ENERGY AND ENVIRONMENTAL POLICY TRENDS

March 2018

THE INVISIBLE COST OF PIPELINE CONSTRAINTS

Over much of the last decade pipeline constraints and the resulting apportionment of pipeline capacity have meant reduced returns on Alberta's Oil Exports.

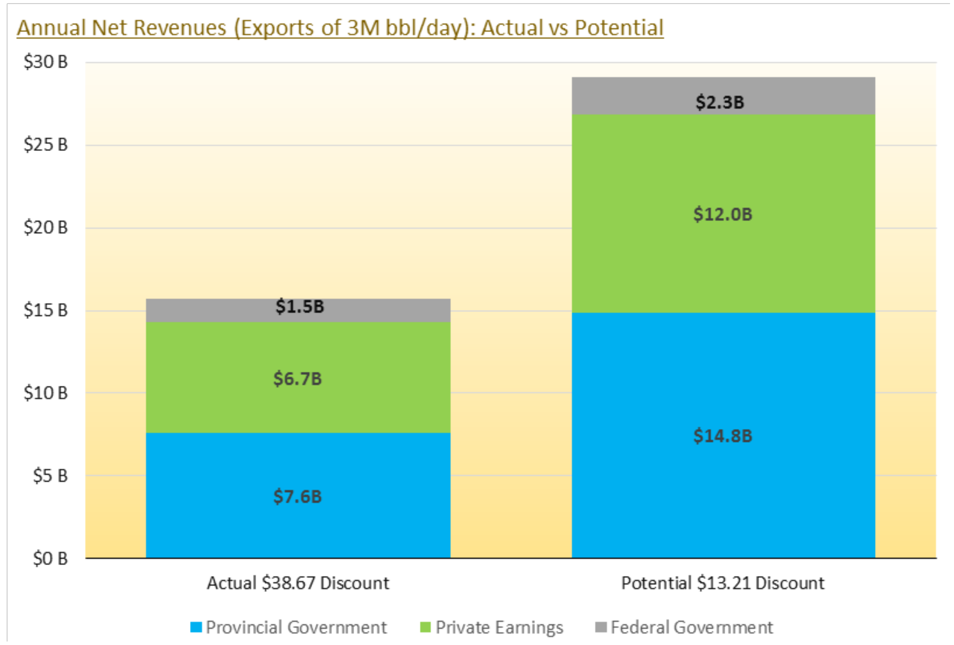
There is a natural price discount between the US benchmark West Texas Intermediate (WTI) Crude oil price and the Canadian benchmark Western Canada Select (WCS) price. This differential reflects the lower quality of WCS relative to WTI and the costs associated with pipeline tolls to transport this oil from Alberta to US refining hubs. However, at present western Canada is experiencing significant pipeline capacity constraints which have dramatically increased this discount relative to historical levels.

Prior to 2013 the WCS/WTI discount generally stayed between 9 and 13% of the WTI price. As of February 2nd 2018, the current differential sits at 47% of the WTI price. A difference largely reflecting difficulties with market access associated with pipeline constraints.

This larger discount means that Alberta is getting lower revenues per barrel for each barrel of heavy crude exported. This negatively impacts federal government revenues, private firms' revenues and most significantly provincial government's revenues.

The Government of Alberta could be losing up to $6.60 on every barrel of Heavy Oil exported to the U.S. equating to annual losses of $7.2 billion in government revenues.

Based on an assessment of [historical data](), we assert that a reasonable discount (absent transportation constraints) would be approximately $13.22 (all values in Canadian dollars) per barrel, much less than the current discount of $38.67.



*The Provincial Government share includes royalties as well as other items of government take, such as taxes and lease costs

This means that the currently received price per barrel for WCS (around $44.18) is much lower than the potential price ($66.63) that would be received absent pipeline constraints.

At the current WTI price, after accounting for the existing discount ($38.67) and operating and capital costs,* the net value per barrel is $14.38. This compares to a net value of about $26.59 under the potential unconstrained discount ($13.21).

As shown in the figure; because Alberta exports around 3 million barrels of oil per day, the difference per barrel means an annual loss of $13B in net value ($15.8B actual vs $29.1B potential). This can be broken up into:

- A $7.2B loss to provincial government revenues ($7.6B actual vs $14.8B potential),
- A $5.3B loss to private companies in Alberta ($6.7B actual vs $12B potential) and
- A $0.8B loss to Federal Government Revenues ($1.5 actual vs $2.3B potential).

*Operating and Capital costs are assumed to vary with the value per barrel, in line with the assumptions made in Alberta's last royalty review: Alberta at a crossroads : Royalty Review Advisory Panel report

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