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SUBMISSION / MEMORANDUM TO THE MINISTER
PRÉSENTATION / NOTE DE SERVICE AU MINISTRE

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Subject - Sujet	**Answer Due - Délai le**
Trends Impacting Investment in Canada's Oil Sands	[illegible] Apr 10/12

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MEMORANDUM TO THE DEPUTY MINISTER

TRENDS IMPACTING INVESTMENT IN CANADA'S OIL SANDS

(Information by April 10, 2012)

SUMMARY

- The purpose of this note is to provide an overview of several trends that could impact future investment in the oil sands.
- Cost increases associated with capital and operating costs are currently the biggest risk to investment in the sector.
- Capital expenditures for a 100,000 barrel per day (bpd) oil sands project have more than doubled, from $3.3 billion (B) in 2001 to approximately $7.3B in 2011. Operating costs have experienced a similar trend, increasing from more than $10 per barrel (/bbl) in 2001 to $20/bbl in 2011.
- If cost increases persist, the viability of more marginal higher-cost projects could be jeopardized or require an even higher price of oil in order to remain viable. Certain major oil sands projects, such as Imperial's Kearl mine, are already facing high cost structures.

BACKGROUND

The Canadian Association of Petroleum Producers estimates that oil sands production will reach approximately 3.7 million bpd by 2025. The National Energy Board (NEB) estimates that production will reach 4.0 million bpd by that year.

There are a number of factors that were considered in these forecasts, such as the availability of infrastructure and a sufficiently high price of crude oil. However, the industry still faces challenges related to increasing capital expenditures and increasing operating costs.

Canada

Increasing Operating Costs

In general, operating costs in the oil sands have risen considerably since 2001, when approximately $10/bbl was the norm. In 2011, wage increases, along with higher natural gas prices, environmental compliance and administrative costs, have raised operating costs to more than $20/bbl[1] and this trend is projected to continue into the future. These costs are expected to increase by five percent annually to 2015. The industry is particularly concerned about this issue, as labour shortages and the associated escalation in labour costs are the principal drivers of increasing operating costs per unit of production.

In January 2012, the unemployment rate for the province of Alberta was 4.9 percent, forcing companies to look outside Alberta's borders. Some companies, such as Suncor Energy (Suncor), operate airlines to bring in workers from as far as the east coast of Canada. SunJet, Suncor's airline, is estimated to transport an average of 25,000 people to and from its oil sands sites per month, which, by some estimates, would rank Suncor as Canada's 12th largest airline.

Increasing Capital Expenditures

Between 2001 and 2011, the average capital cost of a 100,000-bpd project increased from $3.3 to $7.3B[2]. The cost of steel, a primary input for the construction of oil sands projects, is increasingly correlated to the price of crude oil and has also been steadily increasing. Finally, achieving the levels of growth forecast by various groups requires at least $100B in up-front investment, not including the ongoing capital expenditures needed to sustain operations, which are thought to be even greater.

To put this into context, the total capital expenditure in Canada's oil sands since 1958 has been $137B, while capital expenditure in Canada's automotive industry was $35B from 2000 to 2010.

IMPLICATIONS FOR CANADA'S OIL SANDS

In 2011, the NEB estimated that new *in-situ* projects require oil prices of $50–60/bbl, while mining operations require prices of $65–75/bbl to be viable. Although current crude prices promote oil sands development, ever-increasing capital and operating costs could make this price insufficient to support oil sands development at forecast levels. In addition, as more oil sands projects begin construction and operations, cost increases could jeopardize the viability of projects with higher cost structures.

[1] Figures in constant 2001 Canadian dollars.
[2] Figures in constant 2001 Canadian dollars.

For example, Imperial Oil's Kearl Mine project is projected to have 220,000 bpd of capacity by 2020. Imperial's cost estimate for the first phase of Kearl (110,000 bpd of production) was estimated at $8B. This estimate was recently revised to $10.9B, due to higher-than-anticipated construction costs. While Imperial maintains that the revision was largely due to changes in design to its tailings-pond system, analysts believe this is a result of significant cost increases. Further, in December 2011, Imperial announced that it was moving forward with a 110,000 bpd expansion to Kearl, at a cost of $8.9B. By some estimates, this phase of the project will require a crude oil price of approximately US$110/bbl for Imperial to realize at least a 10-percent return on capital employed.

Industry Response to Increasing Costs

The oil sands industry is collaborating to minimize high upfront capital costs through strategic partnerships and joint ventures. Companies are also increasingly splitting the development of their projects into several smaller stages, as opposed to the mega-project approach of the mid-2000s. Some analysts, however, cast doubt on the effectiveness of these measures to shelter the oil sands industry from the impact of high cost increases.

Industry is also calling for government action to help alleviate the labour shortage—for example, asking Human Resources and Skills Development Canada (HRSDC) to streamline the process of granting entry to foreign workers into the oil sands through HRSDC's Temporary Foreign Workers program. HRSDC is responding to industry concerns through its Accelerated-Labour Market Opinion initiative, which aims to reduce the administrative burden on employers seeking to hire foreign workers. This initiative is expected to be in place in April 2012.

Industry is also accessing local programs, such as the Petroleum Human Resources Council of Canada's Alberta Immigrant Integration project, which works with companies to develop the necessary human resource practices to promote the uptake of foreign workers.

NRCAN COMMENT

We will continue to monitor these issues and brief you as they develop. Briefings on labour issues will follow under separate cover.

Mark Corey

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For / Pour

[ ] Minister / Ministre
[X] Deputy Minister / Sous-ministre
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Sous-ministre déléguée
Other / Autre ______

Sector / Secteur	ES	Contact: (name/nom - tel.)	Shawn McCallum	Due Date / Échéance	March ~~26~~ 30, 2012

Subject / Objet: Investment Risk for Canada's Oil Sands Industry

Priority / Priorité ______
(If urgent, state reason /deadline – Si urgent, donner la raison / date limite)

Sector Consulted – Secteur consulté

[ ] AECL Restructuring / Restructuration d'EACL
[ ] Audit Branch / Direction de la vérification
[ ] Canadian Forest Service / Service canadien des forêts
[ ] Corporate Mgt and Services / Secteur de la gestion et des services intégrés
[ ] Earth Sciences Sector / Secteur des sciences de la Terre
[ ] Energy Sector / Secteur de l'énergie
[ ] Innovation and Energy Technology Sector / Secteur de l'innovation et de la technologie énergétique
[ ] Legal Services / Services juridiques
[ ] Major Projects Mgt Office /Bureau de gestion des grands projets
[ ] Minerals and Metals Sector / Secteur des minéraux et des métaux
[ ] Northern Pipeline Agency / Administration du pipe-line du Nord
[ ] Public Affairs and Portfolio Mgt Sector / Secteur de la gestion des affaires publiques et du portefeuille
[ ] Science and Policy Integration / Intégration des sciences et des politiques

Other / Autre ______

Approval – Approbation	Signature	Date
Director / Directeur	[signature] for DHeath	March 26
Director General / Directeur général	[signature]	29.3.2012
Assistant DM / Sous-ministre adjoint	[signature]	APR 05 2012
Comments / Commentaires		