

Alberta

CLIMATE  
LEADERSHIP

— Discussions —

**TECHNICAL ENGAGEMENT SUMMARY**

**NOVEMBER 2015**

## EXECUTIVE SUMMARY

Alberta's Climate Leadership Discussions engaged with a wide range of Albertans to help inform the province's action plan on climate change. The engagement process was led by Alberta's Climate Change Advisory Panel with support from the Climate Change Secretariat, within the Department of Environment and Parks. The engagement process included Aboriginal engagement, public open houses, online engagement, and technical stakeholder sessions.

Alberta's emissions come from sectors across the economy, as well as from the daily activities of Albertans. The Panel held technical sessions with approximately 350 participants from multiple sectors of Alberta's economy and focused on areas with the greatest potential to reduce emissions – energy efficiency for buildings and houses; agriculture and forestry; transportation and the role of municipalities; electricity; oil and gas; other industrial emitters; and economy-wide approaches for greenhouse gas reductions.

To facilitate the sessions, the panel members chose respected and credible convenors with diverse backgrounds and perspectives. Each session had two convenors and those convenors selected the participants with input from the panel.

While the specific opportunities and challenges facing each industry are unique, many consistent themes emerged throughout the technical engagement sessions.

Participants generally agreed that Alberta should address greenhouse gas emissions and climate change through a balanced approach to climate change policy that considers the economic, environmental and social realities in the province.

The majority of participants recognized that having a credible and realistic climate change policy is important to Alberta's reputation and to expanding the province's access to local and international markets. It was emphasized that Alberta's approach to climate change policy should consider any impacts on competitiveness.

Participants emphasized that it is important to consider and align policy approaches with credible benchmarks. Many participants suggested that the province's approach should be adaptable due to uncertainty about future national and international emission reduction commitments.

Participants generally agreed that research, innovation and technology development should continue to play an important role in Alberta's climate change strategy. Participants agreed that this is one area where Alberta can position itself as a global leader. They also discussed how increased integration of renewable energy could drive emission reductions, especially alongside a phase-out of coal-fired electricity.

Through most sessions, there was a strong emphasis on pursuing greenhouse gas reductions in the most cost-effective manner possible, with carbon pricing emerging as the most popular strategy.

Alberta's lack of an energy efficiency strategy was frequently mentioned as both a challenge and an opportunity. Stakeholders suggested that Alberta develop an energy efficiency strategy that drives emissions reductions in line with any future targets.

It is important to note that the themes described in this summary are illustrative of only the comments heard at the technical engagement sessions, and give a general indication of the views expressed.

## TABLE OF CONTENTS

	<i>Page</i>
EXECUTIVE SUMMARY – What Does Climate Leadership Mean?	i
1. INTRODUCTION	1
1.1 Goal of this Report	1
1.2 Purpose of Engagement	1
1.3 Methodology and Approach	1
1.4 Input Analysis and Limitations	1
2. SESSION SUMMARIES	2
2.1 Buildings and Houses	2
2.2 Electricity	3
2.3 Oil and Gas	4
2.4 Other Industrial Emitters	5
2.5 Agriculture and Forestry	6
2.6 Municipalities	8
2.7 Innovation and Technology	9
2.8 Economy-Wide Approaches	10

## 1. INTRODUCTION

### Goal of this Report

Alberta's Climate Leadership Discussions were led by Alberta's Climate Change Advisory Panel and included public open houses, an online engagement, online document submission, Aboriginal People's engagement and technical stakeholder sessions.

This document summarizes comments received at 10 technical stakeholder engagement sessions on eight topics, held in Edmonton and Calgary from August 28<sup>th</sup> to October 6<sup>th</sup>, 2015.

### Purpose of Engagement

The Climate Change Advisory Panel was tasked with providing advice to government to inform Alberta's new climate change strategy.

The Panel was tasked to review Alberta's existing climate change policies, engage with Albertans and provide the Minister of Environment and Parks with advice on a comprehensive set of policy measures to reduce Alberta's greenhouse gas emissions.

The Panel's advice will help government shape clear and ambitious climate change policy, protecting Alberta's environment while positioning the province's economy for long-term success in a lower-carbon world.

### Methodology and Approach

For the technical engagement, the panel held sessions with approximately 350 stakeholders representing diverse perspectives across multiple sectors of Alberta's economy. Sessions were designed to provide stakeholders with an opportunity to share their perspectives on key areas including: building and houses; electricity; oil and gas; industrial emitters; agriculture and forestry; transportation and the role of municipalities; electricity; innovation and technology; and economy-wide approaches for greenhouse gas reductions.

These forums provided panel members with an opportunity to participate in a dynamic discussion with stakeholders with a wide range of perspectives, including representatives from the private sector, think-tanks, environmental organizations, academia and municipal governments.

### Input Analysis and Limitations

Climate Change Secretariat staff attended all the technical engagement sessions and took notes throughout the meetings. These notes were summarized for this document. Analysis involved reviewing all notes taken during the meetings, then sorting and combining comments to discern any patterns. Broad themes were identified and are highlighted throughout this report.

## 2. SESSION SUMMARIES

The following are summaries of each of the technical stakeholder engagement sessions. It is important to note that the themes highlighted in each summary are only a general indication of views expressed by the stakeholders who attended each session. Participants were chosen by convenors who facilitated the sessions and they came from the relevant industries, academia, non-profit organizations, think-tanks, government and agencies.

### 2.1 Buildings and Houses

Emissions from Alberta buildings and houses represent approximately 8 per cent of Alberta's 2013 emissions. The Buildings and Houses Technical Engagement was held in Edmonton on August 28, 2015. The purpose of this session was to have an open discussion on ways to reduce emissions from buildings and houses.

Discussions centred on the challenges and opportunities related to emissions from existing and new industrial, commercial, institutional and residential buildings. Participants for this session represented the buildings and houses sector, academia, non-profit organizations, municipal and provincial governments and agencies.

Participants were in general agreement that an energy efficiency strategy is needed in Alberta. While many stakeholders agreed that energy efficiency and retrofit programs are needed for all types of buildings, others thought that programs should be tailored to different building types such as industrial, commercial, business and residential buildings. Several participants agreed that solar energy presents a significant opportunity to reduce emissions in both existing and new buildings.

Participants identified many essential elements to achieving better energy efficiency in buildings and houses, such as: developing incentive programs for energy efficiency measures and renewables; education at many levels on new technologies and best practices; mandatory labeling and rating for all buildings; sharing information and best practices from projects that have been successful (especially from government buildings and initiatives); and improving building codes to include more emphasis on energy efficiency measures.

There was some debate among participants as to the benefits of an energy efficiency strategy versus the potential effect on the market and overall affordability. There were different perceptions of how active the market has been to adopt energy efficiency thus far and the effectiveness of labeling. Participants generally agreed there was a spectrum. One of the major barriers raised was the lack of incentives for builders to include energy efficiency provisions.

Participants suggested a range of strategic, regulatory and policy mechanisms to drive energy efficiency and conservation and ultimately reduce emissions. One of the primary discussion points was related to building codes. Stakeholders discussed the role of codes, the costs associated with stricter codes, and the rate at which they can and should affect change. Another was related to implementing energy performance labelling for buildings.

There was also debate as to whether the province should be the leader in establishing building codes or work with the national codes system. Participants had varied opinions as to whether building codes should be consistent or different for institutional, commercial, industrial and residential buildings.

Stakeholders agreed that the duration of any energy efficiency program needs to be long-term and funding needs to be stable. Future programs should require third party verification to ensure they are having an impact on emissions. The potential role of demand-side management programs in helping reduce emissions was also discussed.

## 2.2 Electricity

Electricity plays an important part in the day-to-day lives of Albertans and coal has been Alberta's traditional low-cost and reliable source of electricity. However, coal-fired electricity is the second largest source of greenhouse gas emissions in Alberta, responsible for 17 per cent of the province's overall emissions.

The Electricity Stakeholder Technical Engagement was held in Edmonton on September 8 and in Calgary on September 15, 2015 and the purpose of these sessions was to have an open discussion on the challenges and opportunities of ways to reduce emissions from the electricity sector. Participants came from the electricity sector, academia, non-profit organizations, government and agencies.

In the first session, discussions centred on several themes relevant to climate leadership; the current state of the industry; possible emission reduction approaches; ways to reduce emissions from coal-fired electricity and expanding renewable electricity sources. In the second session, stakeholders gave presentations detailing possible approaches to reduce emissions.

Participants discussed the challenges associated with reducing emissions from the electricity sector within the context of the current system. This discussion broadly focused on three areas: policy framework, market structure and physical system requirements, and reliability implications. There was particular focus on reliability challenges, both integrating more renewable energy sources and transmission planning requirements.

It was emphasized that the current market is designed to deliver low-cost power to Albertans in a safe and reliable manner, not to primarily deliver environmental outcomes. Some participants suggested that it is difficult to bring on more renewables without modifying or moving away from a merchant-only, decentralized market structure. Participants discussed various approaches ranging from slight tweaks to the existing market structure to a substantial restructuring.

It was broadly recognized that Alberta's natural resources support expanded wind and solar industries and, as the price of renewables continues to decrease, there are a number of opportunities to integrate larger amounts of renewable power into the grid. Some participants expressed concerns that bringing more renewables into the system will come with increased electricity costs and reliability challenges.

Some participants emphasized that fossil-fueled generation, like coal-fired electricity, are an important source of stable, low-cost power that should continue to be utilized in some capacity. One of the dominant areas of debate was the timeline for a reduction in coal-fired electricity production. While some participants argued for an accelerated phase-out, others thought the federally regulated timelines are sufficient.

There was strong support among stakeholders for a dial-down approach to coal-fired electricity production, with a corresponding ramp up of renewables.

Many stakeholders thought that investment in renewables would result in more green jobs and a more diversified economy. However, others noted that new infrastructure takes time to build and this limits how quickly new sources of electricity can be added to the system.

Raising financing for renewable electricity was identified as a significant challenge. Because of this, many stated that policy stability is important, as investors need a degree of certainty about their ability to generate returns.

Many participants also encouraged the panel to consider storage and the role it could play in supporting and enabling intermittent sources of energy.

Other themes discussed included the role and treatment of industrial cogeneration, management of other key air emissions, and the importance of providing policy certainty to investors and system operators.

## **2.3 Oil and Gas**

The oil and gas sector is the largest and fastest growing source of greenhouse gas emissions in Alberta representing just over 46 per cent of provincial emissions. It is also the fastest growing source of emissions in Canada. The Oil and Gas Technical Engagement was held in Calgary on September 10 and September 11, 2015. The purpose of these sessions was to have an open discussion on the challenges and opportunities of ways to reduce greenhouse gas emissions in Alberta's oil and gas sector. Participants came from the oil and gas sector, academia, non-profit organizations, governments and agencies.

Throughout this technical engagement meeting, discussions centred on four key themes: the current state of the oil and gas sector; potential goals and how to achieve them; technology and innovation; and potential policy outcomes.

Participants began by discussing the economic status and outlook of the oil and gas sector. Understanding the production outlook for the sector is an important starting point for understanding how sector emissions will evolve over the coming years. Participants were in agreement that the drop in oil prices is having an impact on growth and long-term planning in the oil and gas sector and will impact the sector's emissions outlook going forward.

Regulatory and economic certainty was identified as key to ensuring investors continue to have confidence in the oil and gas sector. Uncertainty creates risk for investors, especially longer-term investors such as pension funds. Higher cost energy, like the oil sands, might take a hit if financial houses identify it as a significant risk. This would raise the cost of capital and the market may choose to look elsewhere for oil.

Participants generally agreed that certainty on taxes, royalties and carbon pricing would help the sector plan for the future. Many participants also stated that carbon price certainty is more important to greenhouse gas reductions than any other factor, and that policies should reflect this reality.

Many participants identified technology development as a crucial factor in reducing greenhouse gas emissions. New technologies could reduce emissions and costs of energy production, make Alberta more competitive, provide jobs, diversify the economy and improve Alberta's international reputation. There was some disagreement on where the funds for technology and development should come from.

Beyond technology, participants identified six other important goals for Alberta's action on climate change strategy: credibility, competitiveness, reduced emissions, measurable milestones, cost-effective reductions, and equitable burden across sectors.

Participants were in agreement that it is important for the oil and gas industry to reduce its greenhouse gas emissions. A range of strategic, policy and regulatory mechanisms were discussed, with methane frequently identified as the most efficient opportunity for emissions reductions from this sector.

Domestic and international credibility was frequently raised as crucial for the oil and gas sector, because credibility will aid Alberta in gaining access to new markets. There were mixed opinions as to whether a greenhouse gas emissions intensity goal would give Alberta global credibility and whether the province should pursue an intensity-based compliance system or an absolute reduction system.

Regarding federal climate change goals, stakeholders debated whether Alberta should reduce emissions based on its share of emissions or if every province should reduce emissions equally. Some asked if other provinces should make larger reductions to allow Alberta's energy industry to continue to grow.

## **2.4 Other Industrial Emitters**

The balance of Alberta's industrial sectors (excluding electricity and oil and gas) accounted for 9% of Alberta's total emissions in 2013. The Other Industrial Emitters Stakeholder Technical Engagement was held in Edmonton on September 16, 2015. The purpose of this session was to discuss the challenges and opportunities of ways to reduce greenhouse gas emissions in the fertilizer, steel, chemical, coal mining and cement manufacturing sectors. Many of the industries in this sector represent an important part of Alberta's supply chain and support the province's economy with links to oil and gas, forestry, agriculture and electricity production. Participants included members from each of these sectors, academia, non-profit organizations, government and agencies.

Discussion centred on the following themes related to climate policy: trade-offs between sector-specific and economy-wide approaches; managing the transition to a low-carbon future; working with other jurisdictions; and setting achievable targets.

It was noted by stakeholders that many industries covered in this sector participate in the global market. This means anything that makes operating in Alberta more expensive, relative to competing jurisdictions could impact their ability to compete internationally.

Some participants suggested they have already pursued the 'low hanging fruit', i.e. reasonable on-site reduction opportunities. They said there is little room for further reductions. They pointed to the offset market as an important compliance mechanism. They also advocated for policy that encourages reductions upstream and downstream of their facilities.

Participants agreed that technology development and innovation are imperative to drive further emission reductions. It was suggested that funding mechanisms, like the Climate Change and Emissions Management Fund, are an important driver of reductions. Some suggested the mandate of the Climate Change and Emissions Management Corporation (which manages the fund) be broadened to foster an increased international focus on research and development.

Stakeholders discussed several challenges regarding other jurisdictions and operating in a competitive market place. Many felt that if Alberta's policies outpace or are significantly stronger than other jurisdictions, it could cause industry to move out of Alberta and continue emitting - a phenomenon known as carbon leakage.

Most participants agreed that it is important to align policies with other jurisdictions. Many suggested that offsets provided an opportunity to cooperate, align and link with other provinces. Though some participants had positive experiences purchasing offsets, others had concerns about the limited number of participants in the carbon market.

There was debate among stakeholders about whether a carbon price is preferable to a cap and trade system. Many participants thought there were benefits to carbon pricing, such as the ability to direct funding towards innovation. Others were concerned that carbon pricing could result in carbon leakage. Several participants thought that a cap and trade system would be too administratively complex.

Several participants stressed the need for long-term regulatory certainty, along with a price signal, to indicate Alberta is a safe place to invest. Other policy considerations included setting achievable targets and ensuring there is a realistic plan and room for growth. Overall,



participants agreed that a carbon policy, which impacts the entire economy, should not be based on driving emissions reductions in one industry, like the oil sands.

Participants pointed to the need for an approach tailored to each sector – ‘one size fits all’ will not work for this sector. Sector-specific performance standards were raised by a number of participants as being a preferred approach to managing emissions.

## **2.5 Agriculture and Forestry**

Agriculture and forestry are unique sectors in that they produce emissions but they also absorb carbon that would otherwise enter the atmosphere. These sectors were responsible for 9% of Alberta’s emissions in 2013. The purpose of this session was to discuss the challenges and opportunities of how these industries can reduce their greenhouse gas emissions using biological sources of energy, land management and improved operational practices.

The Agriculture and Forestry Stakeholder Technical Engagement was held in Edmonton on September 17, 2015. In the first phase of the engagement meeting, stakeholders gave presentations to help frame the conversation, provide information to panel members and advocate for various policy approaches. Areas of discussion focused on forestry, bioenergy, agriculture, and livestock. Participants came from the forestry and agriculture sectors, academia, non-profit organizations, government and agencies.

Following the presentations, participants discussed how the agriculture sector could contribute to reducing greenhouse gas emissions and the challenges this sector faces. Highlights from the presentations and resulting discussions are summarized here.

Participants from the forestry sector agreed that climate change poses a significant risk to this industry, from invasive species such as the mountain pine beetle to drought and increased forest fires. However, many participants stated that climate change also presents some opportunities. Forests can contribute to climate change mitigation by storing carbon on the landscape. Additionally, wood products are energy efficient building materials and can be substituted for more carbon intensive concrete and steel.

Participants agreed that market access and accessing the electricity grid presented significant challenges for bioenergy production. It was noted that current market conditions prevent biomass from being economic and do not encourage full use of bioenergy facilities. While there is currently enough fuel to provide a larger portion of Alberta’s electricity with bioenergy, without a high price on carbon there is little incentive to develop this capacity.

Many participants stated that there is a large surplus of biomass in Alberta, which means there is opportunity for investment in green energy, if doing so can be made cost effective. Several participants agreed that investment in bioenergy production could create new, carbon neutral jobs, especially in rural communities.

Participants identified several challenges for the bioenergy industry, including the need to streamline regulations. Additionally, many participants stated that, because developing agricultural bioenergy is a long-term investment, financing is a challenge. Many participants also noted that distributed generation was one of the key benefits of using bioenergy from agricultural, as small, local bioenergy facilities could reduce transmission and distribution costs, helping to balance the grid.

Stakeholders identified challenges for the agriculture sector, including regulations that increase the price of fuel or inputs, finding an equitable way to set international commitments, and a lack of education on how to improve environmental performance. The erosion of public crop research funding was also identified as a challenge for this sector.

Stakeholders highlighted several opportunities to reduce sector emissions including: variable rate technology which allows producers to vary the rate of crop inputs based on conditions, changing the inputs by design, soil testing, matching nutrient needs to crop needs, field mapping, understanding and identifying pests, and localizing treatments and boosting soil organic carbon. Boosting soil organic carbon will boost water conservation, as will conversion of marginal crop lands to perennial forage – but these actions come with a cost.

Stakeholders pointed out that livestock is a capital-intensive industry with low margins. The livestock sector requires significant investments and must respond to consumer demands for safe and reasonably priced products. Participants also shared challenges with receiving appropriate credit for reducing emissions. It was noted that conservation is not currently accounted for and therefore many people cannot receive credit. Additionally, many felt the cost and difficulty of using current offset protocols is a hindrance to the industry.

Participants agreed that new opportunities are emerging for the agriculture sector; a small but growing segment of the population is willing to pay for sustainable agriculture. Continued improvements and steady growth will also come from genetic improvement, feed efficiency, residual feed intake and feed additives to reduce enteric methane production, energy conservation in livestock buildings, fertilizer management, maintenance and improvement of healthy grasslands and the potential to use livestock by-products as bioenergy and biogas.

The challenges associated with offset credits were also discussed. Some participants felt there is a need to make the offset system more credible and reliable. For instance, some suggested that the revocability clause under the existing legislation creates uncertainty. Others suggested the expiry period for the credits should be lengthened.

Much of the discussion focused on how the agriculture sector can contribute to reducing greenhouse gas emissions. Many participants noted that a one size fits all approach will not work when it comes to reducing emissions across the economy.

Many participants stressed the issues with verifying carbon offset protocols and urged government to accredit and train verifiers according to each protocol. Several participants suggested that the Auditor General should not only look at the value for money audit and should also consider environmental benefits.

Participants were asked to provide recommendations for Alberta's action on climate change going forward. Recommendations included: maintaining current protocols and policies; improving the offset policy; improving verification time; advancing a carbon pricing mechanism; examining government audit process (audits should occur before credits go on the registry and not after); establish collaborative partnerships and join international networks, such as the Western Climate Initiative and the UN's sustainable development solutions; and providing support for infrastructure, technology and research.

## 2.6 Municipalities

The Municipal Stakeholder Technical Engagement was held in Edmonton on September 29, 2015. The purpose of this meeting was to have an open discussion on the challenges and opportunities of ways to reduce greenhouse gas emissions in municipalities, with an emphasis on transportation. Participants came from municipal governments of various sized communities in Alberta, academia, non-profit organizations, government, associations and agencies.

Discussions centred on the challenges and opportunities related to the role of municipalities, land-use, transportation, buildings, waste, energy systems, energy efficiency, and enabling policies to decrease overall greenhouse gas emissions, and encourage active transportation and greener urban design.

There were a number of areas where participants were in agreement. Municipalities were identified as the front line of climate policy implementation. Participants discussed how municipalities can act as mediators between provincial government and citizens because they have more flexibility to act. They stressed that local support from municipalities for policies can lead to provincial support. Another area of agreement was the importance of tailored provincial support, based on recognizing the climate change mitigation capacity of individual municipalities.

Integrated land use planning was identified as a challenge, due to the connections between urban sprawl, public transit system infrastructure and demands and compact growth. Many participants agreed on the need to educate and incent homeowners, developers and other sectors to strive for a 'greener' lifestyle and economy. This includes supporting higher density neighborhoods, building more multi-family units, recycling, reducing emissions, supporting micro-generation and pushing towards a green economy through training and leveraging existing industries.

Better alignment of provincial and municipal efforts towards climate change mitigation is needed. Some examples include the province building ring roads on the outer perimeter of Edmonton and Calgary which encourages urban sprawl, not mandating municipalities to implement climate change mitigation actions in regional land use plans, and not providing reliable funding to municipalities for their climate change mitigation efforts. A clear directive from the provincial government in the form of a provincial policy statement may help guide municipalities going forward.

The level of control the provincial government should have over municipalities in overseeing, funding, and directing their climate change mitigation efforts is an issue. Autonomy was identified as very important for municipalities.

Participants suggested a range of strategic, regulatory and policy mechanisms to guide the reduction of emissions, including: incentives for homeowners and industries by rewarding "green" behaviours such as recycling and using energy efficient appliances; introducing punitive measures to discourage industry emissions; investing in active and public transportation systems; aligning provincial goals to support compact growth; securing funding for municipality's mitigation efforts; addressing municipalities' waste concerns through policies and legislation; updating and revising the micro-generation policies to encourage higher adoption; greening the grid; and raising energy literacy among citizens.

## 2.7 Innovation and Technology

The Innovation and Technology Stakeholder Technical Engagement was held in Edmonton on October 2, 2015. Participants came from the technology sector, academia, non-profit organizations, government and agencies.

Discussions centred on challenges and opportunities related to four themes: the current state of innovation in Alberta; the global landscape; how to create the future together; and how to organize for success.

Participants were in general agreement that Alberta has a strong culture of innovation, but there is room to improve. In order to have successful innovation in Alberta, the infrastructure for research, information technology and system linkages are all necessary.

Participants identified several challenges related to bringing technology and innovation to life. These challenges included the significant timelines to turn innovation into reality (10-20 years from conception to commercialization), the ongoing tension between innovation and investor expectations and ensuring that product development is driven by the marketplace.

Much of the discussion focused on the importance of collaboration. Successful innovation requires a shared purpose, working outside of existing silos and finding ways to work together to achieve common outcomes.

While most participants agreed that government is an important partner in innovation, there was some debate over the specific role government should play. While government can provide funding, they can also help create a shared vision for innovation and enable collaboration, within the province, across Canada and around the world. Participants noted that regulatory policy frameworks often hinder innovation, and participants expressed the need to have regulations that stimulate innovation.

Discussion on the global landscape centred on where Alberta will fit into a low carbon future. If the world moves away from combustion, oil and gas will still be required for other uses, such as special lubricants, manufacturing, fertilizers and plastics. Long distance transportation will also likely continue to rely on oil. Some participants argued that these uses will not result in a global market that is capable of supporting the oil sands – there is enough lower-cost oil being produced elsewhere. Participants agreed that uncertainty surrounding the future demand and uses for oil creates uncertainty for technology investors, and researchers.

Participants discussed how Alberta can play a key role in this uncertain and changing global economy, given Alberta's strength as entrepreneurs, innovators, project managers and in agriculture. Given Alberta's resources, many felt the province can support the redesign of a new energy system for a low-carbon future by leveraging natural gas and renewables. There was discussion on the importance of engaging youth as researchers and future leaders.

Participants were asked to consider how Alberta could organize for success and to identify the five conditions required to create an innovative, vibrant economy using Alberta's resources. Ideas included: looking for solutions that result in significant improvements versus small profit increases; implementing a price on carbon; creating and maximizing value in hydrocarbon; transitioning to renewable energy; and making carbon a resource.

## 2.8 Economy-Wide Approaches

The Economy-Wide Approaches Stakeholder Technical Engagement was held in Calgary on October 6, 2015. Discussion focused on overarching topics relevant to climate leadership, including: the objective and coverage of policy; instrument choice; stringency of policy; and revenue recycling options. Participants included academics as well as representatives from think-tanks, government, agencies and non-government organizations.

Most participants acknowledged the potential benefits of a carbon policy in Alberta and supported carbon pricing over a cap and trade model. Many argued that a price on carbon sends a strong signal to both households and investors and is more effective than policies or targets focused on emissions quantities.

There was strong consensus that if Alberta were to introduce carbon pricing, it should be applied as broadly as possible to both consumers and industry as an incentive to encourage behaviour changes and reduce emissions overall.

Participants emphasized that any carbon pricing system should have specific long term objectives, be simple to understand, transparent and easy to implement, and as visible as possible for industry, investors and consumers. There was little support for exemptions to carbon pricing but participants identified some areas where impacts of the policy should be mitigated:

- Temporary special treatment for certain emitters like trade exposed industries.
- Potential impacts on low-income households should be taken into account.

There was agreement that Alberta should consider a stable and predictable price that delivers a long-term signal to drive innovation. This price should be close to the global price, which will help Alberta's competitiveness.

A vote was taken among all participants on what Alberta's marginal price on carbon should be by 2020 and by 2050. The median result was \$50/tonne by 2020 and \$87.50/tonne by 2050.

However, it was emphasized that a price on carbon will not be enough; accompanying regulations will be required to drive significant emissions.

Options for revenue recycling were discussed, including:

- Reducing corporate or income tax
- Investing in innovation with a focus on the energy sector.
- Off-set future tax increases. This could allow for reduction in the deficit without raising other taxes.
- Revenues could be used in a way that compliments overall objective of reducing greenhouse gas emission reductions, such as green infrastructure, green loans, renewable subsidies.