

Legislative Assembly of Alberta

The 28th Legislature First Session

Standing Committee on Resource Stewardship

Natural Gas Production Stakeholder Presentations

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Standing Committee on Resource Stewardship

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Standing Committee on Resource Stewardship

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Ed Gibbons, AIHA Vice-chair and Councillor, City of Edmonton	
Neil Shelly, Executive Director	
Wayne Woldanski, AIHA Chair and Reeve, Lamont County	
Sasol Canada	RS-484
Debbie Pietrusik, Manager, Corporate Affairs and Strategy	

6:18 p.m.

Monday, November 4, 2013

[Ms Kennedy-Glans in the chair]

The Chair: We'd better get started here. Welcome, everyone.

My name is Donna Kennedy-Glans. I'm chair of this committee and the MLA for Calgary-Varsity. I'm delighted to see so many speakers here this evening. You've got something to celebrate, and we're really excited about the timing of all of this. Congratulations to everyone. This is a very wonderful thing for us, to have you here presenting to the committee after such a wonderful announcement in the heartland. Thank you for making the effort to be here.

I'm going to just go around the room and have everyone introduce themselves for the record. Members, if you are sitting in substitution for someone, can you make sure you note that in your introduction? I will start here with my new co-chair for this evening.

Mr. Strankman: Rick Strankman, MLA, Drumheller-Stettler, substituting for Joe Anglin.

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

Ms Calahasen: Pearl Calahasen, Lesser Slave Lake.

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

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

Mr. Allen: Good evening. Mike Allen, Fort McMurray-Wood Buffalo.

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

Mr. Casey: Ron Casey, Banff-Cochrane.

Mr. Bikman: Gary Bikman, Cardston-Taber-Warner.

Ms Pietrusik: I'm Debbie Pietrusik with Sasol Canada.

Mr. Woldanski: Wayne Woldanski, Lamont county and Alberta's Industrial Heartland Association.

Mr. Gibbons: Ed Gibbons, councillor with the city of Edmonton and vice-chair of Alberta's Industrial Heartland Association.

Mr. Shelly: Neil Shelly, executive director of Alberta's Industrial Heartland Association.

Ms Fenske: Jacquie Fenske. I'm proud to have a portion of Alberta's Industrial Heartland in the Fort Saskatchewan-Vegreville constituency.

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

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

Ms Zhang: Nancy Zhang, legislative research officer.

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

Mr. Tyrell: Chris Tyrell, committee clerk.

The Chair: Thank you. Just a reminder to everyone that the microphones are operated by *Hansard*. Cellphones kind of compete with *Hansard*, so if you've got a cellphone, if you just want to pop it under the table, that would be much appreciated. As well, just a reminder that audio of these committee proceedings is streamed online. We expect that everybody in the Alberta heartland is listening in right now. Copies of the recordings will be available from *Hansard*.

I hope everybody has had a chance to look at the agenda. I'm sure you've studied it closely. I'd love for a member to move that the agenda for the November 4, 2013, meeting of the Standing Committee on Resource Stewardship be adopted as circulated. Mr. Sandhu. All in favour? Any objections? The motion is carried.

Mr. Khan, would you like to introduce yourself to this esteemed group?

Mr. Khan: Thank you. Sorry; I'm running a little bit behind. My name is Stephen Khan, MLA, St. Albert.

The Chair: Mr. Barnes.

Mr. Barnes: Drew Barnes, MLA, Cypress-Medicine Hat.

The Chair: Thanks, gentlemen.

Okay. If all of you have had a chance to look at the minutes from the last meeting, I'd love it if somebody would move that the minutes of the October 28, 2013, meeting of the Standing Committee on Resource Stewardship be adopted as circulated. Ms Calahasen. Thank you. All in favour? Any objections? The motion is carried. Wow. Can you guys do it that fast in the heartland?

Okay. Now to the really important stuff. We're going to talk about gas to liquids tonight. We are just delighted that we are able to have Sasol here and to have so many members from the heartland. I had the very good fortune of being introduced to the gas-to-liquids technology of Sasol in 1998 in Nigeria. My memory is not that good, so it's a really good thing we're having a recap. It's very, very exciting technology. We're delighted to hear about it, and we're very excited to hear about the investors, the actual and potential investors, in the heartland.

I also understand that we may have somebody in here by teleconference, Mr. Len Webber. Not yet? Okay. If we do get somebody in by telecon, just give me a flag.

As you know, we have a very short time frame. We have to be back in the House at 7:30, so this meeting has to end at 7:15.

I will invite Sasol to present first, and then we'll turn it over to Mr. Shelly.

Ms Pietrusik: I think we actually switched it.

The Chair: Oh, it's the other way around. I heard you changed it, so we'll do it the other way, and then we will have questions from committee members directed to one or both parties.

I'll turn it over to you. Thank you.

Alberta's Industrial Heartland Association

Mr. Woldanski: Okay. Thank you, Madam Chair, for inviting us to present before this committee. I'm chair of Alberta's Industrial Heartland Association and reeve of Lamont county. Of course, with me today is Ed Gibbons, city of Edmonton councillor and vice-chair of our board, as well as Neil Shelly, executive director of the association.

Alberta's Industrial Heartland Association is a co-operative effort of five municipalities in the capital region that include Strathcona county, Lamont county, Sturgeon county, the city of Fort Saskatchewan, and the city of Edmonton. The mandate of our association is to promote sustainable development in our specialized zone known as Alberta's Industrial Heartland. We recently celebrated the 15th anniversary of our association this year.

Through our efforts we have had the chance to work with investors from all over the world regarding potential investments in petrochemicals and hydrocarbon processing in Alberta. From these interactions we are excited by the potential that exists to transform Alberta into a true global leader in energy innovation and leadership.

What we would like to present to you today is what we have seen and heard from the global investment community regarding the potential that Alberta has. We are excited by the potential that exists in Alberta, not just in the heartland but in communities from Medicine Hat to Red Deer and Lacombe county. This is aligned with the mandate your committee has to maximize the value of our natural resources for all Albertans.

I'd like to now turn the floor over to our executive director, Neil Shelly, to explain this opportunity.

6.24

Mr. Shelly: Thank you, Reeve Woldanski. It's a pleasure to be here today to talk about some of the opportunities that we're seeing and hearing about within the heartland region. With the advent of shale gas we're seeing huge opportunities in the North American market. What we're seeing specific to Canada and Alberta is that cost-advantage natural gas here is bringing a lot of investment potential into the region. We see a lot of opportunities. We can turn this area into a world leader in petrochemical processing, hydrocarbon processing. To achieve this, we'll create new markets for our energy resources here at home, help diversify the economy, and provide new revenues for the province as a whole.

The slide here – I think you can see it in your handout – is of a recent report that came out from the Alberta Geological Survey, part of the Alberta Energy Regulator, and it shows you the size of the prize. It's just massive, the size of the shale gas potential just within Alberta. We're talking 3,400 trillion cubic feet of natural gas, 58 billion barrels of liquids, and the oil in place is in the order of the magnitude of 423 billion barrels of oil.

This has been proven out fairly well by the Alberta Geological Survey. This is a world-scale resource. In fact, it's on the same order of magnitude as the oil sands up in the Fort McMurray region. As we're starting to understand this, you just get that same feeling of enthusiasm. If you go back 25, 30 years, when people started realizing what we could do with the oil sands, we're getting that same sense of what we can do with our shale gas potential here in Alberta.

Because of this, what's been happening is that the trends in natural gas production in Alberta and western Canada are starting to turn around. For a number of years our conventional production of natural gas was declining because our fields were getting old and economics didn't allow us to do it. But as you can see from this graph, all intentions are that the production of natural gas is actually going to rebound, increase, and probably exceed the heights that we had back in the mid-1990s.

This is also very interesting for the petrochemical investors because not only natural gas, as in methane, but very important feedstocks are used by the petrochemical industry such as ethane, propane, and butane. This chart shows where we are today with the supply of these important natural gas liquids, and the projections are that we are almost going to double this if we can develop our resources properly within about the next 10 to 15 years. This means that projects such as NOVA's operation in Joffre, Dow Chemical's operations in Fort Saskatchewan – think

about a doubling of the industry of that size. With the feedstock there will be enough supply there to actually drive that type of investment going into the future.

With this potential, within the Heartland Association and as part of our business attraction efforts we retained an international consulting firm, IHS Consulting, to take a look at the competitiveness of this new world we're living in here and to see where could Alberta be and where could we fit competitively in the world to provide new products around the globe.

The results of the study determined that they saw some great potential in three main product areas: the C1 chain, using the methane component of the natural gas to produce ammonia, urea, methanol, and gas to liquids, which all come from raw methane; the C2 chain, the ethane chain that we use in Alberta, making polyethylene plastics, glycol, polyesters, polyethylene oxide, those types of materials; and a new area that we haven't been involved in in Alberta, getting into the propane chain, so polypropylene plastics, which I'm sure everybody is aware of. The dashboard on your car is probably made out of polypropylene plastics. All of those now are viable to be produced in Alberta because of this new resource that we have coming up.

Future energy growth that we have in Alberta, some really good potential to look at: fertilizer production, gas to liquids, methanol production. Around the ethane chain we're going to see a recovery of our existing industry. We'll be able to top out the capacity that we have in the Red Deer area as well as in the heartland region and then look at expanding into new products and building new facilities. With regard to propane, making polypropylene and its derivatives as well is another key opportunity that we see as the future for what we can do with our resources.

To help prepare for this new reality, we are already starting to see the tip of the iceberg of the growth and investment happening. In the natural gas industry there's the upstream – those are the producers that take the natural gas out of the ground – the midstream industry, which does the processing and the separating of the gas into its individual components, and then the downstream industry. These are companies that take the energy and turn it into consumer-ready types of products.

The midstream industry is already undergoing a major metamorphosis, and we're seeing just in our region companies like Keyera energy spending \$350 million to expand their ethane extraction capacity. Plains Midstream has purchased two new quarter sections of land to expand their operation, and Pembina Pipeline two or three weeks ago just had the sod turned to double or even triple the capacity. So these companies are getting ready for this new reality, where we're going to have abundant volumes of natural gas and natural gas liquids within Alberta.

If you look at the projects that have been announced already that are going to take advantage of this new cost-advantage natural gas, we've had announcements by Williams Energy. They are PDH, which stands for propane dehydrogenization, basically turning propane into propylene, and then from that you can make polypropylene plastics and a lot of other materials. Sasol GTL, Debbie Pietrusik, whom we know very well: they're looking at a facility moving forward, and Debbie can talk a bit more to specifics on what their project is. We have other companies like Air Products putting in a hydrogen manufacturing facility.

ATCO Power is actually going to be spending \$800 million to put in a natural gas fired power plant in the region. This is based upon the fact that they're looking toward the future when there may be a phasing out of coal generation, and they're starting to get ready by tapping into cheap natural gas for base power production in the province. As well, there is expansion in the Joffre-Red Deer area with NOVA Chemicals announcing a \$1 billion expansion to

their Red Deer facility. Now, those are the projects that have been announced so far. These are the companies that have come out.

In addition to these companies, there's been a huge amount of interest specifically from Asian-based petrochemical companies in Alberta. In 2013 alone we are currently working with 11 different foreign companies that have visited the region, some of these multiple times, interested in a variety of different investments in petrochemicals in the region, and our very supportive local MLA, Jacquie Fenske, has been present when we bring some of these delegations in to help support and fly the flag of the government of Alberta. I think Jacquie is privy to a lot of this information. We'd like to provide a list, but some of these companies have asked that their names remain confidential. Since this is a public forum, we're going to respect that by not revealing their names. But there are these massive amounts of opportunities coming to our area, and the continued interest is going to keep on coming as long as the shale gas potential keeps getting developed in Alberta.

What this could mean to Alberta: there are multiple benefits by developing a petrochemical and gas processing industry here in Alberta that I think will help solve some of the issues that we face on a day-to-day basis. For example, one of the issues we believe that Alberta is going to be facing is: what are we going to do with all this natural gas? Our gas supply is going up. At the same time our market in the United States is dwindling because they're developing shale gas down there, and it's pushing production back into Alberta. So what are we going to do with this massive amount of natural gas when we've just lost our biggest customer? A lot of people are talking about LNG exports off the B.C. coast. That's one option, but I think we need a diversified approach to what we do with the natural gas. If we totally bet the farm and everything is going to go to LNG, things can happen with LNG. There are a lot of unknown factors around LNG that could cancel them out.

One way is to create markets here at home. Right now Alberta is producing about 10 billion to 12 billion cubic feet of natural gas. Does that sound about right? Projects like Sasol and some of the other ones would consume at home here somewhere between conservatively 2 billion cubic feet – that would be Sasol plus cumulatively the other companies we've been talking to – to 3 billion cubic feet. So suddenly we could create markets here at home. We wouldn't have to worry about pipelines and export permits. There would be enough demand at home that a very significant part of the natural gas produced in Alberta could be used here to make value-added products and allow them to be exported all over the world.

A significant increase in our GDP. Close to \$23 billion in announced or anticipated projects could come out of this if we get our ducks lined up.

Helping diversify Alberta's economy. When natural gas prices are down, part of our economy is hurting. When natural gas prices are down, the people that use natural gas are doing pretty well. So you're not going to have it where everybody is in the tank in Alberta. You're going to have this countercyclical action that will help counterset and get us out of the boom-and-bust cycle.

A significant source of new government revenues. A study we had conducted by the University of Calgary shows that conservatively, not including all these projects, the corporate taxes – this is not royalties – paid by these companies would generate at least \$600 million a year in new revenues for the government.

But there are challenges to this. There is a realignment going on in the existing infrastructure in the gas system in Alberta. We're also finding a gap between upstream producers and downstream consumers, and the ability of these investors to secure long-term contracts is becoming an issue. We're also seeing competition and incentives from the U.S. Gulf coast region. One example of this is that, for example, Sasol is actually moving forward with a project, a major project, in Louisiana. The state of Louisiana provided Sasol with an incentive of \$2 billion.

6:35

Ms Calahasen: No.

Ms Pietrusik: Yeah.

Mr. Shelly: That's how hotly these projects are being contested for, because other parts of the world are saying: these are very, very important economics. We're in competition with these other regions in the world that are offering huge incentives to try and get these facilities located in those areas. Being from Alberta – and our board has talked about this – we know that that's not the Alberta way. We don't hand big incentives like that out, but there are other things we can do with regard to policies to make us more competitive here in Alberta.

We also have issues with capital cost competitiveness. It does cost more to build facilities here in Alberta than it does in places like Louisiana or the state of Texas. That's an issue we also have to overcome if we're going to attract all of this potential.

We talked about the shift in infrastructure, and this just illustrates what's happening. Up until about five years ago what happened was that the gas was produced in Alberta and B.C., and it was all exported to the United States via the Alliance pipeline or other pipelines out the southern end of the province. The natural gas liquids were collected off straddle plants at the border, at Empress, and at Cochrane, so that was the natural flow. If you fast-forward five years into the future, the U.S. isn't going to need that much gas off us. They're producing their own gas. The flow is probably going to be reversed. We're going to be collecting gas in Alberta, it's going to go towards the northwest, and then the exit point is going to be via LNG out the west coast. This is a real shift in the way gas has been done in the last five years, and it's going to require a lot of rejigging by the industry to get the pipes right and get the systems right so that we can adjust to this new reality of how gas is going to flow into the future.

With that, I'll turn it over to our vice-chair.

Mr. Gibbons: I'm going to start with government direction and policies. While we're excited about the opportunity that exists for Alberta with the new reality of energy production, this will not happen without a clear policy from the government. There have been a number of examples of success in Alberta from policies that have yielded major benefits for the province. To realize our potential, we have to move forward with how these policies could be applied to today's situation.

Currently administration within the departments of Energy and Enterprise are reviewing and analyzing policies that could be applied to the net benefit of Alberta. This could include, one, continuation of the extension of the hugely successful incremental ethane extraction program, or IEEP; two, working with the companies to look at the upside risk policies; three, streamlining the regulatory process to give investors confidence that their projects will be reviewed and decisions made on them in a timely manner — we're looking now at an 18-month to two-year regulatory system — and four, continued support from the government during investment missions that come to Alberta.

The urgency. We have the window right now. The one point that we would like to stress is that there has to be a sense of urgency in moving forward with these decisions. The petrochemical industry is currently in an investment cycle in their

businesses. This window of opportunity will not remain open forever, and the companies need to know where they stand with regard to investment in Alberta. A lack of clarity on direction and actions will result in these companies taking their investments to other parts of the world that are competing with us for these dollars. The window will be closed in the next year to year and a half, which really means that we have got to have recommendations to government to seize this opportunity that is before us

Our recommendations to the government are as follows: one, make the development of policies related to natural gas a priority in the overall government agenda; two, consider the policy options that are being compiled and make a decision either way in a timely manner; three, once the decision has been made, implement these policies, and communicate to the investment community that Alberta is interested and open for business.

Mr. Woldanski: On behalf of our group we'd like to thank you for allowing us to present to your committee. Thanks again.

The Chair: Well, we're not finished yet. We get to ask questions, so I hope you still say that at the end.

We'll turn it over to you, Ms Pietrusik.

Sasol Canada

Ms Pietrusik: Thank you again for the invitation to present today. I'm very happy to be here. I actually came to Sasol from government. I was in the Alberta government for 24 years before coming to Sasol, and I worked in the Department of Energy as well, I think before Stephen became minister. I was in his department for a while, and I was all over the place. Since 2001, actually, I was working on the government's value-add strategy. At that time we were focusing on the government with regard to oil sands monetization and looking at using petroleum coke through gasification to chemicals. What we've seen is that now we are just changing things around, so you're basically using the same processes, but you're starting from natural gas versus oil sands. It's interesting to see the change that's happening here.

I'll just start with the presentation. Basically, my title at Sasol is a strange title, the manager of corporate affairs and strategy for Sasol. I started off working with them – I think they just wanted my Rolodex for government people when they first came here, so that was fine; I gave them my Rolodex – but since then I have actually been doing quite a bit of work with the company in understanding business opportunities for not just gas-to-liquids but other investment opportunities in Canada, and we're expanding that to look more North America wide as well. Definitely, it's an interesting time to be with industry in this natural gas environment

For those of you who may not be familiar with Sasol, it is an international energy and chemicals company. There are about 35,000 people employed with Sasol in 37 countries around the world. The company does specialize in developing technologies, and it's actually built these technologies based on coal and natural gas monetization. In 2013 our turnover was about \$20.5 billion U.S., and our market cap was \$28.1 billion U.S. We're listed on the Johannesburg stock exchange and the New York Stock Exchange, and we're also on the Dow Jones sustainability indexes.

Sasol converts, as I said, hydrocarbons into high-valued fuels and chemicals, and this slide actually just shows you the process flow that we go through. We do have an upstream business unit, which actually goes out and purchases lands and develops and explores for resources that we use through our monetization efforts, which include the gas-to-liquids and the coal-to-liquids technology, and we use those technologies, as I said, to develop the fuels and chemicals that go into the market.

Now, there are definitely a lot of value-add opportunities when you take a look at natural gas, and, as I've said, I know the government did things based on bitumen to fuels and chemicals. This is basically the same thing except you're just starting from natural gas, and it's actually just going into a number of value-add opportunities. This just provides you with a map of all the areas where Sasol is doing these value-add opportunities today.

Just to quickly go into the gas-to-liquids technology, it is taking natural gas, as Neil said, the C1 chain, which is the methane chain, into a natural gas re-forming process to create a syn-gas, which then goes into Sasol's Fischer-Tropsch conversion process, which is a part of the process that creates a waxy syn-fuel. That syn-fuel is then put into an upgrading type of process. Then you get your GTL naphtha, a GTL diesel, and an LPG project, which is liquid petroleum gas.

Now, with regard to GTL it is a world-class product. It's a very, very clean product because it is based on the natural gas as a feedstock rather than an oil as a feedstock. It has a very high cetane number, so as you can see from the diagram on the bottom left, the GTL diesel cetane is about a 70 plus. Most conventional diesels from oil are about a 40 to 50 cetane, so this is a very nice product. It can be used as a pure product, or it can be blended with conventional diesels as well.

6:45

Now, the naphtha that's created from the GTL process: usually naphtha is used as a petrochemical feedstock, but because North America doesn't have a lot of and Canada doesn't have any naphtha-cracking petrochemicals, what we see is that naphtha would be a great product to be used as a diluent for oil sands bitumen.

I'm just going to go through this really quickly. This next slide just shows you the environmental credibility. It just takes a look at a study that was done in the U.S. looking at the emission performance of GTL diesel versus other hydrocarbon-based or oilbased diesels. You can see here the comparison.

Now, quickly, just to go through our GTL experience, we do have an ORYX GTL, which is based in Qatar. It has been operating since 2007, and it's actually a 32,000-barrels-per-day facility. It has been running at about 105, 110 per cent utilization rate, so it has actually been quite a significant project for Sasol on the GTL side. We're actually looking at expanding that project.

You mentioned the Nigeria project since 1998, I believe you said. Well, you'll be happy to know that we're finally getting that thing going. It has taken this long. Nigeria is not an easy place to do business. We are hoping to have this project actually on stream at the end of this year.

As Neil mentioned, we are going forward with our Lake Charles project in the U.S. This project is actually a 96,000-barrels-per-day project in two phases at \$11 billion to \$14 billion. It's currently in the front-end engineering and design phase. Again, it benefits the U.S. just because of the fact that we do have low-cost natural gas as a feedstock in order to produce higher quality fuels.

Then we also are going forward with the Uzbekistan project with the Uzbek government and Petronas, a 38,000-barrels-perday facility. We've just completed FEED, and we're awaiting a final investment decision on that project.

In Canada we do have the Canada shale gas acquisitions. We have a partnership with Talisman in B.C. in the Montney. We are in the Montney. We do have two assets; we paid \$2 billion for those two assets. It has 20 tcf of contingent resource, of which

Sasol's percentage is, obviously, 10 per cent for half of that. We do have an opportunity to expand the lands in this area as well, which we're looking at right now. We are actually doing a derisking program on those lands today. We've drilled a little over a hundred wells on the two assets in the Montney. We did have to downsize our rig activity in the Montney just because of the natural gas environment today, but we do hope that as we get some of these downstream monetization options going forward, we can boost that rig activity up again.

The Sasol GTL project in Canada: we completed the feasibility work on that in 2012. We're looking at the same as what the U.S. is proposing, two phases of 48,000 barrels per day. It is a multibillion-dollar investment, and it will provide significant employment opportunities. I'll show you a slide on some of the socioeconomic benefits in a bit. As I said, the GTL diesel for the first phase can all be absorbed in western Canada because of the diesel market demand. The GTL naphtha will be put into Alberta's oil sands industry as a diluent. We filed our EIA application to the Alberta government in May 2013, so we're in that process right now.

I have to applaud the Alberta government, especially Environment and Sustainable Resource Development. They have been incredible support for Sasol in helping us put together the application and guiding us. Definitely hats off to them, for sure.

We've also completed our land purchase for the GTL, which were lands that were previously owned by Total in Strathcona county in the Industrial Heartland. These lands were once proposed for the bitumen upgrader that Total was going forward with, which has since been cancelled. We've picked up those lands now, and those are the lands that we've actually put our plans forward with for the project. Our decision to move into the frontend engineering phase, which is the next phase, will be made at a later date

In December 2012 the Sasol board did decide to go forward with the U.S. GTL and the U.S. ethane cracker that we're proposing in Louisiana first. Those two projects together will be over \$20 billion of investment from Sasol, so that's pretty much our market cap. Obviously, to reduce risk and benefit from the synergies that we can create from having that project go forward first and using their findings for the Canada project, it does make sense to do this in a phased manner.

The GTL project. When we talk about natural gas use – Neil spoke a little bit about this already – our first phase, which is 48,000 barrels per day, would use about half a bcf a day of natural gas. Two phases would take a bcf a day of natural gas into the GTL for higher value products. So this is definitely a value-add win for the province in creating an industry that adds the value here in the province and sells the products locally.

The socioeconomic effects. This was actually a slide that we just presented at an open house in Strathcona county that we had for the community just the other day. As you can see here, during construction the project would contribute about \$11.6 billion to Alberta's GDP. We're looking at about 3,000 people during peak construction for phase 1 in 2019 if the timing goes forward as we hope. We will be seeing that any people that are coming in to work on this project will be staying in hotels and motels only because of the fact that this is in the heartland, and the heartland does not permit camps. So we will be using hotels in the area.

During the operations we would be contributing about \$550 million annually to Alberta's GDP, with about 890 full-time, high-skill jobs when fully operational. With regard to taxes we'd pay about \$49 million annually in municipal taxes, \$5.48 billion in provincial taxes during the life of the project, and \$8.23 billion in

federal taxes during the life of the project. So it is a very significant project for the government.

This slide just quickly captures for you Sasol's activities in Canada since the company came here. In March and June of 2011 we acquired the upstream assets in British Columbia. In May we established our Sasol Canada office in Calgary, which today has about 50 people working out of that office. In June we finished the feasibility study on a GTL for western Canada. We had our first open house in September in the Fort Saskatchewan area, and 130 people – actually, I was told the other day that it was more like 140 people that attended that event, so it was very well received. In December the board made the decision to go forward with the U.S. projects and that the Canada projects would follow later. In May we submitted the EIA application, in September we completed the land purchase, and, as I said, just the other day we had our second open house, which again received incredible support from the community, which we were really happy to see.

Now, there are challenges and opportunities, I believe, for enabling GTL in Alberta. It is a capital-intensive technology. This is not something that you can put up with a few million dollars. As we said, Louisiana did come to the table with incentives for the U.S. project which could not be ignored. I think that is something that made a difference in why the U.S. projects went forward before the Canada project. The high cost and limited labour market and infrastructure limitations as well as weather conditions: all of these things really add to the cost of determining these projects in Alberta. I know that we hear a lot of debate on how much of the cost when you compare these to the U.S. and so forth, but even though that does make a difference, the problem is that it still is a high-cost area, so that is a challenge when you're looking at the feasibility of these projects. Alberta is landlocked, and that also creates challenges for moving large modules into the region.

The good things about Alberta that we really want to emphasize are that when we were looking at the feasibility economics of the project, the competitive tax environment was huge for us. The fact that the government has moved ahead to streamline and reduce regulatory uncertainty was also a big cost factor for us as well, which was a positive thing. The fact that the Alberta government has been very strongly supportive of downstream value-add industries has also been a key piece for us in really building the momentum of this project internally to Sasol in South Africa.

6:55

Our CEO is an Alberta guy, David Constable. He's from this area, but he hasn't been here in quite a while. When we brought him out here about two years ago, that was actually my first day at work at Sasol, and it was the coldest day of the year. When we brought our executives out here to meet with the government, it did take some time for them to understand that the Alberta government doesn't give out incentives like Louisiana or other areas around the world and that it is based on policies and treating everyone fairly in the same way. It takes these companies a long time to understand this because they are used to dealing in a lot of different regions internationally where people are willing to put different types of incentives on the table. So even though we understand why it happens this way in Alberta, it was a bit of an education for them to have to accept it. But I think they're okay now.

So that's it.

The Chair: Excellent presentations. Thanks to all of you.

I think there are probably way more questions than we have time for. We'll try to cut the questions off at 10 after 7 so we can finish our meeting. I'll start a list. It starts with Ms Calahasen. Just give me a nod if you want to ask a question.

Ms Calahasen: Thank you very much for both presentations. I really appreciate the information that you have provided to us. My question is to Sasol or anybody who can answer this question. Is there a difference in EIA processes as well as consultation processes between the U.S. and Canada?

Ms Pietrusik: Yes. There are huge differences.

Ms Calahasen: What are those differences?

Ms Pietrusik: I believe, in my opinion – and my colleague in the U.S. may differ with me on this one – what I really see is that the consultation process here is much more important than in parts of the United States. Consultation is taken very seriously here, and you have to show that you've done every appropriate measure of consultation that you can do to make sure that all stakeholders have a say in the project. In the U.S. it's a little bit different. It's not as mandated, I would say, to the degree that we have it here.

The EIA process as well in the U.S. is different. It doesn't take as long in the U.S. for some of these EIA approvals, depending on the project that you have. But as I said, Environment has really worked with us incredibly on this project. We were defined as a petrochemical facility, and because of that, we were able to have a shorter time frame for the approval process, which has helped us incredibly.

Ms Calahasen: Thank you.

The Chair: Mr. Sandhu and then Mr. Hale.

Mr. Sandhu: Thank you, Madam Chair. First of all, I'd like to thank Alberta's Industrial Heartland Association and my friends, my councillor Ed Gibbons, Wayne and Neil and Debbie. My question is: what could the government do to help make investment in the heartland more successful?

Ms Pietrusik: You want to say it?

Mr. Shelly: Yeah. As Councillor Gibbons pointed out, right now the departments of Energy and Enterprise are looking at different policies. Those are being analyzed, and those should be available from the government in about the next three months or so. It can be a complex situation. We don't have all the answers, but the answers are being developed. I guess that what we're saying is: once you get these in front of you, make it a priority because our concern is that if it sits on the shelf and people don't get around to it for a year, you've missed the window of opportunity.

Debbie, I don't know if there's anything else you'd like to add.

Ms Pietrusik: Yeah. Sasol has had some discussions through confidentiality agreements with government on different policy options, that we were speaking to the Department of Energy about specifically, that the government could implement in order to see further downstream investment.

In addition to that, the government has studies in their hands now that were done, I think, back in 2007, 2008 that benchmarked other regions around the world and what government actions were taken in order to stimulate downstream. Definitely, you've got some of the answers already. It's just a matter of dusting that off and looking at it in today's market.

Mr. Gibbons: I put our presentation in front of Rick Sloan, who used to be with the provincial government for a number of years

as an assistant deputy minister, and he emphasized that the window is here and that we have to go after that window. If we miss it, we miss it. He couldn't emphasize that more than he did.

The Chair: Thank you.

Mr. Hale.

Mr. Hale: Yes. Thank you. You mentioned, when you were giving the challenges, the capital cost competitiveness issues in Alberta. Can you just expand on that and let us know some more specifics and ways that we could deal with that?

Mr. Shelly: Sure. As Debbie mentioned, building facilities in Alberta are more expensive capital-wise than they are down on the U.S. Gulf coast, which is one of our chief competitors. In fact, a recent study done by the Edmonton Economic Development Corporation shows that we're about 20 per cent higher costwise than down there. Now, if you have a multibillion dollar project like Sasol is talking about, that gets into quite a few billions of dollars very quickly.

The main result of that: there are some issues. We're land-locked, as Debbie mentioned, so everything has to come in by rail. You can't bring it in by big ships. But one of the biggest issues was in regard to labour. Labour shortages in the region are driving prices up. Labour shortages are actually hurting productivity as well. When you have a high demand for labour, there's lots of turnover, and that can reduce productivity in a job. You get some-body in, you get them trained up properly, and then somebody else thieves them away, and you've got to start all over again. Part of the biggest single thing I think Alberta could do is to continue on with getting the right workers into the right jobs and looking, potentially, at what we can do to make sure our young people are going into those areas.

Ms Pietrusik: I agree. I think there are a lot of pieces to it. These are just the big ones that we see, but I know that my eyes were opened quite wide when I started really looking at all the little aspects of the economics that you take a look at in a project and all the little pieces you don't think about when you're in government and how it affects the economics of these decisions. But as Neil said, those are the main ones. Those are the big ones that we have to deal with.

The Chair: Ms Johnson.

Ms L. Johnson: Thank you. Neil, I think, when you spoke about increased cost, do you also consider the skill set of the workforce? Yes, we have tight demand on our workforce. But do we also have an advantage in the skill set of the workforce here in Alberta?

Mr. Shelly: It's more expensive to have the workforce here in Alberta; I think we have a better quality worker here in Alberta. For example, we were in Baton Rouge, Louisiana, a few years ago, and a welder down there – basically, they bring in somebody, and in six weeks a welder walks out the back door. That's the program. Like somebody said: they don't need all the fancy schooling to get a welder. Our welders here we think are better qualified with better understanding. We do have better quality workers, I believe. They are more expensive, but we do need more of them to help with some of the productivity issues as well.

Ms L. Johnson: Okay. Thank you.

The Chair: Mr. Khan.

Mr. Khan: Thank you very much. Debbie, Neil, Ed, thank you all. Marvellous presentations. I'll throw it out, and anybody can answer the question. I think Mr. Barnes and Ms Johnson have identified very accurately some of our – oh. Mr. Hale. I'm so sorry. I sit beside Drew in the House. He's starting to worm his way into my head.

Mr. Hale: He's wearing off on you.

Mr. Khan: Yeah, he sure is.

We've talked about some of the limitations or barriers here in the Alberta. We talk about construction prices. We talk about our labour force. We're keenly aware of some of our challenges with market access. Despite that and despite the fact that Alberta is not a place where we're going to bend over backwards and provide incentive, you did mention that one of the compelling reasons for companies to come to Alberta and make this kind of investment is our current tax regime. Speculative question: should that tax regime change in any substantive way, what kind of impact would that have in terms of future investment or taking advantage of this window that we've talked about?

Ms Pietrusik: Well, I think it would be very hard for Alberta to compete if you change that tax regime. As I said, when we were looking at the feasibility work for the GTL, the tax regime made a difference. It was something that was a message when we presented the findings in Johannesburg in March last year to the executive. That message was clearly shown to them, that this tax regime in Alberta is very competitive, and it is more so than in Louisiana. You know, that was one of the main messages we gave to our executive.

I think you don't want to play with that too much if you want to be competitive in getting the downstream investment because the downstream is a hard industry to attract. Personally, speaking for Sasol, I would say don't change the tax regime.

7:05

Mr. Woldanski: Well, I guess if you're going to change it, then make it better than what it is today. Then that'll be a further incentive to incent industry here.

Mr. Khan: Thank you very much for those answers.

The Chair: Ms Fenske and then Mr. Barnes.

Ms Fenske: Thank you. You spoke about IEEP, and it doesn't really necessarily work for natural gas, but there's some kind of a reverse – I don't know what the term would be. It's not a reverse royalty, but it's a reverse investment kind of opportunity that perhaps would work for an incentive for the natural gas, just as IEEP worked on the other end. Do you know what I'm talking about, Neil?

Mr. Shelly: I think so.

Mr. Gibbons: It's basically the reverse of the Alliance pipeline over the years. You had a 42-inch pipeline feeding northern B.C. and Alberta, going straight down, so it's actually a feed going back up. Neil's map shows that what can actually happen is that it's feeding back up towards the northwest, out to Prince Rupert. It actually can help as a feedstock into the heartland especially.

Mr. Shelly: Yeah. I think, just to build upon that, as we mentioned earlier in one of our slides, we've got this new world, and there's a little bit of a gap between the producers and the downstream users. Some of that is just the infrastructure to link

the two together, and the IEEP program was very successful. It was a program that the government had, resulting in over a billion and a half dollars in investments in Alberta. It was a very progressive way in how the government could use its royalty policies to help incent companies to make those connections.

We're at the point now where we have producers on one side of the chasm, consumers on the other. These guys say: if you build it, we'll build a pipeline. Those guys are saying: no, no, no; if you build it, we'll build a pipeline. So things like the IEEP program are where the government comes in almost as a dealmaker and says: "Look. We've both got to get you together. We'll put this incentive on the table." They're able to cross the barriers and get the necessary infrastructure in place.

Ms Pietrusik: But you also have a BRIK program that can be used as an echo for natural gas. BRIK was a little bit more difficult because you did have to change a lot of legislation in order to do that. But from what I understand, your current legislation on the natural gas side does allow you to do a lot of the things that previously you couldn't do on the bitumen side until you did the changes for BRIK, so it might be an easier sell.

The Chair: They did understand you, Ms Fenske. Mr. Barnes.

Mr. Barnes: Thank you, Madam Chair, and thank you all for your presentation. My question is around the foreign companies that are interested. It's great to see the foreign companies with their interest in Alberta and providing their capital and their expertise here. I'm wondering if there's a risk level at the start of the project that makes it more attractive to the foreigners or maybe scares some of our Canadian companies away because of higher risk. I'm also wondering: when it's all said and done, we're still going to be hundreds and hundreds of miles away from the big population centres where your final products are used. How is that applied to the risk of the whole project? If you guys can answer that, I'd appreciate it, please.

Ms Pietrusik: Do you want to go ahead and talk on what you've seen?

Mr. Shelly: Sure. With regard to the foreign investors, as we mentioned, a lot of the interest in investment is coming from the Asian continent. A lot of that is coming because the demand for petrochemical products – plastics and everything – has kind of plateaued in Canada, North America, and Europe. But you can imagine that in Asia and the Indian subcontinent the demands there are just going like this. So the companies there are coming here because they see the demand; they're trying to keep up with the markets. Somebody said that something as simple as a set of Tupperware bowls is an untold luxury to a typical family in India. You start getting demands there, so that's why, I think, we're getting a lot of the foreign companies coming in. They see the demand coming in their backyard, and they need to meet that demand, and they're looking to Alberta as potentially a source to actually supply that.

Ms Pietrusik: Yeah. I think, you know, when I was working on the value-add strategy for government, we targeted Sasol, actually, about five or six years ago under that work as being one of the anchor companies that we wanted in this whole cluster development concept that we were trying to sell at that time. I don't know how much Sasol actually had Alberta on the radar at that time. I think it did open up a lot of opportunities for them, where they started looking Canada-wide and ended up with the Alberta

decision for GTL at a later time when the gas price changed and so forth.

Sasol looks internationally at a lot of different opportunities for investment where it makes the most sense, and because they rely on low-cost feedstock, they look at areas where they're going to get that coal or natural gas or whatever it is at a low cost in order to monetize it into GTL. The nice thing about GTL is the fact that it's based on oil-price products, so if your gas price is low and your oil prices are high, it's a great project to have in your back-yard.

I do believe that for Sasol, when they look internationally, they do look at risk. They look at the government stability of the area. They do look at what is the resource opportunity there. What are the markets looking like? As you said, a lot of the product isn't going to be absorbed in your backyard. It's going to have to be shipped off somewhere. How competitive can you be in getting your product to market versus, you know, the Louisiana product going into the U.S.?

Definitely, they look at all of those aspects, but the one thing that I know with Sasol that they liked about Alberta was the fact that you've got a local market for this first phase of GTL that will absorb all the product. You're not having to worry about west coast access or getting into the U.S. and competition with our Louisiana product. All of that stuff will be absorbed in the first phase in western Canada.

The Chair: I am so sorry that we have to cut this off. We would much rather be here, I think, than in the Legislature, but we do have to go back. We're so grateful that you're here. We've just got a couple of housekeeping things to tidy up. Again, if people have further questions, I hope it's okay if we direct them to you.

Ms Pietrusik: Definitely. Thank you.

The Chair: We're listening.

The next thing on our agenda is research requests. Does anybody have a research request? I have one, and I'm just going to put it on the table. It's not been clear to me how Alberta gas gets

into the B.C. LNG export market stream. Some people, including the fellow from EnCana, suggested that this wasn't an issue. There is lots of opportunity for line reversals and tie-lines and swaps. He also pointed out that the Alliance pipeline owned by Enbridge and a partner, Veresen, crosses the border around Gordondale and Groundbirch and that it moves a lot of high heat content gas to B.C. from Alberta. However, CERI said in their presentation – and I'm going to point to page xi and xv and page 21. They suggested that this was a problem. I think we need to understand those things a little more clearly, and we just don't have time to bring in more presenters, so I'm going to put that on the table.

Other big things: Richard Sendall of MEG had invited us to a site visit to Christina Lake near Conklin, and I want to get a sense of whether people are interested in looking at cogeneration. If we are, we can ask Mr. Tyrell to start polling for dates. We could even do this sometime late in January, early in February.

Ms L. Johnson: We're replacing that trip up north from last year.

The Chair: Yeah. If you'll do a poll on that, that would be great. If you have a pair of steel-toed boots, please let Mr. Tyrell know. We're going to need them for the Williams Energy facility trip.

Is there any other business? Okay. Next meeting is next Monday from 6:15 to 7:15, and we'll have Calgary Transit.

Mr. Strankman: No. We skip a week.

The Chair: Oh, my goodness. Good thing you caught me on that. That's Remembrance Day.

It's November 18 – we're going to miss each other – from 6:15 to 7:15 with representatives from Calgary Transit and Edmonton Transit

Can someone move a motion to adjourn? Ms Johnson moved that the meeting be adjourned. All in favour? Any objections? The motion is carried. Thank you.

[The committee adjourned at 7:14 p.m.]