access strategies?

I'll come back to that one. Thank you.

**The Chair:** If you could reply in writing, I'd appreciate that. Thank you.

Now I will start with explaining the rotation. Again I apologize to Mr. Clark for the oversight. What we have is 12 minutes remaining. I will be splitting that between the independent member, the third party, the opposition, and the government.

We'll start with the independent member. Dr. Swann, you have three minutes, sir.

**Dr. Swann:** Thanks very much. I'll just read a few questions into the record, and you can answer them as able. Building on questions around the orphan well and liability management, oil and gas companies are required to post a security deposit if their licence liability rating is insufficient. For those companies that had wells become orphaned, how much security deposit did they have posted, and what have we learned from that?

Jumping to the mine financial liability, what is the most recent estimate . . .

**The Chair:** Dr. Swann, I'm sorry. We read questions into the record at the end. At this point we've got the back and forth, sir.

**Dr. Swann:** Okay.

**The Chair:** Sorry. I apologize. We'll give you an extra 30 seconds, sir.

**Dr. Swann:** Oh, thank you.

Go ahead.

**Ms Volk:** I don't have the answer to your question. It would be the Alberta Energy Regulator who would be able to answer that. As I said, I'm sorry that they're not with me today.

**Dr. Swann:** That may be true, then, for the next one, which is related to the mine financial security issues. What substantive changes have been made to respond to the emerging risks around the adequacy of the program deposit, and has the department considered requiring insurance as a requisite approach to the liability issues?

**Ms Volk:** Okay. The AER collects financial security from oil sands and coal mine approval holders under the mine financial security program to protect the public from paying end-of-life project closure costs. The AER audits the submissions to verify the adequacy of collected security as set out in the program.

The AER designed the risk-based audit plan and monitoring tool for the program in response to the July 2015 recommendations from the OAG, and upon the OAG's acceptance of the design in April 2016, the AER implemented the risk-based assessment. The OAG is currently performing a follow-up audit to assess if the recommendation is fully implemented. The risk-based assessment allows the AER to proactively assess risk factors based on program submissions and monitor the development of emerging risk on a monthly basis. As a result, the audit selection is risk based and focuses on areas posing higher risk.

In addition, the AER performs a corporate health assessment to understand and monitor any potential financial risk arising from mining companies that may impact the program. Specifically, you asked whether the department had considered an insurance program. I would just say that we have just done an extensive round of consultations on the liability management program and are considering various opportunities, so we'll see what is ultimately recommended and decided out of that review.

**Dr. Swann:** Can you give us a timeline?

**Ms Volk:** I can't yet because there hasn't been a decision yet. I would guess fall, but that may be premature.

**Dr. Swann:** The AESO's renewable electricity program recommendations document notes that the use of the indexed renewable energy credit will likely result in other generators demanding the same treatment; i.e., some sort of guaranteed revenue. Is the renewable energy credit going to be used as a support mechanism for future rounds of competition?

**Ms Volk:** It may be, as I think David said, something that the AESO would determine with each successive round of REP, what would be the appropriate mechanism to use in that instance.

**Dr. Swann:** Thank you.

What is the anticipated cost of support per year over a 20-year period to the four proponents for renewable energy if the pool price remains the same as it is now? What is the anticipated cost to the government if the pool price decreases?

**The Chair:** If you could respond to that in writing, I'd appreciate it.  
Mr. Panda.

**Mr. Panda:** Thank you. From page 86 of the annual report the cost of capping electricity at 6.8 cents per kilowatt hour is currently unknown, but according to Green Alberta Energy's blog over \$9 million was paid in April by the government to cover electricity prices over and above the 6.8 cents cap per kilowatt hour. Is that correct?

**Ms Volk:** The government did make its first payment in April. I don't know if that's the correct number.

**Mr. James:** It is in the order of just over \$9 million. Correct.

**Mr. Panda:** It's correct. So that means it is \$2.8 million over budget, on average, per month.

**Mr. James:** Because we didn't have all of the details, there wasn't actually a budget. If I had known a few weeks ago during Committee of Supply – we spoke about what that was. I think to say that the \$9 million is over budget – that budget is estimated based on fluctuations month over month. It's not an average monthly budget that would actually be there. So I don't know that just because it's \$9 million this month, the government would suggest that it's over budget. That's just the cost this particular month.

**Mr. Panda:** So my observation is that at that rate you will probably need supplementary supply of \$33.6 million more.

**Ms Volk:** We don't believe that we do because electricity prices vary through the year. They fluctuate through the year, so we don't expect it to be \$9 million per month. In fact, already in the next month prices have come down again, so there wouldn't be a payment.

**Mr. Panda:** Thank you.

The Utilities Consumer Advocate, that's part of your department: how many complaints have they received about the carbon tax so far?

**Ms Volk:** They're not actually part of our department. They're part of Service Alberta.

**Mr. Panda:** Are they? Okay.

Page 11 of the annual report talks about the royalties collected. How much money is owed from 2016-17 and 2017-18 in back royalties, as in royalties not paid but still owed to the government? You can provide that later if you don't have it.

**Ms Volk:** Sure.

**Mr. Panda:** In the same vein, how much carbon tax is currently owed to the government?

**Ms Volk:** We wouldn't know that. It's not owed to our department.

**Mr. Panda:** Thank you.

Also, at some time can you please submit the tonnage and value of coal sales from Alberta for consumption in Alberta and the rest of Canada and also export to international markets . . .

**The Chair:** Mr. Panda, can you please do that at the end, when questions are read into the record?

**Mr. Panda:** Okay. Thank you.

**The Chair:** Thank you, sir.

Okay. Ms Miller, please.

9:50

**Ms Miller:** Thank you, Chair. It's my understanding that the previous recommendation of the Auditor General to formalize pipeline safety training for core pipeline staff at the AER has been implemented. I'm wondering how many employees would have taken the training, what roles they hold within the regulator, and what their day-to-day responsibilities are?

**Ms Volk:** Yes. The AER developed the priority training development project. The intent of the project is to develop and

deliver targeted, high-calibre regulatory and technical training material to AER staff to close gaps in skills and training. Training development and delivery focus on the areas of dam, pipeline, and mine safety as these are the three high-priority sectors identified by executive leadership and in recent provincial reports, including the Auditor General's report.

Initially employees within the AER's operational division were selected to participate in the training. Employees were selected based on operational needs, as assessed by leaders within this division. Courses have been available since September 18, 2017. The majority of the courses are e-learning based, providing the employee flexibility and convenience in how they complete the course. It's our understanding that the office of the Auditor General will be completing a follow-up audit in the future.

As of April 16, 2018, approximately 90 employees have completed one or more of the courses that the AER is offering as part of its priority training program.

**Ms Miller:** Thank you.

I'm going to pass off the remainder of the time to MLA Luff.

**Ms Luff:** Sure. I just have a quick question about microgeneration. It notes in the annual report that, you know, you've recently increased the capacity for microgeneration from one megawatt to five megawatts, which I think has been really warmly welcomed, and that you're hopeful that microgen will help to meet the renewable electricity target. I'm just curious. What percentage of the renewable target do you think you see microgen being as part of the mix?

**Ms Volk:** Would you like to take that, David?

**Mr. James:** Sure. To get to the 30 per cent target, we're expecting that community generation and microgeneration combined will fit in around 2 per cent of that 30 per cent target for production by 2030.

**Ms Luff:** Okay. Thanks.

Also, it notes in the report that, you know, when you were talking to stakeholders, they had mentioned that they're looking to be able to connect to community generation connected to the distribution system, basically to feed their energy back into the grid, and that there might be some rules upcoming to allow that to happen. I'm just curious if you can comment on that at all. What changes would be necessary to really help increase microgen?

**Mr. James:** The rules for microgeneration are well established within the . . .

**The Chair:** Thank you. If you wouldn't mind responding in writing to that question.

Mr. Clark, you have three minutes.

**Mr. Clark:** Thank you, Mr. Chair. I want to go to page 37 of the annual report under performance measures. I'm always a big fan of seeing a performance measure that's hit 100 per cent of the time 100 per cent of the time. But I am curious. When I read the second last paragraph, it talks about the performance measure excluding disputed amounts until all outstanding matters are resolved and retroactively adjusted if necessary. How valuable is this performance measure? Are you not really saying that 100 per cent of companies who pay on time, pay on time?

**Ms Volk:** Douglas.

**Mr. Borland:** Great. What we're talking about here are the royalties that are under dispute in the normal course of business. When we do audits on royalties, sometimes corporations will disagree or dispute our interpretation of the regulation, so the royalty regulation compared to their interpretation of the regulations. We take those out until the dispute is finalized and we come to an agreement with the companies as to what's the actual royalties. That's why we pull that amount out.

**Mr. Clark:** So does this mean that the production data reported by oil and gas producers to AER and to the department – are you confident that that production data is 100 per cent accurate, and how do you know that it is?

**Mr. Borland:** The AER has the responsibility of collecting the volumes produced, so the production data produced. They provide to us on a regular basis a report talking about the efforts that they've taken to verify the royalty volumes reported to them.

**Mr. Clark:** Okay. Would it perhaps be a more valuable measure if you did in fact include disputed amounts? Is that information tracked anywhere in either the annual report or internally in the department?

**Mr. Borland:** The disputed amounts are tracked internally. Our view is that a disputed amount is just regular business. It's the same item as, you know, when you file your personal tax return and you dispute your personal tax return with the CRA. It's just a regular course of business. That's why we don't include it in here until it's settled.

**Mr. Clark:** In terms of tracking trends, though, I mean, I guess as a legislator I would find it perhaps more useful to see what the trend of disputed amounts is over time. Again, you know, while I'm very proud of Alberta companies that pay their bills when they're owed, I'm not sure that this performance measure really tells me much, I guess is what I'm saying. I wonder if perhaps you could consider a more meaningful performance measure than something like this, that just seems to be 100 per cent every year. Essentially, you're saying that everyone who pays their bills, pays their bills, and here's proof.

**Mr. Borland:** I would say no, we aren't actually saying that. What we're saying is . . .

**The Chair:** Sorry. We've got some time constraints. I apologize. We have one minute to read questions into the record.

**Mr. Panda:** Can you submit a status report of every application submitted to the AER, Alberta Energy Regulator, that is awaiting approval as of May 5, 2018 please? Please include the project's name, date of original application to the AER, and the status report.

**The Chair:** Thank you.

Does the government side have a question? No.  
Mr. Clark.

**Mr. Clark:** Okay. When I look at page 8 of the annual report, it talks about some risks, including NAFTA. I'd like to know what specifically has been done to advocate for Alberta energy in NAFTA negotiations and what the department is doing to mitigate the risk of a U.S. border tax.

**The Chair:** Thank you, Mr. Clark.  
Dr. Swann.

**Dr. Swann:** No. Thank you.

**The Chair:** No.

Mr. Panda.

**Mr. Panda:** Can you please submit the tonnage and value of coal sales from Alberta for consumption in Alberta, the rest of Canada, and export to international markets for the last five years?

**The Chair:** We're at seven seconds. I apologize.

I would like to thank the ministry officials for attending today and responding to members' questions. We would ask that responses to outstanding questions from today's meeting be provided in writing and forwarded to the committee clerk within 30 days.

Moving on to other business, I wish to note for the record receipt of a response from the Ministry of Environment and Parks with respect to the questions outstanding from the March 20, 2018, committee meeting. The response has been posted to the internal website for committee members' information and will be posted to the external committee website.

Are there any other items for discussion under other business?

If not, the committee meets next on Tuesday, May 15, with the Ministry of Economic Development and Trade. The committee meeting is scheduled from 8:30 a.m. to 10 a.m., and the committee premeeting briefing will begin at 8 a.m.

Would a member move to adjourn this meeting? Mr. Nielsen. All in favour? Any opposed? On the phones? Carried.

[The committee adjourned at 9:58 a.m.]



