# Oil Sands Royalty Business Overview

## Oil Sands Royalty Business Training

Alberta Energy

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# Topics

- **Oil Sands Royalty Regimes**
  - Non-Project Well Royalty (NPR)
  - Crown Agreement Royalty (CSR)
  - Oil Sands Generic Royalty (OSR)

- **Royalty Reporting**

- **Other Reporting**

- **Common Reporting Issues**

- **Penalties & Interest**

# Royalty Regimes

**Non-Project Well Royalty (NPR)**

- For oil sands wells not in approved OSR Projects
- Crown share based on the ultra heavy oil royalty rates in the Petroleum Royalty Regulation, 2009 or the Petroleum Royalty Regulation, 2017
- Pay cash royalty in accordance with terms prescribed in the *Oil Sands Royalty Regulation, 2009* (*OSRR'09*)

**Crown Agreement Royalty (CSR)**

- Prior to the introduction of the generic oil sands royalty regime in 1997, oil sands projects were approved on a case by case basis with Crown Agreements.
- Pay cash royalty in accordance with terms prescribed in applicable Crown Agreement.

**Oil Sands Royalty (OSR)**

- For approved OSR Projects
- Pay royalty on gross or net revenue of Project
- Pay cash royalty in accordance with terms prescribed in the *OSRR'09*

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# Non-Project Well Royalty (NPR)

All producing wells *not* in an approved OSR Project are charged Non-Project Royalty (in accordance with calculation methodologies in the **Petroleum Royalty Regulation 2009 & 2017**, as if product was Crude Oil)

- Crown Royalty Share (Royalty Volumes) based on:
  - Production x Crown Interest x Royalty Rate (R%)
    - R% is based on ultra heavy oil par price and royalty formulas in either *Petroleum Royalty Regulation, 2009* or *Petroleum Royalty Regulation, 2017*
- Converted to cash royalty:
  - Royalty Volumes x Unit Value
  - less Transportation Allowances
- Once approved in a Project:
  - NPR royalty will be reversed and OSR royalty will be charged (amended reporting is required) from the effective date of the Project

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# Crown Royalty Share
# ARF or MRF?

Generally, wells spud up to and including December 31, 2016 are qualified for Alberta Royalty Framework (ARF) under PRR 2009

- royalty rate is based on a production and price sensitive formula

Generally, wells spud on or after January 1, 2017 are qualified for Modernized Royalty Framework (MRF) under PRR 2017

- Royalty rate is a flat 5% until the well's revenues reach the C* value (proxy for drilling and completion costs of the well)
- When the well's revenues exceed C*, the Post C* royalty rate will apply

Visit **Royalty Overview** at https://www.alberta.ca/royalty-overview.aspx for more details on ARF, MRF, qualifications and royalty formulas

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# Royalty Share Methodology Under Petroleum Royalty Regulation 2009

**Alberta Royalty Framework (ARF)**

https://www.alberta.ca/royalty-overview.aspx#jumplinks-3

## Industry information

### Resources

- MRF Guidelines : principles and procedures [↗]

- MRF Overview [↗]

- MRF technical briefing ⬇

- MRF formulas [↗]

- Royalty related information bulletins [↗]

- Revenue Forecasting Process [↗] fact sheet and MRF information sessions

- C-Star visual ⬇ (PDF, 209 KB) and MRF presentation [↗]

- Alberta Royalty Framework (ARF) Formulas [↗] (for wells spud on or after January 1, 2011 and before December 31, 2016)

  ◦ Conventional oil

  ◦ Natural gas

- ARF Oil Graphs ⬇ (PDF, 134 KB)

- ARF Natural Gas Graphs ⬇ (PDF, 103 KB)

# Royalty Share Methodology Under Petroleum Royalty Regulation 2009

## Alberta Royalty Framework : formulas

| Summary | Detailed Information |
|---------|---------------------|

**DESCRIPTION**

These formulas are part of Alberta's royalty framework and are used by the oil and natural gas industry to determine their resource development royalties. ARF formula apply to wells spud on or after January 1, 2011 to December 31, 2016.

**UPDATED**
May 1, 2010

**TAGS**

Alberta natural gas prices | conventional oil | crude oil | royalty framework

**RESOURCES**

📄 Natural gas

**ⓘ MORE INFORMATION**    **⬇ DOWNLOAD**

DOWNLOADS: 754

📄 Conventional oil

**ⓘ MORE INFORMATION**    **⬇ DOWNLOAD**

DOWNLOADS: 804

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## Royalty Formulas – Conventional Oil
### Effective January 1, 2011

R% = Price Component ($r_p$) + Quantity Component ($r_q$)
ARF (2011): R% has a minimum of 0% and a maximum of 40%
Transition: R% has a minimum of 0% and a maximum of 50%

| Royalty Parameters | | | | |
|---|---|---|---|---|
| | Price ($/m³) | | % Change (%/$/m³) | |
| | ARF (2011) | Transition Wells | ARF (2011) | Transition Wells |
| $P_1$ | 190.00 | 210.00 | 0.06% | 0.035% |
| $P_2$ | 250.00 | 250.00 | 0.10% | 0.01% |
| $P_3$ | 400.00 | 350.00 | 0.05% | 0.005% |
| $P_4$ | 535.00 | -- | 0.03% | -- |
| | Q (m³/month) | | % Change (%/m³/month) | |
| | ARF (2011) | Transition Wells | ARF (2011) | Transition Wells |
| $Q_1$ | 106.4 | 30.4 | 0.26%, 0.10% | 0.13% |
| $Q_2$ | 197.6 | 152.0 | 0.07% | 0.08% |
| $Q_3$ | 304.0 | 273.6 | 0.03% | 0.02% |

| Price Component ($r_p$) | | | |
|---|---|---|---|
| Alberta Royalty Framework (2011) | | Transition Wells | |
| Price ($/m³) | $r_p$ | Price ($/m³) | $r_p$ Transition Wells |
| PP ≤ 250.00 | ((PP − 190.00) * 0.0006)*100 | PP ≤ 250.00 | ((PP − 210.00) * 0.00035)*100 |
| 250.00 < PP ≤ 400.00 | (((PP − 250.00) * 0.0010) + 0.0360)*100 | 250.00 < PP ≤ 350.00 | (((PP − 250.00) * 0.00010) + 0.0140)*100 |
| 400.00 < PP ≤ 535.00 | (((PP − 400.00) * 0.0005) + 0.1860)*100 | PP > 350.00 | (((PP − 350.00) * 0.00005) + 0.0240)*100 |
| PP > 535.00 | (((PP − 535.00) * 0.0003) + 0.2535)*100 | -- | -- |
| Maximum | 35% | Maximum | 35% |
| PP is the par price for the month in $/m³ | | | |
| Note: $r_p$ can be negative | | | |

| Quantity Component ($r_q$) | | | |
|---|---|---|---|
| Alberta Royalty Framework (2011) | | Transition Wells | |
| Quantity (m³/month) | $r_q$ | Quantity (m³/month) | $r_q$ Transition Wells |
| Q ≤ 106.4 | (((Q − 106.4) * 0.0026)*100 | Q ≤ 30.4 | (((Q − 30.4) * 0.0013)*100 |
| 106.4 < Q ≤ 197.6 | (((Q − 106.4) * 0.0010)*100 | 30.4 < Q ≤ 152.0 | (((Q − 30.4) * 0.0013)*100 |
| 197.6 < Q ≤ 304.0 | (((Q − 197.6) * 0.0007) + 0.0912)*100 | 152.0 < Q ≤ 273.6 | (((Q − 152.0) * 0.0008) + 0.1581)*100 |
| Q > 304.0 | (((Q − 304.0) * 0.0003) + 0.1657)*100 | Q > 273.6 | (((Q − 273.6) * 0.0002) + 0.2354)*100 |
| Maximum | 30% | Maximum | 35% |
| Q is the monthly production in m³ | | | |
| Note: $r_q$ can be negative | | | |

| Examples: | | | | | | | |
|---|---|---|---|---|---|---|---|
| Price ($/m³) | Quantity (m³/month) | ARF (2011) | | | Transition Wells | | |
| | | $r_p$ | $r_q$ | R% | $r_p$ | $r_q$ | R% |
| 400.00 | 50.0 | 18.60% | -14.66% | 3.94% | 2.65% | 2.55% | 5.20% |
| 400.00 | 200.0 | 18.60% | 9.29% | 27.89% | 2.65% | 19.65% | 22.30% |
| 600.00 | 50.0 | 27.30% | -14.66% | 12.64% | 3.65% | 2.55% | 6.20% |
| 600.00 | 200.0 | 27.30% | 9.29% | 36.59% | 3.65% | 19.65% | 23.30% |

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# Royalty Share Methodology Under Petroleum Royalty Regulation 2017

**Modernized Royalty Framework (MRF)**

https://www.alberta.ca/royalty-overview.aspx#jumplinks-3

## Industry information

### Resources

- MRF Guidelines : principles and procedures ⬏
- MRF Overview ⬏
- MRF technical briefing ⬇
- MRF formulas ⬏
- Royalty related information bulletins ⬏
- Revenue Forecasting Process ⬏ fact sheet and MRF information sessions
- C-Star visual ⬇ (PDF, 209 KB) and MRF presentation ⬏
- Alberta Royalty Framework (ARF) Formulas ⬏ (for wells spud on or after January 1, 2011 and before December 31, 2016)
  - Conventional oil
  - Natural gas
- ARF Oil Graphs ⬇ (PDF, 134 KB)
- ARF Natural Gas Graphs ⬇ (PDF, 103 KB)

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# Modernized Royalty Framework : formulas

| Summary | Detailed Information | Related (2) |
|---|---|---|

**DESCRIPTION**

These formulas are part of Alberta's Modernized Royalty Framework and are used by the oil and natural gas industry to determine their resource development royalties.

**UPDATED**

January 1, 2017

**TAGS**

| BUTANE | NATURAL GAS | PENTANE PLUS | PROPANE | CRUDE OIL | MODERNIZED ROYALTY FRAMEWORK | WELLS SPUD |
|---|---|---|---|---|---|---|

**RESOURCES**

Butane (extracted and in stream component) : for wells spud on or after January 1, 2017

Updated February 2017.

**ⓘ MORE INFORMATION**    **⬇ DOWNLOAD**

DOWNLOADS: 83

C* : for new wells spud on or after January 1, 2017

Updated February 2017.

**ⓘ MORE INFORMATION**    **⬇ DOWNLOAD**

DOWNLOADS: 273

Conventional oil, pentane plus (extracted and in-stream component) and field condensate for wells spud on or after January 1, 2017

Updated February 2017.

## Modernized Royalty Framework: Formulas
## Conventional Oil, Pentane Plus (extracted and in-stream component) and Field Condensate
## For wells spud on or after January 1, 2017

R% = Price Component ($r_p$) + Quantity Adjustment ($r_q$)

R% has a minimum of 5% and maximum of 40%

| Royalty Parameters | | |
|---|---|---|
| | Price (C$/m$^3$) | % Change (%/$/m$^3$) |
| P1 | 251.70 | 0.07100% |
| P2 | 409.02 | 0.03900% |
| P3 | 723.64 | 0.02000% |

| Price Component ($r_p$) | |
|---|---|
| Price ($/m$^3$) | $r_p$ |
| PP<=251.70 | 10% |
| 251.70<PP<=409.02 | ((PP-251.70)*0.00071+0.10000)*100 |
| 409.02<PP<=723.64 | ((PP-409.02)*0.00039+0.21170)*100 |
| PP>723.64 | ((PP-723.64)*0.00020+0.33440)*100 |
| Maximum | 40% |

| Maturity Threshold | | |
|---|---|---|
| | Q | % Change |
| Q oil equivalent volumes | 194.0 (m$^3$e/month) | 0.1350% (%/m$^3$e/month) |
| Quantity Adjustment (oil equivalent volume) | | |
| Quantity (m$^3$e/month) | $r_q$ | |
| Q >=194.0 | 0% | |
| Q <194.0 | [(Q-194.0)*0.001350]*100 | |
| Note: Quantity is calculated at a well level, where m$^3$e/month = m$^3$ equivalent per month. | | |
| Note: $r_q$ is 0 or negative | | |

A well will pay 5% royalty rate until revenue equals C*($). R% applies once a well's revenues exceed C* (post-C* phase). The minimum royalty rate in the post-C* phase is 5%.

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# Oil Par Prices



https://www.alberta.ca/oil-par-prices.aspx

# Ultra Heavy Oil Par Price

April 22, 2022

INFORMATION LETTER 2022-15
Subject:     Petroleum Royalty Regulation, 2009 (A.R. 222/2008) and 2017 (212/2016) -
             Par Prices for June 2022 Production Month

This Information Letter provides the Crude Oil Category and Density, and the various prices for oil necessary to determine the royalty volume payable to the Crown.

| Category of Crude Oil | Density | June 2022 Par Prices $/M³ |
|---|---|---|
| Light Oil | less than 850 kilograms per cubic metre | $777.80 |
| Medium Oil | greater than or equal to 850 kilograms per cubic metre and less than 900 kilograms per cubic metre | $743.19 |
| Heavy Oil | greater than or equal 900 kilograms per cubic metre and less than 925 kilograms per cubic metre | $706.24 |
| Ultra Heavy Oil | greater than or equal to 925 kilograms per cubic metre | $671.86 |

# Royalty Calculators for ARF and MRF

https://www.alberta.ca/resource-royalties.aspx

Royalty calculators

- Modernized Royalty Framework Calculator [↗] (wells spud in 2017 or later)

- Post C* calculator [↗]

- Alberta Royalty Framework Calculator [↗] (wells spud 2011 - 2016)

- Alberta Royalty Framework Oil Calculator [↗] (wells spud 2009 - 2010)

- Original Basic Oil Calculator [↗] (wells spud 1993 – December 31, 2008)

# Crown Royalty Share (ARF)

# Crown Royalty Share (ARF)

Classification: Protected A

# MRF – C* Calculator

## Alberta Modernized Royalty Framework C* Calculator

Alberta's Modernized Royalty Framework (effective for wells spud after Jan. 1, 2017 or early opt-in participants) emulates a revenue minus cost royalty structure across all hydrocarbons (oil, natural gas and non-project oil sands).

The Drilling and Completion Cost Allowance (C*), is a proxy for completed well costs. It is a calculated value based on vertical depth, lateral length and the amount of proppant placed. The same C* formula is used regardless of hydrocarbon target. It determines the allowable revenue after which individual well sites begin paying higher royalty rates.

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 (Post C*) that vary depending on the resource and reference price of the commodity. Royalty rates decrease to match declining production rates when the well reaches a maturity threshold.

This calculator is a tool to help you estimate C*. See About Royalties for more information.

Disclaimer

### C* Calculation

| | |
|---|---|
| TVD (True vertical depth)  meter | 300 |
| TLL (Total lateral length)  meter | 300 |
| TPP (Total proppant placed) | Sand (tonnes)    100 |

Formula used for TVD < 2000:

$$ACCI * (1170 * (TVD - 249) + 800 * TLL + 0.6 * TVD * (1 * TPP))$$

Where ACC = 1

| Calculate C* | $ 317,670.00 |
|---|---|

# Crown Royalty Share (MRF)
## Post C* Calculator

# Transitioning from NPR to OSR

- Non-Project wells where royalty is calculated under ARF, can apply for an OSR Project at any time, to transition to the OSR regime

- Non-Project wells where royalty has been calculated under MRF with the C* royalty rate will have 12 months to apply for an OSR Project, to transition to the OSR regime

- When the non-Project well is subsequently approved under the OSR regime, any NPR royalty paid prior to the OSR Project effective date will be recalculated to MRF Post C* royalty rates

\* For further information, please see section 27 of the *OSRR'09*

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# Crown Agreement Royalty (CSR)

- Royalty terms, revenues and costs are specific to each Crown agreement

- Pay cash royalty in accordance with terms prescribed in each Crown Agreement

- Separate but similar reporting format to OSR reporting (cost and revenue categories may differ)

# Oil Sands Royalty (OSR)

**Why generic Oil Sands Royalty regime?**

- To establish a single, clear and stable royalty regime with common rules that apply to all developers

- To optimize oil sands development to benefit Albertans

- To promote competitive and fair oil sands development

- Regime is "self-assessing"

- Principally, based on Revenues less Costs or "R - C" approach
  - Project costs (C), allowed under the *Oil Sands Allowed Costs (Ministerial) Regulation* (*OSAC*), are deducted against Project revenues (R) before royalty is applied

- Requires that Projects be defined as distinct economic entities, to "ring-fence" the costs and revenues.

- In the absence of an OSR Project approval, Non Project Royalty (NPR) will apply

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# OSR Pre-requisites

Must apply for, and receive approval for, an oil sands royalty Project to qualify for OSR Royalty

- Oil sands developers must have an oil sands agreement (permit or lease)

- Oil sands developers must have an AER Scheme Approval
  - Apply to AER for development/scheme approval

- Oil sands developers must have an OSR Project
  - Apply to DOE for OSR Project approval

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# Payout

**Payout** is defined as the first time at which the Project has recovered all investment costs, return allowances, capital and operating costs to date, i.e. Cumulative Project Revenue = Cumulative Cost

**Pre-Payout Projects** (lower royalty rate)
- When cumulative Project Revenue is lower than cumulative cost

**Post-Payout Projects** (higher royalty rate)
- When cumulative Project revenues first equal or exceed cumulative Project costs

* Once a Project has reached Payout, it remains in Post-Payout

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# Pre-Payout and Post-Payout Project Royalty

**Royalty on Pre-Payout Projects:**

- Gross Revenue x Gross Royalty Rate ($R_G$%)

**Royalty on Post-Payout Projects:**

- Greater of
  - Net Revenue x Net Royalty Percentage Factor ($R_N$ Factor%)
  - Gross Revenue x Gross Royalty Rate ($R_G$%)

**Gross Revenue**

- Project Revenue less diluent cost

**Net Revenue**

- Project Revenue less (Allowed Costs – Other Net Proceeds)

# Product Revenue and RCP

## Project Revenue

- Effective 2009, Product Revenue based on *deemed* dispositions
    - Volume at Royalty Calculation Point (RCP) x *applicable* Unit Price

## Royalty Calculation Point (RCP)

- The point where royalty volumes are determined (Volume at RCP)

- Generally, the RCP is the first point of measurement where clean crude bitumen is obtained from the Project prior to disposition or prior to product being removed from Project boundary

# Revenue Valuation

RCP

Project

Disposition

Effective 2009

Product Revenue based on Volume at RCP x Unit Price (determined based on dispositions)

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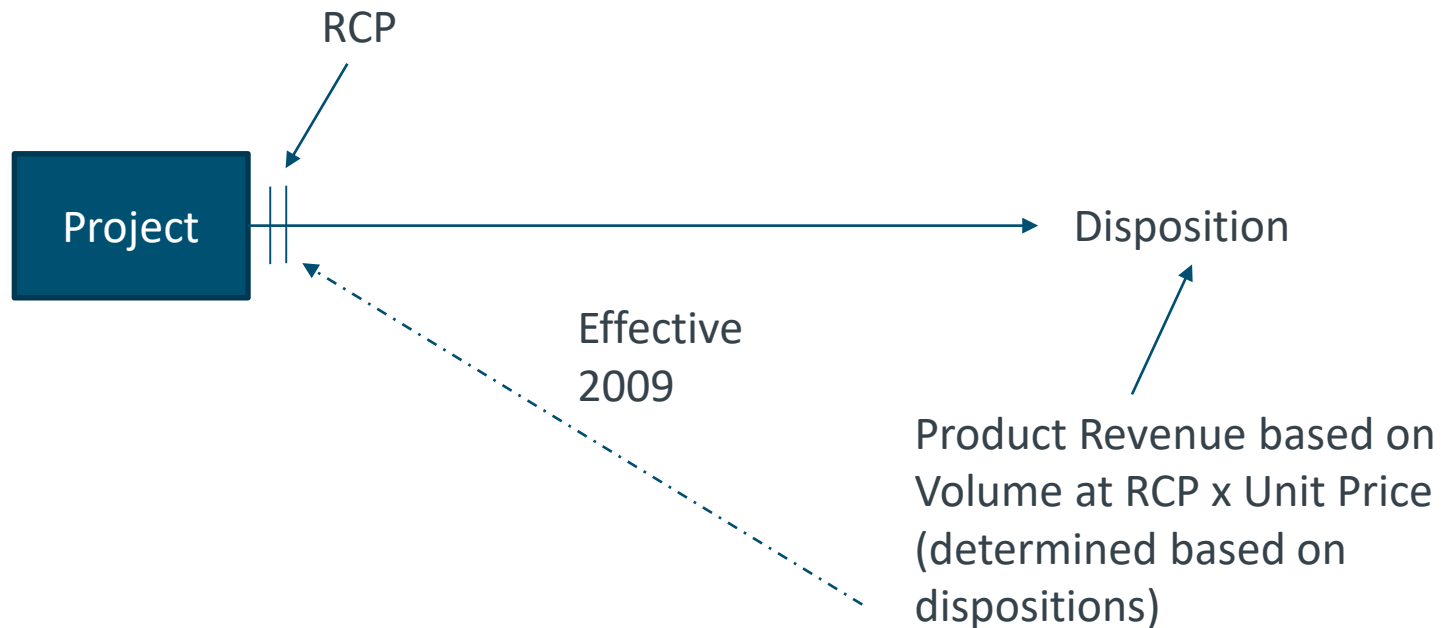
# Product and Project Revenue

**Product Revenue**

- Product volume at Royalty Calculation Point x *applicable* Unit Price
- Product can be clean crude bitumen, blended bitumen, and/or other oil sands products

**Project Revenue**

- Sum of Product Revenues

# Unit Price in Revenue Valuation

Depends on volume of Third Party Dispositions (TPD) in relation to the Volume at RCP of that kind of oil sands product

$$\text{TPD\%} \quad = \quad \frac{\text{Third Party Dispositions}}{\text{Volume at RCP}} \text{ x } 100$$

- TPD% ≥ 40%                          Arm's Length (AL) Sales Price

- TPD% = 0%                           Bitumen Valuation Methodology (BVM) Price

- TPD% < 40% but > 0%        Combination of AL Sales Price and BVM Price

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# Unit Price Formulas

**AL Sales Price (when TPD% ≥ 40%)**

$$\frac{(TC - HC)}{TD}$$

Where:

- TC is the Total Consideration for 3rd party dispositions
- HC is the Handling Charges in relation to 3rd party dispositions
- TD (Total Disposition) is the 3rd Party disposition quantity

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# Unit Price (AL Sales Price)

RCP

Diluent Added

$700,000 (Blend Handling Charges for AL Sales)

**Project**

13,000m3

**Point of Sale**

13,000m3 (AL Sales)
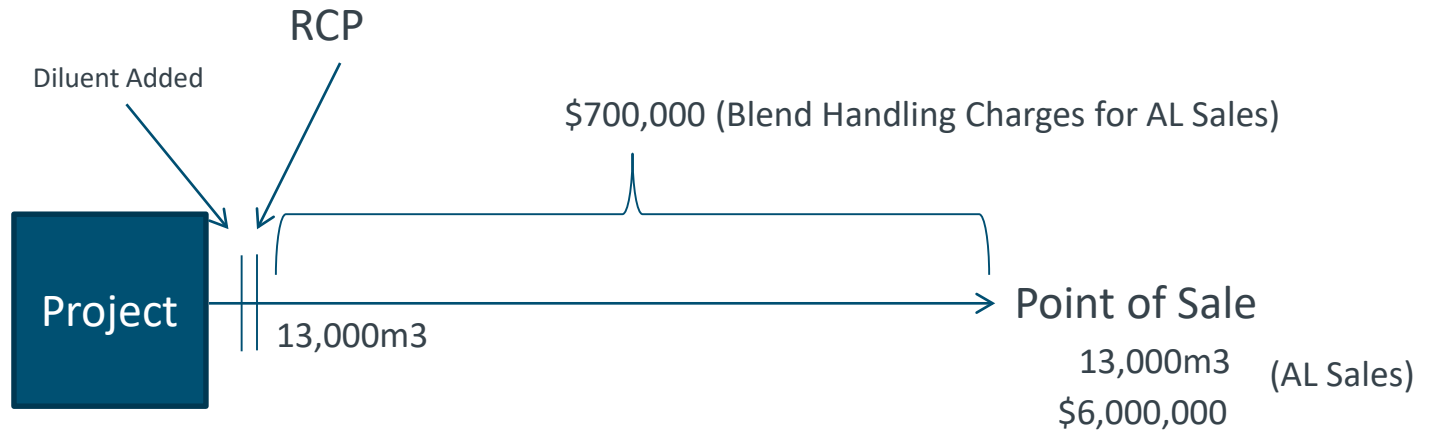
$6,000,000

TPD% = (13,000 / 13,000) x 100

TPD% = 100%

Blend Volume @ RCP = 13,000m3

Blend AL Sales Volume = 13,000m3

Blend AL Sales Value = $6,000,000

Blend Handling Charges for AL Sales = $700,000

Blend Unit Price = (TC - HC) / TD

= (6,000,000 - 700,000) / 13,000

= $407.69/m3

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# Unit Price Formulas

**BVM Price (when TPD% = 0%)**

$$\frac{(TC - HC) + [(NQ \times P) + CD]}{PQ}$$

Where:

- TC is the Total Consideration for 3rd party dispositions
- HC is the Handling Charges for 3rd party dispositions
- NQ is the remaining Bitumen Volume at RCP after 3rd party dispositions
- **P is the Bitumen Adjusted BVM Price**
- CD is the Cost of Diluent in 'Remaining' Volume at RCP after 3rd party dispositions, if product is blend
- PQ (Production Quantity) is the Volume at RCP

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# Bitumen Adjusted BVM Price "P"

- Bitumen Adjusted BVM Price (Adjusted BVM Price for Bitumen) = BVM @ Hardisty *less* BVM Transportation Allowance

- BVM @ Hardisty is the greater of:
    - the "floor price" for the month (published)
    - the price determined by the "BVM Model Calculator"

- Floor Price and BVM components used in the BVM Model Calculator are published by DOE monthly
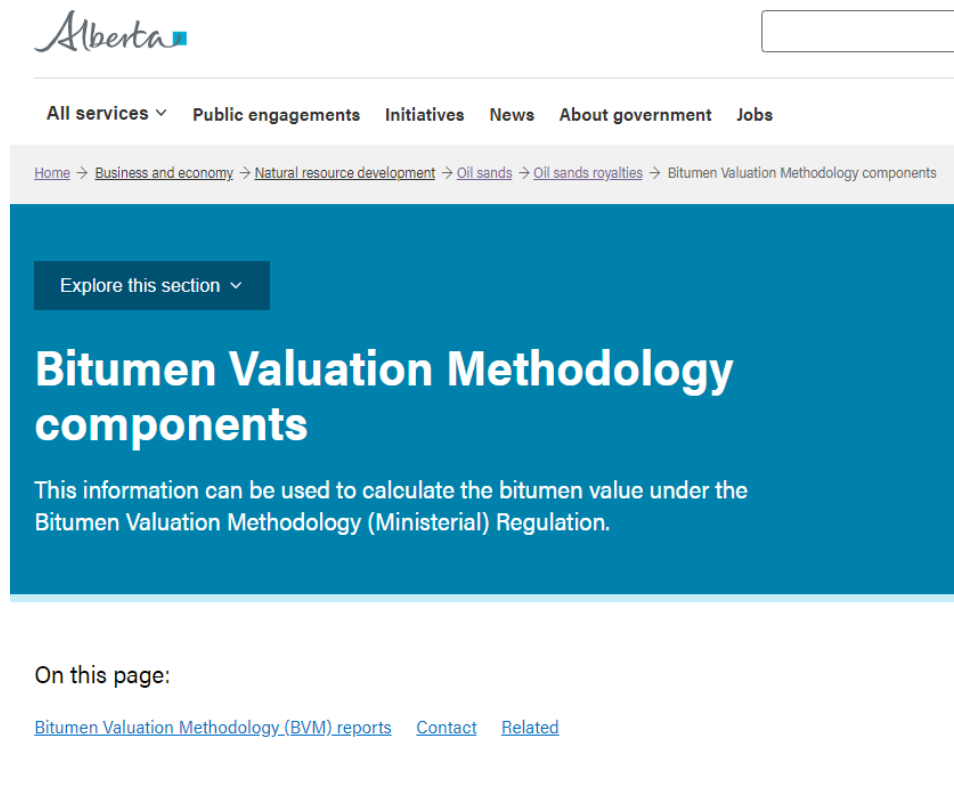
Hardisty price is dependent on the bitumen density reported. Bitumen density must be calculated using the rolling average of the six most recent measurements and must be reported to 1 decimal place.

* For further information, please see Information Bulletin IB 2014-06
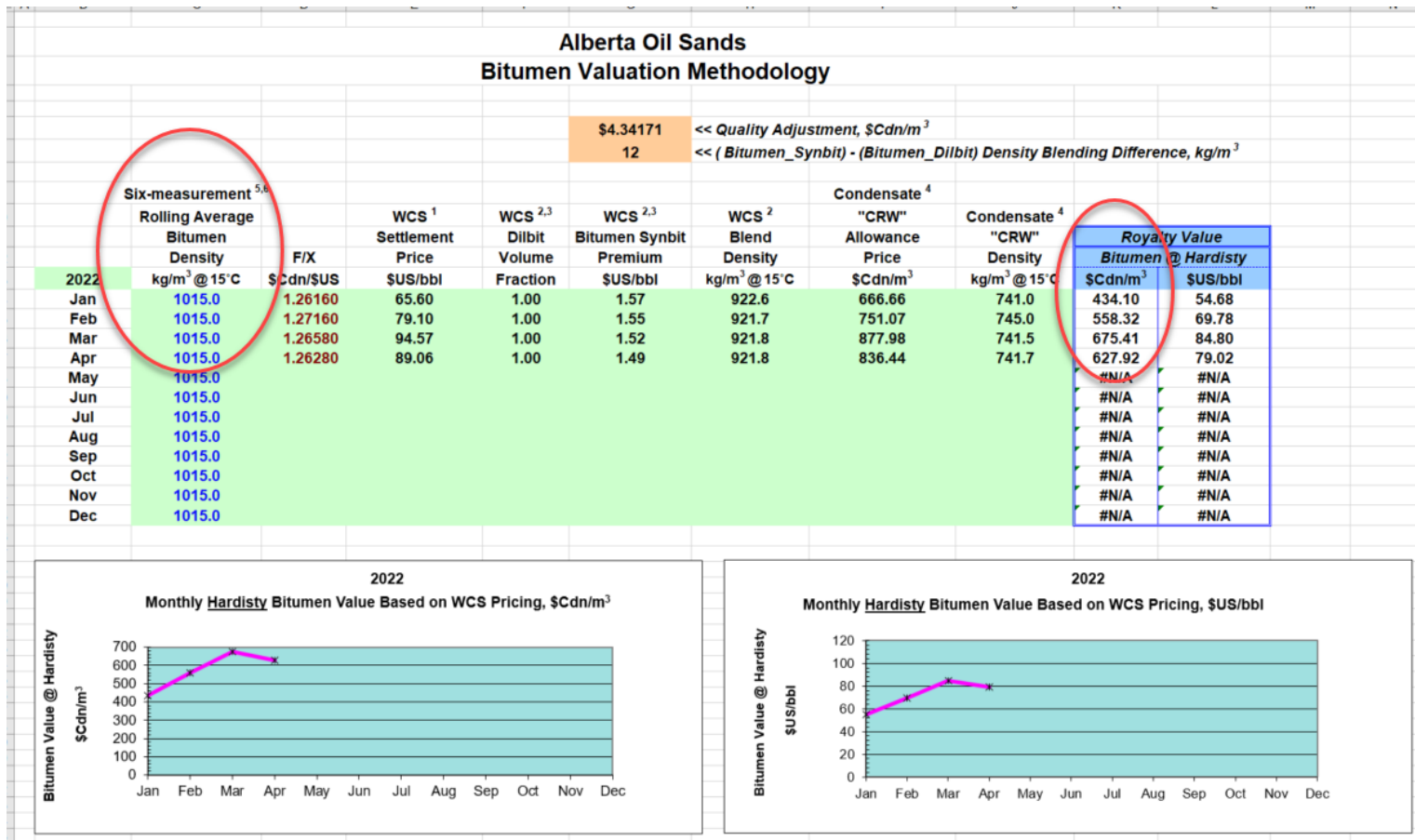
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# BVM Model Calculator

## Alberta Oil Sands
## Bitumen Valuation Methodology

$4.34171 << Quality Adjustment, $Cdn/m$^3$

12 << ( Bitumen_Synbit) - (Bitumen_Dilbit) Density Blending Difference, kg/m$^3$

| 2022 | Six-measurement [5,6] Rolling Average Bitumen Density kg/m$^3$@15°C | F/X $Cdn/$US | WCS [1] Settlement Price $US/bbl | WCS [2,3] Dilbit Volume Fraction | WCS [2,3] Bitumen Synbit Premium $US/bbl | WCS [2] Blend Density kg/m$^3$@15°C | Condensate [4] "CRW" Allowance Price $Cdn/m$^3$ | Condensate [4] "CRW" Density kg/m$^3$@15°C | Royalty Value Bitumen @ Hardisty $Cdn/m$^3$ | Royalty Value Bitumen @ Hardisty $US/bbl |
|---|---|---|---|---|---|---|---|---|---|---|
| Jan | 1015.0 | 1.26160 | 65.60 | 1.00 | 1.57 | 922.6 | 666.66 | 741.0 | 434.10 | 54.68 |
| Feb | 1015.0 | 1.27160 | 79.10 | 1.00 | 1.55 | 921.7 | 751.07 | 745.0 | 558.32 | 69.78 |
| Mar | 1015.0 | 1.26580 | 94.57 | 1.00 | 1.52 | 921.8 | 877.98 | 741.5 | 675.41 | 84.80 |
| Apr | 1015.0 | 1.26280 | 89.06 | 1.00 | 1.49 | 921.8 | 836.44 | 741.7 | 627.92 | 79.02 |
| May | 1015.0 | | | | | | | | #N/A | #N/A |
| Jun | 1015.0 | | | | | | | | #N/A | #N/A |
| Jul | 1015.0 | | | | | | | | #N/A | #N/A |
| Aug | 1015.0 | | | | | | | | #N/A | #N/A |
| Sep | 1015.0 | | | | | | | | #N/A | #N/A |
| Oct | 1015.0 | | | | | | | | #N/A | #N/A |
| Nov | 1015.0 | | | | | | | | #N/A | #N/A |
| Dec | 1015.0 | | | | | | | | #N/A | #N/A |



2022
Monthly Hardisty Bitumen Value Based on WCS Pricing, $Cdn/m$^3$



2022
Monthly Hardisty Bitumen Value Based on WCS Pricing, $US/bbl

# BVM Components

# BVM Components

**Bitumen Valuation Methodology (BVM) components**

Summary | Detailed Information | Related (1)

**DESCRIPTION**
This report provides the information used to calculate the bitumen value under the Bitumen Valuation Methodology (Ministerial) Regulation.

**UPDATED**
May 25, 2022

**TAGS**

BVM | Bitumen Valuation Methodology Regulation | Bitumen Value Methodology | bitumen | oil sands

**RESOURCES**

BVM components : 2022

**ⓘ MORE INFORMATION** | **⬇ DOWNLOAD**
DOWNLOADS: 109

BVM components : 2021

**ⓘ MORE INFORMATION** | **⬇ DOWNLOAD**
DOWNLOADS: 604

BVM components : 2020

**ⓘ MORE INFORMATION** | **⬇ DOWNLOAD**
DOWNLOADS: 750

BVM components : 2019

**ⓘ MORE INFORMATION** | **⬇ DOWNLOAD**
DOWNLOADS: 807

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# BVM Components

Bitumen Valuation Methodology (BVM) Components

| Production Month 2022 | Exchange Rate ($CDN/$US) | WCS Settlement Price ($US/bbl) | WCS Dilbit Volume Fraction | WCS Bitumen Synbit Premium ($US/bbl) | WCS Blend Density (Kg/m³@15ºC) | Condensate 'CRW' Allowance ($CDN/m³) | Condensate 'CRW' Density (Kg/m³@15ºC) | Bitumen Floor Price ($CDN/m³) |
|---|---|---|---|---|---|---|---|---|
| Jan | 1.26160 | 65.60 | 1.00 | 1.57 | 922.6 | 666.66 | 741.0 | 341.38 |
| Feb | 1.27160 | 79.10 | 1.00 | 1.55 | 921.7 | 751.07 | 745.0 | 418.01 |
| Mar | 1.26580 | 94.57 | 1.00 | 1.52 | 921.8 | 877.98 | 741.5 | 540.74 |
| Apr | 1.26280 | 89.06 | 1.00 | 1.49 | 921.8 | 836.44 | 741.7 | 492.10 |

| Production Month 2022 | Oil Sands Par Price ($CDN/tonne) | Third Party Disposition Threshold | Deemed Quality Adjustment ($CDN/m³) |
|---|---|---|---|
| Jan | 31.93 | 40.00% | 4.34171 |
| Feb | 41.80 | 40.00% | 4.34171 |
| Mar | 51.10 | 40.00% | 4.34171 |
| Apr | 47.33 | 40.00% | 4.34171 |
| May | | 40.00% | 4.34171 |
| Jun | | 40.00% | 4.34171 |
| Jul | | 40.00% | 4.34171 |
| Aug | | 40.00% | 4.34171 |
| Sep | | 40.00% | 4.34171 |
| Oct | | 40.00% | 4.34171 |
| Nov | | 40.00% | 4.34171 |
| Dec | | 40.00% | 4.34171 |

Deemed Quality Adjustment has been extended to Dec 31, 2024

# Unit Price (BVM Price)

Diluent Added

RCP

Project

13,000m3

10,000m3 (Bitumen)
3,000m3 (Diluent)

AL Sales = 0

NAL Disposition
13,000m3

Bitumen @ Hardisty = $347.42/m3

Transportation Allowance = $10.00/m3

Bitumen Adjusted BVM Price = $337.42/m3

TPD% = (0 / 13,000) x 100

TPD% = 0%

Blend Volume @ RCP = 13,000m3

Diluent in Blend Volume @ RCP = 3,000m3

Diluent Value in Blend Volume @ RCP = $3,000,000

Blend AL Sales Value = $0

Blend AL Sales Volume = 0m3

Blend Unit Price = [(TC - HC) + {(NQ x P) + CD}] / PQ

$= [(0 - 0) + \{((13{,}000 - 3{,}000) \times 337.42) + 3{,}000{,}000\}] / 13{,}000$

= $490.32/m3

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# Unit Price Formulas

## Combined Price (when TPD% < 40% but > 0%)

$$\frac{(TC - HC) + [(NQ \times P) + CD]}{PQ}$$

Where:

- TC is the Total Consideration for 3rd party dispositions
- HC is the Handling Charges for 3rd party dispositions
- NQ is the remaining Bitumen Volume at RCP after 3rd party dispositions
- P is the Bitumen Adjusted BVM Price
- CD is the cost of diluent in 'Remaining' Volume at RCP after 3rd party dispositions, if product is blend
- PQ is the Volume at RCP

\* For further information, please see section 32 of the *OSRR'09*

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# Unit Price (Combined Price)

RCP

Diluent Added

$150,000 (Blend Handling Charges for AL Sales)

**Project**

13,000m3
10,000m3 (Bitumen)
3,000m3 (Diluent)

AL Sales
2,000m3
$1,000,000

1,538m3 (Bitumen)
462m3 (Diluent)

NAL Disposition
11,000m3

TPD% = (2,000 / 13,000) x 100

TPD% = 15.38%

Bitumen @ Hardisty = $347.42/m3

Transportation Allowance = $10.00/m3

Bitumen Adjusted BVM Price = $337.42/m3
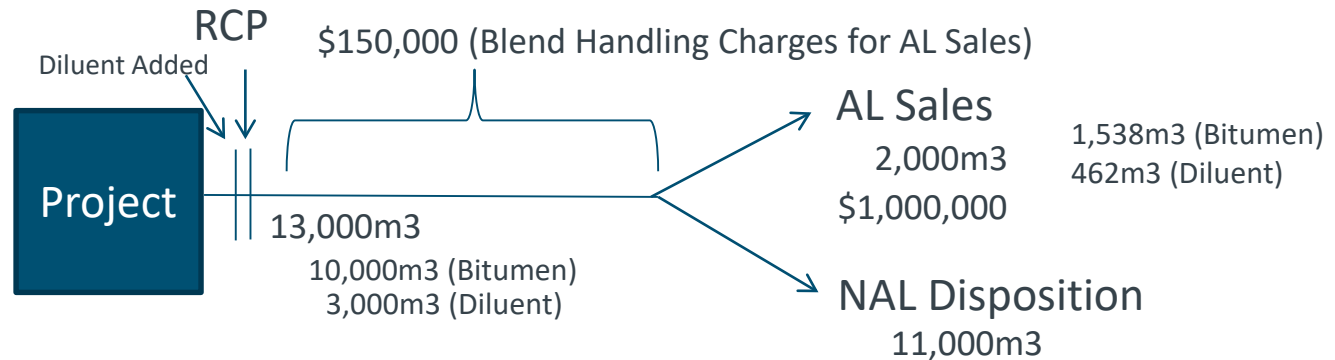
Blend Volume at RCP = 13,000m3

Diluent Value in Blend Volume @ RCP = $3,000,000

Blend AL Sales Value = $1,000,000

Blend AL Sales Volume = 2,000m3

Diluent Value in Blend AL Sales = $462,000

Blend Unit Price = [(TC - HC) + {(NQ x P) + CD}] / PQ

$$= [(1{,}000{,}000 - 150{,}000) + \{(10{,}000 - 1{,}538) \times \$337.42 + (3{,}000{,}000 - 462{,}000)\}] / 13{,}000$$

$$= \$480.25/m3$$

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# Recap

**Product Revenue**

- Product volume at Royalty Calculation Point x Unit Price
- Product can be clean crude bitumen, blended bitumen, and/or other oil sands products

**Project Revenue**

- Sum of Product Revenues

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# Pre-Payout and Post-Payout Project Royalty

**Royalty on Pre-Payout Projects:**

- Gross Revenue x Gross Royalty Rate ($R_G$%)

**Royalty on Post-Payout Projects:**

- Greater of
    - Net Revenue x Net Royalty Percentage Factor ($R_N$ Factor%)
    - Gross Revenue x Gross Royalty Rate ($R_G$%)

**Gross Revenue**

- Project Revenue less diluent cost

**Net Revenue**

- Project Revenue less (Allowed Costs – Other Net Proceeds)

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# Allowed Costs

- Eligible and Approved costs incurred prior to OSR Project Approval effective date, net of any revenues, will become the opening cost balance for the Project - Prior Net Cumulative Balance (Initial PNCB),
  i.e. Initial PNCB = Cumulative Cost less Cumulative Revenue

- Eligible and Approved costs incurred after OSR Project Approval effective date can be deducted against the revenues earned by the Project
  - Costs include:
    - Operating Cost
    - Capital Cost
    - Diluent Cost
    - Return Allowance
    - Project Expansion PNCB
    - Cumulative Balance Carried Forward (Post-Payout Projects only)
    - Carry Forward Costs (Post-Payout Projects only)

\* Please see the Oil Sands Allowed Costs (Ministerial) Regulation

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# Initial PNCB and Project Expansion PNCB

- Initial PNCB:
  - PNCB associated with initial Project approval
  - Reported in Schedule PRE 4 of Pre Payout EOPS as the opening cumulative cost balance
  - If the Initial PNCB is negative, the Project will become Post-Payout and the PNCB amount will be reported as Other Net Proceeds

- Project Expansion PNCB:
  - PNCB associated with a Project amendment
  - Reported in the Allowed Costs section of the royalty form, as Project Expansion PNCB
  - Reported for the production month of the Project amendment, in the monthly/annual royalty submission (MRC/GFE/EOPS)

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# Return Allowance

- A Return Allowance (rate of return or interest given on unrecovered investment) is calculated for OSR Projects until they reach a net revenue position, to recognize the cost of investing in capital intensive oil sands Projects.

- **In Pre-Payout:**
  - Return allowance is calculated for each *month* in the Period
    - Net Cumulative Balance x Long Term Bond Rate $(LTBR)_{month}$
  - Return allowance calculated for a *month* is an allowed cost in the *next month*

- **In Post-Payout:**
  - Return allowance is calculated for the *Period*, when the Period has a Net Loss
  - Return allowance calculated for a *Period* is an allowed cost in the *next Period*

# Cumulative Balance Carried Forward

**Applicable to Post-Payout Projects only**

- Net Cumulative Balance is an allowed cost in the first Post Payout Period

- Last production's month Return Allowance calculation is an allowed cost in the first Post Payout Period

- Sum these two amounts and report in the 'Cumulative Balance Carried Forward Upon Payout' row in the Allowed Cost section of the GFE and Post Payout EOPS

# Carry Forward Costs

**Applicable to Post-Payout Projects only**

- If a Post-Payout Project has suffered a loss in a Period, the loss can be claimed as an allowed cost in the *next* Period

- A return allowance is calculated on the net loss in a Period, which can be claimed as an allowed cost in the *next* Period

- If the royalty payable for a Post-Payout Project in a Period is based on Gross Revenue, rather than Net Revenue, the difference (excess) between the Gross Revenue Royalty and Net Revenue Royalty in a Period is an allowed cost in the *next* Period

\* For further information, please see section 3 of the OSAC

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# Other Net Proceeds (ONP)

- Net Revenue = Project Revenue – (Allowed Costs – ONP)

- Other Net Proceeds (ONP) are a reduction of allowed costs

- **Types of ONP:**
    - Disposition of Assets and Non-Oil Sands Products Purchased by Project
    - Sale/Lease of Technology
    - Insurance and Legal Settlements
    - Custom Processing and Transportation Fees
    - Processing of Project Owner's Non-Project Substances
    - Negative PNCB

- If the ONP for the Period is greater than the allowed costs for that Period, the 'allowable ONP' will be an amount equal to the allowed costs for the Period and the excess ONP will carry forward to the *next* Period as ONP.

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# Gross and Net Revenue

**Gross Revenue**

- Project Revenue less diluent cost

**Net Revenue**

- Project Revenue less (Allowed Costs – Other Net Proceeds)

# Pre-Payout and Post-Payout Project Royalty

**Royalty on Pre-Payout Projects:**

- Effective 2009, Gross Revenue for Royalty Calculation x Gross Royalty Rate ($R_G$%) *

**Royalty on Post-Payout Projects:**

- Effective 2009, greater of
    - Net Revenue x Net Royalty Percentage Factor ($R_N$% Factor) **
    - Gross Revenue for Royalty Calculation x Gross Royalty Rate ($R_G$%) ***
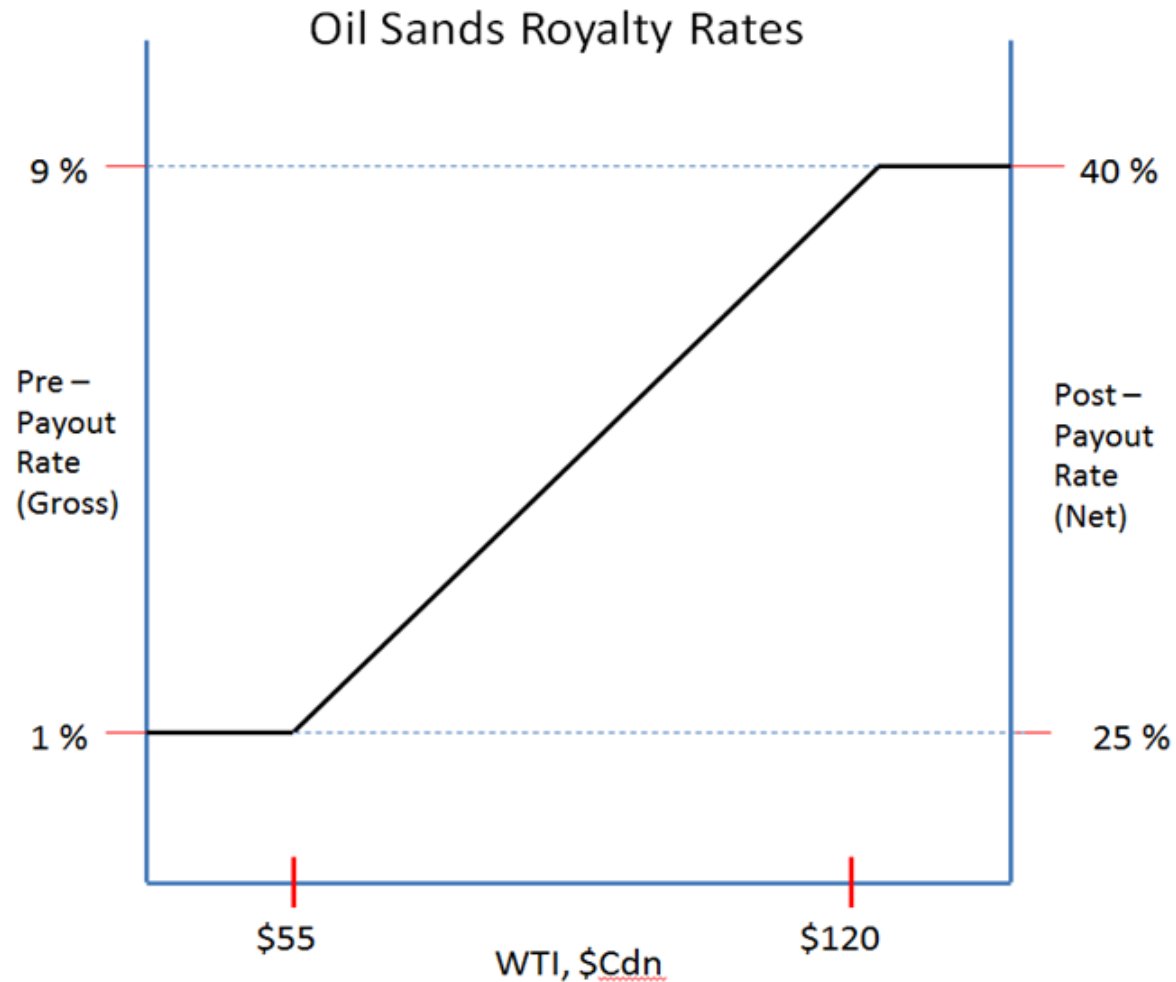
Note: Gross Revenue for Royalty Calculation must be greater than or equal to 0.

\* Pre-Payout Gross Royalty Rate (from 1% to 9%)

\*\* Post-Payout Net Royalty Percentage Factor (NRPF or $R_N$% Factor) (from 25% to 40%)

\*\*\* Post-Payout Gross Royalty Rate (from 1% to 9%)

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# Oil Sands Regime (OSR) Royalty Rates



Oil Sands Royalty Rates

Classification: Protected A

# Oil Sands Regime (OSR) Royalty Rates

- The following are calculated for each production month:
  - Pre-Payout Gross Royalty Rate ($R_G$%)
  - Post-Payout Gross Royalty Rate ($R_G$%)
  - Post-Payout Net Royalty % Factor (NRPF or $R_N$% Factor)

- Royalty percentages and supporting details are posted on DOE Oil Sands website by the 5th business day following the production month at:

  https://open.alberta.ca/publications/oil-sands-monthly-royalty-rates-information

- Royalty rate formulas are prescribed in the Oil Sands Royalty Regulation, 2009

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# Royalty Reporting

- **NPR**
  - Monthly Royalty Reporting:
    - Non-Project Royalty Submission (NPR)
  - Annual Royalty Reporting:
    - N/A

- **OSR & CSR**
  - Monthly Royalty Reporting:
    - Pre-Payout Projects: Monthly Royalty Calculation (MRC)
    - Post-Payout Projects: Good Faith Estimate (GFE)
  - Annual Royalty Reporting:
    - End of Period Statement (EOPS)

- **A Statement of Approval (SOA) is required for MRC / GFE / EOPS.**
- **An External Auditor's Opinion is required for EOPS for Oil Sands Projects with average daily production of 1,590 m3 or greater for the Period.**

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# Other Reporting

- **Costs and Reporting Enhancements (CARE)**
  - More detailed breakdown of revenue, operating and capital cost information on quarterly or annual basis

- **Operator's Forecast**
  - Annual forecasts (current + 14 years effective November 2017) including estimates for:
    - Production
    - Strategic and sustaining capital
    - Operating costs

- **Cost Allocation Methodology Reporting (CAMR)**
  - Cost Allocation Order will provide specific reporting requirements

- **Additional reporting requirements under section 27(6) of the *OSRR'09***

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# Common Reporting Issues

- **Failure to file required reporting**
  - Ensure all Non-Project Well and Project reporting is provided as per the *OSRR'09*

- **Submission late in the day of the filing deadline**
  - Ensure adequate time if submitting on the due date. OASIS processes and responds to submissions about every 2 hours up to 4:30pm

- **Submission with errors**
  - Initial report received back from ETS does not confirm successful submission validation. Validation results from OASIS will indicate whether submission was successful or requires further attention. Submissions with errors will be considered not to have been furnished as per section 5 of the *OSRR'09*

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# Penalties

**Monthly & Annual Reports, Operator's Forecast**
- Submissions not received by their applicable due date are subject to a penalty of $5,000 for each month or part of a month during which the failure continues

**Adhoc Reports**
- Reports requested under section 40(1) of the *OSRR'09* that are not received by the deadline specified in the notice given by the Minister are subject to a penalty of not more than $5,000 for each day during which the failure continues

**CARE Reports**
- Submissions not received by their applicable due date are subject to a penalty of not more than $5,000 for each month or part of a month during which the failure continues

**Reporting requested under section 27(6) of the *OSRR'09* (reporting requirements under MRF that apply to non Project wells)**
- Submissions not received by their applicable due date are subject to a penalty of not less than $1000 and not more than $5,000 for each month or part of a month during which the failure continues

* For further information, please see section 44 of the *OSRR'09*

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# Penalties (Example)

- Assume current date = May 14, 2019
- No monthly royalty submissions received to date for January – March production.  What late-filing penalties apply?
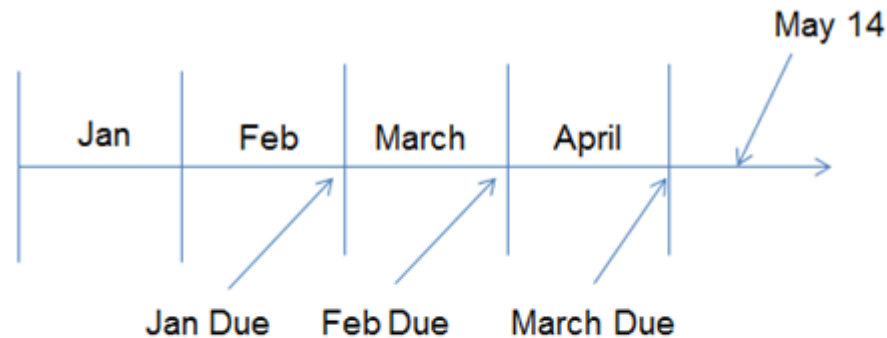


Jan:  $5,000 x 3 months (March – May):  $15,000

Feb:  $5,000 x 2 months (April – May):  $10,000

March:  $5,000 x 1 month (May):  $5,000

Total:  $30,000

# Interest Payable to the Crown

- If an amount is not paid by the day on which it is required to be paid, interest on the amount is payable to the Crown by the person required to pay the amount.
  - Some examples are:
    - Non-Project Royalty
    - Project Royalty
    - Penalties
    - Interest

\* Simple Daily and Compounded Monthly Interest applies

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# Interest Payable by the Crown

- Interest is paid by the Crown only in specific circumstances:
  - Some examples are:
    - Post-Payout End of Period Statement overpayments
    - Non-Project Royalty overpayments

* Simple Daily Interest applies

* For further information, please see section 45(6) of the *OSRR'09*

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# Questions?