

Oil Sands Consultations
Alberta Department of Energy
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Edmonton, Alberta Canada
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Submitted by email

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Dear Chair and Panel Members,

Thank you for the opportunity to share our perspective regarding a vision and principles for oil sands development. Representatives of the Pembina Institute participated in five oil sands consultation sessions, in Bonnyville, Peace River, Fort McMurray, Edmonton and Calgary to present our vision for appropriate oil sands development as it relates to the major issues of water use, land impacts, optimal pace and scale of development, greenhouse gas pollution and ensuring Albertans are fairly compensated with an equitable royalty regime. Please consider this written submission as a supplement to these presentations.

The pace of oil sands development has far exceeded expectations. The Alberta government oil sands policy has been heavily focused on expanding production and in the process Alberta's oil sands industry has become the epitome of unsustainable development. Between 1995 and 2004 oil sands production more than doubled to more than one million barrels per day, and is proposed to exceed 3 million barrels of bitumen per day by 2015. The Alberta Government has leased 43,000 square kilometres of land for oil sands development. This rapid development has put stress on the social and economic system, as can be seen from the shortage of labour and rising costs. But it also inflicts unnecessary strains on the environment and causes long-term damage. Albertans are legitimately questioning whether we are maximizing the benefits to society of developing our oil sands asset and whether enough thought is being given to the welfare of future generations.

Decisions to take actions to significantly reduce environmental impacts, prevent the rapid rise of greenhouse gas pollution, absorb the negative socio-economic impacts and put in place a plan that ensures future generations of Albertans benefit will require a willingness to slow down the pace of development. If we can chart a more sustainable path for oil sands development we will not look back with regret at those decisions.

The Pembina Institute offers the following vision for development of the oil sands:



Development occurs at a pace and scale that:

- respects the capacity of regional ecosystems to be sustained;
- addresses global climate change by achieving deep reductions in greenhouse gas emissions;
- optimizes economic benefit to the public owners of the resource; and,
- continuously improves the quality of life for all Albertans today and for future generations.

A number of principles are needed to achieve this vision. They include:

Taking the time to plan – a moratorium on oil sands leases and regulatory approvals

Oil sands development is occurring in a disorderly manner that brings with it economic, social and environmental consequences. In order to catch up to approved development and get ahead of planned development it is necessary to rein in development by suspending the new allocation of oil sands rights and regulatory approvals for oil sands projects. This will grant all stakeholders – government, industry, First Nations and Metis, environmental groups, and Albertans – the opportunity to effectively ensure that the policies and systems are in place to guide further growth in a manner that is consistent with the public interest of current and future generations of Albertans.

Implementation of protective and precautionary environmental limits to the cumulative impact of industrial development on the oil sands region's air, land and water in order to maintain human health, healthy ecosystems and traditional values and uses.

The plans should include a network of protected areas and wildlife corridors within the boreal forest and the management of surface water on a watershed basis.

New mineral leases are being granted before there is a process to effectively limit the cumulative impacts of existing operations. It is appropriate for the Alberta Government to manage cumulative environmental impacts by managing the rate of oil sand lease sales. This will allow for orderly development that occurs in the public interest. This represents the most effective way to ensure that the rate of development proceeds in the public interest. Considering the project impacts associated with the development of a resource that covers almost one quarter of Alberta, it is essential that representative portions of the boreal forest are protected in perpetuity as wildlife habitat, traditional use, and recreation areas.

Establishment of thresholds that should not be crossed. These should ensure maintenance of adequate flows in rivers, groundwater protection, air quality and conservation of wildlife habitat and species.

The current oil sands rush has led to the allocation of large volumes of water from the Athabasca River for oil sands mining before the scientific studies have shown how much water is needed to maintain a healthy ecosystem. The wastewater from the bitumen extraction process has created enormous tailings ponds that have the potential to become long term toxic liabilities for future generations of Albertans. Air pollution is rising with each new project and will reach and exceed levels that result in serious impacts to health and the environment. Where the bitumen is too deep to mine, the roads and pipelines for in situ production are fragmenting the boreal forest and affecting wildlife habitat before stakeholders understand what the consequences will be to the boreal ecosystem. Large allocations of groundwater are being made to generate steam for in situ production before we fully understand the rate at which the aquifers are recharged or have an adequate network of monitoring wells across the region.

Limits for air pollution, for water use, protection of wildlife habitat and greenhouse gas emissions have not been implemented. Further, the precautionary principle must be employed where there remains scientific uncertainty. Existing multi-stakeholder processes such as the Cumulative Environmental Management Association (CEMA) are unable to deliver on their mandates since essential government staff are too busy reviewing proposed projects and managing the regulatory approvals process. The Government of Alberta must be held accountable for ensuring orderly development of the oil sands that is in the interest of all Albertans – both current and future generations. To do so requires that the responsible government agencies and departments are adequately resourced, both financially and with regards to human resources. It is essential to implement development limits before additional projects are approved.

Holding industry accountable for reclamation to boreal forest

The oil sands industry must be held accountable for demonstrating the success of its proposed reclamation processes (including end pit lakes) and transparently reporting on the costs of reclamation. Clear reclamation criteria that require restoration of boreal forest are required and the industry must clearly commit to and be held accountable for achieving this reclamation in a timely manner.

The scale of oil sands mining operations, the creation of immense volumes of toxic tailings and the cumulative impacts of multiple industrial mega-projects bring great uncertainty to the question of whether oil sands reclamation will be successful. After more than three decades of oil sands mining not a single hectare of land has been certified as reclaimed by the Government of Alberta. This uncertainty also has potential economic ramifications for Albertans given the lack of clear government policy and guidance to ensure it collects adequate reclamation security from oil sands operators.

Short-term targets to reduce and offset greenhouse gas emissions, and a requirement that oil sands operations are carbon neutral by 2020.

Oil sands development is the fastest growing source of new greenhouse gas pollution at a time in which Alberta and Canada must be achieving reductions in greenhouse gas pollution. Emissions of climate-changing greenhouse gases from Alberta's oil sands are set to increase more than threefold between 2003 and 2012, and fivefold between 2003 and 2020. The projections show annual emissions from the oil sands increasing from 25.2 megatonnes (Mt) in 2003 to 61.9-67.9 Mt in 2010. This increase represents 41-47% of the 90 Mt growth in Canada's total annual emissions that the federal government estimates would occur over the same period under "business-as-usual" conditions. 86% of Albertans believe that oil sands companies should be required to reduce greenhouse gases associated with their operations, yet the Alberta Government has not implemented rules to limit greenhouse gas emissions from the oil sands. Achieving emission reductions from oil sands projects must follow the polluter pays principle, in which those responsible for the emissions are held accountable for managing them.

A fair royalty regime so that Albertans are adequately compensated for the development of the oil sands resource.

The generic royalty regime for oil sands has facilitated massive capital investments and increases in production. Despite the shift in the oil sands industry from fledgling to mature as well as the drastic increase in the price of oil, the provincial government has maintained the same royalty regime. The royalty regime has not been adjusted to reflect today's economic reality. The result is declining royalty revenue for each barrel of oil from oil sands. Albertans received less royalty revenue for each barrel of oil from oil sands in 2005 than they did in 1997. Between 1997 and 2005, royalty revenue per barrel of oil declined by 39% from \$2.85 to \$1.74. It is essential that a new royalty regime is implemented to ensure Albertans achieve a fair return from the development of their resource.

Continuous improvements in the quality of life, which means ensuring not only a sustainable financial contribution from oil sands development but investment in energy efficiency and in the production and distribution of sustainable forms of energy for future generations of Albertans and a recognition of the value of clean air, fresh water and a healthy environment

The oil sands are a finite resource. There is an opportunity to ensure that revenue generated from oil sands development is used to fund the transition to a sustainable energy future, and that future generations are not left with the liabilities and diminished environment associated with poorly planned oil sands development.

There is an urgent need for the Alberta Government to ensure that the public interest is reflected in the rate and conditions of oil sands development. The current oil sands regime is focused only on rapid extraction, which risks squandering a public resource and is resulting in major social and environmental impacts.

Until a plan is in place that reflects the vision of Albertans for oil sands development, it is essential that there be a moratorium on new oil sands lease allocations and project approvals. There is an urgent need to catch up to existing development and get ahead of future development. Thank you for providing the opportunity to comment on a new vision for Alberta's oil sands. We provide for your reference the following background material that summarizes some of Pembina's research on oil sands impacts and solutions.

Please contact me if you require further information on any portion of Pembina's verbal or written submissions to the Oil Sands Panel.

Yours sincerely,



Dr. Marlo Raynolds
Executive Director
Pembina Institute

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Pembina Institute Reports

[Oil Sands Fever: The Environmental Implications of Canada's Oil Sands Rush](#)

[Death by a Thousand Cuts: Impacts of in-situ oil sands development on Alberta's boreal forest](#)

[Down to the Last Drop](#)

[Troubled Waters, Troubling Trends](#)

[The Climate Implications of Canada's Oil Sands Development](#)

Pembina Institute Panel Presentations

- Dr. Mary Griffiths, Senior Policy Analyst – September 13 - Bonnyville
- Simon Dyer, Senior Policy Analyst – September 14 – Peace River
- Dan Woynillowicz, Senior Policy Analyst – September 19– Fort McMurray
- Dr. Marlo Raynolds, Executive Director – September 26- Edmonton
- Amy Taylor, Director, Ecological Fiscal Reform – September 27 - Calgary