



News Release

Accelerating technological development is required today to address long-term environmental footprint of oil sands, finds Expert Panel

Ottawa (May 28, 2015) – Released today by the Council of Canadian Academies, a new expert panel report, ***Technological Prospects for Reducing the Environmental Footprint of Canadian Oil Sands***, examines the potential for technology to mitigate the environmental footprint of oil sands development. Addressing the environmental impact of the oil sands is a long-term endeavour. Technologies implemented over the short to medium term can reduce the footprint on a per barrel basis, but none can bring absolute reductions. The greatest potential lies with emerging technologies that are longer-term research and development prospects.

The oil sands are an important component of the Canadian economy and are expected to play an increasing role in global oil supplies. Their development produces a range of environmental impacts on air, water, and land. The Council's Expert Panel looked at these impacts and identified GHG emissions and tailings ponds as being the most serious. GHG emissions are a central cause of global warming. As widely acknowledged, based on 2014 production estimates, GHG emissions could double to 156 megatonnes by 2025. Moreover, the volume of tailings continues to accumulate. The Expert Panel noted that large tailings ponds are both a legacy problem from past production and a future reclamation challenge.

"Working now to accelerate the pace of technological development is central to meeting the long-term challenge," said Eric Newell, Co-Chair of the Panel. "Technology will be an important part of the path forward. For example, if current long-term R&D projects prove successful, resulting technologies could reduce GHG emissions per barrel below that of U.S. average crude oil by 2030." The Expert Panel was co-chaired by Eric Newell, O.C., FCAE, A.O.E., Former CEO of Syncrude Canada Ltd., and Scott Vaughan, President and CEO, International Institute for Sustainable Development.

Other findings described within the Expert Panel's report include:

- A number of technologies identified in the report can help reduce the environmental footprint in all its dimensions in the short term if widely adopted; these are important but insufficient to achieve absolute reductions.
- An opportunity exists to accelerate the pace of technology development, creating a path to long-term and absolute reductions in the overall environmental footprint of the oil sands. This requires strong leadership, continued investment, and risk-taking by all.
- Opportunities to reduce GHG emissions lie primarily with in situ operations, a major source for emissions, which could rise by 300% by 2030 under 2014 production forecasts.
- There is no single "silver bullet" technology that can significantly reduce the volume of tailings and increase their consolidation for reclamation. However, a range of technologies used together may provide options for timely reclamation.
- Impediments to the accelerated adoption of the most promising technologies relate to resources used, business decisions, and government policies.

This assessment came at the request of Natural Resources Canada. The final peer-reviewed report provides a foundation of evidence relevant for policy- and decision-makers, industry, environmental groups, and other stakeholders. It will serve as a valuable resource to guide future research priorities, R&D investment, and regulatory development.

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For more information or to download a copy of the Expert Panel's report, visit the Council of Canadian Academies' website, www.scienceadvice.ca.

About the Council of Canadian Academies

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