

Alberta's Modernized Royalty Framework Overview

Alberta's Modernized Royalty Framework partially emulates a revenue minus cost royalty structure across all hydrocarbons.

The framework is consistent with global standards for the pre-payout/post-payout models of risk and profit sharing, without introducing costly process burdens for the thousands of wells drilled every year.

The Drilling and Completion Cost Allowance (C^*), based on average industry drilling and completion costs, is a proxy for well costs. It determines the allowable revenue after which individual well sites begin paying higher royalty rates (post-payout).

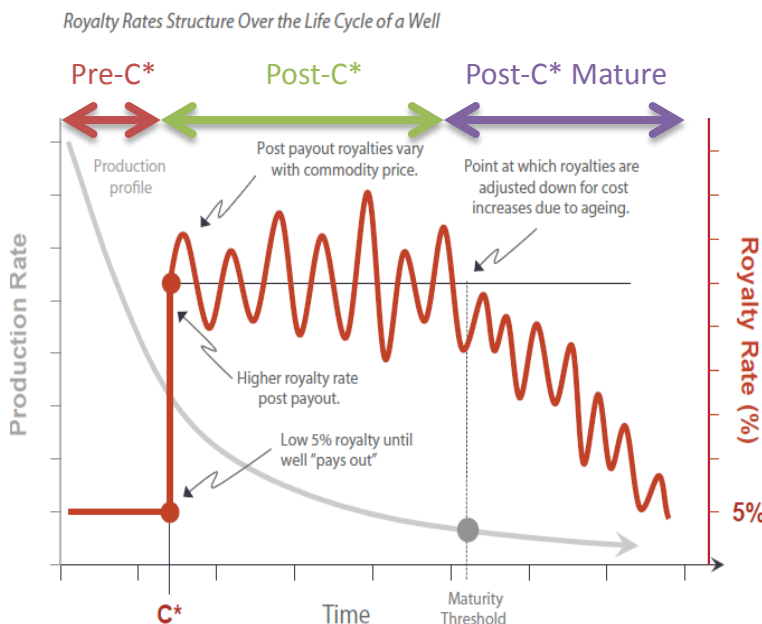
Modernizing Alberta's Royalty Framework by:

- Harmonizing the framework across hydrocarbons
- Removing distortions and disincentives
- Extending drilling incentives but reducing the effects at higher prices

A company will pay a flat royalty of 5% on a well's early production until the well's total revenue, from all hydrocarbon products, equals C^* . Afterwards, the company will pay higher royalty rates that vary depending on the resource and market prices. Royalty rates will drop to match declining production rates when the well reaches a Maturity Threshold.

Harmonizing the royalty structures reduces exploration risk, enabling producers to assess the highest value development opportunities based on market forces without worrying as much about how the well's products or productivity will be characterized by the royalty framework

A company that reduces their drilling and completion costs below the industry average will benefit from lower royalty rates as C^* is based on average industry costs. This provides incentive for companies to innovate to reduce their costs.



Further, costs are high when developing new resources but tend to decline over time as industry gains experience. As industry wide costs decline, C* would also decrease resulting in a more competitive basin, more activity, and higher value captured per well.

Calculating a well's C*

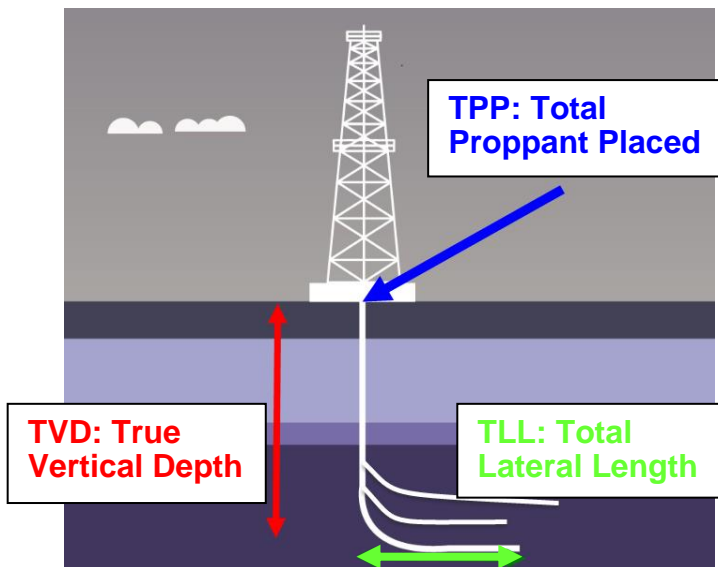
For wells with TVD ≤ 2000 metres

$$C^*(\$) = 1,170*(TVD-249) + 800*TLL + 0.6*TVD*TPP$$

For wells with TVD > 2000 metres

$$C^*(\$) = 1,170*(TVD-249) + 3,120*(TVD-2,000) + 800*TLL + 0.6*TVD*TPP$$

The calculation of C* is the same for all wells, regardless of what hydrocarbon the well produces. When a company drills a well, the well's true vertical depth (TVD), total lateral length (TLL) and total proppant placed (TPP) are entered into the Drilling and Completion Cost Allowance formula to calculate the C* value for the well. The formula for wells deeper than 2000 metres reflects the higher complexity and cost per metre to drill a deep well.



Deriving Post-C* Royalty Rates

Modernized royalty formulas are price sensitive and product specific. The actual royalty rate is the sum of a price component and a quantity adjustment component that applies when monthly production from the well is below the Maturity Threshold, equivalent of 194 cubic metres (m³) (40 barrels of oil equivalent per day). In gas equivalent volumes, this is 345.5 thousand cubic metres (e³m³) per month. The royalty rate has a minimum of 5% and a maximum of 40%.

As royalty rates will not be tied to production until the well reaches the maturity threshold, highly productive wells benefit which will encourage innovation and productivity, rather than drilling more wells. In turn this will lower costs and environmental footprint.

Intended outcomes:

The Modernized Royalty Framework provides industry with similar or better returns for wells under high and low prices and as good or better returns for Albertans. Wells are expected to deliver higher revenues to Albertans under this framework sooner and more stable revenues over the rest of their life. Taking royalties sooner results in lower undiscounted revenues over the lives of some wells.

Removing distortions will increase industry returns for deep oil in particular and is expected to increase industry activity, growing the pie for industry and Albertans alike.