



**NICHOLS APPLIED
MANAGEMENT**

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To: Jacob Irving
From: Maarten Ingen-Housz
Date: July 3, 2007

RE: Royalty Review Panel Follow-up.

Background

RIWG presentation to the Royalty Review Panel on June 5 2007 contained a slide on the forecasted construction capital costs of oil sands projects and forecasted royalty revenues to 2018. This slide elicited the following question from Ms. Judith Dworking, panel member: "Do the forecasts assume that capital and operating costs continue to escalate at recent rates?"

Discussion: Capital Spending Forecast

The methodology for gathering the capital spending forecast is as follows:

- CAPP gathers the information on a confidential basis directly from the companies;
- CAPP shares most of the data with RIWG, again on a confidential basis and on the condition that only aggregate data is published; and
- Nichols Applied Management conducts an edit on the CAPP/RIWG data with a view to augment the data where needed (and possible) with capital costs information from recent regulatory applications; and
- Nichols Applied Management disaggregates the capital costs data from the company to the project level where possible in order to allow for the RIWG discounting procedure.

With regards to the capital cost escalations, the data reflects the companies' knowledge of their own projects as the first quarter of 2007 and reflects the cost inflation experienced in recent years and expected in the future.

There is an \$80 billion increase in the capital costs forecast for the 2007 to 2020 period between the 2006 and the 2007 forecasts. Price escalation of projects in both the 2006 and 2007 survey accounted for approximately \$40 billion of the \$80 billion increase. The balance was made up of new projects that were captured for the first time in the 2007 survey.

Discussion: Royalty Forecast

The royalty forecast is affected by both the capital and the operating cost forecasts. The RIWG methodology does not prescribe either one. It relies on the capital and operating costs embedded in individual company's economic models. One of the strengths of the RIWG royalty forecast methodology is that it picks up (but does not declare) the companies' view of the future capital and operating costs.

The RIWG methodology does prescribe a set of product and input price assumptions, including a benchmark crude price, the differential, and the gas price. The RIWG input assumptions also prescribe an inflation level, noting that the tax and royalty calculations are done in nominal terms and then re-stated in real terms. For the 2007 royalty forecast, the input costs assumption is set at:

- twice the general inflation level for the 2007 to 2010 period;
- 50% above the general inflation level for 2011; and
- on par with the general inflation level for the 2012 to 2030 period.

Concluding Comment

The capital and royalty forecasts reflect the views of the responding companies as per early 2007. These views are informed by recent cost escalations as evidenced by increases in capital costs of projects between the 2006 and 2007 capital cost estimates. These increased capital costs do influence the royalty forecast.

Additional costs increases may occur. An example is the cost increases discussed by Opti/Nexen as their Long Lake project nears completion.