



Legislative Assembly of Alberta

The 28th Legislature  
First Session

Standing Committee  
on  
Alberta's Economic Future

Bitumen Royalty in Kind Program  
Stakeholder Presentations

Tuesday, February 26, 2013  
8:33 a.m.

Transcript No. 28-1-7

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

**Standing Committee on Alberta's Economic Future**

Amery, Moe, Calgary-East (PC), Chair  
Bikman, Gary, Cardston-Taber-Warner (W), Deputy Chair  
Anglin, Joe, Rimbey-Rocky Mountain House-Sundre (W)\*  
Barnes, Drew, Cypress-Medicine Hat (W)\*\*  
Bhardwaj, Naresh, Edmonton-Ellerslie (PC)  
Blakeman, Laurie, Edmonton-Centre (AL)  
Donovan, Ian, Little Bow (W)  
Dorward, David C., Edmonton-Gold Bar (PC)  
Eggen, David, Edmonton-Calder (ND)  
Fenske, Jacquie, Fort Saskatchewan-Vegreville (PC)  
Goudreau, Hector G., Dunvegan-Central Peace-Notley (PC)  
Hehr, Kent, Calgary-Buffalo (AL)  
Jansen, Sandra, Calgary-North West (PC)  
Luan, Jason, Calgary-Hawkwood (PC)  
McDonald, Everett, Grande Prairie-Smoky (PC)  
Olesen, Cathy, Sherwood Park (PC)  
Quadri, Sohail, Edmonton-Mill Woods (PC)  
Quest, Dave, Strathcona-Sherwood Park (PC)  
Rogers, George, Leduc-Beaumont (PC)  
Sandhu, Peter, Edmonton-Manning (PC)  
Sherman, Dr. Raj, Edmonton-Meadowlark (AL)  
Smith, Danielle, Highwood (W)  
Starke, Dr. Richard, Vermilion-Lloydminster (PC)  
Strankman, Rick, Drumheller-Stettler (W)  
Towle, Kerry, Innisfail-Sylvan Lake (W)  
Young, Steve, Edmonton-Riverview (PC)  
Vacant

\* substitution for Danielle Smith

\*\* substitution for Rick Strankman

**Support Staff**

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

## Standing Committee on Alberta's Economic Future

### Participants

Teedrum Inc.....	EF-44
Ken Horn, President	
Jay Stevens, Chief Financial Officer	
Alberta's Industrial Heartland Association.....	EF-49
Ed Gibbons, Board Member; Councillor, City of Edmonton	
Neil Shelly, Executive Director	
Canadian Association of Petroleum Producers.....	EF-55
Martyn Griggs, Manager, Oil Sands and Oil Markets	
University of Alberta.....	EF-62
Amit Kumar, Associate Professor, Department of Mechanical Engineering	
Stefan Scherer, Director, School of Energy and the Environment; Office of the Vice-president, Research	
Emilson Silva, Professor and Academic Director, Centre for Applied Business Research in Energy and the Environment, Alberta School of Business	
Alberta Federation of Labour.....	EF-67
Gil McGowan, President	
In Situ Oil Sands Alliance.....	EF-73
Patricia Nelson, Vice-chair	
Richard Sendall, Senior Vice-president, Strategy and Government Relations, MEG Energy	
Shell Canada.....	EF-77
John Broadhurst, Vice-president, Development, Heavy Oil	
Keiren Ferris, Manager, Global Royalty Policy	



8:33 a.m.

Tuesday, February 26, 2013

[Mr. Amery in the chair]

**The Chair:** Good morning, ladies and gentlemen, and welcome to all the members, staff, and guests in attendance at today's meeting of the Standing Committee on Alberta's Economic Future. I would like to call this meeting to order and ask that members and those joining the committee at the table introduce themselves for the record. Also, I would like to ask those who are participating by teleconference or substituting for other members to indicate so when they're introducing themselves.

I will start with myself. I'm Moe Amery, MLA for Calgary-East and chair of this committee.

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

**Mr. Rogers:** George Rogers, MLA, Leduc-Beaumont.

**Mr. Quadri:** Sohail Quadri, Edmonton-Mill Woods.

**Mr. Bhardwaj:** Naresh Bhardwaj, Edmonton-Ellerslie.

**Mr. Dorward:** David Dorward, MLA for Edmonton-Gold Bar.

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

**The Chair:** And substituting for?

**Mr. Anglin:** Oh. Substituting for Danielle Smith. It's always about me, so I apologize if I leave anyone out.

**The Chair:** We know that, Joe.

**Mr. McDonald:** Good morning. Everett McDonald, Grande Prairie-Smoky.

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

**Mr. Eggen:** Good morning. I'm David Eggen, MLA for Edmonton-Calder.

**Ms Olesen:** Good morning. Cathy Olesen, MLA, Sherwood Park.

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

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

**The Chair:** Those who are participating by teleconference, please.

**Mrs. Towle:** Good morning. Kerry Towle, MLA, Innisfail-Sylvan Lake.

**Mr. Barnes:** Good morning. Drew Barnes, Cypress-Medicine Hat, substituting for Rick Strankman.

**Mr. Donovan:** Good morning. Ian Donovan, Little Bow riding, substituting for myself.

**The Chair:** Thank you.

**Mr. Luan:** Good morning. Jason Luan, Calgary-Hawkwood. Can you hear me?

**The Chair:** Yes, we can.

**Mr. Luan:** Thank you.

**Mr. Young:** Steve Young, MLA for Edmonton-Riverview.

**The Chair:** Thank you all very, very much for being here this morning.

Just a few housekeeping items to address before we turn to the business at hand. First of all, the microphone consoles are operated by the *Hansard* staff. Please keep cellphones, iPhones, and BlackBerrys off the table as these may interfere with the audiofeed. Audio of this committee proceeding is streamed live on the Internet and recorded by *Hansard*.

The first item that we have on the agenda is the approval of the agenda. The agenda was posted on the committee's internal website I think last Friday. Can I have a motion to adopt?

**Mr. Hehr:** I've got it.

**The Chair:** Okay. Mr. Hehr moved. Any discussion? All in favour? All opposed? Carried. Thank you.

The next item on the agenda is the approval of the last meeting's minutes. Can I have a motion?

**Mr. Quadri:** I move that.

**The Chair:** Mr. Quadri moved. Any discussion? All in favour? Carried. Great. Thank you.

Now we will move to the fourth item on the agenda, which is the oral presentations. Before we get started with the presentations we have scheduled, I want to take a moment to read into the record the motion passed by this committee which started this review process. I hope this friendly reminder will help everyone remain focused and on task as we proceed today.

The motion reads as follows: moved by Ms Olesen that in the interest of encouraging economic development in the province, the Standing Committee on Alberta's Economic Future undertake a study of the BRIK, bitumen royalty in kind, program and that the scope of the study shall include the following:

- risks and rewards and the effectiveness of the BRIK program;
- barriers to increased bitumen upgrading;
- economic costs and benefits of increased bitumen upgrading in Alberta as compared to other jurisdictions;
- amount of bitumen that can be safely and profitably upgraded in Alberta over the next 20 years given the limitations of infrastructure and water supply and labour availability;
- environmental advantages and disadvantages of increased bitumen upgrading in Alberta;
- possible regulatory measures that could be introduced to encourage bitumen upgrading capacity in Alberta; and
- economic trade-off of increased investment in bitumen upgrading in Alberta compared to investment in other sectors

but shall seek to avoid the study of incentives to encourage increased bitumen upgrading in Alberta and those issues within the mandate of the Royalty Review Panel and the Standing Committee on Resource Stewardship in order to avoid a duplication of efforts.

This is the motion as passed, I think, on . . .

**An Hon. Member:** A good motion.

**The Chair:** It is a good motion, actually. I don't remember the exact date.

I'd also like to remind everyone that we have a full day of presentations ahead of us, and it is important that we keep on schedule. At the last meeting it was agreed that 40 minutes would be set aside for each submission, including 20 minutes of presentation time, followed by 20 minutes for questions from committee members. We will use the timer up front here to keep things on track, and I am sure Karen will help me do that.

For the question-and-answer portion of the presentations we will proceed using the previously agreed-upon rotation, which will start with the Wildrose caucus for five minutes, the Liberal caucus for five minutes, the NDP caucus for five minutes, and the Conservative caucus for five minutes. If there are any questions left at the end of this, they can be read into the record with a request that they be responded to in writing.

8:40

Without further delay I will invite the representatives from Teedrum Inc. to join us at the table. While you are getting settled, I will just point out to you that there is no need for you to touch the microphones as they will be turned on and off by the *Hansard* staff. Also, please remember that this meeting is open to the public. It will be recorded by *Alberta Hansard*, and the audio is streamed live on the Internet.

Okay. I was instructed by the clerk to read something into the record, that the overhead presentation by our first group, Teedrum, is for the all-party Standing Committee on Alberta's Economic Future, not for the government of Alberta. Thank you.

Please introduce yourself, Mr. Horn, for the record and proceed with your presentation.

**Mr. Horn:** Thanks very much and good morning. Thanks very much for allowing us the opportunity to present our project. Beside me here is my colleague Jay Stevens, CFO.

**Mr. Stevens:** Good morning.

#### **Teedrum Inc.**

**Mr. Horn:** On behalf of Teedrum and AFNEC we'd like to give an overview of the project, a little bit of the history, and go through it currently, where we're at, and start to give our views on what we believe the BRIK program has to offer and, obviously, try to answer some of your questions as best we can.

The Alberta First Nations Energy Centre was put together for the sole purpose of developing, building, constructing a refinery project. We collectively went into partnerships with a majority of the Alberta First Nations to deliver this project back in 2008, I think. We go back almost five years now. We've been at the same time dealing with the Alberta government on the bitumen royalty in kind program, starting back with Minister Mel Knight at the inception. I think we submitted a submission back in the early part of 2008 about what it might look like.

That went on, and then, as we're all aware, there was an RFP put out. Enhance Energy was the winner of that particular RFP. The chiefs of Alberta elected not to put forth a submission at that time. They had asked Premier Stelmach at the time to put forth government-to-government negotiations. As that moved forward, we negotiated with the Alberta government a conditional BRIK agreement, and I'll talk a little bit more about that later on in the presentation.

A bit of an overview for our project. The project is a 6 and a half billion dollar refinery to upgrade bitumen to finished fuel products. The initial capacity is 125,000, with allowable expansion up to 300,000 barrels per day. One of the key drivers

for the project, being off-balance-sheet greenfield, is the light-heavy differential.

While we try to identify our ability to finance this particular project, it has always been difficult, so we were looking for opportunities such as BRIK to bring forth this particular opportunity. Along the way we've tried to identify strategic partners for Teedrum, and those were and continue to be the Alberta First Nations. Over the course of our tenure we worked with and have continued to work with the government of India through Engineers India Limited, who has done a substantial amount of our engineering work to date.

I'll go over a little bit on the development team, starting with Teedrum. We continue to drive influential people to help us develop the project. We've aligned ourselves with a local agency/firm, Stantec, that's done some engineering for us and some of our environmental clearance. Engineers India Limited has taken on a class 3 study for us. We are now looking at going forward with them on some more engineering and further development. The State Bank of India on behalf of EIL has done quite a comprehensive overview. CIBC and Pricewaterhouse-Coopers have gone through our project.

There are two locations identified. One we've done some work on. It's in Lamont county in the Industrial Heartland, a 2,400-acre site. We've done one overview of environmental clearance for that and some geotech, and it serves to be a good location.

Another opportunity is on the Total site. I want to talk a little bit about that because I think there leaves us with a pretty good opportunity. Currently Total has their land, engineering, and permit optioned with Sasol, I believe. We would like to in the future, if that option expires, take over that permit, that land, and their engineering to date. I would describe that as being shovel ready to move our project forward, significant time saving in costs and engineering. That's another opportunity on-site, and that's in the Industrial Heartland as well.

Our timeline, as you can see, starting back in 2008, carries us through to 2018 if we continue on our path. Currently there are two paths that are working for us right now. One is with BRIK, and one is without BRIK. That could change our timeline if there is a second RFP, and I'll talk about that a little bit later.

Primarily, our product will be a high-value finished fuel product for export. You know, there's been a lot of concern from other competitors that we would be looking to cannibalize the market and dilute the profitability here. Our full intent is to export primarily to the deep water, where we have an off-take agreement currently with Vitol to take 90 per cent of our finished fuel product.

I think that leads to the next concern or question. How do we get it there, and what are the means for transportation? There are a number of options that are working right now, but I think the primary reliable one is probably railcar, 500 railcar. Our site holds for about 2,400 acres; it can allow for railcar. There was some dialogue previously, when we were engaged in the conditional BRIK agreement, to do clean fuel transportation through Kinder Morgan. I think that opportunity is gone now. But, you know, I think the largest risk of this particular project is transportation. I think one of the major benefits that we deliver is bringing the majority of the Alberta First Nations as our partnership to not be obstructive and to support the initiative, and I think that could also carry on through British Columbia. We would be looking to Kinder Morgan and potentially Enbridge as well. But to create certainty for our project to move forward, it would certainly have to be the railcar option.

That's a brief overview of the project. I didn't want to get into it too much. I think the purpose of today is really to talk about the

BRIK program and its effects and opportunities that it has to date and where it might go into the future.

Our view of the BRIK and certainly the financial world's is that trying to put together an off-balance-sheet greenfield project needs strategic partners. We view that this particular policy and program, the bitumen royalty in kind, alleviates a lot of that particular issue. To have a steady supply and have a strong participating tolling arrangement would help alleviate some of the cost of capital.

Certainly, the Alberta government was looking to find a partner similar to the North West-CNRL that we would align with, and we believe that particular partnership for our project is available. We just didn't get to that point, where we'd bring on a partnership. From the standpoint of going forward without BRIK barrels, it's going to be probably a lot tougher challenge, from our perspective, to not have the steady flow, the tolling arrangement, which ultimately brings down their cost to capital.

What the BRIK agreement has done to date. It has allowed us to bring in strategic partnerships from Engineers India Limited, some work in kind from Stantec engineering. Also, when we were in the discussions with the BRIK proposal, there was interest from the government of China through Syntech and Sinopec as well. We did not engage in a contract with them, but we believe the BRIK opportunity allowed us to have a competitive process to bring our cost to capital a lot lower for the project. In our view, you know, the lower that we're able to bring down the cost to capital saves on the tolling fee for the province, which ultimately brings down the profitability for both sides, industry and government.

**8:50**

The rewards, from our perspective, for the Alberta government and as an Albertan and certainly from the natural hedge standpoint: simply put, when bitumen is low, these particular projects are very profitable; when bitumen is high, these projects aren't very profitable and potentially could have a loss. But Alberta being in the business of 2, 2 and a half, 3 million barrels per day certainly should be hedging something, and we believe the BRIK program and policy is a natural hedge for the Alberta government, the Alberta people. I think that the fundamental takeaway from our perspective outside of the business case is the hedge for the Alberta people for this project.

The profitability: I'll go into that a little bit later.

The BRIK policy and the opportunity through capturing the value of a barrel of bitumen. Certainly, from a transportation standpoint currently there's about 35 per cent of a pipeline that is wasted from a space capacity from diluent and the low-value by-products of bitumen. Transporting a high-value fuel product would certainly maximize that space. Certainly, from an environmental standpoint having clean fuel product, I think, is more widely accepted to be easily mitigated.

I talked about the risks. With a higher bitumen price these particular projects will not make as much money, but I go back to the natural hedge opportunity again for the Alberta government and the people of Alberta. When bitumen is high, royalty is high; when bitumen is low, certainly these particular projects will be more profitable.

We did a StatsCan-Alberta Enterprise impact study back, I think, in 2009 and took our project, and these are some of the benefits, from an indirect and direct benefit. A hundred and ten billion dollars in GDP would come back to Canada and the province. Very significant. You know, once again, if we're looking for ancillary benefits outside of just the direct benefits, these are the indirect, which reach widely across Canada.

I guess, in conclusion, we would like to see a second round of BRIK barrels become available for our project. Certainly, the financing world accepts that as a great opportunity. It brings down our weighted average cost to capital. From the First Nations' standpoint, for them to be able to participate in the energy sector, and philosophically from my standpoint, having dealt with them going back – a short story: I helped develop the gaming policy back in 2000 for the First Nations' casinos and have been involved in that. There have certainly been some challenges, you know, but I think the independence of the First Nations is certainly a good way for all Albertans, and I think if they can continue to participate in the energy sector, it will also bring benefits to both the Alberta First Nations and the Alberta government.

In conclusion, I guess, speaking about the second round of BRIK barrels, we did conclude – and it was my understanding at the time and our team's that it was recommended to cabinet and caucus – our conditional agreement. We would certainly like to have the opportunity to have that revisited and/or, if there's a second round of BRIK barrels, to be, you know, a proponent in that particular project.

Thanks very much. If there are any questions, I'd be glad to take them.

**The Chair:** Thank you very much, Mr. Horn.

We will open the floor for questioning starting with the Wildrose caucus for five minutes.

**Mr. Anglin:** I want to apologize in advance. I have a cold just like you, and I'll be sipping on my cup here as I speak. I want you to comment on the BRIK program itself. After going through all the material and looking at some of the complexities in how they designed it, it's basically: we accept bitumen rather than royalties, and we as a government are getting the royalties on the final product that is marketed after it's refined, correct?

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

**Mr. Anglin:** And the government has chosen or decided on a BRIK program with what would be one of your competitors? Is that correct?

**Mr. Horn:** I wouldn't describe it to be one of our competitors. Certainly, if it is North West, you know, I think they were the first one in. They were a bit further on their engineering. We view our competitor as the deep water, where we'd be primarily selling our finished fuel product, or if we were in a BRIK program, it would be the Alberta government's finished fuel product.

**Mr. Anglin:** Correct. But you don't have an agreement. You've been denied this first go-round in the BRIK program.

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

**Mr. Anglin:** Okay. In your view, are we applying the program incorrectly? Are we picking winners and losers, or are we putting you at a disadvantage?

**Mr. Horn:** Well, I guess there are two – I mean, certainly, the first process that the Alberta government embarked on was, you know, what I would describe as fair and reasonable. They had a RFP, and they picked the best program, which was the North West one. The Stelmach government invited the Alberta chiefs to negotiate on a government-to-government basis with our particular project. We went through that process, and we believe we satisfied all the conditions. I think we got caught in a political

change, so we didn't go through. What is in front of us? I'm not sure what will happen.

**Mr. Anglin:** Well, what I'm trying to get to here is that any time the government interferes – I'm going to use that word – in business, it creates an imbalance, for lack of a better word. In your opinion, is this what's happening now? Are we applying the BRIK program to one segment, which is one upgrader, and not equally among other opportunities? Let me rephrase the question. Change your hat. Put yourself in the position of the government. What is a better way to apply the program so that we have a balanced economic growth?

**Mr. Horn:** Well, I think the fair path forward for the Alberta government is to continue on with BRIK barrels. I think the Alberta government is compelled to have a competitive process with the exception of the First Nations. They are considered a government, so there were government-to-government negotiations. But on a go-forward basis, you know, I think it should be competitive, and it should be to the highest value for the benefit of the Alberta people. Have I answered your question?

**Mr. Anglin:** You came close. I'm going to ask you to keep the government hat on. What's the disadvantage for the government not to offer an extension of the program to, say, your upgrader?

**Mr. Horn:** Well, I mean, we go back five years, six years, and we've been intimately involved in a lot of discussions and negotiations in this process. Are we shovel ready? We potentially could be. You know, I think we have an opportunity to bring a number of solutions to the province as far as bringing in the First Nations, foreign investment, clean fuels for export, higher value, more capital over and above a tax royalty dollar. There are a number of advantages to keeping our project moving, I think, and it can support Alberta's mandate.

**Mr. Anglin:** Well, from where I sit, I would say that it's to the advantage of all Albertans if we grow economically regardless of what refinery or what corporation is investing in it.

Just a question.

**The Chair:** Mr. Anglin, you have about 45 seconds left.

**Mr. Anglin:** This is more of a socioeconomic question. Can you outline the advantages for First Nations economically in your project versus others?

**Mr. Horn:** Certainly, I think we can all agree that the First Nations do live in, you know, some deplorable, third-world conditions. I've been involved with Native Americans and First Nations for many years, and they are looking for a way up and independence and pride of ownership, so I think a project of this size and magnitude and being resource based alleviates a lot of issues for them. They want to participate in the economy. They want to participate in resource development.

9:00

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

Your time is up, Mr. Anglin.

I would like to remind everyone that this is the Standing Committee on Alberta's Economic Future, not Alberta's economic past. Let's focus our questions on the issue at hand and on the motion that I just read at the beginning.

The Liberal caucus, please, for five minutes.

**Mr. Hehr:** Thank you very much for your presentation. I've read many reports done by Dr. Andrew Leier out of the University of Calgary and talked to some oil and gas businessmen around Calgary. They say that going down this path of building refineries and upgraders really doesn't make much sense and that all we need to take away the differential is pipelines. You've mentioned the hedging and the like, the benefits to the Alberta people. Can you comment further on why that logic breaks down and expand more on what you see and what many people see, including myself, expanding a local industry here in Alberta.

**Mr. Horn:** Absolutely. A great question. You know, there are a number of companies that are trying to protect their market here, number one. I guess if you take company Y, whether it's Shell or Exxon or Petro-Canada, if they're making a decision at the board level to ship or develop further assets and if they have a 1 or 2 per cent better IRR, return on investment, in Houston, Texas, on a brownfield existing refinery, they're going to make that choice. We don't have that as an entrepreneurial business like Teedrum and North West Upgrading. It's easy. It's profitable. It's a business case that can be satisfied.

When you talk to the competition, (a) they want to protect their local market, and (b) when they make a decision at a board level to retrofit an existing refinery in Houston, Texas, that's easy for them. For us there are all the reasons in the world from a business standpoint to develop these particular projects here.

Just to add one other point to that, when you look around the globe when you try to identify a location, most locations that are looking to do large industrial projects incentivize some way, somehow. My view is that if Alberta wants to participate and be competitive, there has to be some incentive for them to build here. I could look at the Sasol one. They moved to Louisiana. Why did they move there? There was a very good incentive program for them to develop liquids to gas. I don't know that for sure, just reading through the newspaper.

Those are some of the reasons. You know, I think we stand alone. We're not dependent on a global company and market.

**Mr. Hehr:** Just a follow-up question. In your view we have to take a balanced approach. I know your project is seemingly getting on the path to being able to be part of the BRIK program. Do you see a natural limit as to how many refineries we can do here? What is the process for you guys being able to – you say railway, but will there be an opportunity? Would you guys then tie into a pipeline eventually, or do you see eventually just all your business going through on the rail systems?

**Mr. Horn:** Certainly, you know, the rail is an option that's here and now, and if we're going to go to the debt and equity markets, we need an option. There have been quite a lot of studies done on capacity. We think it's here; it's now. Absolutely, we're looking at another pipeline alternative that leaves southern Alberta, goes through Montana and across that's existing that would connect with rail, some hybrid opportunities.

I think the first part of your question is: how much can we do here? Absolutely, there's a threshold. There are two things that drive it. The economics of scale of having a large cluster of petrochemicals or refineries or upgraders: I think that still has a lot of growth opportunity. I think potentially from an environmental standpoint and going forward, you know, there could be a million barrels produced here, upgraded, refined into finished fuel products and petrochemicals primarily for export. Is that a realistic number over the next 20 years? Yes. Is the impact... [interjection]



Available? Yeah. I mean, there are going to be infrastructure requirements, but it's not overnight.

**Mr. Hehr:** If you could, I guess, just highlight for me: what are the risks to the Alberta government for going further down the BRIK program? I look at this as sort of, although we don't like to say it, the business of being in business again, something that I think has been folly not to do over the course of the last 25 years. Could you outline sort of the risk to the Alberta government for me or on behalf of the Alberta people?

**Mr. Horn:** Certainly, you know, the risk is on the tolling fee, the tolling fee versus your cost of it, the tolling fee you pay to what you sell the product for. If bitumen becomes very high and those two don't align, there could be a capital, dollar, loss. It's a very extreme situation, to ask that number, but that could potentially be a dollar. Is it over the life of 30 years? Once the capital is paid down, that risk comes back. I think there's risk in not doing it.

**The Chair:** Thank you.

Mr. Hehr, your time is up.

**Mr. Eggen:** Thank you for your presentation. Maybe just for the record can you let us know again what your finished products will be from your refinery?

**Mr. Horn:** Finished fuel products: primarily diesel, jet, and unleaded fuels. There'll be some butanes, propanes, you know, and other lighter ends but primarily diesel for the export market and the deep water.

**Mr. Eggen:** Have you made a rough calculation – I'm sure you have – of how much value added you would be contributing, say, to a barrel of bitumen by upgrading to diesel, butane, aircraft fuel, and so forth?

**Mr. Horn:** Well, I think a simple approach to look at it is that you take a \$25 to \$30 cost to get it out. You look at Brent pricing, which is traditionally about 15, 20 per cent higher than WTI, so a finished barrel of diesel in the deep water trades anywhere between \$120 and \$140. You take your cost, your towing fee, and shipping: you know, there's a tremendous value proposition in that barrel.

**Mr. Eggen:** Yeah. I mean, it would be useful, I think, if you might break that down at some point for us. We have a serious oversupply of bitumen and difficulty moving that product down the line – right? – so you're offering us something that can create tremendous extra value for that. It's just my suggestion.

**Mr. Horn:** Oh, absolutely.

**Mr. Eggen:** Obviously, you know, you have here an increase in GDP of \$90 billion over the 20-year lifespan of your proposition, so that's a nice large number. Absolutely.

**Mr. Horn:** Absolutely.

**Mr. Eggen:** You know, it's clear that you need to secure this bitumen contract, and we have that product here. In fact, that's the story of the day, that we have this backlog of bitumen. What can we do to ensure – in what timeline can we execute that to get you the bitumen you need to move forward?

**Mr. Horn:** Well, the timeline was started when we did the conditional agreement. All we were asking, really, at the time was to have it set aside for ourselves. The barrels are available. There's, I

think, publicly put out by the Alberta government how many barrels would be available going into 2015 through 2020. So, you know, we were looking for 90,000 barrels to put through on our particular project.

**Mr. Eggen:** So in your view this would, you know, clearly alleviate this so-called bitumen bubble and, in fact, turn it into money – right? – profit and jobs here in Alberta.

**Mr. Horn:** Well, there's no question on that. I think the benefit of upgrading and refining is the transportation – you're utilizing a hundred per cent of the pipeline as opposed to 35 per cent being wasted – and the creation of value. Nobody uses bitumen. Nobody uses oil. Everybody uses a finished fuel product or a petrochemical, so your market is endless for a finished fuel product or a petrochemical.

**Mr. Eggen:** Yeah, and I would like you to expand on this concept about the pipeline, not just the viability of the pipeline but sort of mitigating the opposition to pipelines moving diesel, aircraft fuel, butanes, and so forth, as opposed to bitumen. In your view would it make it easier for us to bring on stream new pipeline capacity?

**Mr. Horn:** I think twofold. Having the majority of the Alberta First Nations participate in a pipeline development opportunity. I think we can all draw our attention to what are some of the major proponents that are trying to stop pipeline development. I can't speak for the B.C. First Nations. So that's number one.

I think the other thing we should draw our attention to is the LNG plant that the First Nations of B.C. approved overwhelmingly. If you take the lightest end of a barrel, which is LPGs versus bitumen, there isn't a mitigation plan for bitumen in the deep water. It sinks. As you go lighter into the barrel, the finished fuel products, they dissipate, whether it's diesel, jet, or other. Oil sinks. There's no mitigation plan for that.

So my view is utilization of the pipeline, First Nations participating, and from an environmental standpoint, certainly, it's more accepted to use a lighter finished fuel product.

**9:10**

**Mr. Eggen:** Thank you.

Finally, we watched here in Edmonton the remarkable employment opportunities and economic benefits of building the Scotford plant, where we had, you know, thousands of workers for many years employed building that plant. It's exciting to think that that might happen again and perhaps twice over. Thank you for this.

**The Chair:** Thank you, Mr. Eggen. Your time is up.

The last five minutes are for Mr. Dorward, PC caucus.

**Mr. Dorward:** How long did you say?

**The Chair:** Five minutes. That's it.

**Mr. Dorward:** Oh, darn.

Well, I had a question for Mr. Stevens because we haven't had too much discussion on the financial side of it yet. Firstly, let me phrase it by saying that you talked a little bit about the business case being a good one that showed that Alberta could do this upgrading or that upgrading could be done in Alberta in comparison with down in the U.S., but the capital markets might not feel so positive about that, or the capital markets might be a little bit more nervous about that. From your experience in the borrowing market what insight can you offer for any future investment in the BRIK program? What have you seen out there?

How hard has it been? How much work have you had to do? You mentioned in your presentation that one of the toughest problems is the transportation of the product. Let's go back to the financing side and have an exploration of that if we could.

**Mr. Stevens:** Well, I think for the financing side it's pretty straightforward. If we want to go forward on a merchant refinery without a processing agreement with anybody, the leverage you can get on a facility for that is going to be low. You might have 50 per cent debt to equity. The debt cost will be high, and the equity cost will be even higher. Right there you're very challenged to have a financial model that will work with the proponents because they'll be diluted and unable to make, you know, probably the very heavy interest costs.

The BRIK program and how the processing agreement works – and we've seen it with North West – is how the government of Alberta enters into a guaranteed processing fee. The banks look at that, and it's just cash flow stability. They see where it is. It's visible. They know they're going to get paid on their debt no matter what. You put that in their bailiwick, and they're willing to leverage up to, we heard, 80 per cent with debt costs under 3 per cent. That's a significant savings for a large, multibillion-dollar facility.

**Mr. Dorward:** So is it fair to say, then, that on your list of challenges a project would have going ahead, you don't see the financing component as being the biggest problem?

**Mr. Stevens:** Under a BRIK program?

**Mr. Dorward:** Yeah.

**Mr. Stevens:** It wouldn't be the biggest problem. You're probably trying to have the proper mitigation for cost overruns, and the building aspect would be . . .

**Mr. Dorward:** Okay. I don't think it's appropriate for me to ask what commitment a company has to make prior to entering into negotiations to be able to be involved in the BRIK program from that commitment you mentioned. However, can you give us some kind of indication of the enormity of that task relative to financing and funding a project at the start in order to get through the process that you're actually in and have been in and will be in, according to the timeline that you showed, before you really start to see some benefit? Can you comment about the difficulty of putting the pieces all together?

**Mr. Horn:** From a financing standpoint or an overall development standpoint?

**Mr. Dorward:** Well, both, actually. Yeah.

**Mr. Horn:** Is the question with or without BRIK?

**Mr. Dorward:** With BRIK, yes.

**Mr. Horn:** Oh, with BRIK. You know, I think there are a number of paths moving simultaneously, and if BRIK was a potential opportunity or conditional, you know, there are a number of tasks. There's a construction risk task, there are the financing issues at hand – they're all moving simultaneously – and, you know, obviously the market conditions for the demand and offtake, and the last and final one that we all talked about today was the transportation issue of pipeline or rail. There are a number of large showstoppers, let's say, that you are challenged with with these particular projects. Having said that, I think the opportunity lies.

**Mr. Dorward:** Then, finally, if I'm sitting having a meeting with somebody and they say to me, "David, how long does it take to get a project from that early stage that was a refinery in Alberta till it's actually, you know, turn the switch and there's our first production and we're sending stuff down a pipeline or on rail?" – you've shown a timeline that must have to now be modified relative to the reality of where you're at today. If a project is where you are at today until completion, is that five years or nine years or how long a period of time? Talk about the time frame for us so that we can understand how long it would take the project to get going.

**Mr. Horn:** Well, I guess to answer the earlier question on some of the risks. One of the unknowns is the environmental clearance risk. That, you know, has traditionally been two to four years. So that's the unknown.

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

**Mr. Dorward:** We can discuss it after.

**The Chair:** Thank you.

We have about two or three minutes left. If you have any outstanding questions that you would like to read into the record, please do so now. Hopefully, they will be responded to by the presenters.

David, please.

**Mr. Eggen:** Thank you, Mr. Chair. I was just towards the end wanting to get a sense of how many workers you would be employing during the course of your construction phase and then after, in production, if you've made those calculations.

**The Chair:** Thank you.

**Mr. Hehr:** Personally, I liked Mr. Dorward's question. How long until you guys are up and running, say, if you were in the BRIK program tomorrow?

**The Chair:** Thank you.

Mr. Dorward.

**Mr. Dorward:** No other questions. Thank you.

**The Chair:** Well, thank you very much for your presentation.

**Mr. Horn:** Yeah. Thanks very much for having us.

**The Chair:** It was a pleasure having you here today.

[The committee adjourned from 9:16 a.m. to 9:20 a.m.]

**The Chair:** Please take your seats. We're going to start right away. We're right on time.

Thank you very, very much for being here. We will just go around the table and make a fast introduction. Again, those who are participating by teleconference or substituting for other members, please indicate so when you're introducing yourselves.

I am Moe Amery, MLA for Calgary-East and chair of this committee.

**Mr. Bikman:** I'm Gary Bikman from Cardston-Taber-Warner and the vice-chair.

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

**Mr. Rogers:** George Rogers, MLA, Leduc-Beaumont.

**Mr. Quadri:** Sohail Quadri, Edmonton-Mill Woods.

**Mr. Bhardwaj:** Naresh Bhardwaj, Edmonton-Ellerslie.

**Mr. Quest:** Good morning, gentlemen. Dave Quest, Strathcona-Sherwood Park.

**Mr. Dorward:** David Dorward, MLA for Edmonton-Gold Bar.

**Mr. Young:** Steve Young, MLA for Edmonton-Riverview.

**Mr. Anglin:** Joe Anglin, MLA for Rimbey-Rocky Mountain House-Sundre, sitting in for the Official Opposition leader, Danielle Smith.

**Dr. Sherman:** Raj Sherman, MLA for Edmonton-Meadowlark and the big mall, sitting in as the Liberal leader.

**Mr. McDonald:** Good morning. Everett McDonald, Grande Prairie-Smoky.

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

**Mr. Eggen:** David Eggen, MLA for Edmonton-Calder.

**Ms Olesen:** Good morning. Cathy Olesen, MLA, Sherwood Park.

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

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

**The Chair:** Members participating by phone?

**Mrs. Towle:** Kerry Towle, MLA, Innisfail-Sylvan Lake.

**Mr. Donovan:** Ian Donovan, Little Bow riding.

**The Chair:** Anybody else?

Thank you very much. Just a few housekeeping items before we start. The microphones are operated by the *Hansard* staff. You don't have to touch them.

The meeting is open to the public, recorded by *Hansard*, and streamed online.

I'd like to ask the presenters to introduce themselves. The floor is yours.

**Mr. Gibbons:** Good morning. I'm Ed Gibbons, councillor, city of Edmonton. I'm the rep on the Alberta capital region heartland.

**Mr. Shelly:** I'm Neil Shelly. I'm the executive director of the Alberta's Industrial Heartland Association.

**The Chair:** Okay. We have 20 minutes for the presentations and 20 minutes for questioning. Please go ahead.

### Alberta's Industrial Heartland Association

**Mr. Gibbons:** Thank you, Mr. Chairman. I'd like to thank you for allowing us to present today. Who is the Alberta heartland really? We're a co-operative effort of five municipalities formed in 1998, a little bit sooner than that because Eric McGhan was still with Strathcona before coming with the province, and he kind of drew the actual outline of the heartland on the back of a napkin.

We're made up of Strathcona, which is the number one municipality in here; with Fort Saskatchewan; Sturgeon; Lamont; and ourselves, Edmonton. We came in in 2010. We've come up

with a system of chairs that rotate, and this coming April at the general meeting the county of Lamont will be in the chair with Edmonton being the vice-chair.

We're an organization committed to sustainable development through economic development and planning, a specialized region of over 582 square kilometres zoned for heavy industrial development.

I'll turn it over to Neil just to go on from the technical side.

**Mr. Shelly:** Thank you, Councillor Gibbons. Just a little bit of background on our organization and the region known as Alberta's Industrial Heartland. We are Canada's largest hydro-carbon processing centre, home to 15 world-scale facilities, and we're responsible for 43 per cent of the basic chemical manufacturing in Canada. We're a major centre for petroleum refining, bitumen upgrading, petrochemical production, natural gas fractionation, and, recently, oil sands logistics. So companies like Conexus, that is looking at bitumen by rail, Pembina Pipeline, and others are all choosing our area for their location.

Economic impacts: approximately \$1 billion a year in annual expenditures in the region. That doesn't include the feedstock costs. There are 7,500 full-time direct employees in our region. If you look at any simple magnifying factor, which would include contractors, consultants, probably about close to, well, between 20,000 and 25,000 people derive their living from the heartland region.

What we'd like to do today is talk a bit about upgrading: what has happened in the past, what could be happening in the future, some of the benefits, and some of the actions that can be taken. Back when I joined the organization – I believe MLA Cathy Olesen was with the organization at the time, back in 2007 – there was sort of a boom in the area, and then things started going south. What were the factors that affected this? Capital cost escalation in Alberta in the mid-2000s scared a lot of people away. Narrowing differentials between heavy and light oil prices, excess capacity at some refineries in the United States as well as expectation of new pipeline access to markets: all these factors resulted in a major shift in the economic energy and dynamics of the area.

Basically, this resulted in, as this slide here shows, the land positions that some companies had taken in the heartland. What we had on the books back in 2007 were eight potential upgraders and \$65 billion worth of capital investment announced for the area. Because of the factors and the dramatic shift that happened, we went in a matter of three years – there's a picture – from this to this. About \$65 billion in capital investment was taken off the books, and we went from eight upgraders down to zero that had plans to move forward. It basically shows you what can happen with energy cycles. Nobody can say it's going to stay constant from year to year. It's always going to be a shifting type of cycle.

Because of this, recently the ERCB and the National Energy Board as well as the Conference Board of Canada came out with their projections of what is going to happen with the oil sands in Alberta. What you can see here is the growth in oil sands production. At the same time, the golden line here shows the percentage of bitumen being upgraded in Alberta. Right now we're somewhere around 55 per cent to 60 per cent. Their projections are that by about 2034, if we get maximum build-out, only about a third of all of the bitumen produced in Alberta would be upgraded in the province. So these were kind of the factors that outside organizations like the ERCB have said: this is what is going to happen with the upgrading in Alberta.

As with normal cycles everything changes, and we're looking at a major change again in some of the dynamics regarding bitumen upgraders. The bitumen bubble is creating large spreads in oil

pricing differentials. This is going to be a dynamic and a shifting thing as well, so it's not going to be around forever, but it is going to be a factor that's going to be around for a long time, that you have to consider.

Additionally, shale oil production is changing refinery demands and diets in the United States. So what everybody thought refineries wanted in the United States three years ago has changed dramatically, and we have to adjust to that.

There is also uncertainty regarding carbon intensity limits on fuel feedstocks. Right now states like California and three or four northeastern and New England states have intensity standards that would not allow Alberta to sell its bitumen into those markets because we don't meet their environmental regulations.

The other major factor in oil pricing – these are averages from December – is that we talk about the differentials. A lot of people talk about western Canada select. Western Canada select isn't the price of bitumen. It's actually a blend of bitumen and a material called diluent. So you add parts in 2 to 1, and you come up with western Canada select.

The real price of bitumen, the average, in December was \$32. If you upgrade that to synthetic crude oil, or SC oil, the market price in Alberta was \$81. That's an increase of \$50 in value. If you can transport that material down to Cushing, Oklahoma, you get the west Texas intermediate price, which is pretty much the North American bench price, and again the value goes up.

The world price is set by what we call North Sea Brent. If you can get it to an ocean port, the world sea price is actually at about \$110. If you refine it into diesel, wholesale diesel prices in Edmonton work out to about \$133 a barrel. So you can see here that when we talk about the importance of BRIC and refining, the difference between a barrel of bitumen and a barrel of refined diesel in Edmonton is over \$100 a barrel, so you're more than tripling, almost quadrupling the value of our resource.

Some of the benefits of upgrading in Alberta. There are multiple benefits: market diversification, opening up pipeline access, showing environmental leadership, and economic diversity.

#### 9:30

On market diversification, I know this has been a key thing for our government, looking at opening up new pipelines to diversify our markets not only to the United States but to eastern Canada and also to the Asian markets. But something to consider when we're looking at market diversification is that raw bitumen is a very hard crude to refine, and there are only a small handful of refineries that are capable of utilizing bitumen as a feedstock. By upgrading, you open up the market for refineries in various parts of the world that could accept bitumen, and this allows for more competition and leaves the door open for changes to marketing strategies.

For example, there are some discussions about reversing one of the TransCanada gas lines to take bitumen to eastern Canada. Right now none of the refineries in eastern Canada could handle raw bitumen coming out of Alberta. You have to basically upgrade the material. You could build an upgrader here and then access all of the refineries in eastern Canada, or some refineries in eastern Canada would have to be modified to accept our bitumen. On market diversification, by upgrading, you not only open up new regions; you open up markets for how many refineries you can go to.

This slide shows here – and I got this off a U.S. Energy website – that in the United States there are a total of about 146 operating refineries, mainly centred around the U.S. Gulf coast. There are about 25 in Texas and 17 in Louisiana, but there are other marketing areas. California has 21 refineries. The U.S. eastern

seaboard, the central plains of the United States are also major refining centres. Of these 146 refineries there are only a handful that can accept unupgraded bitumen. I was trying to find the numbers here, and I apologize. I'll try and follow up. Probably somewhere between six to eight refineries could actually handle raw bitumen. If you're looking at diversifying your markets, it's not just accessing a region; it's accessing the customers. By upgrading, you could take your market from a small handful of refineries up to a potential of 146 refineries.

The same thing applies on the world scale as well. Where is the future going to be? What this chart shows here is refining capacity across the world. What you can see is that in North America refining capacity peaked in the '80s and has been pretty much flat. It's the same thing in Europe and in eastern Europe as well. The real growth has been in the Asian markets, India and China specifically. Right now the Asian markets have grown to be the largest refining markets in the world.

In fact, the largest single refinery in the world is in India. A company called Reliance Energy has built a refinery there that has a capacity of over a million barrels a day out of one refinery. To put that into perspective, the total refining capacity of the three refineries in Alberta is only 400,000 barrels. These are world-scale operations. I was at an oil sands conference a couple weeks ago in Calgary, and one of the presenters there said that right now none of the refineries in the Asian markets could accept raw Alberta bitumen. You'd have to build or modify an upgrader there to take this heavy crude.

Another opportunity from upgrading is regarding pipeline capacity and some of the bottleneck problems we have here. To move bitumen down a pipeline, as you may know, you basically have to mix it at a 2 to 1 ratio with a lighter hydrocarbon called diluent. When exporting this, it limits your pipeline capacity and how we ship materials out of Alberta. This graphic shows this concept. If you're shipping out raw bitumen, basically what you're shipping out is two barrels of bitumen and one barrel of diluent that's usually taken out and then brought back into Alberta. If a pipeline has a million-barrel-a-day capacity, if you're shipping out bitumen, you're only really shipping out – two-thirds of it is the bitumen. The other one is this carrier material called diluent. If you upgrade it into a light crude or even a medium crude, you don't need the diluent, so you can utilize the full capacity of that pipeline. As Alberta's industry continues to grow, we're going to need more pipeline capacity out of the province. This is a way of basically helping up the capacity of Alberta by one-third just by doing the upgrading side.

Also, there's a great opportunity for environmental leadership. There's growing concern over the carbon footprint of oil production, and Alberta is in a good position now. We're well supported through two pending carbon capture and storage projects. The first of these is the Shell Quest project that's being built through Strathcona county to hook up the refinery and the upgrader there. The second one is the Enhance Energy pipeline project, which will originate in Sturgeon county, work its way through the heartland, Strathcona, Lamont, and eventually take the material down for enhanced oil recoveries in central Alberta, around the Red Deer region.

By doing this, we're actually reducing our carbon intensity footprint to the point where we're meeting or even getting better than the standards that are being set by California. One of the issues that I think I've seen in the news is the use of what are called nontariff trade barriers to Alberta oil sands products. With world trade organizations what you can do to block products – environmental regulations are one way to block them without a tariff. If we can meet the intensity standards, we'll knock that

argument out from underneath the feet of the people that basically want to stop oil sands production in Alberta.

Another major benefit as well is economic diversity. By building upgraders here, like I mentioned earlier, we had \$65 billion worth of projects in 2007 on the books, a significant growth to GDP from upgrading oil sands. An important part of this as well is that it's countercyclical to commodity prices for energy, helping to avoid boom-and-bust cycles. It's a new source of revenue for the government from corporate taxes that are independent of royalties, and it provides a balanced portfolio and opens doors for future developments of petrochemical, manufacturing, and research industries.

I'm not sure if you've seen this one or not yet. This is a slide that shows who really benefits when you have these differentials. When the differential is narrow like we had back in 2008, when all the projects were cancelled, who gets most of the benefit is the producer. If Alberta was to sell raw bitumen at a very narrow differential, that's where the majority of the money would be. When you move into the situation we have today, where we have a wide differential, the people that are making most of the money around this are the upgraders and the refineries, and the producers are being left behind.

I've had people ask me when they talk about BRIK or upgrading: "Well, what happens if we shift back to a very narrow differential in the future? Wouldn't the government of Alberta have been better to just sell it as raw material?" The thing is that if the differential narrows quite a bit, the government is going to be making a lot more money in just royalties. This is a way of balancing your portfolio. You're not putting all your eggs in one basket.

You can see here that we're currently in a bubble. It's going to change again in the future. It's almost like a sine wave type of function. This is the way industry and the economics work. They're continually changing. By having a diverse portfolio, you're not in a matter of being in a boom one day and a bust the next day with regard to revenue. It helps dampen out the cycles and provides longer sustainable funding for governments going into the future.

When we talk about this, a lot of people say: "Really, should government get involved? Are there any effective government actions?" I think we've seen multiple examples of where government has stepped in and taken actions that have been very effective, starting back with Premier Lougheed and his lead back in the 1970s to create the modern petrochemical industry in Alberta through the ethane extraction program. Back then a lot of the potential players were saying: it makes no sense to do this in Alberta; let's all ship it out to Sarnia or other locations. He stepped in and said: "No. We're going to do it here." That led to the creation of companies like NOVA, MEGlobal, Dow Chemical, Celanese, AT Plastics, and others. It created a whole industry based in Alberta.

Another good example is the generic oil sands royalty that was adopted during the 1990s as a catalyst to kick-start the modern oil sands industry. Without that type of government action a lot of people say that the oil sands industry wouldn't be in the position that it's in today. We've also seen benefits through programs like the incremental ethane extraction program of 2011. This was a program that helped bring off-gases down to the heartland and will lead to about \$2 billion in potential investments. And the BRIK 1 program has been a success in sharing the challenges and opportunities with investors in the private sector.

Does government action work? Yes, it does. There are multiple examples in Alberta's history of effective use of government

policy to achieve economic outcomes. With that, I'll turn it over to Councillor Gibbons.

**Mr. Gibbons:** On the path forward we feel that we need to continue to support the expansion of the new export pipelines to the U.S., Asian markets, and eastern Canadian markets. Number two, the full range of the energy industry needs to be considered as part of any provincial or national energy program, whether it's upstream, midstream, or downstream. And government actions are needed to maximize the benefit to Alberta from our oil sands resources.

Now I'll take off one hat and put another hat on as a representative from Edmonton on the Capital Region Board. We've had a pipeline committee led by Mayor Houston of Spruce Grove. They've gone out to B.C. and met with different municipalities' chambers of commerce. We also have another committee doing a study in the region on pipeline corridors so we don't get into the same problem we did with power lines and everything. We're communicating with our residents up front and so on.

**9:40**

We're also trying to work with and working with Transportation on a heavy-haul bridge corridor, which would be the highway 63 extension coming down through and helping our municipalities. We're hearing right now from different companies that are coming in for site selection that they're not interested in going north or west of the river because they can't get across the river hauling stuff. That does matter. It's just that from our main construction, fabricating material, or anything – this is to the heavy haul and everything. If you noticed on the radio this morning, they're talking about the big haul to Fort McMurray that's going to take from now until the end of Saturday. Well, I come out of the steel industry, and we haven't gotten one heavy-haul corridor changed from the late 1970s, when I was supplying bucket wheels up in Fort McMurray.

Why are we interested? We see the benefit of the balanced energy portfolio. Upgrading is an important part. We need a long-term vision, and we need for the government to take action and achieve. We're willing to work alongside you because if you get accused of regulatory slowness, so do we. Municipalities have to be at the table just the same as the province, working together.

I would like to thank you on behalf of Linda Osinchuk, our chair, and our vice-chair, Reeve Woldanski from Lamont county.

We're ready for any questions, Mr. Chair.

**The Chair:** Well, thank you very, very much. You're almost on time. You have one minute left.

We'll start with the questioning on the same rotation. Five minutes for the Wildrose caucus. Mr. Anglin.

**Mr. Anglin:** Thank you. I want to talk a little bit about the diversification, in particular with regard to the differential. I'm one of these people, by the way, that think the term "bubble" is a joke, so you don't need to use that term with me.

Differential creates opportunity as it spreads, as it narrows, and it is managed in the market accordingly. What I'm interested in is a comment on the finished product versus the raw bitumen and its advantages for provincial growth in particular. If you could comment on that.

**Mr. Shelly:** There are multiple steps in the processing process. You can take it to a medium synthetic, you can take it to a light synthetic, or you can take it all the way to refined products as well. The situation we're looking at here is where we're located. Right now there is a need for more refined products in western

Canada. Western Canada has actually become a net importer of refined products. We used to supply to Vancouver with pipelines connecting there, but actually now a lot of that product is coming in by boat from places like California, Washington state. I believe we have the opportunity for local markets to capture just the demand in western Canada. Going beyond that, I believe there's an opportunity to expand into the United States market and even the Asian markets.

One of the things that's happening in North America is a growing demand in diesel fuel. Gasoline demand is pretty much tapped out, but what we're seeing more and more – I was just reading in the paper yesterday that automobile manufacturers are starting to offer more options in diesel. Because of that, there will be a growing demand for diesel fuel, and that's a good product fit for the heavy bitumen. I think we could get into the heavy products, and there's enough market in western Canada and a growing market in the United States for diesel fuel that we could fulfill.

**Mr. Anglin:** Would you agree with me, then, that if everything you say is true – and it sounds good to me that it is viable; it makes economic sense. To have a program where we had a royalty on raw bitumen and to have a BRIK program to diversify: in your opinion, does it make sense that we apply this uniformly?

**Mr. Shelly:** That could be one of the options. I know that having a generic program like the generic oil sands policy – when they wanted to kick-start that, it wasn't a single project. It was basically royalty relief across the board. I guess that is another option available instead of having a specific BRIK program, to have more of a generic program to make us more competitive and to have people build those facilities here.

**Mr. Anglin:** Yeah. You hit the right words, “more competitive,” and I'd like you to expand upon that. If we were to take the program and actually make it – I'll use the words “uniform” or “generic.” Could you give us an indication of what that would mean to your economic opportunity and growth in the heartland?

**Mr. Shelly:** It's hard to say exactly, but it would help. The BRIK program definitely has helped. There is a competitive process in the BRIK program where people come forward and they vie for the BRIK barrels and then as the company that has the best one. So I think there is a competition process in the BRIK program. A generic program could be another arrow in the quiver to help out with this.

The concerns we've got, the competitive disadvantages we have in Alberta versus competing areas, have been construction costs, specifically labour, distances to market, and one area that Councillor Gibbons touched upon as well is the regulatory timelines required to get projects done in Alberta. When we're competing with regions like Louisiana and Texas, companies are telling us that they can get their full environmental approvals done in six months down there. Here it takes a minimum of one and a half to two years. In the case of Total, that went through a full EIA, it took almost three and a half years to get that.

I think there are a number of things Alberta can do, including the BRIK program, royalty incentive programs, streamlining of regulations, and having the infrastructure, as Councillor Gibbons mentioned, to be able to move the products around through heavy-haul roads.

**Mr. Anglin:** Now, clearly, building pipelines for upgraded bitumen has got national and international attention, and it has a whole group of people protesting it. On the finished product side, shipping finished product either through pipeline or rail, I'm not

hearing anything in the news. We know that we ship finished product all over North America and the world every day. My question to you is: has the possibility been explored of what it would take to build a pipeline for finished product or rail for finished product to the west coast versus the image of bitumen being piped instead?

**Mr. Gibbons:** Well, talking politically, as we've had members go out to B.C. who have talked with and had great conversations with chambers of commerce and mayors and everything, it's not them that's a concern.

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

**Mr. Gibbons:** Okay. Thank you.

**The Chair:** We will move to the next questioner.

**Mr. Anglin:** Could I get that answer finished, though, in writing or something?

**The Chair:** You can do that in writing at the end of this presentation.

**Mr. Gibbons:** Sure.

**The Chair:** Dr. Sherman.

**Dr. Sherman:** Thank you, Mr. Chair. Thank you, gentlemen, for the presentation. It's great to see a partnership of Edmonton and all our regional partners. You've given a very common-sense presentation with facts and numbers, and I do appreciate your comments that government action can be a source of public good.

Just a couple of questions. What are your thoughts on just a national energy corridor, whether it's pipelines, whether it's power lines, and what role can we as a provincial and national government play in pushing that forward?

**Mr. Gibbons:** I don't know about national, but we've talked about it within our province. I look at the intersection of highways 16 and 43 to the west and draw a triangle from there to the heartland, building our own railroad, putting the power lines and the pipelines in that particular corridor, and then drawing a line from that particular location to the airport and for Port Alberta and then in the future from the heartland back down to the airport.

I mean, it's a win-win in building corridors, and that's why we've got a committee on pipeline corridors in our region. We can't talk about the province, but we're talking. If you've been watching the news about my Horse Hill infrastructure area structure plan, every time I turn around, they've got another pipeline coming through. How do you plan for urban or rural or anybody if you've got another pipeline coming through on a different corridor? We need to be able to work on planning into the future on this.

We sit on pipelines. We don't have any worry about it. If we had the worry that B.C. has right now, I think everybody would move out of Edmonton and region. But the pipelines are safe, and it's a safe way of transporting to the west coast. I think that maybe all the push-back is good in some ways but bad in the long route.

**Dr. Sherman:** I appreciate your comments. Would this not be a good time for Albertans to take an equity stake in upgrading and refining beyond the BRIK program, or would that be a bad idea?

**Mr. Gibbons:** That's a pretty tough question for us to answer from here. I'm representing four other municipalities. I don't know, Raj.

The fact is that we've worked with North West all the way through there. Moving forward, I think you heard from their presentation a couple of weeks ago – I understand they were here – that if they were in operation right now, they'd be putting \$500 million a year into the coffers of this province, helping taxpayers out.

9:50

The BRIK program. I think that if you look at the charts we've given, the graph system of where we were in 2008 and where we are today, it's a totally different market. We feel – and we've been talking as we go down to Houston or Baton Rouge and are meeting with different individuals in Calgary, CAPP and so on – that what it was a year ago is today a totally different mood of moving forward. We have never changed from our viewpoint that we're in an upgrading type of industry in our area, and we believe in upgraders. We feel that we can do both and, hopefully, help taxpayers out.

**Dr. Sherman:** I thank you for telling us about what's happening with the refining capacity across the world. With the life cycle of refineries, would this not be the time to have the most environmentally friendly, the best refineries on the planet built right here in Alberta and across the nation perhaps?

Along with that, what can we as policy-makers do to incent the right decisions? You've had a lot of investment upstream, but we forgot to put the pipelines in, and we forgot to put in some refining and upgrading capacity before we incented. What can we as policy-makers do to make sure that balance is not thrown out?

**Mr. Shelly:** I think that's a good statement. We're seeing a shift. Refineries have been around for a long time, but as we showed there, the last greenfield refinery built in North America was the Shell refinery here. A lot of the refineries are geared towards older processes, and in North America they were basically built to produce gasoline, not diesel. What we're seeing is a shift towards more diesel consumption, so there is a whole new market opening up. If you combine that with some of the environmental concerns, I think this is a good time to look at a whole new refinery complex that would incorporate the best environmental practices and meet the needs of clean-burning diesel and low carbon intensity diesel.

What can the government do? I think we've touched on some of those points.

**The Chair:** Thank you, sir. Your time is up.

**Mr. Eggen:** Thank you for your presentation. I have quite a lot of just quick questions. First, looking at that map that you show for the Industrial Heartland region, it's astounding, and it was depressing. We saw, you know, eight upgraders disappear off the planning. I know that you've given a few different reasons why, but large corporations don't make those sorts of commitments and pull them off the table so easily. Just in a nutshell, what do you think was the biggest single factor that had us lose those upgraders, so that we don't do that again for the future?

**Mr. Shelly:** I think one of the biggest factors was the hyper-inflation that happened in Alberta. A lot of these projects started off. The economics looked good. The cost of building, for example, North West: when they first started that project, I think they estimated around \$2 billion. In a matter of two or three years, with capital costs, steel costs going up, the cost of these things virtually doubled overnight. That caused every company to sit back and say: "Wow, that's not the way we planned this out. Are

there other options?" That's when they started looking for options outside of Alberta, where capital costs are lower.

**Mr. Gibbons:** Just to finish one thing.

**Mr. Eggen:** Yeah. Go ahead.

**Mr. Gibbons:** Suncor and Total went together, and then they went into the other thing, so they have the biggest portion of the red. They felt that amalgamating, going together, was better for them at the particular time. They own the land. It's sitting out there. Will they go back there again? We can only meet with them and hope that there is something.

**Mr. Eggen:** Well, we have the capacity here to change the regulatory environment so that they could in fact do that. I mean, it isn't ironic that the extraction side of this whole process was so hot that it actually made it less possible for us to build a secondary manufacturing capacity, right? We're just mining so much that it drove the prices out of building secondary manufacturing.

I was struck by your map as well showing that the U.S. actually doesn't have – you don't know exactly how much – a lot of upgrading capacity for this heavy bitumen. Do you think that, in fact, if we build the pipeline, they will be building similar upgraders down there to meet the product that's going to be coming down to them?

**Mr. Gibbons:** David, I don't know how to answer that question, but I thought this graph right here is showing 146 down there. If California doesn't have a refinery able to do it, Texas does. What happens if there's a blip in how the flow is going? I mean, they're going to be in trouble. To me, I think this is one of the better charts that we could have put together. We need to follow up on how the numbers are and get that back to you.

**Mr. Eggen:** Sure. Don't get me wrong. It's extremely illuminating. It just shows to me, I think, really, that probably they will build upgraders, just like we're thinking about doing, too, right? I mean, why don't we do it here?

Do you think that building a major pipeline with bitumen capacity to other places is going to undercut our ability to build upgraders here in the province? You know, it's like building the big highway that goes past your town, and suddenly you're SOL on commerce and traffic and so forth, right? If you build a big pipeline to move raw product somewhere else, does it diminish our capacity to upgrade and build these things?

**Mr. Gibbons:** Over the last couple of years we've been meeting with the municipality of greater Sarnia and area. They have 17 different municipalities, and they've come together with one warden. He's actually come out to our symposiums, and we've met with him at Federation of Canadian Municipalities meetings.

We're trying to get a meeting with the federal minister, our MP, Tim Uppal, as well as with the MP out of that area to talk about it. But the fact is that they can't upgrade. They haven't got the capacity to upgrade. Are they going to upgrade? I mean, we're talking about reversing the pipeline, and there are all these other conversations happening. We've got to keep the communications going. You know what? I'm a Canadian.

**Mr. Eggen:** Yeah. Absolutely. I'm perfectly willing to go east-west. My point is that upgrading actually makes money and is valuable, wherever the end of the pipe is. Maybe we can be at the end of the pipe a little bit more here and make some money off it, right?

My last question is in regard to water. I was doing work years ago, when Sherritt was going to build their hydrogen plant.

**The Chair:** Make it fast.

**Mr. Eggen:** Okay. What do you think is the limit for upgrading capacity in the Industrial Heartland based on water?

**Mr. Shelly:** To answer that very quickly, the heartland was part of what was called the cumulative environmental management program.

**The Chair:** I think we probably have to get a response in writing for this.

The last questioner is from the PC caucus, Cathy Olesen, please. Your time will be divided between you and Dave Quest.

**Ms Olesen:** Sure. That's great.

Having been on the heartland board, I'm certainly familiar with the value-added and the upgrading component of it. In your presentation you did credit government for having done some things that have been helpful: the oil sands strategy, the generic program, regulatory streamlining, which we've committed to. Looking forward, besides BRIK, what have you thought about? You know we don't do incentives. The Alberta government has not done the incentive path. What could you suggest for changes to help facilitate the upgrading here? I'm sure you've brainstormed this one.

**Mr. Gibbons:** I look at every one of these. I mean, I come from the steel industry, and I contract administrated part of Dow Chemical in Fort Saskatchewan as well as Joffre. They were good days. We thought the streets were going to be paved with gold forever, and they didn't last.

We got a lot of plants built here, keeping a lot of people employed. You know, you take a look at the next one, where it's: let them build. But they kept building, and we didn't get the money on the other end really quickly. Or you get back to the BRIK program. I can see a great future there. North West has a design factor where they're 75 or 80 per cent designed. They go in the ground, and by the time a year is up, they're going to have BRIK 2 because it's a right-hand/left-hand build-out, and we could have two plants for the same area.

We've talked, but I'm not going to guess too much.

**Mr. Shelly:** Well, I think what's happening today, with this committee, is that we're very grateful that the government has taken this seriously. We need action on this.

One thing that's a little bit outside this committee is that I think we also have another resource issue, regarding natural gas and natural gas liquids. It's going to be as big if not bigger than the issue we've got with bitumen. We just encourage the conversation, but hopefully out of the conversation we can get to a decision point of action or no action, to what makes sense for Alberta.

I think, as the chart shows here, we talk about the bitumen going out. We're going to need a combination, a balanced portfolio. We're going to need pipelines that ship out raw bitumen. We're also going to need pipelines that ship out upgraded bitumen. We're going to need pipelines that send out refined product. Access to markets from Alberta is going to be one of the key issues, so continue the good work on supporting the Keystone, the Enbridge. Look at other pipelines as well that can ship out refined or semirefined products. We've got a great opportunity here, but if we can't tap the market, it's a lost opportunity.

10:00

**Mr. Gibbons:** Just talking about the gas from up north with Talisman, the partnership with Sasol. I mean, here you have natural gas coming down a pipeline that actually had a capacity of a lot more than what we have lost. Celanese actually is snooping around the region right now wanting to come back now that gas is actually at a cheaper rate, which sounds good, but the fact is that Sasol gets a \$2 billion incentive from Louisiana.

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

David, less than two minutes left.

**Mr. Quest:** Sure. I'll be brief.

Just to follow up on some of your comments on the pipelines, then, Neil. We always talk about the two big ones, Gateway and . . .

**An Hon. Member:** Keystone.

**Mr. Quest:** . . . Keystone. Like I could forget that.

Out of those projects – and you'd be familiar with all of them – are some or all of these capable of shipping upgraded or refined crude as well as bitumen?

**Mr. Shelly:** Upgraded product, yes. Refined product gets a little bit more difficult. In a pipeline you can ship bitumen; then the next day you could ship refined diesel fuel. You basically run a thing called a pig down the line to clear it out. Especially the people that produce the diesel, they're a little bit more finicky. They don't want any cross-contamination. So it's very easy to send out either upgraded or non-upgraded product. When you get into diesel or more refined products, it gets a little bit more difficult, but there is potential to utilize them for all three.

**Mr. Quest:** Okay. My next question. You know, it takes – what? – five to seven years to build an upgrader. You talked about the differential narrowing and that there would still be a benefit to government with respect to royalties, but where would that leave an operator potentially? Can they still be profitable as these differentials narrow? I'm sure that anybody that could have an upgrader up tomorrow would if they could, but looking out into the future, is there some risk there for these operators?

**Mr. Shelly:** I'm trying to find it here. Sorry; I can't find it.

**The Chair:** Let's consider this question as read into the record, and hopefully we can get a written response.

Mr. Anglin, do you have a question to read into the record?

**Mr. Anglin:** Yes. There have been some comments on the delay it takes to get environmental approvals. I was going to ask you directly: what specifically are some of those delays, and where can we improve? That will be written, I guess.

**The Chair:** If we can get a response to this question in writing.

We have another question from Mr. Hehr.

**Mr. Hehr:** I guess the one graph you showed me where \$65 billion in investment: just poof, right off the map. Companies base their decisions quarter to quarter; governments can take a longer term view of this. I guess my question is: is the BRIK program enough to get refining capacity here? If not, there are two other ways, in my view, to do it. I'm a recovering lawyer, not an oil and gas expert, so there may be a bundle of other options available. I'm hoping you can enlighten me, please.



The Alberta government can start the Alberta Energy Company again or buy another oil company and get into it directly like Peter Lougheed did, something that I would say is a reasonable thing. Another way they can do it is like they did to incent the oil sands, simply say that the taxpayers are going to pay for putting this up through either giving up royalties or whatever for a certain period of time and going from there. Are those two methods ways to get the refining capacity up – like, the taxpayers pay for it one way or another, start an Alberta Energy Company or incent the market – or is the BRIK program enough to get refineries here? Sorry. If you can sort of piece some sort of answer together from that discombobulated question, I would be appreciative.

**The Chair:** Thank you.  
Mr. Eggen.

**Mr. Eggen:** Thanks. Just a brief synopsis of my last question there. Some rough idea of the limit in capacity for upgrading in the Industrial Heartland area based on water limitations, if you could.

**Mr. Shelly:** I can answer that very quickly. There has been a five-year study done on the North Saskatchewan River. To cut through about 3,000 pages of document, there's lots of water in the North Saskatchewan. The study said that we could double the amount of water we're taking out of the river right now and still meet all environmental standards and qualities.

**The Chair:** Well, thank you very much. I'd really appreciate it on behalf of the committee to get the responses to these questions in written form.

Thank you very much for your presentation, and thank you for being here. It was a pleasure having you here.

**Mr. Gibbons:** Thank you.

[The committee adjourned from 10:05 a.m. to 10:09 a.m.]

**The Chair:** Okay. We will go ahead and start. I will ask everyone to quickly introduce themselves. For those who are participating via teleconferencing, please indicate so. If substituting for other members, please indicate so when you are introducing yourself. It's not all about yourself, Joe.

My name is Moe Amery, and I'm the MLA for Calgary-East and chair of this committee.

**Mr. Bikman:** I'm Gary Bikman from the Cardston-Taber-Warner constituency, and I'm the deputy chair.

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

**Mr. Rogers:** George Rogers, MLA, Leduc-Beaumont.

**Mr. Quadri:** Sohail Quadri, Edmonton-Mill Woods.

**Mr. Bhardwaj:** Naresh Bhardwaj, MLA, Edmonton-Ellerslie.

**Mr. Quest:** Dave Quest, Strathcona-Sherwood Park.

**Mr. Dorward:** David Dorward, Edmonton-Gold Bar.

**Mr. Young:** Steve Young, MLA, Edmonton-Riverview.

**Mr. Griggs:** Martyn Griggs with CAPP.

**Mr. Anglin:** Joe Anglin, MLA, Rimbey-Rocky Mountain House-Sundre, representing the Premier-in-waiting Danielle Smith.

[interjections] This is going to get interesting by later this afternoon.

**Dr. Sherman:** Raj Sherman, Edmonton-Meadowlark, leader of the Alberta Liberal Party that would lead to a true miracle on the prairies next election.

**The Chair:** No political comments, please.

**Mr. McDonald:** Good morning. Everett McDonald, Grande Prairie-Smoky MLA.

**Ms Olesen:** Good morning. Cathy Olesen, Sherwood Park.

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

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

**Mr. Sandhu:** Good morning. Peter Sandhu, Edmonton-Manning.

**The Chair:** Anybody left on the phone?

**Mr. Barnes:** Yeah. Drew Barnes, Cypress-Medicine Hat, substituting for Rick Strankman.

**The Chair:** Thank you.

Well, just a few housekeeping items before we start the presentations. The microphones are operated by *Hansard* staff. This meeting is open to the public, recorded by *Hansard*, and streamed live online.

I would like to remind the presenters that they have 20 minutes of presentation time followed by 20 minutes for questions from committee members. We will use the timer to keep things on track.

Sir, would you please introduce yourself and start the presentation.

#### Canadian Association of Petroleum Producers

**Mr. Griggs:** Thank you very much, Mr. Chair.

Can everybody hear me okay? Can everybody understand me? That's the other problem. I lived in Australia for four years, so I blame it on the Aussies. I apologize for that.

Anyway, good morning, ladies and gentlemen, members of the Alberta Legislature. My name is Martyn Griggs, and it's my very great pleasure to present to you this morning a short briefing on current issues impacting the oil sands, in particular actions required to maximize the value of the resource for all Albertans, including utilization of the bitumen royalty in kind, or BRIK, program.

The Canadian Association of Petroleum Producers, or CAPP, represents companies large and small that explore for, develop, and produce natural gas and crude oil throughout Canada. CAPP's member companies produce about 90 per cent of Canada's natural gas and crude oil. CAPP's associate members provide a wide range of services that support the upstream crude oil and natural gas industry. Together CAPP's members and associate members are an important part of a national industry, with revenues of approximately \$100 billion a year.

In order to achieve maximum value of Alberta's oil sands resource for all Albertans, Alberta needs greater market access. I was here for the last speaker, and he talked about it at some length as well. We need greater market access. Currently due to pipeline constraints Alberta is selling its oil resources at a very significant discount to world prices. Access to world prices for its oil resource would be the single biggest benefit for all Albertans.

Secondly, government and industry are aligned in maximizing value-added opportunities in Alberta. Industry has exemplified this by investing in bitumen upgrading facilities in Alberta, which ensures that 60 per cent of current bitumen production is upgraded within the province.

Thirdly, government can make a difference and help in maximizing the value of the oil sands resource for all Albertans by enhancing, providing, and/or supporting the development of skilled labour and workforce through education, supply chain development, improving regulatory effectiveness and efficiency, infrastructure developments, enabling technology development, and a steady, stable, predictable competitive business environment.

I would now like to address each of these key issues in more depth as we move forward through the presentation. As already noted, market access is the key issue to be addressed by both the Alberta government and industry and includes access to market for all petroleum products, whether it be light oil, heavy oil, bitumen blends, synthetic crude oil, or SCO, refined products, or even natural gas. Canadian producers are currently encountering transportation and pipeline constraints to access market demand within North America and internationally. Given the projected growth in oil production within Alberta, transportation and pipeline constraints are expected to continue, and given the current regulatory and environmental hurdles to proceed with proposed pipeline projects, this issue is likely to be exacerbated over the next decade or so.

As already noted, due to pipeline constraints Alberta is selling its oil resources at a very significant discount to world prices. As oil sands royalties are based on bitumen prices, accessing world oil market pricing would provide the single largest benefit to Albertans in the form of government revenues, be it royalties, corporate taxes and income taxes, opportunities for jobs, business creation, and would ensure the future development of Alberta's oil sands resource.

#### **10:15**

Improved pipeline capacity will help connect Alberta's production to world oil prices. The committee, I am sure, is well aware of the current pipeline proposals, which include access to central Canada and the Atlantic coast, which in turn provides access to refining capacity in Ontario, Quebec, Atlantic Canada, and possible exports to the U.S. Gulf coast, Europe, India, and other international markets. Pipelines to the U.S. Gulf coast, where there are underutilized refineries already configured to process heavy oil, and of course pipelines to the west coast, the Pacific coast, provide access to competitive tanker routes to markets in Asia, in particular China, and California.

Government and industry are aligned in maximizing value-add opportunities in Alberta. This is exemplified by industry having invested in five operating upgrading facilities in the province that process between 1.3 million and 1.4 million barrels of crude bitumen per day, or, put another way, 60 per cent of current bitumen production which is upgraded within the province of Alberta. Other upgraders are in the planning and development stage, ready for completion as the market develops and economic conditions improve.

Upgrading development in the province of Alberta, however, is currently and will only continue to be challenged to compete with underutilized upgrading capacity in the United States Gulf coast until this capacity is filled. When filled, Alberta can then be competitive in adding further upgrading capacity if the appropriate conditions are in place.

The economics of bitumen upgrading is determined by the costs of upgrading compared to the additional value earned by upgrading bitumen to light oil or synthetic crude oil. These economics are driven by long-term price differentials between heavy and synthetic crude oil. Typically the cost of upgrading requires a long-term price differential of the order of \$25. Benefits are also derived when upgraders are physically associated with either upstream resource extraction facilities or downstream refinery operations, which provide economies of scale, thus becoming more economically viable, and synergies through the sharing of joint infrastructure and overhead costs.

I am aware that IHS CERA, the Cambridge Energy Research Associates, will be issuing a dialogue report in the next week or so detailing in far greater detail upgrading and refinery cost structure, which will be of great value to the deliberations of this standing committee. CAPP understands that IHS CERA will be most happy to forward to the standing committee copies of their report for you to consider at your discretion.

The bitumen royalty in kind, or BRIK, program is, of course, a government choice and a legislative right. CAPP was pleased to fully participate in the consultation process and provided submissions on how to best structure and implement BRIK that were supported by industry and government. The first phase of BRIK, however, has yet to be initiated, so it is a little early to assess whether it has achieved or is achieving government objectives.

Clearly, government can make a difference. Even beyond the utilization of BRIK barrels, there are other levers that the Alberta government has at its disposal that can have a significant impact on maximizing the success and the value of the oil sands industry for all Albertans. These opportunities will result in maximizing oil sands royalty revenue, corporate and income taxes, jobs and business creation, including allowing Alberta to compete for future upgrading infrastructure by supporting the development of a skilled labour workforce through education. Alberta is already suffering workforce and labour constraints in certain sectors, including the building trades and certain engineering disciplines.

Secondly, supply chain development, including out-of-province suppliers, which also shows that the oil sands is a national resource with significant economic benefits accruing across the nation. In addition to the thousands of suppliers and service providers across Alberta, there are almost 1,200 out-of-province suppliers across Canada, impacting all provinces and regions.

Thirdly, regulatory effectiveness and efficiency. CAPP fully support ongoing efforts with the current regulatory enhancement program, otherwise known as a single regulator, and development of the joint environmental monitoring program between Alberta and the federal government. Both of these regulatory enhancements plus other measures support the industry's licence to operate in a well-regulated environment.

Further, the development of infrastructure would include roads, airports, hospitals, schools, and utilities and the provision of enabling technology through organizations such as Alberta Innovates. One is reminded of the invaluable research and development conducted by AOSTRA, particularly in developing the SAGD, or steam-assisted gravity drainage, in situ extraction technology many years ago.

Finally, the provision of a steady, stable, predictable competitive business environment is so critical for attracting the investment required to grow the oil sands industry. Given this support, the government of Alberta can truly help the province be prepared for future value-add opportunities within the province.

As I noted at the beginning, the highest priority issues for government and industry are, clearly: market access to ensure

Albertans receive maximum value for their oil sands resource; government and industry are aligned and maximizing value-add in Alberta; industry has demonstrated its willingness to invest in Alberta when economic conditions are supportive; and through the various opportunities just discussed, government can make a huge difference. These are measures, in fact, that will support all Albertan industries.

Finally, I very much appreciate the standing committee allowing CAPP to present and for looking into these very important issues. They impact all Albertans.

Thank you very much, and I'm willing to take any questions.

**The Chair:** Thank you very much, Mr. Griggs. That's a beautiful presentation.

Now we'll open the floor for questioning. Mr. Anglin.

**Mr. Anglin:** Thank you. One of the things I've been hearing about is the lifespan of upgraders and refineries, in particular, and how long it's been since a new one has been built. Looking out over the horizon, if we were to advance the construction or the implementation of the BRIK program, which would assist in the financing of and the facilitation of the upgrading and refining in this province, how does that look in, say, 15, 20 years, when maybe some of these other refineries, particularly the capacities down in Texas and Louisiana, are looking at either massive upgrades or decommissioning?

**Mr. Griggs:** I think Alberta is in the medium term in a very good position to compete through upgrading and infrastructure support. The key issue and one of the reasons why Keystone XL, if you like, is so attractive right now is that there is spare capacity in the U.S. Gulf coast with refineries that are configured to take heavy oil. Their heavy oil historically has come from Mexico and Venezuela. Mexico heavy oil is decreasing because of a lack of investment, and Venezuela, of course, for political reasons is choosing to send its resource to other areas around the world other than the U.S. So it's a prime market for heavy oil for Canadian resources. That's why once that 15 to 20 per cent of spare capacity is taken up, given all things being equal, that would then provide the opportunity for Alberta to fully compete.

Your question about looking 15 to 20 years down the road really depends on how you view, in terms of pricing, what would be the price differential between the light and the heavy crudes because it's that differential that allows upgrading to successfully and economically be built, constructed, and operated. If you don't see those differentials being wide enough, then it makes it much more problematic.

**Mr. Anglin:** Would you agree with me that some sort of implementation of the BRIK program on a universal basis would reduce some of the differential on the raw material as we go to a more refined product on the world market?

**Mr. Griggs:** I'm not an expert in price differentials, but suffice it to say that the expansion of the differential recently is primarily because there is almost a glut, if you like, of light sweet crude coming out of the Bakken area in North Dakota. That coupled with the heavy crudes coming out of the oil sands is causing restricted access to that pipeline capacity. So that devalues or at least broadens the light-heavy differential. Once we have pipeline capacity in place, one would assume that light-heavy differential would likely narrow. That would make it, as I said, in the short to medium term more problematic for upgraders here in Alberta.

10:25

**Mr. Anglin:** But you always still have the differential between the finished product and the raw product.

**Mr. Griggs:** Oh, correct. Yes, you do.

**Mr. Anglin:** Okay.

On the issue of environment – and this is a question I posed, the final question to the last presenter – that's a considerable difference in timing on environmental approvals. I'm sure CAPP has looked into this. What are some of the real problematic areas that we should be focusing on as a province to look into this?

**Mr. Griggs:** Well, actually, there are some steps being taken as we speak, the single regulator. We've had a lot of the regulatory process being divided between three or four different departments and regulatory bodies. We're looking now at coming up with developing a single regulator which amalgamates the regulatory work, the ERCB and Alberta Environment. Of course, before that there was sustainable resource development, which is now folded into Environment. So we used to have three or four different regulatory bodies. That is certainly one area where we have yet to see the fruits, if you like, of that work, but it could be supportive of reducing that regulatory timeline.

**Mr. Anglin:** Okay. Could be, would be, should be. What I'm looking for is that I know you've looked at other jurisdictions. What is it that we're not doing right? I mean, we're looking at almost 10 times as much time differential here. Talk about a bitumen bubble.

**Mr. Griggs:** Yeah. It's not so much the process as that the focus of the world is on our industry, so it's almost by necessity. We need to be safe.

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

Our next questioner is Mr. Hehr.

**Mr. Hehr:** Well, thank you very much. Just for the record one of my close and personal friends works for your organization, Aaron Miller.

**Mr. Griggs:** Oh. Yes, I know him.

**Mr. Hehr:** So I get the CAPP perspective. As we often joke, you're the union for the oil and gas companies, but that's just kind of how it is.

In any event you were speaking to the dangers of us possibly expanding the BRIK program too far if and when pipeline capacity becomes available. If and when Northern Gateway or another pipeline goes through, if and when the Keystone pipeline goes in, if those two things go through, do you see the BRIK program as being successful for the Alberta people and something that the Alberta government should be involved in, possibly expand?

**Mr. Griggs:** The bitumen royalty in kind program as it relates to bitumen is a unique tool, quite frankly. One of the steps that industry and government agreed upon was to take a stepped approach. The first chance was going to be for 50,000 barrels of raw material. The whole idea of that was that bitumen is not like conventional crude. It's not easily transportable. It's not homogenous. It can be quite different in quality from wherever the bitumen is sourced.

Even if the BRIK program was going to be sent, if you like, to a proposed upgrader, then you would not necessarily want discrete

sources of bitumen coming from every single operator because no upgrader would want that kind of material. So one of the things we clearly wanted to do between government and industry was to take it in steps, step up the structures, to allow delivery of bitumen from preferred producers, if you like, between a willing producer and a willing recipient, namely the government, and then also to set up the infrastructure to transport that material to wherever the government chose to use the BRIK barrels.

I'm not entirely sure that we want to limit BRIK because of what's happening elsewhere on the planet vis-à-vis the Gulf coast, but we want to make certain that we learn how to use BRIK to the benefit of everybody, and we don't end up stranding investments, we don't strand assets, and we don't make the whole system less efficient.

Does that help?

**Mr. Hehr:** I might turn it over to Raj. Raj had a question.

**Dr. Sherman:** Martyn, thank you. It's really about balance. Life is about balance. You know, we understand it's not practical to refine everything here and upgrade everything here. We heard about the balance of shipping out just bitumen and upgraded product and refined product. The reality is that, moving forward, U.S. energy demands are not going through the roof, and their exploration and development are much higher even than ours. In order of prioritization how would you prioritize access to markets: east, west, south, or north? What is the priority?

**Mr. Griggs:** I'll be cynical. We would take all of the above, Raj. We really do need access in every direction. I think that the previous speaker I heard was talking about the growth in the Asian market. There's no doubt that that's where the growth of development is taking place and where our resource will probably get maximum value. But having said that, there are costs of transportation, so industry looks at net-backs. Consequently, to the degree that the U.S. has capacity to accept our product, it will always be the best market in terms of economic value. But you're right. To access world markets, we are taking such a huge discount right now because we don't have that access. Any one of those pipelines would allow and support growth in the pricing.

**Dr. Sherman:** Martyn, our job is to really not take five, 10 years. You know, I want you to pretend that the union you're representing is the 3.7 million Albertans. We need to take a 40- to 60-year timeline for the decisions that we make today.

With respect to pace of development and the balance, where should the priority of policy-makers be? We've had such investment in the upstream. As I said to the previous speakers, we actually forgot to put the pipelines in before we dug the product out of the ground and forgot to put in the upgrading and refining. Where should the priority be?

**The Chair:** Thank you, Dr. Sherman.

**Mr. Griggs:** Am I allowed to answer that one or not? In writing. Okay. I will do so.

**The Chair:** Mr. Eggen.

**Mr. Eggen:** Yes. Thanks for your presentation. I guess it reminds me of this fact – it's a bit of a rhetorical question. You know, the price differential with bitumen and the west Texas never really goes away, does it?

**Mr. Griggs:** No. There's always a price differential between heavy crudes and light, sweet crude which is referenced by WTI.

What's really hurting us right now is that our key market, which is the Chicago-Midwest area – basically, product is stuck at Cushing; consequently, we can't get our product out.

**Mr. Eggen:** If we take that given barrel of discounted bitumen now, you are considerably narrowing the differential if you upgraded it to at least synthetic crude.

**Mr. Griggs:** That's correct, yes. Synthetic crude is essentially a light, sweet crude, so you're now competing with other light, sweet crudes in the U.S. market.

**Mr. Eggen:** Right. Again, just to confirm this, I mean, any given pipeline can switch much easier from synthetic crude to, let's say, a refined product than if it was a dedicated bitumen line.

**Mr. Griggs:** Bitumen is transported as a dil-bit. It has a diluent, as the previous speaker mentioned, so it's easily transportable. Pipelines can be used for taking almost any product, but as I heard a previous speaker say, those at the refined end prefer not to transport in the pipeline with raw crude, even with pigging and barriers, because of quality issues. Having said that, we need a pipeline for all products.

**Mr. Eggen:** Sure. But you get my point, that you are reducing the differential, probably getting some ancillary economic benefits, and you have more flexible transportation options available to you with at least synthetic crude and so forth, right?

**Mr. Griggs:** Yeah.

**Mr. Eggen:** This other point you brought up here I haven't heard before, but I find it intriguing. Again, tell me if I'm wrong here. It's much easier to match a certain mining source and dedicate that to an upgrader because of the product that they might be pulling from.

**Mr. Griggs:** No. Upgraders are like refineries. They like a consistent, consistent supply of its feedstock.

**Mr. Eggen:** Yeah. And of the nature of that material as well.

**Mr. Griggs:** Correct.

**Mr. Eggen:** So if they're mining from a certain riverbank or wherever they are, then they know what the composition of that is, and that makes it easier to upgrade.

10:35

**Mr. Griggs:** That is correct. Producers all over Alberta – the bitumen is different.

**Mr. Eggen:** Yeah, of course. Sure. Again, does that sort of create an advantage for us to have a focused upgrader here, reasonably close to the source, that, you know, is dedicated to a certain chemical composition?

**Mr. Griggs:** For an upgrader, let's say in the Industrial Heartland, you would be looking for probably two or three suppliers of a certain kind of feedstock source, yes, which would be consistent, and you could also get security of supply.

**Mr. Eggen:** Thanks. This is remarkable information, really.

My last question – I may not make it – is: what would be the viability of, let's say, shipping bitumen east to west and having upgrading capacity along the length of that pipeline? I mean, this is just something I've imagined.

**Mr. Griggs:** There are upgrading capacities. I'm aware of refineries in, say, Ontario that have upgrading. Suncor, for instance, and Shell in Sarnia have upgrading. My understanding is that those companies will be looking at their Montreal facilities as well. So you're very right. And, of course, in B.C. Chevron is also capable of taking heavy crude.

**Mr. Eggen:** Sure. So, I mean, you could do this even in Saskatchewan and then Manitoba as well. As the larger pipe goes along, you can have upgrading capacity for their own needs all the way along, right?

**Mr. Griggs:** Correct. For private industry it boils down to basically economics as to where you would locate it.

**Mr. Eggen:** Sure. Okay. Good. Thank you.

**The Chair:** Thank you, Mr. Eggen.  
Mr. Quadri.

**Mr. Quadri:** Thank you. Thank you for your presentation. Given the knowledge you have about the BRIK program – for example, the North West upgrading project – can you speak to any risk or rewards that you can foresee coming for this program?

**Mr. Griggs:** I wouldn't speak to the North West program particularly because I don't have the knowledge for it, quite honestly.

In terms of the BRIK program from industry's perspective all we were looking for was to ensure that there was no harm, if you like, to current producers; consequently, their assets would not be stranded. If you take BRIK barrels from a producer and apply it through BRIK to another upgrader, you may support one upgrader, but you're now having a less efficient upgrader that was originally designed to take a certain throughput. So you have to be careful, when you take BRIK, to ensure that you're not leaving stranded assets because that makes the industry that much less efficient.

In terms of opportunities for any given upgrader in the Edmonton area it's depending on how they configure it and whatever final product they have. What is their marketability and their access to markets? All of these are part of the equation and need to be decided by the proponent.

**Mr. Quadri:** Is VCI an upgrader in the traditional sense?

**Mr. Griggs:** I don't know. I'm sorry. I can't answer that question. I will take that back and get back to you. Is that a type of upgrading, or is that a company? VCI, is it?

**Mr. Quadri:** I think it is an upgrader company.

**Mr. Griggs:** I'm not in a position to answer that one. I apologize.

**Mr. Quadri:** That's fine.

Do you see the economic trade-off of the increased investment in bitumen upgrading in Alberta compared to the investment in other sectors such as the raw bitumen production?

**Mr. Griggs:** Upgrading is, if you like, a well-understood industry. Major producers are making decisions all the time as to whether they choose to upgrade or not, as the case may be, based upon their view of the economic value. So take your cue. Can we do it more efficiently, more effectively as a province, or are there other opportunities elsewhere that would have a greater payback? I couldn't answer for other industries, but what I can say is that upgrading is a well-known technology, well-known engineering,

and decisions are made each day on whether to go ahead or not, as the case may be, based upon the economics and access to markets.

**Mr. Quadri:** How much is it, do you think, for private entities to get into the bitumen upgrading program or bring a new upgrader into Alberta?

**Mr. Griggs:** As I said in my presentation, it makes upgrading a little easier if you have it attached to a specific facility either downstream or upstream. In other words, if you have an upgrader attached to a mining operation or a SAGD operation, you can get economies of scale in synergy. Conversely, if you attach it to a refinery, you can also get similar synergies. We have operators that follow either model. I'm not in a position to talk about new upgraders that don't have either resource but, I believe, are planning on attaching it to the end final refined product.

**Mr. Quadri:** Thank you.

**The Chair:** Thank you.

Dr. Sherman, you'd like to read a question into the record?

**Dr. Sherman:** Thank you.

**The Chair:** Hopefully, you will get a written response.

**Dr. Sherman:** I understand the economics for many of your members to build refining capacity in Alberta, the expense and the cost. What is the appetite for them to build refining and upgrading capacity across the country in some of the have-not provinces, where their unemployment rates are higher and there's an opportunity to do it more cost-effectively?

**Mr. Griggs:** From a refiner's perspective it makes economic sense to be very close to your end user, if you like.

**The Chair:** I'm allowing this response because we have about a minute left.

**Mr. Griggs:** Oh, really? I apologize. It's going to be written. I'm more than willing to provide a written submission.

**Mr. Anglin:** And I actually would like a large written submission.

You made a comment that government can make a difference to targeted investments, and I would like you to elaborate on that. How does a government target, and how does it do it fairly so it applies equally to the entire industry?

**Mr. Griggs:** Okay.

**The Chair:** Good. Any others?

Thank you very much, sir.

**Mr. Griggs:** Thank you.

**The Chair:** A good presentation.

Now we will take a 15-minute break, and we will come back to discuss the next presentation.

[The committee adjourned from 10:42 a.m. to 11:01 a.m.]

**The Chair:** Ladies and gentlemen, Mr. Deputy Chair, again I'd like to call this meeting to order.

We have a cancellation and a little bit of discussion here. I wish to advise the committee that Value Creation Inc., VCI, yesterday evening cancelled its scheduled presentation due to an urgent business matter. They have asked if the committee would be willing to hear from them at a later date although they did not state

when that might be. Our committee clerk contacted Mr. Chung to advise that the committee was completing this part of its review today and that there weren't any other dates scheduled to receive oral presentations.

I put the question to the committee. Do you wish to accommodate VCI at a future date? I will open the floor for discussion.

**Mr. Quest:** Well, I think we probably should. I myself have done some reading on what it is they're proposing in the Fort McMurray area, but I'm still quite confused about what their plans are. I'd like some clarification myself. They're apparently working on some new technology. I understand that they want to drill some test holes and, from other conversations we've had, that they want to mine up there. So I'd like to hear from them at some point myself, yeah.

**Mr. Dorward:** Well, conversely, five of the six that are going to present to us today rushed, likely with very short notice, to get ready for this meeting. I don't know if it's appropriate to have somebody that just bows out be let in the door without – the others may have wanted to have some extra time to prepare a presentation as well. I don't know. Maybe there's a middle of the road there. We can say to this group: well, you can embellish your – I mean, let's face it. I think that was a one-page or a two-page submission that we got. Maybe we say to them that they can give us a longer submission or a more thorough report. I'd just offset what Mr. Quest said.

**The Chair:** Okay. Mr. Rogers.

**Mr. Rogers:** Well, thank you, Mr. Chairman. I would follow Mr. Dorward's thoughts. It's really tough. You know how hard it was for us to work with everybody's schedule to get this full day. I, too, would like to get some thoughts from this particular enterprise, but I, too, would support suggesting that if they have the ability to send us something in writing, if we're able to consider it as we move forward, we can do so. But I certainly wouldn't – my schedule won't allow me – offer up a particular day to deal with them alone.

**The Chair:** Thank you.

Mr. McDonald.

**Mr. McDonald:** Thank you, Mr. Chair. I also agree. I think that we've tried to extend every opportunity for people to attend. If they're not able to attend, then I think that we have a pretty well-rounded group of individuals presenting here today, and I think that the ideas will be held throughout the committee.

Thank you.

**The Chair:** Okay. Mr. Quadri.

**Mr. Quadri:** Yes. I agree with my friends Everett McDonald and George Rogers and David Dorward. Yeah, I don't think so.

**The Chair:** Any other discussion?

**Mr. Eggen:** Sure. I mean, for what it's worth. I've read – in fact, this company was in the newspaper on the weekend or a few days ago, and it was very interesting. I certainly wouldn't want to dissuade them from giving us a fulsome picture of what they are intending to do and how they're going to do it. But I recognize that scheduling is a huge problem – right? – so, you know, a written submission is probably good enough.

**The Chair:** Am I hearing correctly that we would allow them to submit a written submission but not schedule another meeting? As you all know, we will be going into session in the next few days, dealing with session issues and estimates. We have a very tight timeline. We have to present our report by April 30.

**Mr. Quest:** Mr. Chair, I'm okay with a written submission, too. I would like more information on what it is they're doing up there.

**The Chair:** Okay. Peter.

**Mr. Sandhu:** Yeah. I also agree with all my other colleagues. We need to have a written submission and see what they're doing. A meeting is a problem with the scheduling, but participation is what we'd like, to see what they're up to.

**The Chair:** Good. Thanks.  
Everett.

**Mr. McDonald:** Thanks again, Mr. Chair. I hate to belabour this, but we did ask for submissions before, and we got a one-pager. You know, I don't know what we're going to get. We have a deadline that we're working with to have a report. If you're going to extend the opportunity for them to submit, we did that once already. They're not here today, so thank you very much for your time, and we need to move on with our reporting. That would be my suggestion.

**The Chair:** If the opinion of the committee is to allow them to submit a written submission, how much time should we give them? I was thinking about two weeks, until March 16.

**Mr. Bikman:** Well, if he was ready to come, but something came up, then his submission is already ready. So let's just ask him to send us his slides with a little bit of added narrative if he needs to, and we're okay, I think.

**The Chair:** By what time?

**An Hon. Member:** Next Monday?

**The Chair:** They won't be ready. I mean, it took them two and a half months to send a page and a half.

**Mr. Rogers:** If they were coming today, Mr. Chairman, with all due respect, then I would assume they would have brought something. If they're willing to submit that something, we'll have it. Other than that, we'll thank them for their interest or lack thereof.

**The Chair:** Monday, March 4, providing that we let them know today. Okay.

Now, we do have a similar issue that we were going to discuss before this one came up. It is under other business and can be dealt with now as we have time for this discussion. We have received a request from an organization called IHS CERA, which will be releasing a report titled *Extracting Economic Value from the Canadian Oil Sands: Upgrading and Refining in Alberta or Not* in the next few weeks. They have asked to submit this report to the committee for consideration during its review of the BRIK program. What are the committee's thoughts on this request?

**11:10**

**Mr. Bhardwaj:** I think, Mr. Chairman, we've gone over this a couple of times already. We asked for submissions a long time ago, when we first began. A number of people and companies who were interested have made their submissions. If we keep opening

it up, I don't think we are going to be able to meet our timelines and time commitments for when the report has to be written. So, respectfully, I would have to say no.

**The Chair:** David.

**Mr. Dorward:** I didn't have my hand up, but I'm always willing to comment.

**The Chair:** I thought you did. Sorry.

**Mr. Bikman:** That wasn't his hand; that was his hair.

**Mr. Dorward:** Yes. Thank you. It's going to get worse. The reference there was to my hair. I'm actually going to grow my hair long till next February and donate my ponytail to Kids with Cancer to make wigs. Thank you for allowing me to mention that on *Hansard* and tell everybody. So when they see me, that's why I will have long hair.

I don't know that receiving a report is going to slow down our report. I'd like to have as much empowerment as I can. I don't think this, you know, prohibits. I think it's good. I think we should receive it and do with it what we can.

**The Chair:** Okay. Mr. Bikman.

**Mr. Bikman:** All right. I think we should also receive it. This isn't a competition, where the ones that make the best presentation win a prize. We're here to gather as much information as we can. That's why I'm in favour of receiving the tardy homework. I think there's a benefit to getting more information, too, so I would say yes.

**The Chair:** Thank you.

**Mr. Sandhu:** Well, Mr. Chair, it's not stopping our work. They're only talking about a couple of weeks. I'd like to see their report, too.

**Mr. Bhardwaj:** Mr. Chairman, in all fairness, if that's the will of the committee, I think we should open it up to anyone who wants to submit, not just be limited, then, to a company. You know, if we're of the opinion that more information is good information, then let's just open it up and extend the deadline again and say: "Hey, this is what we're doing; we're extending the deadline for another couple of weeks," and whoever wants to submit, let it be instead of just saying all of a sudden that now we're going to open it up for this one but not for the other ones. I think that to be fair, let's just open it up if that's the route the committee wants to go.

Thank you.

**The Chair:** Mr. McDonald.

**Mr. McDonald:** Thank you, Mr. Chair. Well, we extended it last time we had our meeting. It was suggested that there were a couple that may be interested in submitting, and we asked them to submit if they wanted to. We extended the timeline for them. Whether they applied or not, I'm not really that sure. But we can keep extending this forever and ever, and we're going to continue to get somebody that will say: well, maybe we should get a kick at the table. I think we've done our due diligence. We've asked if there's an interest out there in the BRIC program and asked them to submit, and we're here today doing that. I think we've done our due diligence. If we continue on with this, we'll be meeting till June.

**The Chair:** I must advise that this company was not on the stakeholders list. I think they found us; we did not find them. We did not seek them. They found us.

**Mr. Bhardwaj:** Mr. Chairman, the question remains the same. There could be other companies who may find us. They may not be on our stakeholders list. I mean, I have no problem with someone submitting, but let it be open that, hey, if there is someone else who finds us and they're not on our stakeholders list or the invitation list, open it up.

**The Chair:** We can't have it open forever. You know, we have a deadline that we have to abide by. I mean, if we are allowing VCI to make a submission by Monday the 4th – okay? – I think we should allow this company the same courtesy.

Mr. Dorward.

**Mr. Dorward:** Yeah. I totally agree. You know, I'm out on social media telling people that I'm doing this, and if that gets passed on to somebody else and they have some information – I just don't think we stop our process. We continue with any dates we set, any individuals who are going to get together to write the report, and as time approaches towards finishing the report, it would have to be a fairly serious, huge bunch of information that would change the direction of that report. Certainly, up to that time information that comes to me on Twitter or Facebook or e-mail or something all factors into things.

**The Chair:** So are we in agreement that we advise this company to make a submission by March 4 to coincide with . . .

**Mr. Rogers:** They mentioned a couple of weeks.

**The Chair:** Yeah. They said a couple of weeks. Or they said: in the next few weeks.

**Mr. Rogers:** That's right. It could be a month.

**Mr. Dorward:** I don't think that's really relevant. We're not going to change our process. We will receive their report as soon as they can get it to us, in my opinion, and then whatever stage of the game we're at, we'll proceed.

**Mr. Rogers:** If I may, though, Mr. Chairman.

**The Chair:** Yeah.

**Mr. Rogers:** Let's be clear. What do we intend to do with that? I mean, we have a research department, Dr. Massolin and his team. If we're intending to do something to analyze that report in some form, we have to tie it into some window. A few weeks – and I read "a few weeks" here; it's not a couple, not two – could be some time in the future. I don't know how we can accommodate that. If they have the ability to provide something in a shorter window, we may – and I stress: may – want to consider it. But we have a process and people working to help us digest this stuff, so I don't know how we can just leave them out on a limb by saying: well, you know, if we get this in a few weeks. If we don't intend to do anything with it, why bother taking it? So I offer those comments.

**The Chair:** Okay.

**Mr. Bikman:** I tend to agree with that except that our mandate, I think, is to gather as much information as we can and then submit a report. If this report comes in too late to be considered and to be processed through the research department, it's still there for us if

we want to look at it on our own and add to our fount of knowledge. I think it can come in, but we can't give them any guarantee that there's actually going to be time for it to be considered. But we welcome the submission.

**The Chair:** I think Dr. Phil is suggesting that March 15 would be a workable, appropriate date.

**Dr. Massolin:** Can I just elaborate on my response?

**The Chair:** Okay.

**Dr. Massolin:** Not to anticipate any item on the agenda, but I would think that this report would have to be considered within the framework of the report-writing phase. So that means that, yes, of course, the entire committee is involved in that, but perhaps the subset of the committee working group would have that available to help them in their deliberations and preparation of the report. Certainly, we would assist in that as the research support to the committee and the working group. I would suggest that if a submission of this report happens within that time frame, which would extend over the next few weeks, perhaps in line with what you're suggesting, Mr. Chair, depending on how this all plays out, it would be workable.

**The Chair:** Okay. So if we agree on March 15, can we extend the timing for VCI to present at the same time? I mean, we have to be fair to both of them.

**Mr. Dorward:** Well, no. There's a big difference there. VCI has already had a ton of time.

**Mr. Quadri:** I think VCI is done. They can just send it right away. They must have had something ready for today, anyway.

**Mrs. Sawchuk:** Did you want me to speak to them?

**The Chair:** Sure. Go ahead.

**Mrs. Sawchuk:** Thank you, Mr. Chair. Actually, we had received a presentation from VCI with respect to their presentation today. They've actually pulled that back, and the request that was received last night just refers to

very urgent business, incidentally related to Upgrader Project of significant implications to Alberta sustainable economic growth. We would request another opportunity to present to the committee in greater depth at a later date.

They've advised that they are redoing their presentation based on this urgent matter that they're dealing with. So we don't in fact have anything right at this moment. They've pulled it back.

11:20

**Mr. Bikman:** Excuse me. Isn't it, then, the same issue? If we get it in time, we'll consider it. If it comes too late, then it won't factor into our report, but again it's knowledge on the library shelf.

**The Chair:** Okay. Do we have an agreement on that? All in favour of March 15?

**Mr. Rogers:** For both?

**The Chair:** You know, I would say for both. I mean, let's be fair to both of them. Okay. All in favour? Great. Thank you.

The U of A has informed us that they'll be here in 15 to 20 minutes, so we can take a 15-minute break.

[The committee adjourned from 11:21 a.m. to 11:37 a.m.]

**The Chair:** Good morning, ladies and gentlemen. Again we would like to call this meeting to order. Before I do that, I would like to ask each and every one of us around the table to introduce ourselves, including those who are participating via teleconferencing and those who are substituting for other members.

I will start. My name is Moe Amery, MLA for Calgary-East and chair of this committee.

**Mr. Bikman:** Gary Bikman, Cardston-Taber-Warner MLA and deputy chair.

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

**Mr. Rogers:** George Rogers, MLA, Leduc-Beaumont.

**Mr. Quadri:** Sohail Quadri, Edmonton-Mill Woods.

**Mr. Bhardwaj:** Naresh Bhardwaj, MLA, Edmonton-Ellerslie.

**Mr. Quest:** Dave Quest, Strathcona-Sherwood Park.

**Mr. Dorward:** I'm David Dorward, MLA for Edmonton-Gold Bar.

**Mr. McDonald:** Everett McDonald, Grande Prairie-Smoky.

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

**Mr. Eggen:** David Eggen, MLA for Edmonton-Calder.

**Ms Olesen:** Good morning. Cathy Olesen, MLA, Sherwood Park.

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

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

**The Chair:** Do we have somebody joining us by teleconferencing? No? Okay. We will go with what we have.

Before we start the presentation, there are a few housekeeping items. The microphones are operated by the *Hansard* staff. This meeting is open to the public, recorded by *Hansard*, and streamed online.

The presenters will have 20 minutes for their presentations, followed by 20 minutes for questions from committee members. We will use the timekeeper, which is Karen, to keep us on track.

Would you please introduce yourselves? The floor is yours.

**Dr. Kumar:** I'm Amit Kumar, an associate professor at the University of Alberta in the department of mechanical engineering.

**Dr. Silva:** Emilson Silva. I'm a full professor in the Alberta School of Business.

**Dr. Scherer:** I'm Stefan Scherer with the School of Energy and the Environment and the VP research office at the University of Alberta.

**The Chair:** Thank you.

Please proceed.

#### University of Alberta

**Dr. Silva:** I will start, and Dr. Kumar will complement my presentation. I will cover initially the economic analysis, and I will start with some of the information that I'm pretty sure you are very familiar with, which is the program's main objectives.



Essentially, there are three main objectives: foster value-added oil sands development, enhance the transparency and liquidity in the bitumen market, and share in the differential gains and risks between synthetic crude oil and bitumen. I think that one way of looking at this is that we can understand this in a more general framework in which the main goal or the general goal should be to maximize the value of resources in Alberta.

The potential rewards of the program. The potential rewards are primarily that refined products may yield higher profit than bitumen and the feedstock in offering that in the market. Second on my list but also important is that upgrading generates jobs in Alberta, upgrading increases investments in Alberta, upgrading augments the industrial cluster in Alberta, and upgrading endows the government of Alberta with bargaining power vis-à-vis downstream buyers. I'm sure that there are many other potential rewards, but I decided I should keep the list as simple as possible.

As for the potential risks I would say that one of the flip sides of the potential benefit of the profit is the downside of potential lower profits or even losses from selling refined products rather than bitumen if future bitumen prices rise. Future bitumen prices will rise for sure if we have the approval of Keystone XL or the approval of Northern Gateway or potentially another type of pipeline that might be developed between northern Alberta and the Northwest Territories; I have heard of a particular project that may take place. Upgrading will increase the oil and gas industry's environmental footprint in Alberta. Long-term bitumen supply commitment in the current plan, if I'm not mistaken, is, like, 30 years.

Excess capacity in heavy oil refining. This is in North America. In particular, the Midwest is building up some refining capacity for heavy oil. Also, in California and Washington they have some capacity for heavy oil. There are declining local supplies from California, for example, so there might be some room for Canadian oil to replace that. Then, most importantly, is China. China already has a lot of capacity and is also planning to expand their capacity quite a bit in the next few years. So those opportunities should be taken into account.

Rising production costs due to labour and capital investment shortages that we face and are likely to face in the future.

Higher carbon prices around the globe. Many countries are now engaging in policies in which they want to tax carbon, and that may lead to a substantial switch from diesel transportation models to other types of transportation models. I'm thinking in terms of large fleets. They may use natural gas, so that may pose a potential risk in terms of the production of diesel.

Higher supplies of unconventional natural gas, shale, around the globe are increasing, say, in the United States and also in Canada but in many other parts of the globe.

High costs of building and maintaining the refining facilities. This may cause a high contribution from taxpayers.

Those are the potential risks. Also, the list could be longer, but then I decided to keep it as simple as possible.

As for the costs and benefits of upgrading in Alberta relative to some other places, I would say that one would have to take into account the risks and rewards above. Most important, in computing the costs and benefits, we would use a long-term perspective. We look at the present value of costs and benefits. That would depend on potential scenarios that we may face. The potential scenarios, as I alluded to before, could be the Northern Gateway being approved, the Keystone XL being approved, and higher refining capacity in the U.S. and China. We have to take that into account. There is also the business-as-usual scenario. You know, what would happen if the circumstances remained the same for a long period of time, say, the next 20 years? One way of

looking at this would be to place some probabilities on those scenarios. Then one would look at an analysis in which we would take into account uncertainty, and then we would generate an analysis based on the best probabilities that we could find given the information that we have available. Then we would look at the costs and benefits based on that.

*11:45*

Environmental impacts of increased bitumen upgrading in Alberta. There are some pros, production of liquid CO<sub>2</sub>, that could not be neglected. There is also, then, a further stimulus to carbon capture and storage, CCS, and enhanced oil recovery. In terms of the cons: increased environmental footprint due to higher emissions of air pollutants like SO<sub>2</sub>, NO<sub>x</sub>, and greenhouse gases and higher utilization of water and ground resources.

In terms of increased bitumen upgrading versus other public investments in Alberta currently there are some investments in education in green R and D programs, and these types of programs may in fact yield higher social returns than the BRIK program or increasing the BRIK program, so one would have to take those into account in computing. Of course, you know, that requires an analysis in which one would look at: what are the potential returns from those investments compared with the potential returns from the BRIK program?

With that, I will pass it to my colleague Dr. Kumar. He is going to talk about assessment and cost assessment and other types of strategies that we could use to learn more about the specific problem.

**Dr. Kumar:** Thank you, Emilson. What I wanted to focus on is that, basically, you see that there is debate over whether we upgrade it in Alberta, export bitumen, or refine it in Alberta. I mean, these are the issues there. If you think about the information that we have, from our perspective still there is limited information on comprehensive cost and environmental assessment in various scenarios that Emilson alluded to, and it requires a systems analysis, which is kind of a new concept which is coming in – there is a lot of interest in this – where you look at the whole energy system in a holistic way and try to assist the systems where you have interactions between different types of, say, energy supplies.

Now, the cost assessment aspect of it. Probably one of the things which is key and is required is on development of a technoeconomic model which could help us in understanding, say, the synthetic crude oil production in Alberta and its delivery to the U.S. market. We do have information on it, we do understand it, but in understanding it in the different scenarios, what if this happens? How much are the different components of the cost which is there to the U.S. market? We also try to understand a comprehensive assessment of the scale issues. What size should we build? Yes, we know that there is a refinery coming to Alberta. What are the issues which are there which dictate the optimum scale of these refineries? Could we go bigger, smaller? Which makes more sense for Alberta?

Again, the other aspect that we need to understand is that we do look at SCOs, but we look at: what are the cost assessments in terms of refined products? What are these costs? Again, what I'm referring to is more of a comprehensive assessment, which is publicly available data, more credible, where you could get input from a number of sources on these and again the scale issues in these kinds of refineries.

If you talk about whether we should upgrade it, transport, say, crude oil, transport refined product, there are key trade-offs which govern this, and the key trade-offs are in terms of energy density

and mass density. When I talk about energy density, so the amount of density per unit volume, if you look at, say, bitumen, in terms of energy density it will be lower compared to what you get out of one cubic metre of diesel. On the energy side it has a negative point, or it is not as competitive compared to the refined product. But on the mass density side, when you look at it – so that is kg per cubic metre – again there is a trade-off. These issues govern how much the delivered cost is of these in different markets.

Understanding different modes of transportation. If you look at the different modes of transportation, the key components there are your fixed costs and the variable costs of these different modes. Now, when I talk about fixed costs, it could be dollar per kg or dollar per tonne or dollar per barrel. If you look at these different modes, what you're looking at in the variable cost terms, you will have the lowest cost with a ship. I'll come to that, where that plays into different scenarios. But dollar per tonne per kilometre would be lowest for a ship. This would be then followed by pipeline and then your rail.

But then there is a trade-off when you look at markets which are longer distances, so for example markets in Asia. You do have a combination of modes which can get you there, and there are a lot of trade-offs which need to be made, so again understanding the delivered costs of these different components and how this plays in. Then that could also lead to some of the issues that we have with the pipeline bottlenecks.

In assessing the market conditions for these which could make it more attractive, I'd also like to point out that if you think about Canadians, just Canada as a country, the eastern part of Canada, we need to understand: where do they get their refined products? It's from the U.S. Now, if there is a situation we cannot expect where, for example, we cannot export our crude, can something be done which makes it more possible for us to transport it or to deliver it to eastern Canada so that the Canadian economy is independent in addressing our energy needs?

The other key scenario that probably needs more assessment and understanding is in terms of, say, business as usual, no Keystone. You can't transport. Possible scenarios to China: as Emilson alluded to, China is developing capacity, and we know that there is a huge demand for energy. But whether it could be in the form of bitumen or it could be in refined products, that again has a lot of trade-offs which need to be assessed. I mean, at the University of Alberta we are building the Sino-Canadian energy and environment research and education initiative, where we had discussions on different supply chains of energy to China: in what forms, what the delivered cost would be, and other aspect assessments for these which we could build on. We probably need a clear assessment in those terms.

To Europe. We don't talk about Europe, but there could be a scenario where you think about, say, Germany. They get their refined product, predominantly oil, from Russia and probably the Middle East. The political uncertainty is there. Now, if we get it all the way to the east coast, transport it from there to Germany, yes, the delivered cost might be there, but we don't know what the premium is that Germans have to pay compared to what they have from Russia. Are they willing to pay for a secure oil or a secure petroleum product? There has been some discussion. Again, the University of Alberta has a big initiative, the Helmholtz-Alberta initiative, which has been there for the last three years. There are some discussions in this respect, which could be again used to build on these scenarios if there is a possibility.

The possibility of export to other provinces: I alluded to that. That is another key aspect. This is in terms of cost assessment.

When you look at the whole energy systems analysis, it's not only the cost. It comes down to the environmental footprint, too,

not only in terms of GHGs but also water issues, the water footprint, how many litres of water you need to produce a litre of bitumen or refined product through a number of technologies, a number of scenarios. That is another key aspect, and you will see that now people are talking about most of these over the life of these pathways, the life of the product.

### 11:55

The third one, land-use footprint, again, looking at how many kilometres of land are disturbed when you produce a barrel of, say, crude oil or bitumen from a certain pathway or a certain product. That is another key aspect that is required.

In terms of environmental scenarios, again, we need to assess these for different scenarios over life cycles. Now we are focusing more on not only the conversion process but all the way from the production to its use.

The environmental issues in case of a spill. Now, there are, again, trade-offs. The spilling of bitumen is different than the spilling of the refined product because of the way it reacts after it is spilled. Those issues need to be assessed.

The other key understanding that we need to have is that now we talk about longer distance of transport, longer delivery, and larger scale of transport. One of the key issues which is important to understand – this comes up, and people have done this with other forms of energy, too – is looking at actually how many megajoules or how many units of energy you put in to get a megajoule out, to get a unit of energy out, for the different scenarios. If it doesn't make sense, probably you won't do it. The whole approach that needs to be taken is kind of a study which is credible, independent, publicly accessible, and is a science-based assessment. In terms of a comprehensive assessment both economic and environmental issues are important.

That's what we have to say. We'd be happy to answer any questions.

**The Chair:** Well, thank you very much, Dr. Silva and Dr. Kumar, for your presentations.

We will open the floor for questioning, starting with my dear deputy chair, Mr. Bikman, representing the Wildrose caucus.

**Mr. Bikman:** Thank you very much. It's a pleasure to be here today with you and to learn from you. A couple of questions. On your second slide, "Enhance the transparency and liquidity in the bitumen market," what did you mean by liquidity, the physical properties or financial?

**Dr. Silva:** When we think in terms of liquidity, it would be financial and also physical properties, right? The physical properties would be in terms of liquidity, in terms of refining the products, so I'd look in terms of refined products. In a sense, then, it goes from a heavy to a more liquid type of asset. But then I think that the most important would be the financial aspect in terms of liquidity in the markets or what we can actually gain in terms of market value.

**Mr. Bikman:** You're suggesting that the upgrading, then, makes it – well, obviously, it's worth more, but is that what you're observing?

**Dr. Silva:** The upgrading per se is making a higher value product. Of course it does. But then the question that we should ask ourselves is in terms of the relative costs, the relative benefits. Even though you can go in and potentially can get a higher value in terms of, say, diesel, if you refine the product, then the question is that there is a whole production process that you must take into account and then

the cost of producing that value. If that were free, there is no question, right? We'd go with the higher value and then produce that at zero cost; no problem. Then the question is whether the additional value that you get from refining the product is worth while if you take into account the cost, the additional cost that you have to incur in order to produce that product.

**Mr. Bikman:** The market would determine that, right?

**Dr. Silva:** The market will determine that, yes.

**Mr. Bikman:** Okay. Second question. In the potential rewards: "Upgrading generates jobs in Alberta." Did your study or your research estimate what the number of jobs would be and what the dollar impact on the economy would be?

**Dr. Silva:** We have not carried out a study, but Alberta Energy has carried out a study relative to this particular type of project. According to their study, then, it was worth while. The number of jobs generated would be – I'm not sure right now what the estimate is. Taking that into account, then, the project was deemed to be worth while.

**Mr. Bikman:** Thank you.

Under potential risks is lower profits from selling refined products rather than bitumen if future bitumen prices rise. Can you explain that relationship? It wasn't clear to me as you presented it.

**Dr. Silva:** Well, let's just say that the crude closest to the WCS, that we produce, is the Maya crude. That is the closest in terms of quality. The Maya right now is selling at over a hundred dollars per barrel in the international market, so there is a huge discount that we are facing relative to, let's say, the potential benefit that we would have if we had access to the same markets that the Mexicans have.

The Mexicans sell a lot of their crude on the U.S. Gulf coast. That is the Keystone, right? So if we have access to reducing the bottlenecks that we face in terms of the pipelines, if we have access to those markets, since they have excess capacity in terms of refining, then we would be competing with the Maya. That would substantially increase the price for bitumen that we would receive. That's one option.

The other option is to have access to the Asian markets, so with the Northern Gateway or even with an expansion of the Trans Mountain project. As we increase that market access, then what would happen is that our bitumen would also increase in price.

**Mr. Bikman:** Okay. Thank you.

**The Chair:** Time is up. Thank you very much.

**Mr. Hehr:** Well, thank you very much for your presentation. I read a recent article in *Alberta Oil* magazine by Roger Gibbins, saying that Alberta needs to double down on the development of heavy oil. I tend to agree with many of the things he said. You know, you say: wait for the market to decide. Well, the market has already decided. Refining and bitumen upgrading will not be done in Alberta unless government flexes its muscle and says: we're going to do what Peter Lougheed did and we're going to have a petrochemical industry and bitumen upgrading in this province. Is that a fair comment that I just made?

**Dr. Silva:** I would say that when you're thinking in terms of the market, those who operate in the market are the ones who have first access to all the information. They are rational decision-

makers, and the way that they evaluate alternatives is on a cost-benefit analysis – right? – in terms of profits and so on. Their decision would, in fact, point out that their expectations are that it's much better to refine elsewhere than to expand refining capacity in Alberta.

**Mr. Hehr:** Regardless, government should not care about what is in their best interests; they should care about what is in the people of Alberta's best interests and how to maximize value to the Alberta people.

In your view, is that through the development of the expansion of the BRIC program, using government muscle to set up a refining capacity and the like, regardless of the market? What is going to return more value to Alberta as a people?

**Dr. Silva:** Okay. That's a fair question. I have 2011 figures in terms of the demand for Canadian crude. The total was 2,855 kbd. So multiply that 2,855 by a thousand, and that's barrels per day, right? If we look at it in terms of what the demand looks like, Alberta commands 14.3 per cent of the total, so it's about 424. The largest amount goes to PADD 2, which is a refinery complex in the Midwest. That goes for 1,430, so it's about 50 per cent of the total. If you look at even in terms of Canada, Canada is consuming less than 30 per cent of all the oil that is being produced in Alberta.

As for refining, typically in the refinery economics refineries are built to serve the local market. In that sense, then, 14.3 per cent would point towards having some refining capacity. But we already have a lot of refining capacity in Alberta. Some of that is private, right? I believe that we have five bitumen upgraders that have the potential for 1.3 million barrels per day. Then we also have four oil refineries that can produce 450,000 barrels per day. So the question that one should pose is in terms of just looking . . .

**12:05**

**Mr. Hehr:** Well, I want you to answer it. That's why you're here. But I don't want to give you a hard time.

**Dr. Silva:** Just looking in terms of the economics, then, having this refinery built provides some needed support for the current market and then generates the other types of benefits that I mentioned like jobs and more investment. But then it also generates some costs in terms of environmental damages and other things, right? All of that has to be taken into account.

**Mr. Hehr:** Okay. Thank you.

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

**Mr. Eggen:** Thank you. Thanks for your presentation. I just have a couple of questions. It seems clear – and correct me if I'm wrong – that your presentation, starting from slide 3, would suggest that the more bitumen pipelines we build, the less likely we can in fact build a viable upgrading industry here in the province of Alberta. Is that correct?

**Dr. Silva:** That's correct.

**Mr. Eggen:** That's mostly due to how we would increase the price of the bitumen based on our capacity to export more of it.

**Dr. Silva:** Yes.

**Mr. Eggen:** All right. Now, permeating many of your slides, I find, is again a very sort of oblique, unclear situation here with the

bitumen refining and upgrading capacity of both the United States and China. You've put those in sort of a market analysis of circumstances that are unsure, which would suggest to me that, in fact, they don't have that extra upgrading capacity that has been so much touted here in the media and so forth in the last few weeks and months. Correct me if I'm wrong, but I'm asking you: would they be building that extra heavy oil capacity to meet the needs of the bitumen coming to them once we build the pipeline, or do they already have it sitting there waiting to take all of the Alberta bitumen, and they can handle it all now?

**Dr. Silva:** That's a good question. I wouldn't say that we would monopolize the Asian market or the U.S. market. I think that we should think in terms of our portfolio analysis, which, of course, we're going to be selling to the U.S. The question is whether we're going to be selling less to the U.S. if we have access to these other markets.

Now, in terms of capacity China nowadays has the capacity of refining 500,000 barrels per day of a WCS type of crude.

**Mr. Eggen:** Of crude oil?

**Dr. Silva:** Yes.

**Mr. Eggen:** Of synthetic crude oil but not bitumen, right?

**Dr. Silva:** Well, yes.

**Mr. Eggen:** Yeah. I mean, this is a big problem. I'm sorry. You know, people mix up bitumen and crude oil so fast and easy. We know the difference between the two, and we make money from taking one to the other. I think it's really important. For example, again, you talked about the Maya crude. I guess my question is: is that the most reasonable facsimile to bitumen? Is that what you were trying to say?

**Dr. Silva:** Yes.

**Mr. Eggen:** Right. But it's not bitumen in any shape or form. It's still a crude oil. It's a heavy oil, in fact; it's not a bitumen. Again, for us to somehow put those two prices together and say, "Oh, wow; look how much we're losing between the two," is like comparing two completely different things.

**Dr. Silva:** Yes, I agree. In terms of WCS, as far as I know, only four companies are producing that – right? – Suncor being one of them. There is a process in which you have to upgrade from bitumen to WCS. There's no question about that. So there is a need for doing this.

Then the refinery capacity that I alluded to is one that has to take into account the specifics of the particular type of bitumen – right? – the correct statistics and so on. Also, as Dr. Kumar mentioned, one would have to take into account the transportation costs and other types of relative measures. For example, there is an estimate by a recent study that the transportation cost to the U.S. west coast would be in the range of \$1.60 per barrel whereas China would be an amount of \$3 per barrel. One would have to take those things into account as well as, like I say, the hardware of the refineries and the specifics of the bitumen. Then that would require an analysis that is more comprehensive in the sense that you would have to take those things into account and look at the pros and cons.

**Mr. Eggen:** Yeah. Sure. I appreciate that.

My final question. I find it very interesting how you talked about energy it puts in and energy it puts out. We know that

because of the requirements of extra energy to bring bitumen up to the useful product, let's say, combined with the transportation because we're dealing with a product that's in a very isolated part of the world, of course, that means that we'll always have a considerable price differential, that we shouldn't be suddenly bringing up conveniently when we need to cut the budget of this provincial government, right?

Also, you know, isn't it better in terms of megajoules in, megajoules out that you, in fact, as a business are closer to where you're making that conversion? That's where you can make more money.

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

Perhaps you can respond to Mr. Eggen through the committee in writing and we will forward it. Thank you.

Mr. Bhardwaj.

**Mr. Bhardwaj:** Thank you very much, Mr. Chairman. Thank you very much, gentlemen, for your very interesting presentation this morning. We've been looking at presentations from the industry. In your slides you talked about both potential risks and rewards associated with increased upgrading here in the province of Alberta. What do you think, in your mind, is really a balance between both the rewards and risks? That's my first question in terms of the rewards and risks. How do you think this balance is achieved? Industry has got their point of view of what they think is the right balance. In your mind, in terms of the rewards and the risks and achieving the balance, what do you think that is?

**Dr. Silva:** The government of Alberta also has in mind figures that would essentially point out that they're less optimistic than industry in many accounts. They estimate between \$200 million and \$700 million in terms of the return, the present value. Then if one compares that with the \$500 million that Mr. MacGregor mentioned, you know, that we would have made, say, last year if we had this in operation, it is a very small amount.

One way of looking at this and comparing the true figures is to say that the government of Alberta has an expectation that the current situation we face in terms of the price differentials will be resolved sometime soon. I haven't looked at the figures in this study in particular, but in their estimates they are probably accounting for short-run gains and then losses in the longer term, so if we have expansions in pipelines and reduce the bottlenecks and so on so that the price differentials then go the other way. But they still view that as being on the positive side. That is in terms of one facility – right? – producing in this facility, taking into account all the costs of building up the facility and maintaining the facility and so on and so forth.

I have not seen their study, but I think that their study is probably close to the mark that I would also agree with. If one would take into account the current volume that might be processed, say, in a phase 1, 37,500 barrels per day, and then even include phase 2, in which they also increase by 37,500 per day, having a total of 75,000 barrels per day, that is probably – I'm saying probably because I have not carried out this study – a good way to go in terms of diversifying the portfolio.

In terms of looking at the BRIK program, I would say that I would agree with those estimates that they've come up with, not the overoptimistic estimates that, say, Mr. MacGregor was talking about.

12:15

**Mr. Bhardwaj:** So, in your mind, how is this balance then achieved, and what are the potential risks?

**Dr. Silva:** As I said, in terms of balance – and I think it's not a clear balance because the balance would be like zero, right? – I would say that that is on the positive side in terms of the current project, North West Upgrading. How would that be achieved? I would say that given the current conditions that we have in terms of bottlenecks and facility problems, then the short run would point towards the direction of having a positive side, a flip side, in terms of upgrading and producing diesel locally, right?

But then over the long run that incentive is going to be smaller given the fact that we will – in my perception, I attach a high probability that we're going to have greater market access. Over, say, 15 to 20 years we might be, in fact, in the negative side, so you might be incurring losses. But then if you look over time at the life cycle of the particular project and if you compute the short-run gains with the long-term losses, it might be in the positive side.

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

Now we have a couple of minutes left, members. If you have any questions to be read into the record, please do so now.

**Mr. Hehr:** Basically, what you've sort of told me is that we don't have a crystal ball on the future, the long and short of it. In the short run you believe it would be in our best interests probably to have some of this refining and upgrading capacity here in Alberta. In the long run you're not so sure. Nevertheless, if we are going to do this, isn't the window of opportunity, given that China and other areas of the world who are not constrained by the four-year election cycles that we are, who tend to take a long-term view of these things, are getting into the business of refining? If we don't move now, those channels are going to be set, and we're going to lose out on that opportunity of doing it here. If the Alberta government on behalf of the Alberta people is going to do this, it has to be in the here, the now, sooner rather than later. Is that fair? If you could answer that question in writing, that would be great.

**The Chair:** In writing, please, to the committee. Thank you.

**Mr. Bhardwaj:** There seem to be some gaps that exist in knowledge and research pertaining to the cost and profitability of transporting raw bitumen and refined products to the U.S. versus building an upgrader here and transporting upgraded and refined products. This knowledge is not really readily available. In your minds, is it really worth while looking into drilling down into it?

Thank you.

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

Any other questions?

**Mr. Bikman:** Actually, I do have one. I would be interested and I think the committee would, too, in having a clearer understanding, perhaps, through your research or your ability to answer with regard to the role of the marketplace in these kinds of decisions. Given that it's a global market and given that Alberta is a player but just one of the players, what role does the market play in the decisions that we might recommend for the government?

Thanks.

**The Chair:** Well, thank you very much. Any other questions? Thank you.

Gentlemen, if I could ask you to please forward your written response to the committee clerk so that she can post it on the internal website of the committee. Thank you very much for your presentation, and it's a pleasure having you here.

Now, ladies and gentlemen, we will break to committee room C, right across the hall, for lunch until 1 o'clock sharp.

[The committee adjourned from 12:19 p.m. to 1 p.m.]

**The Chair:** Good afternoon, ladies and gentlemen. I hope that you have enjoyed your lunch.

Now we will start with our fifth presentation of the day, but before we do that, I would like to go around the table and introduce ourselves for the record. I would like to ask those who are joining us via teleconferencing to introduce themselves and also indicate whether they're substituting for someone.

My name is Moe Amery. I'm the MLA for Calgary-East and the chair of this committee.

**Mr. Bikman:** I'm Gary Bikman from Cardston-Taber-Warner and deputy chair.

**Mr. Rogers:** George Rogers, Leduc-Beaumont.

**Mr. Quadri:** Sohail Quadri, Edmonton-Mill Woods.

**Mr. Bhardwaj:** Naresh Bhardwaj, Edmonton-Ellerslie.

**Mr. Quest:** Dave Quest, Strathcona-Sherwood Park.

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

**Mr. Dorward:** David Dorward, MLA for Edmonton-Gold Bar.

**Mr. Anglin:** Joe Anglin, MLA for Rimbey-Rocky Mountain House-Sundre, what we call God's country in Alberta, standing in for the wonderful Danielle Smith.

**Mr. McDonald:** Everett McDonald, MLA, Grande Prairie-Smoky.

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

**Mr. Eggen:** Dave Eggen, MLA for Edmonton-Calder.

**Ms Olesen:** Good afternoon. Cathy Olesen, MLA, Sherwood Park.

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

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

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

Who's joining us via teleconferencing?

**Mr. Barnes:** Drew Barnes, Cypress-Medicine Hat, sitting in for Rick Strankman.

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

Just a few housekeeping items before we start the presentation. The microphones are operated by *Hansard* staff. This meeting is open to the public, recorded by *Hansard*, and streamed online.

I would like to remind the presenters that they have 20 minutes of presentation time, followed by 20 minutes for questions from committee members. We will use the timer to keep things on track.

Please introduce yourself, and the floor is yours.

#### Alberta Federation of Labour

**Mr. McGowan:** Okay. Thanks, Mr. Chairman. My name is Gil McGowan, and I am president of the Alberta Federation of Labour. For those who are not familiar with the organization, it's

the umbrella organization representing most unions in the province. We have about 30 unions in the public and private sectors under our umbrella, who in turn represent about 160,000 unionized Albertans. Myself, I'm from the Communications, Energy and Paperworkers Union, which is one of our affiliate unions, and this issue is very personal for me because my union is the one that represents most of the unionized energy workers in the province, including about 5,000 people who work at Suncor.

As elected officials from across the province you all know that the majority of Albertans want to see more upgrading done within our province's borders. You've seen the polls. You've heard directly from your constituents. In their hearts and in their guts Albertans feel a strong need to move up the value ladder. Albertans are saying yes to adding value and no to sending high-quality, high-paying jobs down the pipeline to places like the U.S. Midwest, the U.S. Gulf coast, and in the future, perhaps, China.

The wishes and preferences of Albertans on this issue are clear, but we all know that public opinion is not enough. In order to become a reality, upgrading also has to pass the economic test. On that score the power players in the oil industry are on an entirely different page than ordinary Albertans. They've been telling us that the numbers don't add up for Alberta-based upgrading. They put on their longest faces, and they sadly report that we have no choice but to get comfortable on the lowest rungs of the value ladder. They say that the case is closed, but we as the Alberta Federation of Labour are not buying it. I'm here today to challenge the industry's conventional wisdom. I'm here to say that the industry power players are wrong and that the majority of supposedly ill-informed Albertans are right.

I'm also here to thank Premier Redford but sadly also to take her to task on some issues. Albertans should thank her for drawing wide public attention to the whole concept of the differential that exists between the price that's paid for conventional oil, on one hand, and the price that we get for bitumen, on the other hand. The Premier is right when she says that the differential is incredibly important to the future of our province's economy, but she's wrong when she says that a widening differential is a disaster for the province. The truth is that a wider differential dramatically improves the economics of upgrading and presents us with an opportunity to do exactly what the majority of Albertans want us to do, and that is to move up the value ladder.

To put it another way, the so-called bitumen bubble that has been inflated by the widening differential has a very significant silver lining. If the goal of this committee and this government is to develop effective public policy, it's a silver lining that cannot be overlooked or ignored. For those of us in Alberta's labour movement the need for our policy-makers to see and to seize the opportunity presented by the widening differential is great. The need for policy leadership is great because as a province we are in the process of tumbling down the value ladder rather than climbing up it.

This slide that we've just put up shows the reality of what we're facing today. Throughout the 1980s, '90s, and well into this decade we normally upgraded about two-thirds of our raw bitumen to synthetic crude before shipping it out of the province. Former Premier Stelmach promised that his government would ensure that 70 per cent would be upgraded within the province. That's why we established the BRIK program, but we're moving in the wrong direction. Today we upgrade only about 58 per cent, and the Energy Resources Conservation Board projects that by 2017 that figure will drop to 47 per cent. Even worse, a report prepared last year for the government by the consulting firm Wood Mackenzie as part of the government's evidence to the Northern Gateway pipeline hearings projects that by 2025 Alberta

will be upgrading only 26 per cent of our bitumen. I will repeat that: 26 per cent by 2025.

To be clear, no one is talking about shutting down existing upgrading or refining facilities. They are all very, very profitable. In fact, there isn't an upgrader or refinery in Alberta or anywhere else in the country that isn't making money hand over fist. Instead, the problem is that with the notable exception of the North West upgrader and refinery, no new upgrading capacity is being added to our province. Virtually all of our province's new oil sands production is going to be shipped out of the province in its rawest form.

Why is this a problem? It's a problem because by shipping our bitumen raw, we're letting literally thousands and thousands of good jobs slip through our fingers. A single upgrader employs up to 2,000 people in direct operations positions. It also provides millions of man-hours of employment each year for construction workers doing regular maintenance and turnarounds. In addition, as the Conference Board of Canada has pointed out, upgraders and refineries have incredibly long supply chains, so the spinoff effects to suppliers and local businesses are huge. These are not temporary, transitory jobs in occupations like construction. These are long-term, stable, family-sustaining, community-sustaining jobs. If you don't build upgraders and refineries, you don't get those jobs. It's as simple as that.

Our federation, working with the Communications, Energy and Paperworkers Union, has estimated that if the volume of diluted bitumen slated to go down the Keystone XL pipeline were instead upgraded in Alberta before being exported as a higher value product like synthetic crude, it would create as many as 18,000 permanent direct and indirect jobs. If the bitumen slated for the Northern Gateway pipeline were upgraded here and shipped as synthetic crude, it would create 26,000 jobs. These are numbers provided by economists working for the labour movement, but for our purposes today I want to draw your attention to the work done by other economists, in particular work done by economists and energy experts working for the Alberta government itself.

We at the Federation of Labour do a lot of FOIP searches. We recently did a search on reports conducted or commissioned by the government on the subject of upgrading, most of which have never been released publicly. The search netted 8,000 pages of documents, and there were two reports that really stood out, both of which we've included in your kits.

The first is entitled Alberta's Value Added Oil Sands Opportunities and Bitumen Royalty in Kind. It includes this slide, which shows that when you export bitumen in raw or diluted form, you capture about 35 per cent of the value chain, but if you upgrade that same bitumen to synthetic crude and export that product, you capture 70 per cent of the value chain. If you move even higher up the chain to products like gasoline, diesel, jet fuel, and petrochemicals, you can essentially capture a hundred per cent of the value chain.

#### *1:10*

At the same time, there is compelling evidence that moving up the value ladder will also generate more revenue for government to help pay for things that Albertans need and want, like health care and education, and will also generate money that can be saved for future generations. For example, just a few months ago at this very committee you heard from Ian MacGregor from North West Upgrading, and he told you that if his very small refinery had been in operation last year, it would have generated approximately \$500 million more in revenue for the government than the government got by allowing bitumen to be exported in raw form. That's on a volume of only 37,500 barrels per day,

which, as I think most of you know, is tiny compared to the overall production from the oil sands.

So what we stand to lose if we don't find a way to arrest our province's headlong tumble down the value ladder are jobs; millions, perhaps billions, in public revenue; and the difference between 35 per cent of the value chain and 70 per cent. Of course, skeptics will say and have said that the numbers just don't add up. For a few years, just a few, between 2009 and 2011, that was true. The numbers did not add up, but they do now.

To illustrate my point, I'd like to draw your attention to the second very important document that we received as a result of our FOIP search, which is also in your kit. This one is entitled Oil Sands Fiscal Regime Competitiveness Review. The government is not known for pithy headlines. It comes to a number of very interesting and important conclusions about royalties. For example, it shows that we're not getting a fair share for the sale of our collectively owned resources. It also makes some interesting conclusions about carbon taxes. For example, it shows that there is little to be feared from a carbon tax and actually something to be gained.

For our purposes today I want to focus on the report's findings in upgrading. Basically, what the report says is that there are two factors that have been undermining the economics of Alberta-based upgrading between 2009 and 2011. The first is the spike in the cost of oil sands related construction. The second is the narrowing of the differential between world prices for oil and the price of bitumen. Like many, many other studies I've seen, this one concluded that the high cost of construction was a direct result of the pace of development. Too many projects approved and under construction at the same time were undermining productivity in the oil sands construction sector and driving up costs.

On the differential side the study points out that, contrary to the arguments presented and repeated recently by the Premier, a relatively wide differential is nothing new and nothing to be afraid of. In fact, the study shows that the differential has hovered between the 25 per cent and 30 per cent range for most of the past two decades. The study also shows that a wider spread between conventional oil and bitumen prices is not only good for Alberta upgrading; it's actually our biggest competitive advantage when it comes to investment and development in upgrading and refining.

Take a look at this next slide. This is once again from the government-commissioned study. What it shows are the break-even points for different kinds of oil sands development: SAGD, which is in situ development primarily for export only in raw form; mining, which by itself is extraction only; and then what we call integrated projects, which include an upgrader. It shows these different projects at different differential and price levels. If you look closely at the slide, what it shows is that the projects with upgraders are very economic unless the differential gets narrower than 15 per cent between bitumen and conventional oil. On the other hand, the viability of SAGD operations without upgraders plummets as the differential gets wider. Okay? The picture is similar in the next slide, also taken from the same study. What this one shows is that upgraders are entirely viable in the current price and differential climate.

So here is the actual conclusion from the report. Remember that this was written in 2011, when the differential was very narrow, okay? It says: "Despite the fact that adding upgrading capacity makes less economic sense in today's market" – and that was 2011, when the differential was only 15 per cent – "our sensitivity analysis suggests an integrated upgrader serves as a hedge against volatility of light-heavy differential." So I want to make it clear. That's kind of academic-speak. What are they actually saying? They're saying that upgraders are profitable when the differential is above 25 per cent, and they are a responsible hedge against

volatility in the light-heavy differential – okay? – and it does go up and down. What they're saying is that one of the best ways to hedge against the natural volatility in the differential is to build upgraders because upgraders are profitable over a broader range of economic scenarios than SAGD operations. This is not a Labour report. This is a government-commissioned report.

So all this talk about differentials and sensitivity analysis sounds a little bit confusing to lay people – and I count myself in that category – but it's actually really simple. Low bitumen prices, which our Premier has been bemoaning, are actually good for us because they allow our upgraders to buy their feedstock low and sell their refined products high. In fact, synthetic crude often trades at a premium. It trades for more than conventional oil, priced at WTI prices. So that's our question for the government as the steward of our collectively owned resources. Why shouldn't we buy low and sell high? And we can only sell high if we build upgraders. Why shouldn't we sell products that fetch a higher price and in the process keep the jobs for ourselves?

That leads me to our recommendations, and this is where I'll conclude. First, we need to see the widening differential for what it is, not as a threat but as an opportunity. Second, we need to stop chasing the mirage of price parity between bitumen and conventional oil. The differential is not the result of lack of market access. It is the natural result of bitumen's lower quality. I'm not trying to offend anyone by saying this, but this is the reality.

Think of it this way. Do you remember the old Russian Ladas, those awful cars that they tried to sell us in the '80s? The fact that they couldn't get the same price for one of those hunks of junk as they could for a GM that was selling a Cadillac was not because they lacked market access. It was because their product was junk, okay? Not to offend anyone, but we face a similar problem with bitumen. It may not be junk, but it's not conventional oil. So instead of chasing what I would describe as the impossible dream of getting world price for a subpar product, let's upgrade that product to a product that the world really wants and sell it for a higher value price. The only way to get Cadillac prices is to sell a Cadillac product, and we're not doing that right now.

Third, we need to set a more reasonable pace for development in the oil sands. Unrestrained pace is driving up cost, and higher costs are one of the factors leading companies to opt for cheaper, extraction-only projects. By failing to set a more reasonable pace for development, as Peter Lougheed suggested, we're pricing ourselves out of the market for the kind of value-added projects that Albertans want and which would be better for our economy over the long term.

Fourth, we need to make upgrading a condition of development, not an option. By leaving these important decisions entirely in the hands of largely foreign-based, multinational energy corporations, we're ignoring Peter Lougheed's advice to act like owners. Even now that the numbers do add up for Alberta-based upgrading, these companies are not investing in value-added projects because they have their own existing refining plants in places like the United States and China. They see that money can be made by buying our bitumen low and selling the refined product high. But it's our resource, collectively owned by Albertans, and it should be we, the citizens of Alberta, who should be seizing the value opportunity, not some foreign-based energy giant. It may make all sorts of sense from a private-profit point of view for Exxon and Sinopec to rip and ship our resources raw, but just because it makes sense for Exxon and Sinopec to rip and ship doesn't mean that it makes sense for Albertans, who own the resource.

Fifth, we should expand the bitumen royalty in kind program. It's a good program, but we can't build our province's energy future with just one BRIC.

1:20

Finally, we need to be bold and build on Peter Lougheed's legacy. Energy companies like Exxon and Sinopec cannot be counted on to make development decisions that are in the best interests of Albertans, who own the resource. The approach that Lougheed took to building our petrochemical industry in the '70s and '80s is actually the one that we should take today with bitumen. He set a clear goal for building a value-added industry. He understood that the government as the steward of the resource had to be a participant in the market, not a spectator. He introduced regulations about what could be exported and what couldn't be. He used public money to build critical infrastructure like straddle plants to support the value-added industry, and he created a public energy corporation, Alberta Energy corporation, to enter into joint-venture projects with reluctant private-sector investors.

And guess what? It worked, and in the process it created a \$20 billion petrochemical industry that employs thousands of Albertans and injects \$20 billion into our economy every year. It would not have been here without activist government.

In the end, all we're asking as a federation is that the government see and seize the opportunity that's in front of us, and we're not asking this government to do anything that previous Progressive Conservative governments haven't done already. We're asking you to lead like Lougheed.

Thank you.

**The Chair:** Thank you, Mr. McGowan. Thank you for your presentation.

We will open the floor for questioning, starting with the Wildrose caucus. Mr. Anglin.

**Mr. Anglin:** Thank you, Mr. Chairman. I just have two questions, but I want to start by thanking you for pointing out this fallacy of the bubble. There is a spread that is different in value on the spot, on the forward, and on the futures market, never mind the spreads on the finished products, but there's always opportunity. That's where I want to go with this. In the view of Labour, what percentage of our production should we refine or upgrade in Alberta? We talked about diversification – we'd sell raw material – but what percentage should be refined here?

**Mr. McGowan:** Well, as policy we haven't identified a particular benchmark. However, the short answer is: probably as much as possible up to a hundred per cent.

**Mr. Anglin:** That's good enough. I'm not going to go to a hundred per cent, but I just wanted to know if you had looked at that.

My second question is that, clearly, our access to market is a huge issue, and from where I sit, I think the Asian market is more important for our economic future than the U.S. market in many ways. I assume you have relationships with labour organizations in other provinces: where does Labour stand, particularly on getting to the west coast? What are the main issues? What are the main concerns? What are the main recommendations for us to get a pipeline to the west coast?

**Mr. McGowan:** We're not opposed to the construction of new pipelines. In fact, we recognize that we are by nature an exporting economy, so we need access to markets. If the product that we're selling is oil or oil products that need to flow down a pipeline, we need systems to deliver them. Our problem is not with the pipelines; it's with what goes down them.

The pipelines that are currently under construction, including the Keystone XL pipeline and the ones that are being proposed, like the Gateway pipeline, are specifically designed to move bitumen and nothing else. I know the industry will tell you that in theory they could be used to move refined products, but I've seen the design specifications. They have massive pumping stations. They have wide gauge. These are not pipelines designed to move synthetic crude or refined products. These are pipelines that are specifically designed to move thick, viscous, diluted bitumen.

What we need, from our perspective, is a policy before pipelines. Right now they're just building pipelines, which will drive the policy. We need a policy on upgrading before we build the pipelines, not the other way around.

In terms of the market access, we think that the Asian market is an obvious market for our products, and it's not one that we should ignore, but it's not the only market. I think we should also look east because if you look at Ontario and especially the Maritimes, depending on the province, up to 70 per cent of their oil is being imported from places like Saudi Arabia at prices that are actually higher than WTI. So there's an opportunity here for us to help other Canadians by providing them with access to cheaper oil and improving our own country's energy self-sufficiency. So, you know, yes, we should look west but not until we have a policy that ensures that jobs are not sent down the pipeline, but we should also be looking east.

The final point I'll make on this is one that we learned about through participating in the hearings on the Northern Gateway pipeline. There's a concept called fungibility. For those of you who are not economists, you may not be familiar with this, but it refers to what defines a commodity. A commodity is by definition something that's exchangeable and interchangeable, and conventional oil fits that bill because a barrel of light, sweet crude can be upgraded or refined in any refinery around the world. This is not the case with bitumen. In order for it to be taken by a refinery, the refinery has to be what we call a coking refinery as opposed to a more simple cracking refinery.

One of the reasons that we're facing a discount for bitumen has nothing to do with access to markets; it's access to refineries that can actually upgrade our product. Our biggest market is the United States right now, but even in the United States only 50 per cent of American refineries having coking capacity, and in China, where we're desperately trying to get, only 20 per cent of the refineries have coking capacity. What the government's own experts said to the hearings when I was there was that as soon as we fill up the coking refineries, it's not just a glut; the bitumen actually spills over into the cracking refineries.

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

Now five minutes for the Liberal caucus. Dr. Sherman.

**Dr. Sherman:** Thank you, Mr. Chair. Gil, thank you so much for your presentation. I agree with many of the things that you've said. I agree that we need to pace our development and growth. We need to have the rules and regulations in place, the right ones, before we start doing the work. I agree that we need to make an effort to refine and upgrade more at home in Alberta and, beyond Alberta, then Canada before we ship it across our borders. I also am concerned about the supply of refineries that can actually refine our product because, yeah, we might get access, but suddenly we get another glut down the pipeline.

What I want to hear from you is: from your perspective and the perspective of Labour on the issue of access to pipelines east, west, or south, is there a priority? Is there a preference?



**Mr. McGowan:** First of all, I question the notion that we need any more north-south pipeline capacity, and one of the reasons I question it is because if we were shipping an upgraded product like synthetic crude, we would actually need less pipeline capacity than we would if we were shipping diluted bitumen. This is an important part of the equation that most people don't realize, but in order to move bitumen down a pipeline, you actually have to dilute it between 30 and 50 per cent with some kind of diluent, so you need more volume to move it. But if we were shipping synthetic crude as opposed to diluted bitumen, we'd need between 30 and 50 per cent less pipeline capacity. Our analysis is that if we were actually shipping everything as synthetic crude, the existing pipeline capacity would be enough right now to satisfy market demands in the United States.

The thing I'll say about east and west pipelines is that they just don't exist right now. Almost all of our infrastructure for delivering our product to market is built north and south, and if we want to actually contribute to the Canadian economy and plug into the opportunities that exist east of Ontario, we actually have to start building pipelines.

The Asian market, frankly, for us is a big market because there's big demand there, but it's a lower priority because the returns are less. You have to keep in mind that the farther you go to deliver your product, the less we get back as the owners of the resource because your royalties are based on the net, right? And the net includes transportation costs. So the farther you send it, the less we're going to get in terms of our share as the owner of the resource.

**Dr. Sherman:** Well, it makes sense. If you refine it here, we'd be making lots of money right now, and secondly we'd be able to ship more if it was refined. That makes absolute sense. Recognizing that we can't practically get to a hundred per cent refining tomorrow, common sense would dictate that, hey, maybe the bitumen, as it's going, can head down south, the refined product out east, and the upgraded product out west. Is there a number at least in the medium term, in the next 10 years, that we should strive towards, maybe one-third, one-third, one-third of each of those? Is there a number that you guys have in mind?

1:30

**Mr. McGowan:** Well, at the very least, we should find a way to actually meet the target set by Premier Stelmach four or five years ago. He said that his government's target was to upgrade about 70 or 72 per cent of raw bitumen before sending it out of the province. I think that's an achievable goal. It's desirable. But we're moving in exactly the opposite direction, and I'm afraid that if nothing is done in the very short term, it's going to be virtually impossible to turn the ship around. We've dropped from 66 per cent to 58 per cent in a matter of five years, we're going to drop below 50 per cent in the next two, and it could be as low as 26 per cent by 2020. This is a crisis, from our perspective, and it needs quick action.

**Dr. Sherman:** I appreciate your position. When the French, the Chinese, the Dutch, the Norwegians, and other nation states, other citizens, are investing here to finance their programs, I support the position that Alberta definitely needs to start investing in Alberta.

With respect to the environment on pipeline risk, mitigation, management, and carbon – let's say carbon. Carbon tax: what's the limit? Should it be on intensity, absolute? What's your opinion on pipeline safety and the carbon issue from the point of labour without wrecking economic productivity?

**Mr. McGowan:** Right. I actually think that there's a potential win-win situation here.

**The Chair:** Thank you, Mr. McGowan. Perhaps you can put that in writing to the committee clerk, and she will post it on the internal website of the committee.

Now Mr. Rogers.

**Mr. Rogers:** Thank you, Mr. Chairman. Mr. McGowan, I want to thank you first of all for your passion because I certainly hear you speak with a lot of passion to this issue. I'll agree with you that more upgrading capacity in Alberta is desirable, but I'd like you to expand a little bit more on your idea of the government basically risking – and I'd almost say risking it all – to get into this line of business. You talk about a cadillac price for a cadillac product, but, you know, there's a huge opportunity cost.

I remember – and you referenced it – North West Upgrading presenting to this committee some months ago. I believe their project is somewhere between \$6 billion and \$8 billion, so I can't imagine that with any refinery, any upgrader you're suggesting that we'd be looking at anything less than that. I certainly know for a fact that the government doesn't have this kind of cash lying around unless you look at the heritage savings trust fund, which is not all cash.

Again, I really would be scared, frankly, to take on this kind of a risky venture using the funds that we're hoping will be there to allow our grandchildren to have the same standard of living that we have today. I wonder if you'd expand a little bit more on that risk because, frankly, it makes me queasy, what you said on it.

**Mr. McGowan:** Right. I actually think the bigger risk is doing nothing, and you'll see it in the reports that were prepared by the government's own analysts. Almost all of the new development that is approved and under construction right now is what they call SAGD in situ projects. As the bitumen differential widens, the economics of those projects plummet, which means that if the whole next generation of oil sands projects – and we sort of bet the farm on SAGD – becomes unprofitable with wider margins, then we're going to lose billions. We're going to lose billions as the owner of the resource. The energy companies that are investing in those projects are going to lose billions as investors. I think that's the direction we're going, and the reason we're going in that direction is because the wider differential is here to stay, unfortunately, because the world has choices now with lighter crude coming from places like North Dakota.

I always shake my head. We're one of the only oil-producing jurisdictions in the world that responds to declining prices by ramping up production. You know, this is the reason OPEC was created. They rolled back production when prices went down so they could send prices up.

My point is that the profitability of the projects that are on stream right now is in question. If we were to actually upgrade and sell the world a product that they actually want, the chances for profitability both for business and for government would be greatly enhanced, so I don't see this as a risk.

Should government get involved? Actually, I think there's no choice because right now the private-sector energy companies are making their decisions based on their own narrow self-interest, and their narrow self-interest says: yeah, we'd love to get cheap product from Alberta and pump it into our existing refineries. But just because it makes sense for Exxon and Sinopec to grab our product more cheaply and then sell it, you know, take advantage of the profit opportunity themselves, that doesn't mean that we as the owners of the resource should accept that logic, okay? Yes,

there would be some money up front, but because of the strong economics of upgrading, it would be a risk well worth taking.

**Mr. Rogers:** Just to take that a little further, Mr. McGowan, a lot of your presentation talked about the government really taking an equity stake in this sector. When I look at the global economy that we operate in today and the fact that the government has natural advantages compared to any private investor – I mean, we are the regulator. We're the owner of the resource and many other benefits. You know, we'd be competing with the private sector, and I almost see this as cutting off our nose to spite our face. These investors are going to perceive a very uneven playing field and very much, I think, run the risk of putting a lot of your very members that work . . .

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

Now we have about five minutes remaining, and we have three parties present, so I would allow a brief question from each party if you're interested.

Do you want an answer to your question?

**Mr. Rogers:** I'd love an answer to that question, Mr. Chairman. Thank you.

**Mr. McGowan:** With all due respect, I don't think that the approach that we're proposing would drive investment away. On the contrary, what we're proposing is not for government to nationalize the oil sands or to compete directly with industry. What we're suggesting is that we follow the model established by Peter Lougheed during the '70s and '80s, when he helped to develop the petrochemical industry. It was a model based on joint ventures. This is exactly the model that's being pursued by almost every major oil-producing jurisdiction in the world, whether it's Saudi Arabia or Statoil in Norway.

What happens is that, you know, the governments through their publicly owned energy companies are putting some money on the table for the kind of projects that their countries desire, usually value-added projects, and they're saying that we're going to enter into partnership and reduce some of the risk that may be scaring off private-sector investors. This is not about government using its money to compete with industry. This is about government using its resources to encourage the kind of value-added development that we all want and would benefit from.

**Mr. Rogers:** Thank you.

**The Chair:** Thank you.

Dr. Sherman.

**Dr. Sherman:** Thank you. Mr. McGowan, the costs of upgrading and refining to build that capacity would be immense. I recognize there's a role that Alberta as a province can play in that, and it has played a role in that it had spun off some world-class companies that went on to create even more jobs. You know, we have a lot of institutional investors. We have pension funds across the country. We have other governments across the country that may be interested. Is there a role beyond an Alberta Crown corporation perhaps to do this and to be able to accept investment from private industry as well?

**Mr. McGowan:** Well, there's definitely a role for government to play through something like a Crown corporation. In fact, that's exactly what we're proposing. Whether or not that Crown corporation could also funnel some investment from the private

sector and other parts of the country is an interesting idea, and we certainly wouldn't be opposed to it.

In terms of funding these very expensive projects, one of the things I feel compelled to point out is how much money we're potentially losing already. I talked about the fungibility problem, right? The government's own expert at the Northern Gateway pipeline hearings pegged the potential loss by creating a glut of bitumen at \$8 a barrel. So if we produce too much bitumen, it starts to spill over from coking refineries to cracking refineries. That automatically drives the price that we're getting down by \$8 a barrel.

1:40

If we could instead, you know, stop that glut by selling synthetic crude, that can be used by every refinery in the world, that \$8 would accrue to whomever is developing the resource. That's money that could be used to pay for a refinery. Eight dollars a barrel goes a long way. It will create billions and billions of dollars to put back on the table. It can be used to help pay for the construction of these facilities. I mean, the value and profit opportunities are huge if this government would be willing to seize them. This is exactly what Peter Lougheed did. We built a multibillion-dollar industry that would not have been here otherwise.

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

Mr. Bikman.

**Mr. Bikman:** Thank you. Mr. McGowan, has your research revealed to you – or in your own opinion, I guess, for that matter – what role higher construction costs and bureaucratic delays play in discouraging in-province upgrading?

**Mr. McGowan:** Well, I don't see any problem with bureaucratic delays. In fact, if anything, oil sands projects are approved too quickly. The first question, about construction costs, is huge, though.

Listen, I've looked at study after study, including studies that have been done by the labour movement itself, and what we see over and over again is that construction costs in the oil sands are skyrocketing. There's isn't a major oil sands project that has come in on budget for the last 25 years.

What the studies also show is that the reason for these skyrocketing costs is that we've approved too many projects at the same time. I call it the Three Stooges problem. You guys remember the old movies where the Three Stooges would all try to get through a door at the same time and get stuck? That's exactly what's happening in the oil sands right now. We've got too many projects chasing too few workers, and it's just driving down productivity and driving up costs. If we were to follow the advice of Peter Lougheed, that said one project at a time . . .

**The Chair:** Thank you, Mr. McGowan. Thank you very, very much.

I believe there were two questions, one from Mr. Anglin and one from Dr. Sherman, that you did not have the chance to respond to. Would you be kind enough to respond in writing to the committee clerk?

**Mr. McGowan:** Yes. I'd be happy to.

**The Chair:** Thank you very much. Thank you very much for your presentation.

**Mr. McGowan:** Okay. Thank you.

[The committee adjourned from 1:43 p.m. to 1:45 p.m.]

**The Chair:** Ladies and gentlemen, can I ask you to take your seats?

We will proceed with the next presentation, but before we do that, I'd like to do a quick introduction of ourselves. I'm Moe Amery, MLA for Calgary-East and chair of this committee.

**Mr. Bikman:** I'm Moe's brother, Gary Bikman, from Cardston-Taber-Warner, his deputy chair, his right-hand man.

**Mr. Rogers:** No relation. George Rogers, MLA, Leduc-Beaumont.

**Mr. Bhardwaj:** Naresh Bhardwaj, Edmonton-Ellerslie.

**Mr. Quest:** Dave Quest, Strathcona-Sherwood Park. Naresh and I are actually brothers, too.

**Ms Fenske:** By another mother?

Jacquie Fenske, MLA, Fort Saskatchewan-Vegreville.

**Mr. Dorward:** David Dorward, Edmonton-Gold Bar, MLA.

**Ms Blakeman:** Laurie Blakeman. I'd like to welcome each and every one of you to my fabulous constituency of Edmonton-Centre, and my apologies for having been in and out of this committee so often today. I didn't mean to be disrespectful. Welcome.

**Dr. Sherman:** Raj Sherman, Edmonton-Meadowlark, leader of the future government, 2016. Thank you.

**Mr. McDonald:** Good afternoon. Everett McDonald, Grande Prairie-Smoky, MLA.

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

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

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

**The Chair:** Anybody joining us via telephone conferencing?

**Mr. Donovan:** Ian Donovan, MLA, Little Bow riding. I'm pretty sure there's not a soul in that room that would admit they're related to me. Maybe Dorward.

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

A few housekeeping items. The microphones are operated by the *Hansard* staff. This meeting is open to the public, recorded by *Hansard*, and streamed online.

I would like to remind the presenters that they have 20 minutes to present, followed by 20 minutes for questions from committee members. We will use the timer to keep things on track.

I'd like to ask you to introduce yourselves, and the floor is yours.

**Ms Nelson:** Thank you for having us. I'm Pat Nelson. I'm the vice-chair of the In Situ Oil Sands Alliance. Next to me is one of our senior people from MEG Energy – they're a company that has a membership with our alliance – Richard Sendall. He's the senior vice-president of strategic planning.

I thought at first, Mr. Chairman, that I would make a statement on behalf of our alliance and then go into questions and answers afterwards. If you'll bear with me, I'll go through this.

#### **In Situ Oil Sands Alliance**

**Ms Nelson:** The In Situ Oil Sands Alliance is the voice of a group of vibrant and forward-thinking oil sands companies. Our goal is

to manage the responsible development of an industry we can be very proud of. IOSA, as we're known, members are all Alberta companies. Our members manage a combined 44 billion barrels of oil sands resource base. That's a lot of oil. We represent the drillable oil sector of the oil sands industry. Of the surface area overlaying the Athabasca oil sands region of Alberta 97 per cent will be developed using in situ technologies. The remaining 3 per cent of the region will continue to be developed using open-pit mines.

We use creativity and expertise to advance technology in the oil sands. This kind of innovation reduces our environmental impact, improves efficiency, and lowers costs. We attract some of the best and brightest talent to strengthen Alberta's ability to continue to be a world leader in high-tech oil recovery.

Through a motion passed by your committee on October 31, 2012, the Committee on Alberta's Economic Future was asked to undertake a study of the bitumen royalty in kind, BRIK, program. In particular, the committee was asked to examine the merits of upgrading in the province to obtain a greater value from the resource base for Albertans. This important and timely work by the committee could set important directions for Alberta. We at IOSA are happy to contribute to the dialogue as you deliberate on this crucial topic.

In setting this direction, we need to ensure that we are not just reacting to the tendency to fall into the cliché that upgrading equates to adding value for Albertans. One must examine this from both the short- and long-term economic perspective of development in the province to maximize the value of the resource.

Today, however, the primary issue for the industry and Albertans is the congestion of the marketplace, primarily at Cushing, Oklahoma, which is the hub and clearing point for crude oil production in North America's Midwest. If this congestion and other foreseen constraints to market access are left unresolved, Alberta will likely continue to see our resources dramatically discounted off world prices. Alberta's royalty base will continue to be eroded instead of strengthened.

Recently there has been a great deal of press and attention paid to this market bottleneck and the bitumen bubble it has created. Only last week Peter Tertzakian, the chief energy economist and managing director with ARC Financial, stated that the record rise in crude oil supply has an outcome of ongoing oil sands development, and the onset of tight and oil shale plays have overwhelmed infrastructure, causing bottlenecks and differentials to develop in PADD 2; PADD 2 and the western sedimentary basin oil prices have suffered as a result.

This market congestion has been caused by an increase of supply of both light unconventional and heavy oil sands production. The producers who are located upstream of the area of congestion and the oversupply in the PADD 2 market all face discounted pricing. It is more than just a bitumen bubble in the western Canadian sedimentary basin. It's a crude oil bubble in all of North America. All products – light sweet, synthetic crude oil, and heavy oil sands products – are experiencing heavy discounts. Therefore, investing in upgrading to convert bitumen into synthetic crude oil that competes with oversupplied light conventional crudes still doesn't get you past the discounting that we are facing. Products from light oil refining are already in surplus on the U.S. Gulf coast, and taking more light or upgraded synthetic crude is not going to be of value.

Hence, in the short term we need to be able to diversify the markets for our oil sands products. The most value we can add to our resource is to support infrastructure that will show our

products and help our products to get access to markets. We need to have our products at higher value markets that are linked directly to the world price for oil like the U.S. Gulf coast or, to the extent possible, to the east coast, and we need to get to tidewater so that our products can be directly linked to world prices.

The installation of an upgrader is a multibillion dollar investment paid out over many years. Alberta is not a competitive location to build upgraders. We are not located in a region of high demand. The industry has had to evaluate the economics of building new upgraders in comparison to retrofitting existing refineries, particularly those in the Chicago area and the U.S. Gulf coast. Both of these hubs are closer to market, making the retrofit more attractive. Upgraders in the province will always be at a competitive disadvantage to those located adjacent to high-volume demand markets.

By the time we build an upgrader in Alberta, presumably in five or six years, the bubble will have burst, and the differential that these investments rely upon for profitability will have evaporated. The market will respond to the current situation, and differentials will diminish either through the addition of infrastructure that provides access to the higher value markets for crude oil or, failing that, through a cutback of production because of high differentials that have lowered producers' net-back pricing, forcing curtailment.

One of the other considerations and justifications for upgrading has been the ability to produce other products like diesel, for instance. Again, there has to be an evaluation as to the impact of additional products coming into the marketplace. You can see from our history what happens when the market is overproduced without infrastructure in place to get to the market hub. The Alliance pipeline was one of the solutions to the gas bubble that occurred in the late 1990s. If the market is not ready for additional product, the market becomes saturated. Once the market is saturated, economic profitability suffers.

Peter Tertzakian has done the math, and he says that the numbers are stinging, that federal and provincial coffers will likely be short up to \$11 billion this year due to discounted pricing of oil and gas; the megaloss is a direct result of selling hydrocarbon products to Americans at deeply discounted prices to world markets. To highlight the point, it is transportation infrastructure that is the issue in realizing value for our products.

**1:55**

To summarize, the best way to generate value from Alberta's resources is to proceed on a path of strongly supported increased market access so that Albertans can get the full global price for each and every barrel that we produce, including BRIK barrels. By committing BRIK barrels to new infrastructure that connects our oil sands product to world prices and by helping those projects get in the ground through efficient regulatory processes, the province can add value for all Albertans. This action will increase government revenues, encourage investment, and support market-driven job creation, all critical components in realizing the highest economic returns over the long term for the people of Alberta.

Thank you.

**The Chair:** Thank you.

Now we'll open the floor for questioning. Mr. Bikman.

**Mr. Bikman:** Thank you very much. Very interesting. I appreciate being here to hear your information. A couple of questions. Could you just comment on price as an allocator of resources?

**Ms Nelson:** I'm sorry. I didn't hear the question.

**Mr. Bikman:** Can you comment to us on price as an allocator of resources? In other words, pricing in the free market.

**Mr. Sendall:** Yeah. I believe that the market will bear in this case and that the market will levy a price, depending on supply and demand dynamics within that marketplace. In this case there are areas of the world that are paying world oil prices for their crude feedstock, and those are the east coast, the Gulf coast, and Asian markets. Alberta is behind an area of market congestion. We cannot get our product to those higher value markets in order to realize and be allocated that price back to the production basin. The effect of that is that we are suffering from low prices at the producer level, and therefore that means that the royalties paid on those products produced are low to the province.

**Mr. Bikman:** What role, if any, has the government of Alberta played in creating the current situation?

**Mr. Sendall:** Very little. It's the market that has created it. Currently we are producing. We have a strong economic base here to produce the bitumen product, and that is being ramped up to increase the royalties to the province given the price point. The other element is that Bakken oil has come on to also oversupply the light sweet crude. Alberta's royalty regime has encouraged development of the resource base as it was intended, and now we need to move forward to ensure that we get appropriate pricing for that product. It's through access to market, infrastructure, pipelines that we will be able to reach those higher value markets and bring that price point back into Alberta, to the producer and to the province.

**Mr. Bikman:** Well said. Thank you.

One last question, then. Would there be a negative impact of the government requiring upgrading?

**Mr. Sendall:** We believe that, again, the market should decide how this unfolds. Yes, there could be a negative impact of the government requiring upgrading. If upgrading is uneconomic, then obviously you're not adding value for Albertans in the province. If you bring in regulation that dictates that that upgrading piece must be economic, then the only swing in that is to lower the price that the producer is paid, which is the price on which your royalties are paid, with, therefore, a negative consequence to that. There's a reason why eight upgraders proposed in the mid-2000s have not come to fruition, and that's because they do not see the economic advantage of turning an oversupplied bitumen barrel into an oversupplied light barrel, both of which products are heavily discounted.

**Mr. Bikman:** I'm glad to hear that put on the record. Thank you.

**The Chair:** That's it?

**Mr. Bikman:** That's it. I don't preamble. I've learned my lesson.

**The Chair:** That's good. Thank you very much.

The Liberal caucus. Dr. Sherman.

**Dr. Sherman:** Thank you, Mr. Chair. Our goal as policy-makers is wanting to get the greatest value for Albertans in terms of jobs, the number of jobs and the quality of those jobs. We have to balance the income of Albertans and of those investors. We actually want our investors to do well. If they don't do well, we don't do well. It's that balance. With respect to our oil sands it's really the balance of volume. We can either ship a lot down the

pipeline or maybe pace our growth, get as much value that we ship down there.

We've heard two different points of view, that we should just ship bitumen and, the other one, that we should just ship a refined product. I have a question. You know, you've done some great work. The research and development in Alberta has been world class and fantastic. It's great that we've shared it with others in the world. It almost seems as though we're victims of our own success. Because we've had the ability to get it out of the ground really quickly, really fast, we've cut down the price of our own product. OPEC traditionally would reduce the supply to get the best value for their citizens, and we seem to increase the supply at a time when we get the least for our product.

My question to you. As policy-makers, if we want to find that balance and get the best for our province – what is it the Norwegians do, their economic policy? Our economic policy, beyond just market access, a lot of it we don't control. We don't control the pipeline going to the U.S. and the pipeline going to the west coast or the east coast. That's something others control. What should our economic policy be? You know, if you look at the Norwegian model and our model, which model works better, from your point of view? What do we need to do to look at what's best for Albertans and our investors?

**Ms Nelson:** I'd like to take a little stab at that. I think that Alberta and Canada, particularly Alberta, have been recognized world-wide as being the lead place for research and development and technology. The oil sands have been built on a full, solid backing of innovation and technological enhancements and development over the years. That's attracted a lot of attention world-wide. It's also attracted a lot of opportunity for investment to come into this province, I think about \$150 billion, to develop these oil sands. Along with that came a lot of jobs not only in Alberta but across the country. Every jurisdiction in Canada enjoys the success of the development of our oil sands. It doesn't matter which province you go to; you can meet people who have been impacted by the development that's taken place.

When I look at Alberta and someone asks me to say what could be different, I would say that we need to have a system that doesn't provide constraints to get to the marketplace. We have to recognize that we are a dryland port. We aren't on water or tidewater, where you want to be if you're going to market in the international community, so we have to have different transportation modes. To wait years to get approvals through to expand a pipeline – and the United States is an example, the Keystone pipeline. You've heard talk today about how going down to the Gulf coast would be enviable. We can get as far as Oklahoma, but then we can't get any further until Keystone is approved. That's a critical outlet for our product. West coast, east coast: those are all critical points for us to be able to get to the marketplace.

So if there's something we could do better than what they do in other countries like Norway, it's to take away the constraints of going to the international marketplace. We've grown up. We're now a world-class player, except we can't get to the world. We need to have the door opened so we can go and not only show technology that is world class but also show that we have the product as well.

2:05

**Dr. Sherman:** Thank you. You know, many people say that we've got dirty oil. I've always said that we've got oily dirt.

**Mr. Dorward:** That's the best thing I've ever heard you say.

**Dr. Sherman:** One of our barriers, really, to getting access to the markets has been our environmental issues. I recognize that the

government has, you know, the \$15 levy. It's a good start. With respect to addressing the criticism on the carbon issue, what's your stance on putting a price on absolute carbon intensity? As well, pipeline security and safety: what happened a couple of years ago certainly didn't help. Can you address those concerns?

**The Chair:** Thank you very much, Dr. Sherman.  
Mr. McDonald.

**Mr. McDonald:** Thank you very much. First, I want to congratulate you. You're the only presenter that's been here all day.

**Ms Nelson:** Thank you for letting us sit here and listen. It's been most enjoyable.

**Mr. McDonald:** Yes. It's been lovely to have you. You've been part of the conversation all day in the back and listening to some of the presenters.

One of things that you mentioned right away is the problem at Cushing and that tidewater is so important. I think we've all recognized that, that we need a balanced approach to this. What more could we do to have faster access to tidewater? Obviously, you know how we're trying to present ourselves all over the world now: east, west, north, south, rail. Are there more things that we can do to make this access better, quicker?

**Ms Nelson:** You've heard about things that can be streamlined through the regulatory process, and I think you're on top of that. You're coming forward with a new process with a single regulator, which the industry has been very appreciative of. That saves time, and of course time is money. I often look at it that there are three paths that you go down. You look for crude, you identify your market, and then you have to know how you're going to get there. If all of those three paths are going forward at the same time and hit the finish line at the same time, you've got a 100 per cent score. You try and make sure that you don't have things out of sync. If you do, then you start having economic impacts.

Part of our problem has been, I think, the inability to get some of these exit points approved. We've been on the west coast situation for a few years now, and I don't know when that's going to come to an end. We've got an opportunity on the east coast. We could supply our heavy crude down to the Maritimes. Refineries down there would love to have it, and they would take it tomorrow, but we need, again, a little piece of pipe. We've got a line 9 reversal taking place, but we would be there to deliver that product, again, from Alberta, which would provide jobs across Canada, which would provide opportunities across Canada, and it would also help our situation.

So there are lots areas where governments can come together. I think Alberta is leading the way to try and get that to happen, but some governments aren't as willing.

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

The next question is on the BRIK program. You know, we do have the one upgrader that is under construction, and we see that as being a number of years away. Do you think there's room in the system for a BRIK 2 to keep that balance? Even though it's not even open yet, do you think there would be an opportunity for another RFP as a benefit or three or four?

**Mr. Sendall:** I believe that the jury is still out on the first phase of BRIK. It's not initiated yet, nor has the upgrader that was intended to bring it to the market been constructed or sanctioned yet. So I

would say to let that play out and see if the benefit is derived and then proceed with a future one if warranted. The current structure of BRIK now provides the opportunity for willing producers to have contracts with the Alberta petroleum marketer for supplying crude to that. So it's based upon a free-market model, and industry in general has accepted that model.

**Mr. McDonald:** So it may be a little bit premature to be jumping the gun to a new market again.

**Mr. Sendall:** I would say so, yeah.

**Mr. McDonald:** One final point is on investment. At what point do you think Alberta should invest in these BRIK programs? You know, how much of an ownership should we have as we keep going forward and looking at new opportunities? You've had a rough idea of the BRIK and how it's going to work. Should we be getting more involved or less?

Thank you.

**The Chair:** Thank you.

Okay. We have five minutes remaining. I would allow one question from each party. So you can answer Everett's question.

**Ms Nelson:** We can answer it now?

**The Chair:** Yeah. Sure.

**Ms Nelson:** We've had such tremendous success with letting industry take the risk on development. It gives me some concern to have the government get too far involved until you see what happens with the first program. You know, we haven't seen the results or even the impact of that first program. You have to be cautious not to jump out too far ahead on that.

**Dr. Sherman:** The profits from energy have been higher than ever before in history. If other governments from across the world are investing, why shouldn't the government of Alberta consider it? Premier Lougheed did, and it paid dividends for decades.

**Ms Nelson:** Well, I think that you've got an industry that came here to open up this industry because it was open for business. It's a free-market system. You don't have that in a lot of other jurisdictions. You have where state-owned organizations run the business of the country. We're a little bit different structure here, and we've been most successful with that. It's just a difference in philosophy.

**Dr. Sherman:** Thank you.

**The Chair:** Mr. Bikman.

**Mr. Bikman:** Thank you. I gather you are saying that we don't need another world-class magnesium plant in Alberta.

What is the best long-term solution to our current situation, in your considered opinion?

**Ms Nelson:** Well, I had to handle that file and let people know that we had a magnesium plant with no magnesium, which was a real tough one to swallow. I hope you don't ever go down that path again because that was very, very difficult. There were lots of things, the gifts of the '80s, that were very difficult.

**Mr. Bikman:** Well, I guess I'm saying: what's the lesson to be learned from that as it applies to the current situation? What's the best long-term solution?

**Ms Nelson:** Well, I think you let the industry and the market prevail. You do the economics. You look at what the economics look like, and if it makes sense to do it, rest assured that the industry will pick it up, and they will carry it. If it doesn't make sense, they probably will not. I think you have to have some faith that we've had some pretty good runs with tremendous industry players here in Alberta that have made us a world-class place for energy development. So keep the faith.

**The Chair:** Well, I think we'll take one more question. Mr. Rogers.

**Mr. Rogers:** Thank you, Mr. Chairman. I'm going to be very quick. Ms Nelson, I hope you have time to answer this. I thank you for your presentation.

The presenter before you painted a very bleak picture of your portion of the industry. I wonder if you might comment on your business plan and your ability to be a significant contributor to our BRIK program as we go forward.

**Mr. Sendall:** Yeah. From that perspective, yes, the SAGD industry is a thriving industry in the province. It's a fact of the resource base that over 80 per cent of the resource is only producible from in situ technologies, and SAGD is the technology of choice today. The other 20 per cent is only available through mining on a land base. About 3 per cent of the land holds mining resources, and 97 per cent of the land base is developable through in situ. So it is a thriving business. We need to continue to work to add to that profitability by getting access to world markets and higher prices and getting true value for our bitumen.

**Mr. Rogers:** Thank you.

**The Chair:** Well, thank you very much for being here. It was a pleasure having you.

**Ms Nelson:** The pleasure was ours. Thank you.

**Mr. Sendall:** Yes. Thank you.

**The Chair:** We will take a 10-minute break, please.

[The committee adjourned from 2:15 p.m. to 2:29 p.m.]

**The Chair:** Good afternoon, ladies and gentlemen. Please take your seats. We will be dealing with our last presentation of the day.

Before we do that, I would like to go around the table to introduce ourselves for the record. For anybody who is joining us via teleconferencing, please indicate so when you're introducing yourself.

I'm Moe Amery, MLA for Calgary-East and chair of this committee.

**Mr. Bikman:** I'm Gary Bikman, deputy chair, from Cardston-Taber-Warner.

**The Chair:** And my brother.

**Mr. Bikman:** And my brother.

**Mr. Rogers:** George Rogers, MLA, Leduc-Beaumont.

**Mr. Quadri:** Sohail Quadri, Edmonton-Mill Woods.

**Mr. Bhardwaj:** Naresh Bhardwaj, Edmonton-Ellerslie.

**Mr. Quest:** Dave Quest, Strathcona-Sherwood Park.

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

**Mr. Dorward:** Hi. I'm David Dorward, MLA for Edmonton-Gold Bar.

**Dr. Sherman:** Raj Sherman, Edmonton-Meadowlark MLA.

**Mr. McDonald:** Everett McDonald, Grande Prairie-Smoky MLA.

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

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

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

**The Chair:** Anybody on the phone? Apparently not.

Okay. Just before we start, a few housekeeping items. The microphones are operated by the *Hansard* staff. This meeting is open to the public, recorded by *Hansard*, and streamed online.

I would like to remind the presenters that you have 20 minutes for your presentation and 20 minutes for questions.

Please introduce yourselves. The floor is yours. Thank you.

**Mrs. Ferris:** I'm Keiren Ferris. I'm the manager of global royalty policy for Shell Canada.

**Mr. Broadhurst:** My name is John Broadhurst, and I'm the vice-president of heavy oil for Shell.

**The Chair:** Proceed, please.

### Shell Canada

**Mrs. Ferris:** Thank you. First of all, thank you very much for the opportunity to present to the committee today. We're very interested in the topic that the standing committee is looking at in terms of BRIK.

Our key messages today are around the critical success factors that we see for Alberta's economic future, especially as they relate to BRIK and the oil sands industry. We believe that the key success factors are a healthy upstream oil and gas industry as the foundation for the jobs, the royalties, and the taxes that have built Alberta's economic strength. We also believe strongly in the operation of market forces to make effective and efficient economic decisions.

Prior to getting into more detail on that, a bit of background on Shell. We're a global integrated oil and gas company with headquarters in The Hague, 90,000 employees globally, and of course Canada is one of the three key investment areas for us throughout the globe this year. Our head office is in Calgary. We're one of the largest integrated oil and gas companies, and we have an upstream business as well as a downstream business operating in Canada.

This is a snapshot of our Canadian upstream business, and as you can see, it is distributed across the country even though it's concentrated in Alberta and British Columbia. Of course, it's the Albertan areas that we're interested in today, but we do want to point out that jobs are created not just in Alberta but all across Canada from our industry and from the efforts in this province.

We believe that the Canadian oil sands are a secure, reliable source of energy, and we believe in the Albertan regulatory process and the requirements that are made of us to comply with those regulations.

We have operations in mining and in situ. We actually operate in all three key areas of the province in which oil sands are

produced: Athabasca, Peace River, and Cold Lake. Our mining operation is also integrated with our upgrader in Fort Saskatchewan, so we are at both ends of this issue, one might say, when you talk about BRIK.

The decision to build an upgrader in Alberta was made several years ago when the economic picture was somewhat different that it is today, and we'll talk about that a little further on.

We're also a proponent of the Quest carbon capture and storage project, which is, from an environmental perspective, very important to the future of Alberta's oil sands.

2:35

This is a slide that indicates the future growth that Shell sees globally in world demand for energy. I put it in there because I want to highlight the opportunities that we see. This is a picture of global opportunities, and one of the experiences that Alberta is facing right now is that while it has a lot of supply, it is somewhat constrained. It's a landlocked area, so we need to find ways for Alberta's oil sands to participate in these global growth opportunities.

I'd like to give kudos to the government for its consultation process. When we first looked at bitumen royalty in kind, in 2009, Shell, along with other producers, particularly CAPP, participated in that consultation. We went into that consultation with some concerns and some questions that as a result of that consultation were addressed.

Our big concern was to keep the front end healthy. Anything that would cause upgrading costs to go up, that would impact bitumen pricing, that would impact the health of bitumen operations would be a challenge and would impact the health of the most fundamental feature of the Albertan economic landscape. We wanted to focus on Alberta's natural advantages, so the ability to produce bitumen here. We wanted to look at upgrading given all our experience with upgrading and the fact that it's typically a higher risk sort of activity than governments have otherwise been involved in. Our real driver was to recommend that the market decide. At the end of the day the eventual solution used a market mechanism working with market prices to achieve the BRIK program goals, and we were very supportive of that.

As we move to today, what has changed since 2009? I believe you heard some of these same comments, probably, from the previous presenters. We have huge market-access challenges and huge alternate sources of light oil in particular in North America that are affecting our ability to be competitive, that are affecting our ability to achieve reasonable, sustainable prices for bitumen in Alberta. So we look at keeping the front end healthy.

Our oil sands development capital competes with global opportunities. Going back to the chart I showed about all of the growth opportunities that we see, they're all over the world. They're all competing for the same pot of dollars from a Shell perspective. The Albertan resource, being landlocked, is unable to achieve premium world prices, and low bitumen prices are unsustainable in the longer term. There's a recent article from the Conference Board of Canada that talks about the fact that bitumen prices now are pretty much at break-even levels for a lot of producers and the fact that that is unsustainable.

When you look at your upgrading economics – and people get very excited about upgrading economics in the province – one of the things you have to consider is what's generating the differential between light and heavy crudes, because your upgrading margin is going to be earned based on that differential. If you're making a profit on upgrading because you've got a high selling price for your light oil, your product that's coming out of the back end of the upgrader, that could be a healthy circumstance

for all involved. If, however, your differential is wide because of the low bitumen price, that is unsustainable, then that is not a healthy situation. It's not a healthy situation for the producer, nor is it a healthy, sustainable situation for the upgrader.

Our view is that the viability of upgrading is based on the sustainability of production, so we are very concerned that nothing be done that would impact the viability of production. We have a challenge right now with Alberta heavy being able to access, for example, the U.S. Gulf coast, where there are better prices available. We would like the economics to determine the solutions to those challenges.

The solution that we see is access to additional markets outside of Alberta, and I think you've already heard some of those markets mentioned. The U.S. Gulf coast is one that's been discussed. Asia is another that's been discussed. Those markets are available in different timelines in terms of how quickly you could get access and the kind of capital investment that would be involved. But the solution for the health of the upstream industry is the access to world prices because that's a much bigger issue to solve than the potential solution that could come from incremental upgrading in the province.

We just wanted to raise one other issue which we see as a challenge, which is bitumen valuation. We made our upgrading decisions. We're committed to the upgrading investments we've already made in the province. We're looking at debottlenecking opportunities to leverage those existing assets. But integrated upgraders are subject to bitumen valuation methodology to determine royalties. Right now BVM includes a floor price based on a price that we cannot achieve; it's Maya crude. It means that those people who are already upgrading in the province are actually paying higher royalties than those folks who are potentially shipping it out of the province for sale. This is something else that we'd like to see addressed.

That's the end of the formal presentation, but we're very happy to take additional questions.

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

We will start with the Wildrose caucus.

**Mr. Bikman:** Thank you, brother. Why does a company with more money than God need a subsidy from Alberta taxpayers for carbon capture and storage?

**Mr. Dorward:** We're talking about BRIK.

**Mr. Bikman:** Yeah. And we're going to use that carbon to help us refine. Anyway, I've got the floor, not you.

**Mr. Broadhurst:** Okay. Very good. I'm happy to answer your question. I wouldn't necessarily accept the analogy as to how much money we have.

When you look at environmental performance, really, this comes back to the whole question of: what can we do? One of the things we know is that our access to markets is constrained by how people view our product. I think that we do an incredible job in Alberta of being responsible developers: we have a strong regulatory framework, we have a committed industry, and we're constantly looking for ways that we can improve our environmental performance. One of the key levers for accessing those markets is going to be people in those markets being as delighted with what we do in producing an environmentally responsible product as we are.

CO<sub>2</sub> is a global issue. CO<sub>2</sub> is an issue that is really heartfelt for many, many markets that we're looking to access. In particular, our colleagues in Europe are very, very concerned about green-

house gas and global warming. It is very challenging to find solutions for dealing with CO<sub>2</sub>. One of the key options that the International Energy Agency highlights globally for being able to deal effectively with greenhouse gas is carbon capture and sequestration. That technology is not mature. That technology is not something that I think any one individual party could take and move up the technology knowledge curve.

2:45

There is a partnership between Shell, who has the upgrading asset just north of Edmonton, and the governments of Alberta and Canada for an early phase development that will allow us to learn how to do carbon capture and storage effectively. Both of those are key components, the capture component and the effective shortage. I think that is what we need to do to be able to demonstrate the technology and to start to move the technology down the cost curve or up the technology curve so that it can be applied in more situations.

It is something that's very expensive. It is something that requires a partnership to move it forward, and Shell is very committed and very pleased to be able to do our part in terms of moving that technology forward.

**Mr. Bikman:** Thank you. Given the length of that answer I'll keep the next question short, and hopefully the answer will match. If the solution is access, what are the reasons it hasn't happened?

**Mr. Broadhurst:** The solution is access to the markets?

**Mr. Bikman:** Yeah.

**Mr. Broadhurst:** Again, I think it's a question of being able to mobilize the industry, as you've seen with the pipeline companies, and the support of the producers, being able to identify what the needs are. But then it's an issue of being able to work with those jurisdictions that are not directly in Alberta's control to provide a compelling case for how value is created for all of the parties and to be able to demonstrate, back to my short answer in the beginning, that we have something happening here in Alberta with the development of the oil sands resource that we can be incredibly proud of and that we are on a global basis one of the most responsible developers of that resource and that those jurisdictions can be proud to actually have us as a potential reliable supply source.

**Mr. Bikman:** How did this current crisis of lack of access sneak up on us?

**Mrs. Ferris:** I think there's been a substantial change in the structural relativity of world oil prices recently, and a lot of it happened after the recession. So what you're effectively seeing now is the reaction to that structural change.

**Mr. Bikman:** Thank you.

**The Chair:** Thank you.  
Dr. Sherman.

**Dr. Sherman:** Great. Thank you, Mr. Chair. Thank you for your presentation. There's some fantastic work that's happened in this province, world-class research and development. We heard from the SAGD operators, and I thank Royal Dutch Shell for investing in Alberta. You know, my question to myself always is: God, give me the wisdom to ask the question to change the things we can and accept the things that we can't.



We need to remove barriers to market access. In your mind, what are the real barriers to our pipelines getting through to where they need to go? Our product getting there can be a win-win for everybody whether they're British Columbians, whether they're Americans, eastern Canadians, or the world. What are the real barriers? Is it money? Is it our environmental record? Is it environmental regulation? Is it price on carbon? What are they?

**Mrs. Ferris:** I would say that it's a combination of all of those that you've mentioned. Certainly, the answer with respect to the Quest project included the references to the environmental challenges that we're facing, many of which are based on perceptions, not based on reality. That's number one. Number two, then, is the regulatory process that one has to go through to prove that one can deliver on an environmental basis, and that's something that we would be happy to achieve. Then third is the capital investment that's required. When you look at the challenges we're facing right now, the perception challenges seem to be as material or as difficult as the actual dollar challenges.

**Dr. Sherman:** With respect to carbon tax whether it's carbon tax or – I like using the word “price” – price on pollution, you know, in British Columbia they raised about \$1.2 billion from a carbon tax and in Alberta, I believe but don't know, \$70 million to \$80 million a year with the carbon levy that we have. It's a good start. I've heard many things about Royal Dutch Shell taking on a leadership role and putting a price on carbon. From your perspective, have we gone far enough? Do we need to go further? If we do, how would you do it? Should it be an incremental increase? Should it be the same levy incrementally going up, or should it be placed on absolute emissions?

**The Chair:** Dr. Sherman, I really ask you to stick to the motion that we have at hand. I don't think your question relates to the discussion that we have here today.

**Dr. Sherman:** Well, in a way it does because they do some world-class work in carbon capture and storage. It's just incentives for industry to work on the environmental issues, which are really the risk management mitigation issues that are partly barriers to our pipelines.

**Mrs. Ferris:** I would say that the carbon issue is one that Royal Dutch Shell takes very seriously and is spending time and money on in terms of managing. When we're successful in those efforts, as we hope to be in the Quest project, you will see those benefits come back to the province.

**Dr. Sherman:** Thank you.

**The Chair:** Thank you.  
Ms Fenske.

**Ms Fenske:** Thank you. Thanks for being here today. Going back to the whole BRIC program, certainly looking at upgrading in Alberta versus elsewhere, what is the percentage of upgrading that, in your mind, would retain a healthy front end, as you put it?

**Mrs. Ferris:** I think the answer to that changes by the day as the economics of upgrading change, so I can't give you just a specific percentage. I know that we are doing everything in our power to make our current upgrading investment as effective as possible, and I believe the upgrading percentage we have in the province right now is fairly substantial. Until the economics dictate, I couldn't tell you whether or not the right number would be higher than that, for example.

**Ms Fenske:** You indicated that it's a higher risk for companies to participate. “Upgrading will expose Alberta revenues to a cyclical . . . upgrading is a considerably higher risk.” Could you give me a little more, explain a little more on what that higher risk would entail?

**Mr. Broadhurst:** Sure. I'd be happy to help you. I've been involved with our oil sands business since 1996, when we started up, so I've been through two upgrader decisions as a company. Really, it comes down to fundamentally a different economic choice than a per production choice. So when you're looking at a miner, an in situ development, you're looking at a resource in the ground that we've acquired a lease for from the government. You're looking at developing that production and putting it into the market and taking the reserves that go with it. It's a pure price relationship. There's a price in the market for that product, and you can look at it when you do your economics and put a range and a risk to it.

With upgrading what you're doing is that you're really introducing a manufacturing step. An upgrader is like a heavy metal refinery in the sense that you're taking the heaviest product and trying to turn it into light products. You're dealing with a second-order risk in terms of pricing because you're actually taking your economic decision on upgrading from that cycling differential as opposed to a projection on what a market value is going to be for a hydrocarbon product, so it does introduce a higher risk when we're looking at the economics because you're dealing with a second-order differential in terms of your pricing input to drive your economics.

They are expensive investments. They're effectively refineries, so they're a manufacturing type of investment, so it just has a different dimension to it than a pure production type of economic decision.

**Ms Fenske:** But your return on the product would be higher as well.

**Mr. Broadhurst:** Not necessarily true, right? When you're looking at your heavy oil investments, so if you're looking at in situ or you're looking at a mining development where you're going to produce bitumen, you're going to make an investment, and you're going to project a realized price on that heavy oil product. Same thing for the upgrader. The only difference there is that with your upgrader economics you're going to make an investment that is going to take some molecules and try to increase their value.

2:55

We know that that's cyclical because we know what happens in the marketplaces; people invest, and then there's an oversupply of upgrading capacity because nobody gets it exact. When you're dealing with North America, you just don't get it perfect every time. You do have that opening and closing of the differentials, and you need to factor that into your economic decisions. So it is different, and your projection on what your return is going to be for upgrading is as good as your ability to predict what that cycle is going to look like over a period of time that allows you to pay back your investment.

**Ms Fenske:** For the people of Alberta for a bitumen royalty in kind, which is their product, what would you say would be a reasonable risk for them, for Albertans, to take on?

**Mr. Broadhurst:** I think it always comes back to the point that the market will behave rationally, the companies that are making

the direct investment will behave rationally, and as long as the investment environment, which really is where the government can create a stable, supportive investment environment, is there, then the best possible outcome is to let the market and let the developers who are taking the principal risk make their investment decisions. Most times if it's good for us, it's going to be good for Alberta.

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

Actually, we have five more minutes. If there is interest, I will entertain one question from each caucus. Does anybody have any more questions? Apparently not.

Well, thank you very much. Thank you for your presentation. It's a pleasure having you here today.

**Mrs. Ferris:** Thank you.

**The Chair:** We'll take a 10-minute break.

[The committee adjourned from 2:57 p.m. to 3:03 p.m.]

**The Chair:** Ladies and gentlemen, thank you very, very much. It has been a long day. We have gone through seven presentations very successfully, and I want to thank each and every one of you for sticking around all day today.

Now we have a few more things to do. The next item that we will be discussing is the final report preparation strategy. Before we delve into a discussion on all the information we have received, I would like to take a moment to discuss a strategy for completing our report. We need to have all reports completed and tabled in the Assembly before the end of April. We will be headed into session in fewer than two weeks, which will make everyone's schedules very busy. So in order to prepare the report in an efficient manner, I would like to suggest that this committee consider delegating the work of preparing a draft report to a smaller working group.

If we decide to go this route, all committee members will have the opportunity today to share their thoughts on what should be included in the report. Then the working group would meet to consider the information we have received and provide staff with instructions for drafting a report. The working group remains subject to the will of the committee, so a copy of the draft report would be distributed to all committee members for input before being finalized. Committee members would also receive an advanced copy of the final report, and should any committee member wish to attach a minority report, there would be the opportunity to do so.

If the committee is in favour of delegating responsibility for drafting the report to the working group, I would also suggest that my impartiality as chair should be maintained. I feel that as chair I should remain as administrator first instead of being the representative of my caucus during the report-writing process and having to chair the meetings at the same time. Therefore, I would like to suggest that the committee consider a motion to add a PC member to the working group for the duration of the report-writing process.

Does anyone have a question or comment on this proposal?

**Mr. Rogers:** If I may, Mr. Chairman, just for clarity. A member of this committee or just another individual?

**The Chair:** A PC member of this committee.

**Mr. Rogers:** A PC member of this committee. Thank you very much.

**The Chair:** Any discussion? Any questions?

**Mr. Dorward:** Well, actually, I have a comment. I would support that because I did a similar thing on Members' Services Committee. We had the same situation, so we added – who did we add? – Hector Goudreau. It was way better because I was able to just manage the conversation and didn't have to worry about keeping the input side of it.

**The Chair:** Okay. Then we will have to look at two separate motions. The first motion is that the Standing Committee on Alberta's Economic Future delegate to the working group the task of preparing a proposed committee report for further review by the committee as a whole. Any discussion?

**Mr. Rogers:** If I may, Mr. Chairman, just a friendly amendment. I'm just suggesting maybe a draft report rather than proposed. Just so you're clear.

**The Chair:** Okay. Any discussion? Any thoughts?

I need someone to move the motion. Mr. Sandhu. Okay. Mr. Sandhu moved that

the Standing Committee on Alberta's Economic Future delegate to the working group the task of preparing a draft committee report for further review by the committee as a whole.

All in favour? Opposed? Carried. Thank you.

Then we need another motion that the Standing Committee on Alberta's Economic Future allow the addition of an additional Progressive Conservative caucus member on the working group for the preparation of the draft committee report. I have had discussion with Cathy Olesen, and Cathy has agreed to sit on that working group committee. Okay. We need a motion for that. Mr. Bhardwaj. All right.

**Mr. Bhardwaj:** I move that

the Standing Committee on Alberta's Economic Future allow the addition of Cathy Olesen as an additional Progressive Conservative caucus member on the working group for the preparation of the draft committee report.

**The Chair:** Great. Any discussion? All in favour? Opposed? Carried. Excellent.

The focus issues discussion. Before we go into our discussion, I would like to ask Dr. Massolin to make a few comments.

**Dr. Massolin:** Okay. Well, I think at this portion of the long day of meetings with the various stakeholders it might be beneficial for the committee to consider what it has heard today as a way in which to narrow down some of the issues, maybe as a first step, so as to initiate the working group in its process of distilling these issues and initiating the process by which it will come up with instructions for research staff to draft a report, which will ultimately come back to the committee for approval. With that in mind, perhaps I'll start off here with – I've been jotting down some notes as I was listening to the presentations today, some key issues or focus issues, you know, doing this on the fly. So this list is probably not – in fact, I'm pretty sure it's not absolutely comprehensive, but maybe it will serve as a starting point for the committee to initiate discussion. Then after that, Mr. Chair, with your approval, of course, maybe the committee can respond to it and I can answer questions or the committee can have their input.

Shall I move forward?

**The Chair:** Please.

**Dr. Massolin:** Okay. This is kind of the way I've compartmentalized or digested the information that we've heard today. I think one of the key considerations is, not surprisingly, the economics of upgrading and refining in Alberta, refining or upgrading of value-added products, especially as compared to just simply mining or extracting bitumen and exporting that product to market.

**3:10**

In assessing that very broad issue, perhaps the next step would be to undertake, as we heard today, a cost analysis. A big part of that would be to assess the price differential between light and heavy oil or even sort of bitumen versus the other extreme of the value chain in terms of diesel or even jet fuel. The price differential there is one factor among many. There is also another cost consideration, of course: the cost of transportation.

There are costs associated with market access. Market access has implications for costs in terms of, you know, how much you can sell the product for, the price at market, and of course that has implications for not only the value-added product but with bitumen because, as we heard I think a few times today, depending on the end point, the value of bitumen is radically different. If you can get it to deep water, bitumen's price would increase – at least that's the theory – dramatically.

There are also market implications in terms of whether or not the market is ready for the product. In terms of the value-added product there's a consideration there. If you do more upgrading of synthetic crude or diesel or jet fuel, is there a market for those products? Where is the market? Can you get it to market? Those are other issues.

There's also an issue in a comparative sense. As we heard, are there refineries able to receive bitumen for upgrading or refining, and if there are, where are those? Well, we heard that the Gulf coast is one area where that exists. But we also heard, I believe, that there are a lot of refineries that don't necessarily have that capacity, or at least not yet. So that's a consideration.

There's also consideration in terms of the market and its ability to receive Alberta products, you know, bitumen versus those value-added products. There are carbon intensity standards in some states of the United States like California which wouldn't allow bitumen to be sold there. But the value-added products: well, that might be a different story.

There are a bunch of cost considerations and cost analyses to do. I've just highlighted a few of the issues and subordinate issues there, of course.

In terms of the economic benefits, well, we heard a little bit about the benefits of the value-added production in terms of market diversification. We heard it in terms of labour; in terms of generation of jobs, construction and operations, and spinoff jobs; and in terms of how much the value chain can be captured here versus the cost of upgrading.

Then there's the other side of the labour economic issues. What are the costs of labour in terms of cost overruns, right? Is there too much pressure on labour perhaps? Would adding refining or upgrading capacity put too much pressure on Alberta's labour pool and, therefore, cause the labour price to drive up and result in cost overruns or, you know, pricing the province out of the market? A subordinate issue, of course, is the pace of development in this industry at large, whether that could be moderated somehow in order to control run-ups in costs.

Then there's the issue of financing: capital financing, the acquisition of capital, and financing these fairly capital-intensive projects. Where does that come from? Is it completely private? Is

there any role at all for government in terms of even just a joint venture?

There are a lot of infrastructure issues. One of the biggest ones, of course, is pipeline capacity. Now, that can be conceptualized in two ways. Is there a need for more pipelines? I guess it depends on what you're looking at. If it's more bitumen export, well, there probably is a need. As we heard, with value-added products less capacity in the pipelines is required, and therefore it was submitted that the same pipelines could carry the upgraded or refined products.

Another consideration. In terms of transportation there is the issue as well of getting the product to market through rail transportation. Also, transportation corridors and all they entail, including roads to transport construction materials: that was another issue that was brought up.

Environmental issues. Well, there is the carbon capture and storage and the benefits therein versus the greater carbon footprint that would result as a result of building these upgraders or refineries. There is a need to assess the greenhouse gas emissions. Water use is another issue. Land use. We heard about the potentials for spills and, finally, the efficiency issue, that was brought up I believe by the University of Alberta academics, the assessment of gigajoule in for gigajoule out and what that entails.

Lastly, another category of issues to consider is the regulatory issue. I think we heard a few times from a few of the presenters today that the length of the environmental approval process is complex and time consuming, up to about a year and a half, I believe, but there is a single regulator that's being investigated right now. I believe that process is under way. At least, that's what we heard.

So there are some initial sort of issues and considerations for the committee to chew on, Mr. Chair. Thank you.

**The Chair:** I think you have done a great job in capturing all of these issues since 8:30. A great job, Phil.

**Mr. Dorward:** Do you have mind-map software? Are you familiar with it?

**Dr. Massolin:** Well, I'm somewhat familiar with it, but I don't have it.

**Mr. Dorward:** This would lend itself to that very, very well and allow some of us to pop in on that and make changes. It's just a good way to lay this kind of process out.

**Dr. Massolin:** Yeah. I mean, I think we can look into it.

**The Chair:** Any other questions? Good.  
Any closing remarks?

**Dr. Massolin:** No. Nothing from me. I was just wondering if the committee had any feedback in terms of the issues themselves.

**The Chair:** George.

**Mr. Rogers:** Thank you, Mr. Chairman. Dr. Massolin, I want to commend you. I think you've got a great start there or a skeleton or something to the report. As I listened to the presenters today, I heard a lot of very common themes, and I think you've done a great job of capturing the essence of what we heard today. It's certainly something very good to build on from there, and I thank you for that.

**Mr. Dorward:** Let's plan with the end in mind. Are we on the same page in the committee relative to what we think we will say

in the report? Will we just say that these are the issues, or will we say that this is a recommendation to the Assembly? Have we discussed and finalized any of that?

**The Chair:** No. We haven't discussed that yet.

Dr. Phil.

**Dr. Massolin:** Yeah. I can't comment directly to that, but I have some comments there in terms of making this process an effective process because we're at kind of the leading edge of that. The thinking, you know, the final concept is that the full committee can sort of contribute some ideas, and then the working group goes off and does its work. The idea is that we as staff – I mean, it's your report; we write it, so it's a difficult proposition to begin with – get as clear a direction as possible as to what the recommendations are, especially because those are the most important elements of the report, but also get a sense of exactly what you said, Mr. Dorward, which is what the committee has decided on in terms of its recommendations on those key issues: where it stands, what it's saying to government, and omitting what it's not saying.

What I've gone over now is largely based on what we've heard. Of course, some of that is accepted, some of it is rejected, potentially, or new information can be added. It's your job as a committee to instruct me on those issues.

3:20

**The Chair:** Mr. Rogers.

**Mr. Rogers:** Thanks, Mr. Chairman. I think it would certainly be desirable that this committee would at the end of the report provide some recommendations to the House, which ultimately would get passed on to government. What I heard today was, from the bulk of it – I mean, we had quite a mix of opinion throughout the day, but underlying it all, I heard support for the BRIK program, that this is a good step, a good tool in terms of growing the economic opportunities for the province.

I would hope that somewhere the working group, working with research, would maybe look for a few more specifics in terms of recommendations of enhancing or continuing that program in terms of a go-forward basis. For the most part, with most of these presenters today I didn't hear anyone say that it wasn't a good program. I think we've got a good start there, but I would hope that we might find a few specifics that we might suggest to the House and ultimately to other places where we may want to offer some guidance as to how this program might look in the future.

**Mr. Bikman:** I think that the process that's been outlined and that we've voted on through the motions here at the end will allow that to happen. But, with all due respect, I think it's a little prejudicial to suggest what our outcome will be, and I had a little sense of that from your comment. You may not have intended it, but I still felt that that was the case.

We have to remember that we've asked people to come. Almost by the way we defined ourselves initially, we invited people who were almost guaranteed to be in favour of or leaning towards that. We stacked the deck in that sense. That outcome may in fact be inevitable, but we ought not think that that's a pure cross-section of the economy with regard to the wisdom of our recommendation. I hope we'll be somewhat more open minded than I sense. That sounds judgmental. I don't mean it to be that way. It's a cautionary comment.

**The Chair:** Thank you.

**Mr. Bhardwaj:** Dr. Phil, in your submission you're summing up the essence of what the presenters basically presented. Are you trying to capture sort of the outcomes they were trying to present as well? It's not directly a recommendation. Every presenter had, obviously, their point of view, which they were trying to present. A lot of them supported the BRIK program. They said that it's an excellent program and suggested as well that perhaps we should be, you know, building more upgraders or even refineries. My question to you is: in your submission, in your collection, and when you're preparing the report, are you capturing their opinions as well, or are you relying on the committee's recommendation on what to put in?

**Dr. Massolin:** Very much the latter, Mr. Chair. I mean, it's up to the committee exactly what they want to accept from what you've heard today, right? These recommendations: you know, some of them are contradictory. It's up to the committee to decide which ones are appropriate for the report and which ones are not.

**Mr. Bhardwaj:** Okay.

**The Chair:** Dr. Sherman.

**Dr. Sherman:** Thank you. Dr. Phil, thank you for your summation. We've had a lot of good opinions here. Opinions are a good thing. When we make our decisions as policy-makers, we need to rely on independent facts. We need to get facts. Is it possible, you know, on the decisions of market access, upgrading, refining, environmental issues, to just get cold, hard facts? Really, the decisions we're going to make are going to influence our province 10, 20, 30, really 40 years from now. It is so important that we rely on evidence and not opinion in guiding public policy. So if you can arm us with the numbers and facts, I'd certainly appreciate it.

**Dr. Massolin:** Do you want me to respond to that, Mr. Chair?

**The Chair:** Yes, please.

**Dr. Massolin:** Yes. Facts are essential, and it's obvious that the background to some of these recommendations will very much be setting out the factual situation as it is known at the present time. My one caution would be that there's a great need here to project into the future. Well, I shouldn't put it that way. But in order to assess the benefits of a program, an extension of a program which would be projected out into the future, you would almost have to try to extrapolate some of those facts into the future. That's where it becomes perilous territory because nobody really knows what prices are going to do. I mean, there's lots of supposition there which is based on factual extrapolation, but it doesn't mean that it's necessarily going to come true in the future. That's the one grey area. Certainly, working with this working group, it is my role to provide the factual bedrock, if you will.

**Dr. Sherman:** Certainly, in forecasting the future, I wish we all had a crystal ball. I personally would like information on a geopolitical analysis, the impacts on environment looking into the future, you know, international populations, other facts on the expected consumption. If there's world-wide poverty, consumption of energy will go down world-wide. If there are world-wide middle classes going up – these are the sort of facts that we need in order to predict the future beyond just the facts here.

**Dr. Massolin:** Well, yes, but in terms of process I think I would just again caution to differentiate between sort of a general

research paper or study versus a committee's final report to be tabled in the Assembly. I would just add that this report is not necessarily just a research report. It will contain recommendations of this committee. Its purpose is not to simply provide a factual lay of the land in terms of some of the things you just described.

**Dr. Sherman:** Thank you.

**The Chair:** Any other comments or discussion?

Great. The direction is that the research branch will do a draft.

**Dr. Massolin:** No. Can I just explain the process that I think would be beneficial? Of course, it's up to you, Mr. Chair, and the committee. The essential thing at this point is to, you know, gain feedback from the committee and the working group in order to

arm me with the information. It's the committee's report. It's not my report. We can certainly work with the committee to provide the research part of it, but we need to know what the committee's will is and, by extension, what the working group's will is in terms of filling out that report. I have to strongly caution on any sort of idea that this is something that I write without any direction. I mean, I need as much direction as possible.

**The Chair:** Okay. We'll go with that.

Okay. Any other business for discussion?

The date of the next meeting: at the call of the chair, okay?

I need a motion to adjourn. David Dorward. Thank you very much.

[The committee adjourned at 3:30 p.m.]





