

Alberta's Clean Energy Story

By: Andy Ridge, Director of Climate Change, Secretariat for the Government of Alberta,
Canada: env.infocent@gov.ab.ca

Andy Ridge writes about Alberta's efforts to reduce greenhouse gas emissions through a regulated offset market, fund clean energy technology, and greening their energy production while retaining economic growth. Andy has worked on the provincial and national climate change policy for over 10 years, including a leading role in the development of the Alberta's climate change strategy and associated legislation.

Finding solutions to climate change that meet growing global demands for energy while retaining economic growth requires us to work together. All of us! It requires real and honest conversations, critical thinking and practical ideas. There's certainly a renewed appetite to engage in this kind of dialogue and Alberta has much to bring to these conversations.

As the only North American jurisdiction to have a price on carbon and a technology fund as part of [regulating greenhouse gas emissions](#) for large industrial emitters, it's fair to say that Alberta is steps ahead in the global efforts to tackle climate change. Be it our experience in regulating emissions or our unprecedented investment in climate friendly technology, there are few comparable examples to Alberta's progressive and responsible stewardship of a major energy resource. In fact, the [Conference Board of Canada](#) estimates that \$6.1 billion will be spent in Alberta on clean energy technology over the next five years – that's more than all other Canadian provinces combined. This is something to be proud of.

Alberta's climate change approach stems from recognition that like most any other industry producing a tangible good, emissions grow as production increases and production increases to meet consumer demand – a demand that comes from choices that you and I make in our everyday lives. We believe that through innovation, technology and continued improvements in efficiency, we've reached a stage where, in terms of greenhouse gas performance, the oil sands have caught and surpassed some other global sources of oil.

By the way, it's important to note that the oil sands only represent five per cent of Canadian emissions, and less than 0.1 per cent of global emissions. So, we know that the battle to reduce global emissions will not be won or lost in Alberta. That said, it is going on three years since our government introduced comprehensive GHG regulations covering all major emitters. To date, we've reduced emissions by 17 millions tonnes from business-as-usual as a result of our regulated offset market.

This market consist of a clean energy technology fund which is generated through money collected from industry – at a rate of \$15/ carbon tonne – as part of complying with our climate change regulations and leveraged into significant emission reductions projects that demonstrate Alberta's commitment to a clean energy future. More than \$257 million has been paid into the fund – with nearly \$100 million of that already invested on:

- Renewables – 5 projects – \$64.5 million
- Energy efficiency – 6 projects – \$5.7 million
- Greening fossil fuels – 2 projects – \$23.3 million
- Carbon capture and storage – 3 projects – \$4.8 million

We believe carbon capture and storage is a viable means of reducing greenhouse gas emissions here in Alberta. Certainly, like any new technology, initial costs can be high, but experience has shown that costs will come down. Jurisdictions need to move on these technologies and get the ball rolling – Alberta is doing just that. We are not alone in our pursuit of CCS – many other countries; leading scientists and the United Nations believe it is an important tool to reduce emissions globally. Alberta's \$2 billion commitment, and what we will learn from it, is part of our contribution to the global effort to combat climate change. Our investment will result in a network of projects, pipelines, storage and financing unique in this world.

Greening energy production is a key element of our provincial [climate change strategy](#). Our unique regulations are an incentive for renewables:

- Wind and biomass are a large component of offsets purchased to meet CO2 reduction; and
- Our clean energy technology fund has invested \$64.5 million into renewable energy projects.

In 2007, the Government of Canada provided Alberta with \$155.9 million as part of a national ecoTrust initiative to deliver either climate change or air emission reductions. The ecoTrust fund has allowed us to pursue and invest \$81.5 million into renewable technology, waste-to-energy and solar thermal projects.

At the end of the day, climate change is an energy issue in need of practical solutions that all of us – as energy consumers – must address. Our success in tackling climate change to date is in large part to Albertans commitment to reduce greenhouse gas emissions by transforming how we use energy in our day-to-day lives. In April 2009, the province committed \$36 million over three years to help Albertans achieve this goal through a consumer energy efficiency rebate program. The response to this incentive has been tremendous with consumers opting for more energy efficient choice when making upgrade to their homes. Over the past two years, the program has delivered approximately \$25 million in rebates to support energy efficient consumer choices to date.

Much as we focus on the energy and economic growth imperative inherent in the climate change agenda, Alberta also recognize the need to take the necessary actions to adapt to current and anticipated changes due to climate impacts. Again, Alberta continues to provide leadership in climate change adaptation management. We have completed a province-wide vulnerability studies and currently moving ahead with departmental climate change risk assessment processes, which, in the end, will inform efforts to create a broader provincial adaptation strategy. That aside, Alberta is also involved in federal and regional adaptation management efforts that focus specifically on water resources management, terrestrial ecosystems management and drought and excessive moisture management and adaptation knowledge management. These are exciting and innovative projects and are all aimed at building policy and decision-making capacity, as well as to help Albertans to adapt to a changing climate.

Certainly, work is ahead of us. We don't want to become complacent. We need to take what we learn from these investments and build commercially viable solutions that will have the most

impact on our province. We'll also want to share these learning with other jurisdictions around the world facing these same challenges. It won't happen overnight but Alberta is on the road to a clean energy future.