

Ministry of Energy
Written Responses to the Public Accounts Committee – May 8, 2017

Question 1:

Mr. Panda: "Of the \$26 million in coal royalties, how much was for Alberta consumption and how much was for export?" (Hansard page PA – 684) 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 (Hansard page PA-694)?"

Response:

Breakdown of the \$26 million in coal royalties in 2016-17:

- \$18.36 million, approximately 4.05 million tonnes, of bituminous coal was exported overseas.
- \$7.64 million, approximately 21.96 million tonnes, of subbituminous coal used within Alberta primarily for electricity production (a small amount of subbituminous coal is sold for domestic heating on farms and acreages).
 - 63 per cent was mined from Crown rights.
 - Royalty are not collected on Freehold (non-Crown) production

The table below provides information on the tonnage and value of coal sales in Alberta, the rest of Canada and international markets over the last five years.

	2013 ¹	2014	2015	2016	2017
Consumed in Alberta² (tonnes)	22.8 million	24.0 million	23.4 million	22.2 million	21.0 million
Sold to the rest of Canada (tonnes)³	87,000	44,000	2,000	21,000	3,000
Exported International (tonnes)³	6.3 million	5.9 million	4.1 million	3.4 million	3.2 million
Bituminous coal value (average \$/tonne)⁴	\$115	\$101	\$97	\$112	\$136

¹The numbers in the table are reported based on calendar year. The export values are reported through the Alberta Energy Regulator.

²Subbituminous coal accounts for the vast majority of coal consumed within Alberta. Information on the value of subbituminous coal is not required for royalty reporting of calculation.

³Bituminous coal accounts for all coal exported from Alberta, including shipments to other Canadian provinces.

⁴The average price per tonne applies to bituminous coal and is from royalty reports. The price is an average across bituminous coal qualities.

Question 2:

Mr. Clark: "I'll just pick up, then, on questions you were answering previous in terms of the round-table and the consultation with AESO. You talked about the round-tables. You talked about verbal advice that was given in response to my friend's question about whether you were able to table some documents. Could you table a list of who you consulted with either in the round-tables or those verbal-only internal discussions?" (Hansard page PA-686)

Response:

Internal discussions included senior staff from various Government of Alberta ministries with diverse expertise and perspectives on Alberta's electricity system. Representatives included Alberta Climate Change Office, Economic Development and Trade, Environment and Parks, and Executive Council. There were also discussions with the electricity agencies including the Alberta Electric System Operator (AESO), Alberta Utilities Commission, and Market Surveillance Administrator.

Prior to announcing the decision to adopt a capacity market, senior staff met with senior industry leaders in a series of one-on-one meetings and small roundtables. In total, 22 organizations participated in meetings, representing:

- Competitive retailers;
- Incumbent independent power producers;
- Non-incumbent power producers;
- Industrial, commercial and small consumers;
- Distribution and transmission facility owners;
- Renewable energy firms; and
- Financial lending institutions with specialization in utility markets.

The Government of Alberta additionally held calls with Indigenous leaders, including Grand Chiefs, Chiefs and leadership within the Métis Nation of Alberta.

In recognition of the commercially sensitive nature of these meetings, and at the advice of the Market Surveillance Administrator, these meetings were held in confidence. This protected sensitive commercial interests and mitigated against any market advantages for firms participating in the meetings.

Question 3:

Mr. Barnes: "Can you speak to which two haven't been met, and can you also speak to that I understand that high-consequence pipeline incidents have been trending lower over time." (Hansard page PA-686)

Response:

To clarify, there is only one recommendation that has not been fully implemented for the Office of Auditor General recommendations on Systems to Regulate Pipeline Safety and Reliability in Alberta. That recommendation is in relation to identifying performance measures and targets along with an implementation plan that addresses key risk areas, identifies actions and has a timeframe for implementation. Specifically:

- the Alberta Energy Regulator (AER) has created a pipeline program logic model to illustrate the relationship between the planned activities and the intended results and impact;
- performance measures were identified to measure the desired overall program outcomes; and
- targets for those performance measures are currently in development and the completion timeline is June 2018. Once the targets are defined there will be an assessment of results against those targets.

In regards to high consequence pipeline incidents, these have been decreasing steadily from 32 in 2015 to 26 incidents in 2017. Internal corrosion is the most common failure type of high consequence pipeline incidents with 62 per cent of failure types in 2017. In almost all cases, pipeline incidents are preventable if the pipeline had been properly maintained. The Alberta Energy Regulator publicly reports pipeline performance information on its website at www.aer.ca.

Question 4:

Mr. Barnes: I'm amazed when I'm out and around and I 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 '50 and '60? Do you have any details on the incidents just based on the age?" (Hansard page PA-686)

Response:

With respect to comparing new pipeline technology to older technologies and the difference in their performance:

- Technology has played a major role in the pipeline incident frequency dropping over the last 10 years. The pipeline failure rate was 0.98 incidents per 1000 kilometers of pipeline in 2017 compared with a failure rate of 2.08 in 2008. This represents a 53 per cent decrease.
- Examples of technology that have improved performance are related to better leak detection systems and advances in smart pigs (in-line inspection) tools.
- Machine learning algorithms are now being deployed using prediction analytics to detect threats to the pipeline infrastructure that were never able to be identified before.

Details on incidents based on age:

- The pipeline performance report does not include age as an attribute in the report due to limitations in the historic database.
 - Pipeline construction notification data (AER ST100) can provide an accurate estimate of pipeline age with data going back to 2001.
 - The best approximation of age is based on the "Last Occurrence Date" on the pipeline licence, which can be found on the AER

website at www.aer.ca under 2013-B Pipeline Performance in Alberta 1990-2012.

- Unfortunately, when pipeline licences become amended or transferred this information becomes lost, which means that using “Last Occurrence Date” is a rough approximation.
- Based off the best estimates of age (“Last Occurrence Date”) the incident frequency (incident/1000 km) is the same for all age groups of pipelines, meaning that the data does not indicate that age is correlated with incident probability.
- Maintenance is the key indicator of pipeline performance and without proper maintenance pipelines can fail.

Question 5:

Mr. Barnes: “Are the occurrences random, or do we find that one operator it happens to more than others? Are there any statistics on that?” (Hansard page PA-686)

Response:

Some companies have more incidents than their peers. Typically, large exploration and producing companies make up the majority of incidents, but they also have the majority of the inventory.

The AER publishes pipeline incident and performance information in the Pipeline Performance Report which can be located on the AER website. This report allows you to search by company to determine each licensee’s performance.

Question 6:

Mr. Barnes: “Page 9 of the annual report describes the function of the Alberta Energy Regulator and 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.” (Hansard page PA-687)

Response:

The Aspen project includes several different applications which were submitted at different times. The company first submitted an in situ scheme approval application for the Aspen project in December 2013. The most recent applications were submitted in May 2017.

The review period was prolonged due to application submission timelines, changes to the application, and First Nation Consultation adequacy requirements.

The AER has reviewed all the applications as a project and will be holding a hearing. This will be conducted by hearing commissioners who are independent decision makers and will decide on the hearing process and applications.

The Ministry of Energy, including the AER, is continually looking for ways to improve the regulatory process, including more timely decisions. Industry and other stakeholders deserve a regulatory process with clear timelines, clear points at which stakeholders can engage in the process to share their feedback and clear decisions that all parties understand and accept as having been made through a fair process. The AER's Integrated Decision Approach is a good example of how the Ministry is moving forward in that area (more detailed information is provided in the response to Question 8 below).

Question 7:

Mr. Clark: "If it cannot capture the carbon, have you calculated the cost and then the knock-on effect on Alberta's investment (Hansard page PA-689)? Have you calculated the impact of the carbon levy that the Sturgeon refinery will have to pay as a result of not having the carbon trunk line?" (Hansard page PA-691)

Response:

Alberta Petroleum Marketing Commission does annual calculations of the net present value of onerous contracts. The next update will be released with its annual report in June.

Question 8:

Mr. Panda: "Thank you, Mr. Chair. 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 are coming out with their financial results, the quarterly results announcements. Every single CEO talks 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?" (Hansard page PA-689)

Response:

As an emerging industry, unconventional resource development involves the introduction of new technologies and practices. Alberta's regulatory system for energy projects has continued to evolve and improve over time to accommodate these new technologies and practices without compromising safety or environmental outcomes.

The Ministry of Energy, including the AER, is continually looking for ways to improve the regulatory process, including more timely decisions. Industry and other stakeholders deserve a regulatory process with clear timelines, clear points at which stakeholders can engage in the process to share their feedback and clear decisions that all parties understand and accept as having been made through a fair process. The AER's Integrated Decision Approach is a good example of how the Ministry is moving forward in this regard.

One example of the Integrated Decision Approach is the OneStop process for all new provincially regulated pipeline projects. Under this process, applicants are encouraged to submit related applications at the same time (also known as bundled applications). This will allow the AER to consider all aspects of the project through one decision-making process rather than repeating the process for each related application. It also makes the process more transparent for other stakeholders who have a clearer picture of what a project looks like from beginning to end, and eliminates some of the speculation that might otherwise accompany initial applications.

A play-based regulation pilot is also being used to test a new regulatory approach involving a single, integrated application and decision-making process for unconventional oil and gas development projects. Play-based regulation is intended to encourage operator collaboration and could involve multiple operators in an area.

Question 9:

Mr. Clark: "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 has reached as a result of your market access strategies?" (Hansard page PA-691)

Response:

Efforts to access new markets include:

- In March 2018, government announced a suite of new initiatives aimed at creating jobs, diversifying Alberta's energy economy and increasing market access. Bill 1, *The Energy Diversification Act* launched a new round of the successful Petrochemicals Diversification Program and established the Petrochemical Feedstock Infrastructure Program to help drive more investment in feedstock recovery for petrochemical production. These initiatives are in addition to the February 26, 2018 announcement that government would be supporting up to \$1 billion for partial upgrading, which will lessen the amount of diluent being used and allow more oil to travel through pipelines and thus reach new markets.
- These initiatives support our vision of a more diversified energy economy outlined in the 2018 Speech from the Throne, and builds upon the recommendations from the Energy Diversification Advisory Committee.
- By supporting more value added development in Alberta, these initiatives are increasing market access of Alberta's products into Asia, the U.S., Latin America and Europe.
- Communities from coast to coast will continue to benefit from a strong, sustainable, forward-looking Canadian energy industry and that's why we will keep working to ensure that the Trans Mountain Expansion Project, Line 3 replacement and Keystone XL pipeline are built. These important projects ensure Alberta achieves tidewater access to new markets, a better price for the resources Albertans own and vital connections between the oil sands and American refineries.
- Premier Notley raised the profile of Alberta's energy and environmental sectors in China and Japan during her mission in 2017. Agreements with both

countries were signed as a result which strengthened the province's trade ties in the region.

- The Minister of Energy also travelled to Asia to promote Alberta oil and gas as a safe and responsible supplier to the world. While in Japan, South Korea and China, the Minister met with government and industry representatives, who were eager to learn more about the pipelines to tide water and the opportunities available to import Alberta products.
- As these projects continue to proceed through the required regulatory processes, we will continue to advocate for safe, reliable energy infrastructure and remain confident that we will see them completed.

Question 10:

Dr. Swann: "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?" (Hansard page PA-691)

Response:

Over the past two years, the Orphan Well Association (OWA) has collected nearly \$2 million in Licence Liability Rating (LLR) security deposits from licensees whose assets were declared orphans and transferred to the OWA. This includes:

- \$496,000 collected in 2016-17
- \$1.5 million collected in 2015-16

The OWA annual reports contain more detailed information about LLR securities collected, and is broken down by company.

The Government of Alberta is conducting a review of the liability management system to ensure Albertans are protected from the financial and environmental risks associated with upstream oil and gas development. This includes looking at all aspects of the system, including the OWA's growing inventory and the Licensed Liability Rating system.

Question 11:

Dr. Swann: "What is the anticipated cost of support per year over a 20-year period to the four proponents for the 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?" (Hansard page PA-692)

Response:

The Alberta Electric System Operator has estimated the support costs for Renewable Electricity Program Round 1 to average approximately \$10 million per year for the first five years and \$228 million over the 20-year contract.

This estimate is based on the best available forecasts of the wholesale price of electricity including robust third party modelling of the electricity system. It is highly unlikely that the pool price will stay the same as it is now (or decrease from current levels) given that current electricity prices are near historic lows resulting from a temporary supply overhang. As older assets retire and demand continues to grow, wholesale electricity prices are expected to increase from recent lows.

Question 12:

Mr. Panda: "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." (Hansard page PA-692)

Response:

For 2016-17, the non-renewable resource revenue collected was \$3.1 billion. There was \$14.5 million (approximately 0.5 per cent) in accounts receivables. The 2016-17 non-renewable resource revenue number was adjusted from \$3.097 billion to \$3.104 billion due to adjustments to the cost of selling oil.

For 2017-18, the non-renewable resource revenue collected was \$4.98 billion. There is \$21.9 million (0.4 per cent) in accounts receivables.

Question 13:

Ms. Luff: "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, to connect to the distribution system and basically to feed their energy back into the grid, and 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?" (Hansard page PA-693)

Response:

The rules for micro-generation are well-established within the Micro-generation Regulation which sets out the rules and processes for generating power, up to the amount that they would normally consume from the grid. This is called load offsetting.

In addition, Bill 13: *An Act to Secure Alberta's Electricity Future* includes a proposed amendment to Section 99 of the *Electric Utilities Act* that allows the Minister of Energy to make regulations about small-scale and community generation in Alberta. This act was introduced in April 2018.

At a high level, small-scale and community generation is intended to be net-to-grid, meaning generators create more electricity than they consume, selling the "extra" power to the grid. In terms of how this regulation might help increase small-scale and community generation, the department continues to explore how/if generators can be market participants. The department is also determining

how generators can receive compensation for the power they generate; and what the role of the distribution facility owner will be.

Question 14:

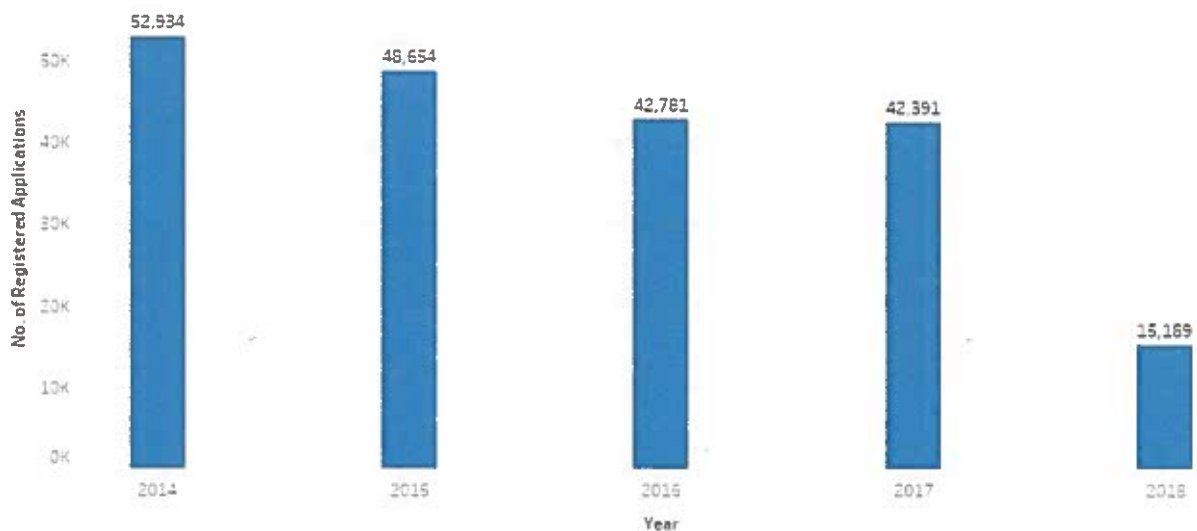
Mr. Panda: "Can you please submit a status report of every application submitted to the AER, Alberta Energy Regulator that is awaiting approval as of May 5, 2018, please? Please include the project's name, date of original application to the AER, and the status report." (Hansard page PA-693)

Response:

Each year, the AER processes more than 40,000 applications related to energy development. There are more than 100 different types of applications received, which includes everything from requests to access a parcel of land, drill a well and build a pipeline.

Annual Registered Application Counts for the AER since 2014

(as of May 14, 2018)



As of May 14, 2018, the AER has received 15,189 applications this year. Last year the AER received more than 42,300 applications. Approximately 2,200 applications are awaiting approval from the AER. These applications are at varying stages of the review process and include applications that have just been received to applications that are in the final stages of review. As such, the number of applications that are awaiting approval fluctuates daily.

Details on the types of applications that the AER reviews, as well as the target processing timelines for each application type, can be found on the Application Processes page of the AER website. In some cases, the time it takes the AER to review an application may extend beyond the target timelines due to the complexity of the development or if statements of concerns are filed against the application.

Question 15:

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." (Hansard page PA-693)

Response:

The Government of Alberta, led by Economic Development and Trade and supported by Alberta Energy, has advocated for the treatment of energy as a separate chapter in North American Free Trade Agreement (NAFTA) negotiations and, more specifically, for energy provisions to be separate within the energy chapter.

As a result of sustained engagement by the Alberta government, the federal government and their U.S. counterparts agreed to accept energy as a separate chapter in the modernized NAFTA. Having a separate chapter recognizes the importance of the sector.

In terms of issue-specific advocacy, the Government of Alberta and federal government advocated for a resolution to the diluent rules of origin problem. This problem results from existing oil trading paperwork being insufficient to easily demonstrate whether the source of diluent is or is not North American in origin. When a U.S. company purchases dilbit from Alberta, the paper work indicates the bitumen is from Alberta, but does not indicate where the diluent that forms the dilbit comes from. A rule change means this paperwork gap will no longer trigger the related fees. This issue costs the industry an estimated \$20 million to \$30 million annually in unnecessary user fees and tariffs. The U.S. agreed in November 2017 to include a product-specific rule of origin exemption, which will eliminate this problem once a modernized NAFTA is ratified.

The Government of Alberta and federal government have also advocated, successfully, for the inclusion of the Mexican energy sector within the re-negotiated agreement. Mexico's energy sector was excluded from the original energy chapter in NAFTA. The liberalization of Mexico's energy sector presents commercial opportunities for Albertan and Canadian firms in the Mexican upstream, midstream, and downstream market segments. This includes a large off-shore market. This means that there will be opportunities for Alberta companies to bid on exploring and producing Mexican oil plays. This was unavailable under NAFTA 1.0, but will be available under NAFTA 2.0 once it is agreed and ratified by the three countries.

Regarding the second question, the U.S. border tax does not pose a current risk. Then-presidential candidate Donald Trump discussed a "border adjustment tax" during the 2016 presidential campaign. He continued to discuss it in early 2017 as president. In July 2017, U.S. House Speaker Paul Ryan stated that Congress would not consider a border tax on any sector.