

# Alberta Climate Summit 2018

## Summary

November 2018



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The Pembina Institute is a national non-partisan think tank that advocates for strong, effective policies to support Canada's clean energy transition. We employ multi-faceted and highly collaborative approaches to change. Producing credible, evidence-based research and analysis, we consult directly with organizations to design and implement clean energy solutions, and convene diverse sets of stakeholders to identify and move toward common solutions.





## Alberta Climate Summit 2018

The Alberta Climate Summit brought roughly 500 thought leaders from industry, government, environmental NGOs, and Indigenous and rural communities together to learn about global trends with implications in Alberta, hear diverse local success stories, and explore the potential in Alberta's energy evolution. The full-day event showcased a range of perspectives and opportunities for Alberta, informed and connected decision makers, and inspired participants to play an active role in the province's energy future.



Find a highlight video of the day and speakers presentations at [www.pembina.org/event/2018-alberta-climate-summit](http://www.pembina.org/event/2018-alberta-climate-summit)

# Opening Remarks

*Casey Eagle Speaker, Blackfoot Confederacy*

*Simon Dyer, Pembina Institute*

*Joshua McNabb, Pembina Institute*

*Kate Chisholm, Capital Power*



The day was kicked off with some insights and a blessing from Casey Eagle Speaker of the Blackfoot Confederacy.

The Pembina Institute's Simon Dyer, Interim Executive Director, and Joshua McNabb, National Strategy Director, set the stage for the day, emphasizing the goal of the Summit: to depolarize conversations about climate change and provide a variety of perspectives on how global market signals on clean growth translate to Alberta.

Kate Chisholm of Capital Power, the event's presenting sponsor, complemented these comments. She highlighted that the Summit has become a tremendous forum for having conversations about a range of sustainability issues critical to our health, wellbeing, and prosperity as a society.

## Keynote Presentation

# International Perspective

*Morgan Bazilian, Payne Institute and Colorado School of Mines*

Morgan Bazilian took the stage to discuss global momentum for climate action and shared stories of energy evolutions from other oil and gas jurisdictions. In the face of international social movements calling for divestment of fossil fuels, Bazilian stressed the active role that the oil and gas industry could play in addressing the challenges posed by climate change. He noted that in recent years there has been a material shift toward a new language of "portfolio resilience" among international oil and gas majors. He also outlined changes to geopolitical and environmental data monitoring that has made it possible for satellites to detect methane leaks from space and "hipsters in a London café" to track global oil shipments in real time.

All of these dynamics, according to Bazilian, bring us to an age of energy disruption. Non-linear growth curves for shale resources and renewables have highlighted challenges for regulators and policymakers in Canada and abroad to keep up. Dexterity and agility is required of both Alberta's public and private sectors

if the province is to be able to recognize and seize opportunities in a transitioning world.



*"The oil and gas companies are under enormous pressure, possibly existential pressure for their businesses. What role can they play in the future energy transition? They have huge technical and financial expertise and acumen, they have a global presence, and they're taking a good look at what this energy transition means and how it can also help economic development in poorer countries."*



## Panel Session

# Climate Finance

*Swami Venkataraman, Moody's Investors Service*

*Georges Arbache, Lazard*

*Brian Vaasjo, Capital Power*

*Moderator: Isabelle Turcotte, Pembina Institute*

The speakers provided an overview of a wide range of investor attitudes around climate finance, through both local and international lenses.

Brian Vaasjo believes there has been a very orderly, rational, and reasonable transition away from coal in Alberta based primarily on the risk of owning coal assets. He noted that while this orderly transition retains investor confidence, politics around carbon pricing are now increasing investor uncertainty and lost opportunities.

Georges Arbache noted that investors' interest in renewables is evolving in North America more broadly. Investments are "moving up the risk curve" to more customer-facing and technology-oriented spaces and the deployment of capital in the "second inning" of renewables (e.g. storage, smart grids and load aggregators).

Swami Venkataraman broadened to a global lens by noting that while climate finance is coming along in North America it remains behind Europe. Nonetheless, he pointed out how many North American financial institutions are proactively assessing their exposure to

risk (e.g. stranded assets, flooding impacts) and how to manage them.

*"The other interesting thing that's driving change from an institutional investors standpoint is ESG [environmental, social and governance] pressures and activism. We're seeing fairly large pools of capital being raised by activist investors that are taking positions in companies where they can effect change." — Georges Arbache*

*"Carbon tax obviously works as a stick. If you're paying carbon tax, you do things to avoid it and to mitigate your carbon footprint. But on the other hand, there are great things from a technological perspective, from a longer-term investment perspective... if there was some sort of stability around carbon tax it would create a lot of very positive activities in Alberta and otherwise." — Brian Vaasjo*

*"The (U.S.) Clean Power Plan never became law. It was there, proposed in 2014, it got revoked in 2017. But guess — at the end of 2017, purely because of renewables becoming cheaper and a lot of renewables getting built, and shale gas — how much lower were U.S. power emissions in 2017 compared to 2005? The answer is 28 per cent, almost. And the target for 2030 was 30 per cent." — Swami Venkataraman*



## Keynote Presentation

# International Perspective



**Li Junfeng**, National Center for Climate Change Strategy and International Cooperation

Li Junfeng took the stage to speak about policy and action on climate and energy transitions in China. First, he discussed the great strides China has made in energy efficiency improvements, reductions in new coal

brought online, and renewable energy infrastructure. Li discussed the roadmap to low carbon development by 2050: a nurturing stage from 2015-20, a key problem solving stage from 2020-30, and an innovation and breakthrough stage from 2030-50. Li emphasized the need to align development targets and emissions reductions targets in China, as the country has announced national goals to be deemed ‘developed’ by 2050 and will correspondingly need to adopt emissions targets suited for a developed country.

*“So reducing coal means reducing greenhouse gas emissions, but also to reduce the kind of emissions in local (air) pollutants. Especially starting in 2013, Chinese are against the kind of polluting issues. We want to have blue sky. You see... blue sky in Canada... it’s not a problem. But if you [see] blue sky in Beijing, people are very very happy, it’s like a holiday.”*

## Panel Session

# Indigenous Energy

**Troy Jerome**, SEN'TI Environmental & Indigenous Services

**Ernie Daniels**, First Nations Finance Authority

**Vickie Wetchie**, Green Arrow Corp.

**Moderator: Melissa Quesnelle (Naatoi’lhkpiakii)**, Indigenous Clean Energy Social Enterprise

Next up were the panellists to talk about clean energy development led by Indigenous Peoples, where a sustainable lens is being applied to economic development.

Vickie Wetchie kicked off the conversation by exploring what the term ‘equity’ means for different communities. She emphasized that consultation with Indigenous stakeholders must be a priority for developers, and it is imperative they come to the table early in the process with both an open mind and background knowledge of the community they want to work with.

Ernie Daniels then discussed five ventures to date that have been supported through the First Nations Finance Authority, with investments in either full ownership or equity of renewable energy projects. With financing available, these projects provide revenue streams that not only support communities, but make fiscal sense for governments and provide excellent business opportunities to partners. Troy Jerome complemented these thoughts with insights on the role Indigenous communities can play in energy transitions beyond renewable developments.

*“When we looked at it in the beginning, it wasn’t a wind farm that we were building. And I kept harping at that, saying [it] over and over. For us, it was about nation building. We were building our nation back, we were building our nation or taking back our destiny. We’re going to take our own source revenues to build our schools, build back our language and these kind of things.” — Troy Jerome*

*“I think there’s an opportunity to build some expertise within First Nations. Installers, even people going out and doing traditional knowledge, those kind of things. Gathering information. There are opportunities there that First Nations can provide and also learn.” — Ernie Daniels*

*“These are new terms for Alberta. These are new terms for mainstream business corporations. Get involved in community development. That is key. Because you need to come in with that open mind. You need to come in and have done your homework, and your research on that community: where they’re from, what they do, what’s going on in their community, before you come in.” — Vickie Wetchie*



## Youth

# Inspiring Change Makers in Alberta

**Hunter Brett**

**Eduardo Lopez**

**Elizabeth Gierl**

**Noah Brace**

**Diana Kurila**

**Murdoch McKinnon**

**Cory Beaver**

**Tasha Brown, RBC**

**Elise Ahenkorah, Hunter Hub for Entrepreneurial Thinking**

**Moderator: Julia-Maria Becker, Pembina Institute**

In an especially inspiring session, local youth were given the opportunity to highlight the innovative projects they’re undertaking for a sustainable energy future. Tasha Brown and Elise Ahenkorah framed the session by highlighting the challenges faced by youth today in Alberta. Brown outlined how, by equipping

them with the tools to be disrupters, the RBC’s Future Launch program aims to create a more prosperous and inclusive future for young Canadians. Ahenkorah highlighted the complementary goals of the Hunter Hub for Entrepreneurial Thinking, which aims to foster innovation and support interdisciplinary student experiences. Julia-Maria Becker introduced Cory Beaver, who gave an update on one of last year’s youth panel projects. Beaver told the audience about next year’s Indigenous Student Energy Summit to provide opportunities for youth for learning, engagement, and mentorship.

This year’s youth projects included: innovative pathways to use 80 per cent of Alberta’s municipal wastewater for energy generation; a University of Alberta student group building and designing the ‘EcoCar,’ a fuel cell vehicle to race at international competitions; modular, vertical farming solutions running on green energy; and a green energy and climate lab to inspire high school youth across 1200 classrooms annually, connecting them directly to energy and climate issues.

*“We often think about these technologies as something far off in the future, incredibly complex and something that can’t really be done easily or cost-effectively. But this isn’t being done from some mad scientists from Back to the Future or*





*in some PhD lab with some geniuses that work all day. It's being done by students like me with just an undergraduate level of education and a minimal budget, and we're doing it safely." — Elizabeth Gierl*

*"Our ancestors once migrated with the buffalo because they symbolize strength. But they also provided the tools and the knowledge to survive*

*and sustain. Today we have a new meaning of survival: education. As a First Nations individual, it's important to pursue education because education is the new buffalo." — Corey Beaver*

*"Join us in this critical point in high school students' lives when they will be making decisions about their role in a sustainable future." — Diana Kurila*

## Ministerial Address



**The Honourable Shannon Phillips, Minister of Environment and Parks, Government of Alberta**

There are as many opportunities as there are costs for Alberta when it comes to climate change, said Minister Phillips. To seize these opportunities, Alberta must be at the forefront of technology and policy development that will play a major role in a carbon-constrained

future. She emphasized the significant progress made over the last few years in the province as carbon pricing drives investment trajectories and supports programs such as energy efficiency under the Climate Leadership Plan. Phillips also commented on the resurgence of inflamed rhetoric around climate change, and emphasized our collective responsibility to uphold the values of truth, science and reason in public policy.

*"These are investment signals that create jobs while reducing emissions. We're proud of that record, and I'm proud of all the work that we did to get here."*

*"Energy efficiency has created, so far, more than 2300 good jobs for working people and over \$475 million in direct benefits to our economic growth. There has been 12 million cubic metres in lifetime water savings through the first year of products installed. That's over 4000 Olympic-sized swimming pools. And 3.4 million tonnes of GHGs avoided by the use of these products."*

## Panel Session

### Change is in the air

**Moderator: Ed Whittingham, Former Executive Director of the Pembina Institute**

The Pembina Institute was thrilled to work with award-winning Canadian artists and the Alberta Museums Association to present 'Change is in the Air' – a satire created for participants to activate a different kind of discussion than we are used to having at the Climate Summit.





The central purpose of the session was to have participants check in emotionally with themselves and others, as the subject of climate change can raise a variety of sentiments that are often overlooked by

purely technical and policy oriented conversations. We invite participants to continue exploring whatever thoughts, feelings or other reactions the session evoked.

## Breakout Session

# Workers and Communities Navigating the Energy Transition

*Chris Warwick, Mayor of Hanna, Alberta*

*Tom Dalzell, International Brotherhood of Electrical Workers, Local 1245*

*Dale Ross, Mayor of Georgetown, Texas*

*Tara Peel, Canadian Labour Congress*

*Moderator: Binu Jeyakumar, Pembina Institute*

The panellists had an open and frank discussion of the opportunities and challenges facing communities and workers as they encounter the broader trends of the energy sector in transition. Chris Warwick set the stage by discussing what energy transitions mean for the town of Hanna, where over 8 per cent of the population will lose their jobs if its main coal plant closes down. Concerns about managing this contributed to the formation of the Just Transition Taskforce, which was designed to bring Alberta communities to the table to discuss transitions for affected stakeholders. Dale Ross described how Georgetown becoming 100 per cent renewable was driven primarily by economics, with the transition ultimately resulting in the city's faster growth. Ross also made the point that any transition planning needs to be based on facts and focus on the short term instead of the long term.



Tara Peel and Tom Dalzell both commented on the importance of catering to workers at different phases of their careers. This means ensuring younger workers can get training, while older workers can retire with cash in hand from pension benefits. Dalzell also noted that while there may be fewer traditional jobs in renewable energy systems relative to fossil fuels, there are ample opportunities to create more jobs in battery storage, integration of renewables into distributed energy systems, and load pushing technologies. Regardless of the path forward, Peel emphasized that any transition plan must ensure all stakeholders are able to keep their dignity and share the burden of change.



## Breakout Session

# Transforming Alberta's Electricity Sector

*Monica Curtis, Energy Efficiency Alberta*

*Julia Pyper, Greentech Media*

*Mark Ahlstrom, Energy Systems Integration Group*

*Carrie Simpson, Xcel Energy*

*Moderator: Sara Hastings-Simon, Pembina Institute*

The panellists explored how Alberta can approach its electricity sector transformation and what it can learn from utilities and markets in other leading states. Julia Pyper and Mark Ahlstrom brought crucial insights from the U.S. context, where large-scale coal plant

retirements are occurring for predominantly economic reasons and shifts toward clean power are occurring across the country at various paces. Both speakers emphasized the importance of knowledge transfer between Alberta and these jurisdictions; not only can the province benefit from understanding international trends, but Alberta's coal phase-out can also help to inform similar pathways occurring south of the border.

Carrie Simpson kick-started a pertinent discussion about the role computer software is playing in renewable energy distribution and forecasting. Pyper contributed to this with perspectives on how utility companies can seize new computing technologies to create new methods to interact directly with consumers. Similarly, Ahlstrom discussed a digital revolution that is hitting the energy industry, with the potential to break down the traditional one-way flow of transmission. And, while it may be less technologically flashy, Monica Curtis encouraged the audience to consider the pivotal role of energy efficiency in transition conversations by sharing numerous success stories from Energy Efficiency Alberta.



## Breakout Session

# The Future of Natural Gas in a Decarbonizing World

*Amanda Levin, Natural Resources Defense Council*

*Vincent Regnault, Énergir*

*Peter Tertzakian, ARC Energy Research Institute*

*Moderator: Duncan Kenyon, Pembina Institute*

The panellists engaged in a lively debate about the role of natural gas in the evolution of energy systems given Canada's global commitments under the Paris Agreement. Peter Tertzakian kicked off the conversation by raising a key question about energy transitions; that is, whether the ultimate objective is decarbonization or phasing out fossil fuels. The latter, he contends, is highly polarizing and creates a false dichotomy between energy systems. For Tertzakian, decarbonizing our energy systems as fast as possible

should be the ultimate goal, even if it means an uptick in Canadian natural gas infrastructure to replace coal use internationally.







Amanda Levin challenged Tertzakian's views by raising concerns about 'lock in' of natural gas infrastructure. Levin noted that using natural gas as a transition fuel contradicts NRDC models that show U.S. emissions must drop by 80 per cent by 2050 and hit net zero by 2075 to meet the global Paris Agreement target of two degrees Celsius of warming. She also mentioned that there isn't enough focus on energy efficiency, which is the lowest-cost source of energy. Vincent Regnault

complemented this debate with a producer perspective, discussing Énergir's support for carbon pricing and low-carbon certification based on the conviction that customers will be willing to pay for natural gas with a lower carbon footprint. Tertzakian also made the point that carbon taxes can and do work in industrial settings, that innovation will reduce costs, and industry will find ways to absorb the carbon price.

## Breakout Session

# Opportunities in Carbon Capture, Utilization & Storage

*Alan Taub, University of Michigan*

*Tim Wiwchar, Shell Canada*

*Apoorv Sinha, Carbon Upcycling Technologies*

*Moderator: Sandra Odendahl, Carbon Management Canada Research Institutes*

The panellists described a recent resurgence of interest in carbon capture, utilization and storage (CCUS) globally, due largely to a change in thinking about CO<sub>2</sub> as an asset instead of a liability. Alberta and Canada are at the forefront of CCUS technology development with both environmental and economic benefits, by replacing inefficient processes and potentially tapping into trillion-dollar markets in both the developed and developing worlds.

Tim Wiwchar noted that the Paris Agreement is not possible without carbon capture and storage, and it will not be possible to have an economy with no fossil fuels, due to needs from growing populations, petrochemical markets, and iron and steel industries. While Alan



Taub emphasized the importance of government incentives to catalyze first-generation technology, Apoorv Sinha commented that there are longer-term benefits to bullish private investments before the technologies become profitable. This approach, he said, would effectively secure Alberta's position as a leader in developing and exporting technology to other jurisdictions.



## Breakout Session

# Experiential Energy Transition

*Moderator: Nathan Maycher, Suncor*

This breakout session let participants experience first-hand how an energy system evolves in this fast-paced and fun hands-on exercise.



## Panel Session

# The Energy Evolution is Good Business

*Pat Carlson, Carlson Energy*

*Ian MacGregor, North West Capital*

*Dale Ross, Mayor of Georgetown, Texas*

*Moderator: Sara Hastings-Simon, Pembina Institute*

The conservative voices of Pat Carlson, Ian MacGregor, and Dale Ross provided powerful insights from the heart of the oil and gas economy on the changes happening in the energy sector. Ross outlined the process of transforming his town of Georgetown, Texas to 100 per cent renewables. While city planners began the process with the modest goal of 30 per cent renewables, the decision to become 100 per cent renewable was made based on the economic best interests of Georgetown residents over the medium-to-long term. He emphasized that the superior economic outlook of renewable energy for Georgetown was based on a combination of availability of renewables in the area, long-term pricing, and limited regulatory barriers. The town has seen a surge in economic development since becoming 100 per cent renewable, and has been deemed the second-fastest-growing U.S. city in its size range.

Carlson stressed that policy certainty is imperative if Alberta is to move forward economically in a carbon-constrained world. Moreover, he said that Alberta's government must foster investment and entrepreneurialism by developing a long-term vision and strategy for the province. In this vein, MacGregor emphasized the particular importance of securing policy certainty around carbon pricing, so that investors and entrepreneurs can respond to a steady signal that sets the economy on a long-term course towards decarbonization.

*"We live in maybe, it's arguably the most entrepreneurial place in the world. People here create businesses everyday. It's easy to form capital. It's been a little tough lately, but really this is one of the most entrepreneurial places in the world. You send a clear signal and all of a sudden, all kinds of magical stuff starts happening really quick." — Ian MacGregor*

*"I think what we need is a plan, a strategy in Alberta that everybody can buy into and that we'll get behind as a province and that the political parties say, yeah, we're not going to change that when we get elected next time. And then we have something we can work on and it gives us an outlook to change." — Pat Carlson*

*"Any time you're making decisions, the final caveat would be, don't we have a moral and ethical obligation to leave the planet better than we found it? If we don't, I think we've failed the next generation and the generation after that." — Dale Ross*



## Keynote Presentation

# Mend the Gap: Having a Constructive Climate–Energy Conversation



**George Marshall**, Climate Outreach

**Amber Bennett**, Climate Outreach

To wrap up the day, George Marshall and Amber Bennett shared meaningful insights from the Alberta Narratives Project — a year-long initiative to uncover fresh approaches to climate and energy conversation. Marshall highlighted the findings that Albertans respond to narratives that build on a shared gratitude and respect for the prosperity the oil and gas industry has provided for the province, and a desire to protect our quality of life and communities in a changing world. Moreover, Marshall discussed how framing must be inclusive to all sectors and demographics, and focus on

Albertans' entrepreneurial spirit and ability to build a better future together.

While Albertans remain divided on climate change, the Narratives Project found that most people want to see the province move ahead on the issue based on shared values. First and foremost, Marshall advised, it is important to meet people where they were at and listen to them carefully, in order to invite them into conversation based on their perspectives, needs, and concerns.

*"I'm emphasizing the split because when things are divided one side against the other side, it's very hard to hold the central ground. People are expected to take a side. It becomes extremely tribal."*

*"I think it's worth noting that when we're talking about the narratives that can work, we're looking at a core ground here, we're looking at the middle. We're looking at those places that you can enter into the conversation that doesn't split it right away. And so through those transcripts, through those conversations, through the 2500 pages of feedback that we had, there's five core pieces that come up: around gratitude, protection, everyone, security and build."*

## Closing Remarks

In the closing remarks, Simon Dyer and Josha MacNab thanked everyone for coming. They noted that it was a great day of learning, inspiration, perhaps a little discomfort, but also a day to help all participants move forward in their personal and collective commitment to make the world a liveable place for our descendants.

