

Presentation to the Oil Sands Multi-stakeholder Committee

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Mr. Chairman and Members of the Panel:

The Pembina Institute envisions oil sands development that occurs at a pace and scale that:

- 1. respects the capacity of regional ecosystems to be sustained,*
- 2. addresses global climate change by achieving deep reductions in greenhouse gas emissions towards a net-zero release of greenhouse gas pollution,*
- 3. optimizes economic benefit to the public owners of the resource, and*
- 4. continuously improves the quality of life of all Albertans today and for future generations.*

You have heard from my colleagues about environmental issues specific to both in situ and open-pit mining, and they have suggested a variety of key principles that support this vision. Today I will speak about one of the largest and most pressing of environmental issues arising from both oil sands mining and in situ operations – global climate change.

The manner in which Alberta's oil sands are developed poses a major risk to our global climate system due its release of greenhouse gas pollution. Also at risk is our international reputation. As Canada emerges as an "energy superpower," in large part due to the oil sands, the world will increasingly watch and scrutinize how we develop this resource. Internationally, Canada has carried a reputation of being environmentally responsible, a nation with a natural endowment of pristine forests, abundant wildlife, clean water, and healthy air, and the commitment to preserving this endowment. This reputation is changing as we now stall international progress on reducing greenhouse gas pollution and are poised to fail in achieving our international commitment under the Kyoto Protocol.

The science of climate change leaves little doubt that greenhouse gas pollution must be reduced immediately if we are to avoid the impacts of drastic worldwide climate change. The science is pointing to the need for industrialized countries such as Canada, to reduce greenhouse gas pollution to 80% below 1990 levels by the year 2050. The global objective is to keep the atmospheric concentration of carbon dioxide well below 450 parts per million by volume. If measures are not taken to curb emissions growth, the oil sands industry will be blamed for undermining Canada's international obligation to reduce its greenhouse gas pollution. The current path is taking Canada in a dangerous direction, increasing societal risks by letting emissions soar.

A significant reason for Canada not being able to achieve its reduction target is the projected growth of pollution from the oil sands. Oil sands are the single fastest growing point source of emissions in Canada. To give you an idea of the scale, consider these facts:

- From 1995 to 2004 emissions have more than doubled¹.
- Projecting out to 2010, emissions could be as high as 61.9 – 67.9 Mt CO₂e / year and as high as 113.1 – 141.6 Mt CO₂e / year in 2020². This assumes natural gas as the primary fuel. The projections will be much worse (up to 50%³) if we switch to coke without pollution control.
- The Suncor expansion – Voyageur – which recently went to the Board for review will alone result in an annual increase of 9.1 Mt CO₂e⁴. These are massive sources of greenhouse gas pollution.

To date we have failed in controlling greenhouse gas pollution from the oil sands. We have failed Albertans, we have failed future generations, and we have failed the global community in responding responsibly. Voluntary initiatives have failed. Shell Canada has made the only real and tangible commitment to reduce emissions – committing to achieve GHG pollution levels that are better than the "most likely commercial supply alternative at start-up". For their existing Athabasca Oil Sands Project operations, this commitment led to a 50% reduction relative to the emissions level estimated when the project was officially launched in late 1999. This commitment demonstrates that it can be done – that we can manage greenhouse gas pollution from the oil sands. It is our collective responsibility to raise the bar so that the laggards meet public expectations for environmental and climate protection. To date both Alberta and the Federal Government have failed to regulate the release of greenhouse gas pollution. Until regulatory action resulting in deep reductions occurs it would be irresponsible for this panel to recommend further development of the oil sands.

Albertans expect action on eliminating greenhouse gas emissions. Polling completed in April of this year shows that 91% of Albertans agreed strongly (58%) or moderately (33%) to the following statement:

¹ Source of 1995 data: Alberta Energy and Utilities Board. 2004. ST98-2004 – Graphs and Data – Section 2 Crude Bitumen, <http://www.eub.gov.ab.ca/bbs/products/STs/st98-2004-data-2-bitumen.ppt>; Source of 2004 data: Alberta Energy and Utilities Board, *ibid.*, p.2-2. Assumes that emissions intensity is constant throughout this timeframe as aggregated oil sands ghg emissions was not found.

² Bramley, M., D. Neabel and D. Woynillowicz. 2005. *The Climate Implications of Canada's Oil Sands Development* page 5 found in Table 1. Data accessed online at <http://www.pembina.org/pdf/publications/oilsands-climate-implications-background.pdf>

³ Woynillowicz, D., C. Severson-Baker and M. Reynolds. 2005. *Oil Sands Fever: The Environmental Implications of Canada's Oil Sands Rush*, p.20. Pembina Institute, http://www.pembina.org/publications_item.asp?id=203.

⁴ Suncor Energy Inc, March 2005. "Voyageur Project Environmental Impact Assessment Volume 3" on page 119 in section 2.4.11.2 taking 'Post Voyageur Upgrader Phase 2' emissions of 21.513 Mt CO₂e/yr and subtracting 'Post MCU' emissions of 12.370 Mt CO₂e/yr.

“Protecting the environment is important, even if it means oil sands development occurs more slowly.”

With respect to greenhouse gas pollution, an overwhelming majority of Albertans believes that oil sands companies should be required to reduce greenhouse gas emissions associated with their development activities. From the same polling conducted by Probe Research in April 2006, 86% (60% “strongly” and 26% “moderately”) agreed with the following statement:

“In each of their oil sands plants, companies should be required to reduce greenhouse gas emissions that are responsible for climate change.”

The bottom line is that Albertans expect action and are willing to slow the development of oil sands down to a pace that can ensure protection of the environment – including significant reductions in greenhouse gas pollution.

A New Vision – Net Zero Greenhouse Gas Pollution

A vision for the oil sands, which would enable Albertans to be proud of the oil sands resource is one where we develop the oil sands while releasing **net-zero emissions of greenhouse gases**. Imagine: Zero net greenhouse gas emissions from the oil sands. Imagine being able to say, “yes we are developing the oil sands but we have eliminated the greenhouse gas pollution from it and are demonstrating international leadership.” This will inspire others to follow.

The exciting thing about this vision is that it **can** be realized. In a “can do” province like Alberta, we could achieve this **vision of greenhouse-gas-neutral oil sands by the year 2020**. How? To produce a barrel of synthetic crude oil from the oil sands we release on average 70-100 kg of CO²e into the atmosphere. Using today’s prices for opportunities to eliminate greenhouse gas emissions at \$15 per tonne, the cost would be on the order of \$1 to \$1.50 per barrel. But through technical work we have completed and will be publishing in the near future, when we look out to 2020 with emerging technology and provide a conservative range of costs, it turns out to achieve a net-zero greenhouse gas vision the cost would be from \$3 to \$9 per barrel. With the \$9 being extremely conservative at a cost of \$90 or more per tonne of CO²e.

To achieve this vision we accept the use of carbon capture and sequestration as an end-of-pipe pollution control technology. Based on our analysis, some 70% of emissions from the oil sands could be captured and sequestered due to the massive point sources. The remaining 30% would be more difficult as they tend to be mobile sources such as trucks, pipelines, and tailings ponds. After investing in opportunities to maximize energy efficiency, the remaining greenhouse gas pollution could be offset using domestic or international offsets to achieve the net-zero vision.

The cost of dealing with greenhouse gas pollution should be on the polluter – “polluter pays”. Given the profitability of the sector, and the expected margins between all-in production costs (including cost of capital) and anticipated market value of oil, we believe achieving this vision of net-zero greenhouse gas emissions by 2020 is realistic and an invaluable contribution to addressing the global challenge we all face. Such leadership could spark the transformation we need.

Thank you.