Alberta Royalty Review

- Facts & Moving Forward -

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Alberta Royalty – Summary

1. The oil and gas industry can easily afford a carbon levy that is at least $100/tCO_2$ – submission #208 to Climate Change Advisory Panel
2. It is necessary for Alberta to transition to fully competitive royalty rates; and at least initially, to a smaller, more efficient, industry. A transition plan is needed.
3. A royalty value maximizing policy would in no way preclude resource owners from then using some of their royalty revenue to pursue strategic initiatives that add the same or even more value for Albertans. It would simply make the entire process more transparent and make it possible for Government and resource owners to determine if in fact any incremental benefits that would be received are actually worth the foregone royalty revenue.

Alberta Royalty – Three Facts

1. The oil and gas industry can easily afford a carbon levy that is at least \$100/tCO_2 – submission #208 to Climate Change Advisory Panel
2. The Upstream oil and gas sector needs to be smaller. Smaller will mean higher, not lower, value. This will also facilitate value added upgrading. A Transition plan is needed.
3. Contrary to CAPP's position that high costs require lower royalties, it is low royalties that lead to higher costs. Low royalties in Alberta are extreme, amounting to a subsidy. This subsidy is causing cost inflation, reducing innovation, and reducing competitiveness.

The Source of Low Royalty Rates

- Low royalty rates originate from three sources:
  1) Policy has been company-centered when it should have been industry centered. By gaging industry needs through lobby groups such as CAPP, government failed to realize that what is good for an individual company, even all companies, is not necessarily good for the industry
  2) Governance: Royalty policy and industry promotion responsibilities have been combined in one Ministry, leading to conflicted advice
  3) Industry has been successful in the erroneous argument that Alberta needs lower royalty rates because the basin has higher costs than our competitors; i.e., the United States.

Industry Facts

- Producer Returns
- Government Shares
- Rates

Producer Returns

Returns in Alberta are double those in the United States – 40% - >100% in Canada vs. 20% - 50% in the U.S.

Royalty rates in the United States are double those in Alberta – 18% - 25% vs. 5% - 15% in Canada

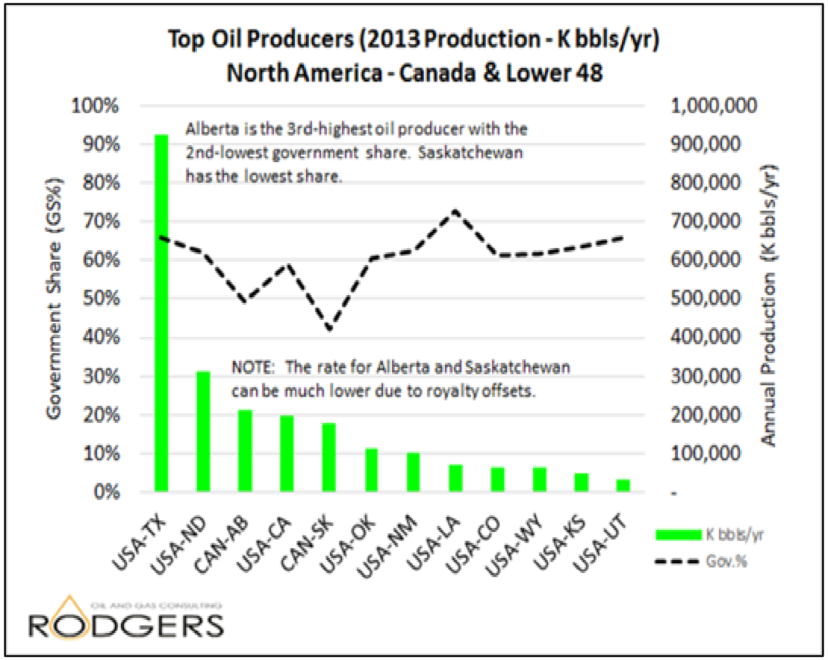
CANADA - UNITED STATES WELL ECONOMICS COMPARISON

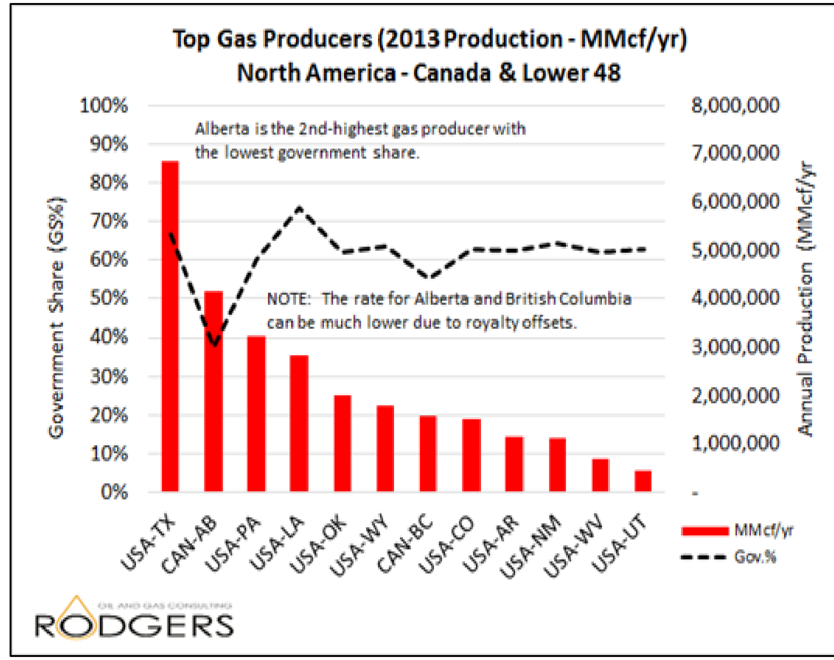
Play	Jurisdiction	EUR/Well (K boe)	ROR	Royalty Rate [1]	Well cost (USD MM)	Supply Price (boe)
Montney	AB/BC	800 - 1,000	40% - >100%	11% - 15%	7.4 - 6.4	30 - 50
Duvernay	AB	1,000 - 1,200	> 90%	5% - 15%	17.3 - 12.0 [2]	30 - 60
Eagle Ford	TX	250 - 700	30% - 40%	20% - 25%	7.4 - 6.7	30 - 50
Permian	TX	650 - 800	20% - 40%	20% - 25%	7.8 - 7.1	45 - 55
DJ Basin	CO/KS/NB/WY	325 - 550	40% - 50%	18% - 20%	4.5 - 5.5	35 - 45
San Juan	CA	400 - 600	20% - 50%	20%	4.0 - 5.0	35 - 65
TMS	LA/MS	600 - 700	20% - 40%	20%	11.0 - 13.0	45 - 55

1. Does not include property tax or severance tax. These can be significant;
   For example: property tax in Texas can represent a royalty-equivalent 2%;
   similarly, a typical U.S. severance tax rate is a royalty-equivalent 5%.
2. The well cost for resource plays depends very much on the stage of development/understanding.
   Typically new plays are developed first in the U.S. with technology later finding application in Canada.
   Thus it is important to compare cross-border costs at the same stage of developent.
   To illustrate: Eagle Ford well costs have declined from $14 MM in 2010.

Rodgers Oil & Gas Consulting, after Encana, Corporate Presenation, June 2015

Government Shares



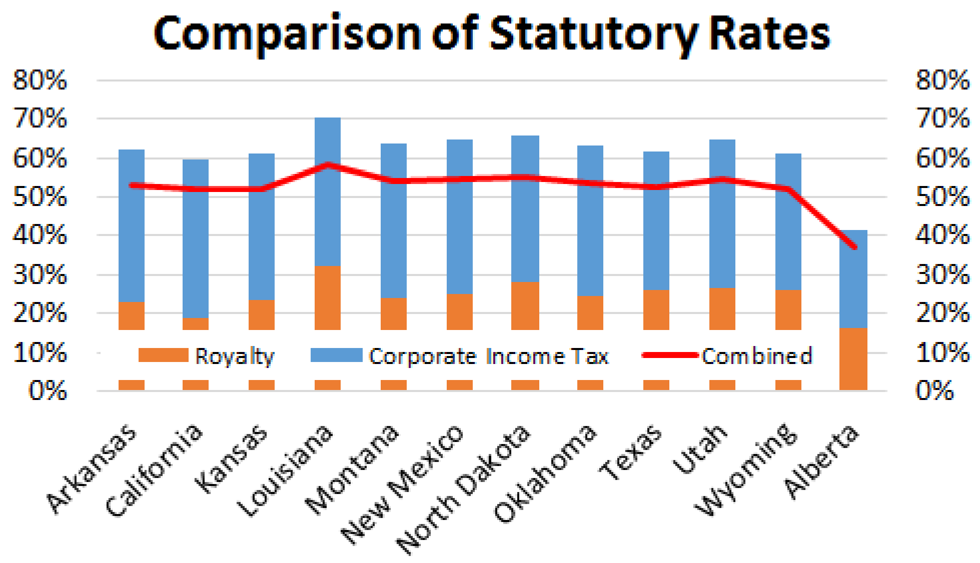


- Alberta is the 3rd largest oil producer with the 2nd lowest government share
- Alberta is the 2nd largest gas producer with the lowest government share

Rates

Alberta has lower royalty rates and lower corporate income tax rates

The USA has higher royalty rates and is recognized as being more innovative



Excludes Oil Sands. U.S. royalties include severance tax but not property tax. Property tax can be significant in the United States. Alberta's royalty rate structure is very complex with rates ranging from 0% - 40%. The average effective rates for 2013 are 16.38% for oil and 5.66% for natural gas. The 2013 oil sands rate was 8.8%. Chart reflects the rate for conventional oil.

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Oil Sands

- Market access requires meaningful action on air emissions. This is not a choice.
- High costs is a choice. The current policy to support investment, no matter what the cost, is not sustainable.

By not charging a competitive fiscal share Alberta is in fact subsidizing the industry. This gets government directly into the business of business and removes the benefits of market-based price signals – leading to reduced innovation, higher costs, reduced competitiveness, a transfer of economic rent from resource owners to industry, and reduced economic diversification.

- Oil Sands does have higher costs. This is precisely the reason why government should not continue subsidizing this industry with low royalty rates.
- Some oil sands producer companies can deliver full cycle economic returns at $40 - $50/bbl, others require $100/bbl.
- Alberta simply cannot afford to subsidize the inefficient $100 companies and at the same time continue under-collecting from the $40 producers.