



Freedom To Create. Spirit To Achieve.

# **Joint Industry/ Alberta Energy Crown Royalty Information Exchange Event**

**October 22<sup>nd</sup>, 2010**

**Government  
of Alberta** 

# Welcome & Introductions

- **Michelle Coleman** – Past CAPPAs President
- **Rhonda Wehrhahn** – Assistant Deputy Minister,  
Resource Revenue & Operations

# Agenda

Time	Topic	Presenters
9:00 – 9:15 am	<b>Welcome/Introduction</b>	<ul style="list-style-type: none"><li>• CAPP</li><li>• Rhonda Wehrhahn – Assistant Deputy Minister</li></ul>
9:15 – 9:25am	<b>APMC Penalty Review Update</b>	Gale Robins – Branch Head, Petroleum Marketing & Valuation and Site Services
9:25 – 10:10 am	<b>Royalty Changes</b>	Pat Van Meer – Manager, Gas Royalty Billing
10:10 – 10:30 am	<b><i>BREAK</i></b>	
10:30 - 10:40 am	<b>Royalty Tips</b>	Laurie Schneider – Director, Oil Royalty Operations
10:40 – 11:00 am	<b>Drilling Royalty Credits</b>	Jui-Cho Soh – Team Lead, Drilling Royalty Credits
11:00 – 11:45 am	<b>Gas Reference Price Review Update</b>	Al Hume – Senior Business Advisor
11:45 am–12:00 pm	<b>Closing Remarks</b>	Rhonda Wehrhahn



# **APMC Penalty Review Update**

# APMC Penalty Review Workgroup

- The APMC Penalty Review Workgroup, which included industry representatives, reviewed current APMC penalty processes to identify issues and opportunities for process improvement.
- One of the key issues identified by the workgroup were problems with over/under delivery reporting by industry. An interim step in working towards a permanent solution was to temporarily suspend over/under delivery penalties effective for the September 2010 production month, as outlined in Information Letter # 2010-32.
  - APMC reconciliation reports will continue to be provided and failure to amend penalties will be assessed if over/under deliveries are not resolved.
  - All other penalties will remain in effect.
- The APMC will begin working on developing “To Be” forecasting and reporting process models starting in 2011.
- The Petroleum Registry (PRA) is a key part of our go forward plans, so we will begin consultation with industry in November to start developing proposed enhancements to PRA to support the future “To Be” processes.

# APMC Penalty Review Workgroup Industry Members

- Alberta Energy would like to recognize and thank the following industry workgroup members:

Blake Johnson, ARC Resources

Dan Brownrigg, CNRL

Deb Manning, Devon Canada

Donna Trottier, ConocoPhillips



**Competitiveness Review  
and  
Resulting Changes to the  
Gas and Oil Royalty Regimes**

# Energizing Investment

**On March 11, 2010 the Alberta Government announced the outcome of the Competitiveness Review Project. The results were :**

- The maximum royalty rate for conventional oil will be reduced to 40 percent, down from 50 percent. (effective January 2011)
- The maximum royalty rate for methane and ethane will be reduced to 36 percent , down from 50 percent. (effective January 2011)
- Transitional royalty rates can only be elected until December 31, 2010, and must be elected whether the well is producing or not. Well events that have elected transitional royalty can chose to 'opt out' only between January 1, 2011 and February 15, 2011 on the Petroleum Registry of Alberta.
- New Well Royalty Rate becomes a permanent feature of the royalty system effective May 2010.



# Energizing Investment

**On May 27, 2010 the Alberta Government announced initiatives to stimulate new energy investment and new technologies.**

**Emerging Resources and Technologies New Well Royalty Rates:**

Shale Gas New Well Royalty Rate 5%

Coalbed Methane New Well Royalty Rate 5%

Horizontal Gas New Well Royalty Rate 5%

Horizontal Oil New Well Royalty Rate 5%

# New Well Royalty Rates

New Well Royalty Rates	Applies to	Maximum 5% Royalty Rate for whichever Is reached first, time or volume	
		Time Limit	Volume Limit
<b>New Well Royalty Rate - extended</b>	Well that is classified as an “oil”, “gas”, or “crude bitumen” well when it commences or recommences production on or after April 2009.	12 producing months	Oil equivalent of 7,949 m <sup>3</sup> (14,158 e <sup>3</sup> m <sup>3</sup> of gas) Conversion factor =1.7811
<b>Shale Gas Royalty Rate ERCB Fluid code 25 – Shale Gas only</b>	Well events that <b>start producing</b> gas exclusively from shale zones on or after May 2010	36 producing months commencing with the first month of production	No volume limitation
<b>Coalbed Methane Royalty Rate ERCB Fluid code 23 – Coalbed Methane – coals only</b>	Well events that <b>start producing</b> gas exclusively from coal zones on or after May 2010	36 producing months commencing with the first month of production	Oil equivalent of 11,924 m <sup>3</sup> (21,238 e <sup>3</sup> m <sup>3</sup> of gas)
<b>Horizontal Gas Royalty Rate ERCB Fluid codes: 02, 22, 24, or 26 Directional Drill Reason Code 4</b>	Horizontal gas wells <b>drilled (spud)</b> on or after May 2010	18 producing months commencing with the first month of production from the well event	Oil equivalent of 7,949 m <sup>3</sup> (14,158 e <sup>3</sup> m <sup>3</sup> of gas)
<b>Horizontal Oil wells ERCB Fluid Code 01,17 Directional Drill Reason Code 4</b>	Horizontal oil wells drilled or spud on or after May 2010	Varied see next page for table	Varied see next page for table

# Horizontal Oil New Well Royalty Rate Caps

Depth (MD)	Volume Cap of oil equivalent	Production Month Cap
0.0 – 2,499.9 m	7,949.0 m <sup>3</sup>	18 months
2,500.0 – 2,999.9 m	9,539.0 m <sup>3</sup>	24 months
3,000.0 – 3,499.9 m	11,129.0 m <sup>3</sup>	30 months
3,500.0 – 3,999.9 m	12,719.0 m <sup>3</sup>	36 months
4,000.0 – 4,499.9 m	14,309.0 m <sup>3</sup>	42 months
4,500.0 m +	15,899.0 m <sup>3</sup>	48 months

# Changes to Natural Gas Deep Drilling Program

- Applies to wells with spud date or deepened on or after **May 1, 2010**
- True vertical depth (TVD) of the producing interval is greater than **2,000 metres**
- Additional benefits for laterals as per table below:

Benefits for Additional Laterals	
Qualifying true vertical depth (TVD) of the well event)	Benefit per drilled metre (GCI Base/Total Depth – kick off point of the well event)
<b>2,000 &lt; TVD &lt; 3,500</b>	<b>\$625</b>
<b>&gt;=3,500</b>	<b>\$2,500</b>

- If well event qualifies for NWRR, SGNWRR, CBMNWRR, or HGNWRR, NWRRs are applied first
- The 60 month calendar time for NGDDP runs concurrently with all the NWRRs
- The existing Supplemental Benefits of \$875,000 are **NOT** available for wells spud on or after May 28, 2010
- Changes to technical evaluation that no longer disqualifies a well under the new NGDDP
  - Off target
  - Within ERCB designated pool boundaries as of June 1, 1985 (G-Orders)
  - Drilling Spacing Unit

# Royalty Curves

## Natural Gas Price Royalty Rate

- The maximum and minimum rates for natural gas are 36 per cent and 5 per cent respectively, as per Government's announcement on March 11, 2010. The royalty rate is the sum of a price component and the quantity component. The quantity component of the formula remains the same as under the existing gas royalty framework. There are changes to the price component of the gas royalty formula to moderate the increase in the rate at prices higher than \$5.25/GJ.
- The new formula will be applied to all Alberta Crown production including production from existing wells effective January 2011, with the exception of production from wells that choose to remain on the Transitional Royalty formulas.

# Conventional Oil Price Royalty Rate

- The maximum and minimum rates for conventional oil are 40% and 0% respectively, as per the Government's announcement on March 11, 2010. The royalty rate is the sum of a price component and the quantity component. The quantity component of the formula remains the same as under the existing oil royalty framework. There are changes to the price component of the oil royalty formula to moderate the increase in the rate at prices higher than \$535.00/m<sup>3</sup>.
- The new formula will be applied to all Alberta Crown production including production from existing wells effective January 2011, with the exception of production from wells that choose to remain on the Transitional Royalty formulas.

# Contacts

## Oil Royalty

Laurie Schneider - Director, Oil Operations  
[Laurie.Schneider@gov.ab.ca](mailto:Laurie.Schneider@gov.ab.ca)  
780 422-9039

Beverley Murray - Manager, Oil Royalty & EOR  
[Beverley.Murray@gov.ab.ca](mailto:Beverley.Murray@gov.ab.ca)  
780 427-2193

Richard Dmytryshyn – Manager, Royalty Programs & DRC  
[Richard.Dmytryshyn@gov.ab.ca](mailto:Richard.Dmytryshyn@gov.ab.ca)  
780 427-3308

## Oil Sands Royalty

Tracy Wadson – Manager, Oil Sands Royalties  
[Tracy.Wadson@gov.ab.ca](mailto:Tracy.Wadson@gov.ab.ca)  
780 427-9266

## Gas Royalty

Pat Van Meer – Manager, Royalty Billing  
[Pat.VanMeer@gov.ab.ca](mailto:Pat.VanMeer@gov.ab.ca)  
780 422-7232

Joyce Chen – Team Lead, Royalty Programs  
[Joyce.Chen@gov.ab.ca](mailto:Joyce.Chen@gov.ab.ca)  
780 427-1550

Wayne Taljit – Manager, Client Services  
[Wayne.Taljit@gov.ab.ca](mailto:Wayne.Taljit@gov.ab.ca)  
780 422-9296

Lily Hiew – Team Lead, Client Services  
[Lily.Hiew@gov.ab.ca](mailto:Lily.Hiew@gov.ab.ca)  
780 427-8775

# Royalty Tips



# Royalty Tips

- Wells that qualify for the New Well Royalty Rates for gas royalty or the Natural Gas Deep Drilling Program must be reported as a single well in order to receive benefits. Once the 5% rate or program ends, reporting must be submitted at the highest level.
- Transitional royalty rates can only be elected until December 31, 2010, and must be elected whether the well is producing or not. Well events that have elected transitional royalty can choose to 'opt out' only between January 1, 2011 and February 15, 2011 on the Petroleum Registry of Alberta.
- In order to receive lateral benefits under the Natural Gas Deep Drilling Program the Total Vertical Depth, Gross Completion Interval (GCI base) and Kick Off Points must be reported. Absence of this information will result in no lateral benefit calculated.

# Royalty Tips

- In order of applying rates, NWRR is applied to all products first and then once exhausted, NGDDP is applied to all products and would reduce the royalty rate to 5%.
- Crown Invoices and statements are retained on the PRA for a period of 6 months. Analysis and printing of the invoices and statements should be done when they are issued.
- New Well Royalty Rates and program reports are available on the Petroleum Registry.
  - Royalty Program Report (Oil)
  - New Well Royalty Rate details (Gas)
  - Royalty Adjustment Report (NGDDP – Gas)

# Royalty Tips

- An oil well that produces the first part of the month at one facility and the second part of a month at a different facility, royalty is calculated for the entire month's volumes at the last reported operator/facility.
- Non project oil sands wells may qualify for the New Well Royalty Rates , Drilling Royalty Credit and Oil Programs.
- Oil Royalty Calculators are available on our website.
- Oil Forecasts for January 2011 need to take the formula change into consideration.

# Royalty Tips

- Use the APMC Delivery Confirmation Report to confirm that the Crown oil volume you reported matches what the pipeline/terminal operator reported as a delivered on your behalf to the Crown.
- Important information, for example department training sessions are posted on the front page of the Petroleum Registry.
- Information Letters and Information Bulletins are available on our website. They are also available electronically if you subscribe.

# Drilling Royalty Credits

# Overview

- The Drilling Royalty Credit Regulation (DRC) became effective September (AR 245/2009)
- The program offers credits based on drilling activity and royalties owed in the fiscal years 2009/2010 and 2010/2011
- This two year program provides a \$200/metre drilled credit to companies based on their production levels from 2008. This is known as the drawdown rate.

# Drawdown Rate

Average Daily Crown Production (m <sup>3</sup> /day including equivalents)	Maximum Credit Percentage
Greater than 0 m <sup>3</sup> /day and less than or equal to 1,590 m <sup>3</sup> /day	50%
Greater than 1,590 m <sup>3</sup> /day and less than or equal to 2,385 m <sup>3</sup> /day	40%
Greater than 2,385 m <sup>3</sup> /day and less than or equal to 3,180 m <sup>3</sup> /day	30%
Greater than 3,180 m <sup>3</sup> /day and less than or equal to 3,975 m <sup>3</sup> /day	20%
Greater than 3,975 m <sup>3</sup> /day	10%

# DRC Eligibility

- New natural gas and conventional oil wells with spud and finish drilling dates on or after March 31, 2009 but before April 1, 2010
- New natural gas and conventional oil wells with spud and finish drilling dates after March 31, 2010 and before April 1, 2011
- When the spud date and finish drilling date cross a fiscal year the well will fall into the later year.




# Application of Drilling Royalty Credits

- If your well was drilled between April 1, 2009 and March 31, 2010, the drilling credits will be drawn down over two years
- If your well was drilled between April 1, 2010 and March 31, 2011, the drilling credit will be drawn down over one year
- Drilling royalty credits that are not applied by the end of the March 2011 production month will be forfeited.

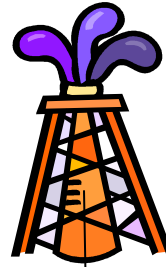
# Calculating Drilling Royalty Credits

- All well information must be on the Petroleum Registry of Alberta (PRA)
- Spud date, Finish Drilling Date, Total Depth and Kickoff Point(s)
- Ensure the information on the PRA is accurate
- Formula for calculating DRC is:  
$$\text{\$200.00} \times \text{DM(MD)} \times \text{Crown Percentage} \times \text{Allocation (working interest)}$$

- Monthly Reporting
  - Volumetric
  - Allocation
- Allowable Costs
  - AC1
  - Facility Cost Centre Operator Change
  - Query Facility Cost Centre
  - AC2
  - AC3 - Allowable Costs Reallocations
  - AC4 - Operating Costs
  - AC5 - Custom Processing (CP) Fees Paid
- Infrastructure
  - Well Infrastructure
    - [Query Well Status](#)
    - [Query Well](#) 
    - [Query Well Licence](#)
    - [Query Volumetric Gas Well Liquid](#)
  - Facility Infrastructure
  - Crown Royalty Related Information
- Ministry Invoices and Statements
  - [Manage Invoices and Statements](#)
- Reports and Queries
  - [Submit Report Request](#)
  - [Upload Report Request](#)
  - Queries
- Admin Functions
  - Security
  - Notifications

# Measured Depth Determination

**Total Depth:** measured distance along the bore of the well from the kelly bushing to the bottom of the well.

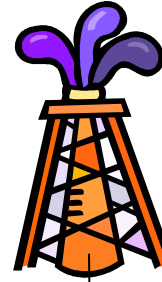


← MD=TD=1000m

**Measured Depth:** total distance in metres of new drilling for the well, including well legs and drains.

$\$200.00 \times 1000\text{m} \times 100\% \times 100\% = \$200,000.00$

# Measured Depth Determination



Kick off point (KOP) = 500m →

'2'  
TD = 1500m

'0' event = 1000m

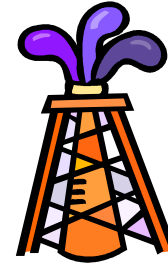
'2' event = 1500m - 500m(KOP) = 1000m

MD: 1000 + 1000 = 2000m

'0'  
TD =  
1000m

\$200.00 x 2000m x 100% x 100% = \$400,000.00

# Measured Depth Determination (Inaccurate Reporting)



'2'  
TD = 1500m

500m Kick off point is  
missing

'0' = 1000m

'2' = 1500m

MD = 1500m

'0'  
TD = 1000m

$\$200.00 \times 1500\text{m} \times 100\% \times 100\% = \$300,000.00$

# Allocations

- The well licensee may only make a **one** time allocation
- The credits will be assigned to the royalty payer(s) identified by the licensee and in accordance with the percentage allocated.
- No credits will be paid until the DRC allocation has been made.
- Allocations are made on the Petroleum Registry of Alberta

### Edit Drilling Royalty Credit Allocation

Licence Number: 1234567

Location: LSD SEC TWP RGE MER

W

Well ID	Licence #	Well Name	Status	Start Date
ABWI100010200304W500	1234567	Oil & Gas Well 1-2	CR-BIT PUMP N/A N/A	2009-06-08

*DRC006 DRC Allocation submissions are final and cannot be amended or deleted.*

Well ID: AB WI 100010200304W500 Licence #: 1234567  
 Well Name: Oil & Gas Well 1-2

BAID	Factor Allocated
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

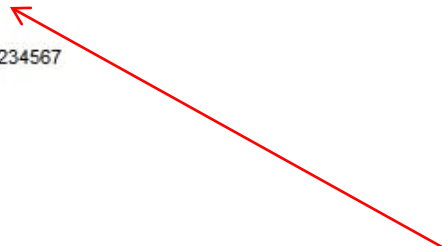
Totals: 0.0000000

Enter the licence # or complete the location information and Click Go

A listing of Wells associated with the license / location will be displayed

This opens the actual allocation portion of the screen.

Note the Warning message





# Drilling Royalty Credit Cap

- The DRC cap is at the corporate level and is based on natural gas, conventional oil and non-Project oil sands royalties owing
- The royalties are combined together and then the drawn down rate is applied to determine the maximum amount of credit
- Payment of credit is through a cheque issued on a monthly basis.


# Factors Affecting DRC

- Transfers of DRC credits and credit caps for amalgamated companies will be done once a year during our fiscal year end processing
- IETP(Innovative Energy Technology Program) will be deducted off of any DRC credits during our fiscal year end processing
- Royalty Programs/Rates will impact your net royalties, reducing your credit caps
- Gas and Condensate royalties are processed two months following the production month and Oil royalties are processed one month following the production month

# Reports

- Drilling Royalty Credit Activity report
- Activity reports are produced only when an allocation is made
- Reports shows:  
Royalties, Drawdown rate (Category), Credit Cap, Year 1 & 2, Process date, Summary Report, Transfers in and out
- Calculation commences at the end of the month

# Retrieving Activity Reports

- Monthly Reporting
  - Volumetric
  - Allocation
- Allowable Costs
  - AC1
  - Facility Cost Centre Operator Change
  - Query Facility Cost Centre
  - AC2
  - AC3 - Allowable Costs Reallocations
  - AC4 - Operating Costs
  - AC5 - Custom Processing (CP) Fees Paid
- Infrastructure
  - Well Infrastructure
  - Facility Infrastructure
  - Crown Royalty Related Information
- Ministry Invoices and Statements
  - [Manage Invoices and Statements](#) 
- Reports and Queries
  - [Submit Report Request](#)
  - [Upload Report Request](#)
  - Queries
- Admin Functions
  - Security
  - Notifications

Business Associate Id:  
Business Associate Name:  
Business Associate Address:

Royalty Values April 2009 to March 2010:

Oil:  
Gas:  
Condensate:  
Non Proj. Oil Sands:

YEAR 1

2009-2010 Credit Cap

x Daily Crown Production Category (50.00%) =


**\*IF NET ROYALTIES ARE LESS THAN ZERO, THEN THE CREDIT CAP WILL BE ZERO.**

**\*\* IF TRANSFER IN / TRANSFER OUT HAS A VALUE, SEE ATTACHED APPENDIX.**

Licence	Depth (metres)	Crown %	DRC Allocation %	2009 - 2010 Drilling Royalty Credits (Depth x \$200.00 x Crown% x DRC Allocation)	YEAR 1
	1,143.00	100.0000000	100.000000000	\$228,600.00	
	1,256.00	100.0000000	45.000000000	\$113,040.00	
	1,935.00	100.0000000	100.000000000	\$387,000.00	
	1,512.00	100.0000000	100.000000000	\$302,400.00	
	1,367.00	100.0000000	100.000000000	\$273,400.00	
	1,250.00	100.0000000	100.000000000	\$250,000.00	
	2,426.00	100.0000000	100.000000000	\$485,200.00	

<b>DRC Allocated for 2009-2010:</b>	<b>\$2,039,640.00</b>	
<b>DRC Calculated for 2009-2010:</b>	<b>\$2,039,640.00</b>	(Lesser of Either 2009-2010 DRC Allocated or 2009-2010 Royalty Credit Cap)
<b>Prior DRC Paid from 2009-2010:</b>	<b>\$2,039,640.00</b>	(Total DRC Paid from Prior 2009-2010 Periods)
<b>Current DRC Payable from 2009-2010:</b>	<b>\$0.00</b>	(Total DRC Calculated minus Prior DRC Paid)
<b>DRC Allocated Carried forward to 2010-2011</b>	<b>\$0.00</b>	(DRC Allocated in 2009-2010 minus (DRC Paid and Current payable from 2009-2010))

# Retrieving Allocation Report

- Monthly Reporting
  - Volumetric
  - Allocation
- Allowable Costs
  - AC1
  - Facility Cost Centre Operator Change
  - Query Facility Cost Centre
  - AC2
  - AC3 - Allowable Costs Reallocations
  - AC4 - Operating Costs
  - AC5 - Custom Processing (CP) Fees Paid
- Infrastructure
  - Well Infrastructure
  - Facility Infrastructure
  - Crown Royalty Related Information
- Ministry Invoices and Statements
  - [Manage Invoices and Statements](#)
- Reports and Queries
  - [Submit Report Request](#) 
  - [Upload Report Request](#)
  - Queries
- Admin Functions
  - Security
  - Notifications

[\[Reports and Queries\]](#)

## Submit Report Request

**Report:**

- AC4 - Operating Cost Claim Report
- AC4 - Operating Cost Claim Report
- AC5 - FCC Custom Processing Fees Paid Report
- Business Associate USA Report
- Drilling Royalty Credit Report**
- Facility Infrastructure Report
- Facility Operator Report
- Raw Gas Allocation Report
- Volumetric Facility Activity Report
- Well Infrastructure Report
- Well Licence Report
- Well To Facility Link Report

Use drop down box

[Menu](#) [Inbox](#) [Help](#) [Contacts](#) [Logout](#)  
[Top](#)

[Reports and Queries](#)

## Submit Report Request

Report:

Licensee:  All  List  All Except Requestor

Wells:  All  List

Allocated BAs:  All  List

Report Format:  PDF  XML  CSV

Note: This report will be queued for processing. You will receive an e-mail notification when the report is ready.

[Menu-Inbox-Help-Contacts-Logout](#)  
[Top](#)



# Deadlines

<u>Activity</u>	<u>Dates</u>
Program end date/finish drilling date deadline	March 31, 2011
Last production month included in DRC calculation	March 2011
Last submissions of Royalties and Allocations	June 30, 2011

# Contacts

Richard Dmytryshyn – Manager, Royalty Programs  
& DRC

[Richard.Dmytryshyn@gov.ab.ca](mailto:Richard.Dmytryshyn@gov.ab.ca)  
780 427-3308

Pat Van Meer – Manager, Gas Royalty Billing

[Pat.VanMeer@gov.ab.ca](mailto:Pat.VanMeer@gov.ab.ca)  
780 422-7232

Tracy Wadson – Manager, Oil Sands Royalties

[Tracy.Wadson@gov.ab.ca](mailto:Tracy.Wadson@gov.ab.ca)  
780 427-9266

Jui Chao Soh – Team Lead, DRC

[Jui-Chao.Soh@gov.ab.ca](mailto:Jui-Chao.Soh@gov.ab.ca)  
780 422-9081

Asneil Charan – Analyst, DRC

[Asneil.Charan@gov.ab.ca](mailto:Asneil.Charan@gov.ab.ca)  
780 422-9040

Trevor Bilan – Analyst, DRC

[Trevor.Bilan@gov.ab.ca](mailto:Trevor.Bilan@gov.ab.ca)  
780 422-9070

# **NEW Alberta Hub Gas Reference Price Effective January 2011 Production**

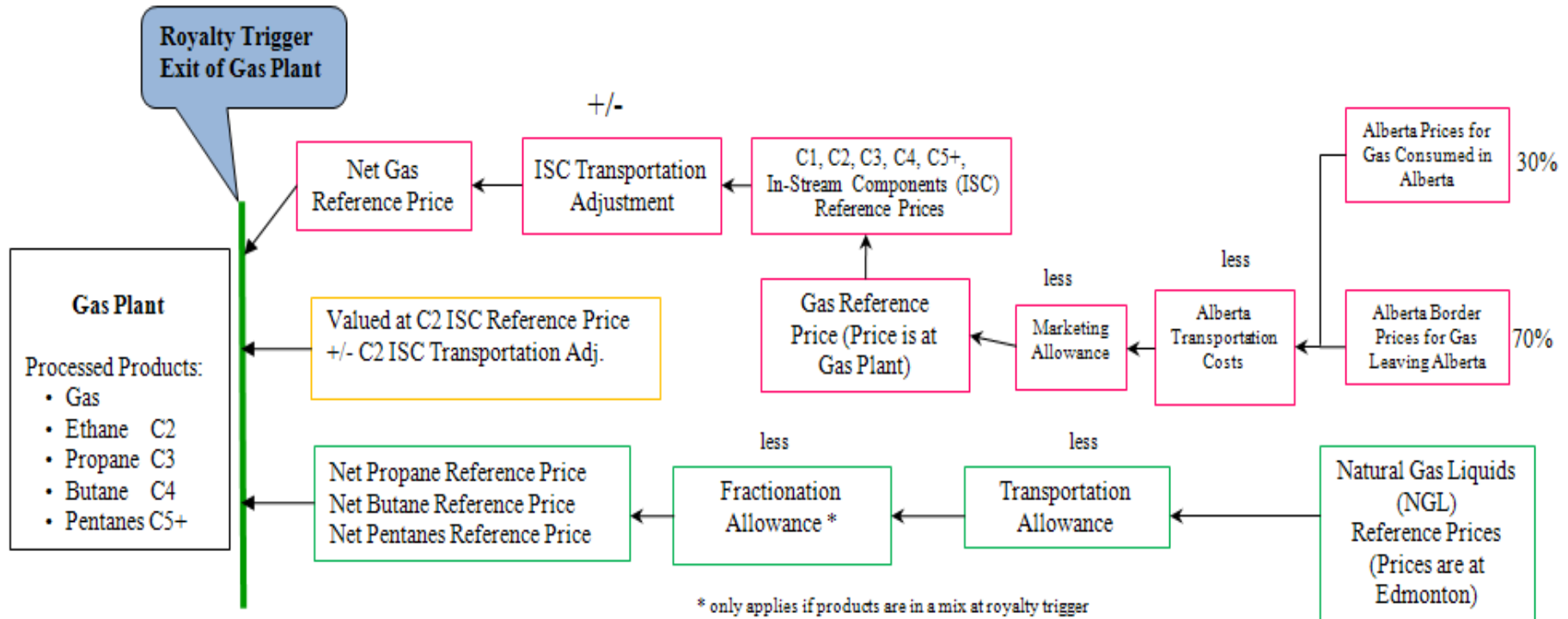
# Introduction

- Why look at the existing Gas Reference Price?
  - Complex reporting and lack of transparency
- What options were considered?
- Why the new process was selected?
- How will it work?
- How are Gas Royalties impacted?
- What are the key next steps?

# Background

- The current GRP methodology was implemented in 1994 as a simplification initiative.
- The use of a GRP would result in the Crown receiving the same average fair market price that a producer can expect to receive when selling its' gas.
- The GRP process was reviewed in 1996 and 2002 to confirm the model still produced a representative average price.
- A netback valuation model is used allowing adjustments for downstream transportation costs, pipeline loss, fuel and a marketing allowance.

# Gas Royalty Valuation – Market Netback Methodology

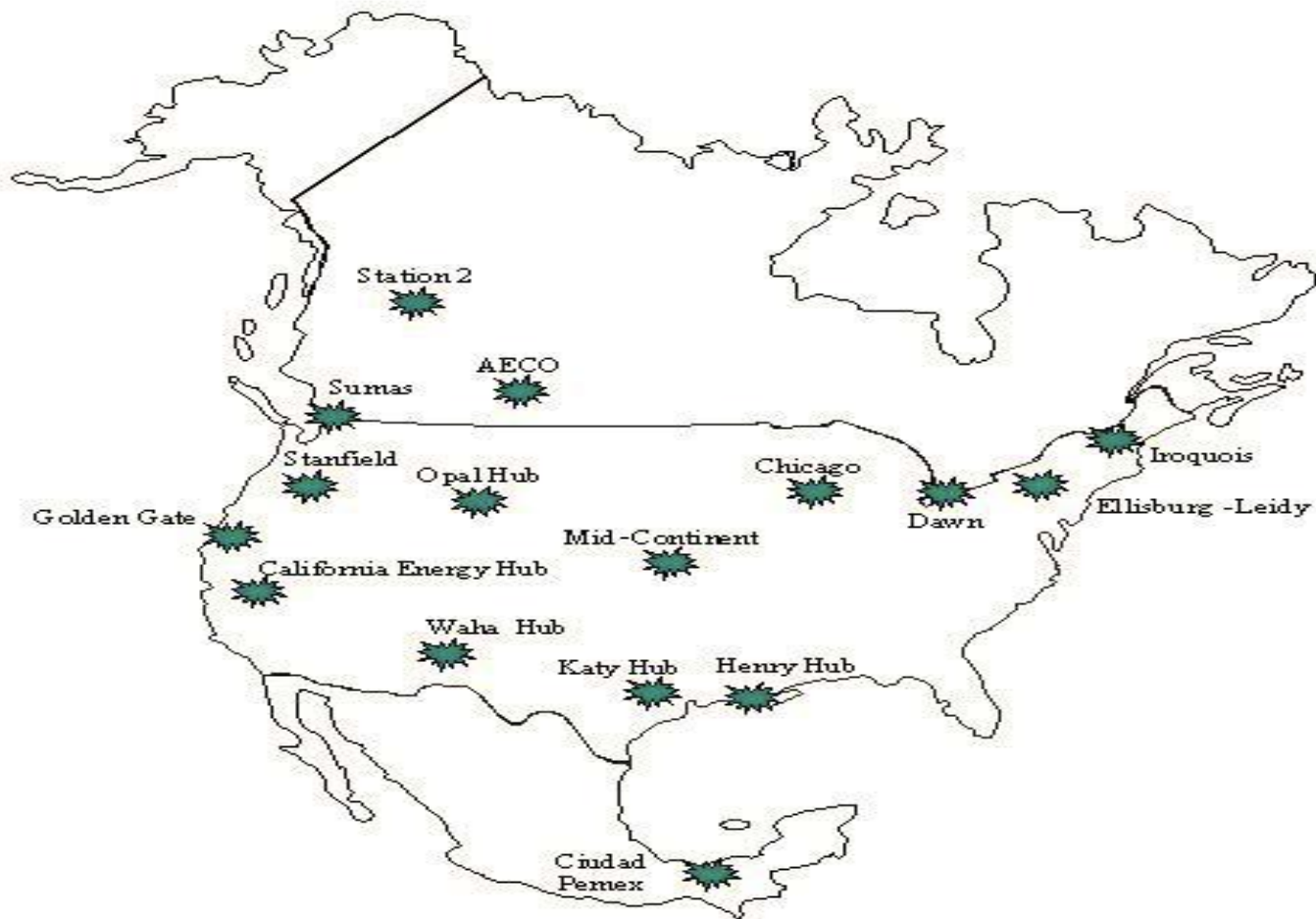


- 238 Gas companies reporting (mostly non-producers)
- 24 NGL buyers reporting (mostly non-producers)

# Issues

- The gas marketing business is complex.
- The current gas market has evolved to a more integrated open market, where gas trades through market centres or hubs. Today's market is very efficient, competitive and robust.
- Collecting information to calculate the GRP is a very complex process and the frequency and degree of reporting errors by clients is very high.

# Market Centres and Hubs





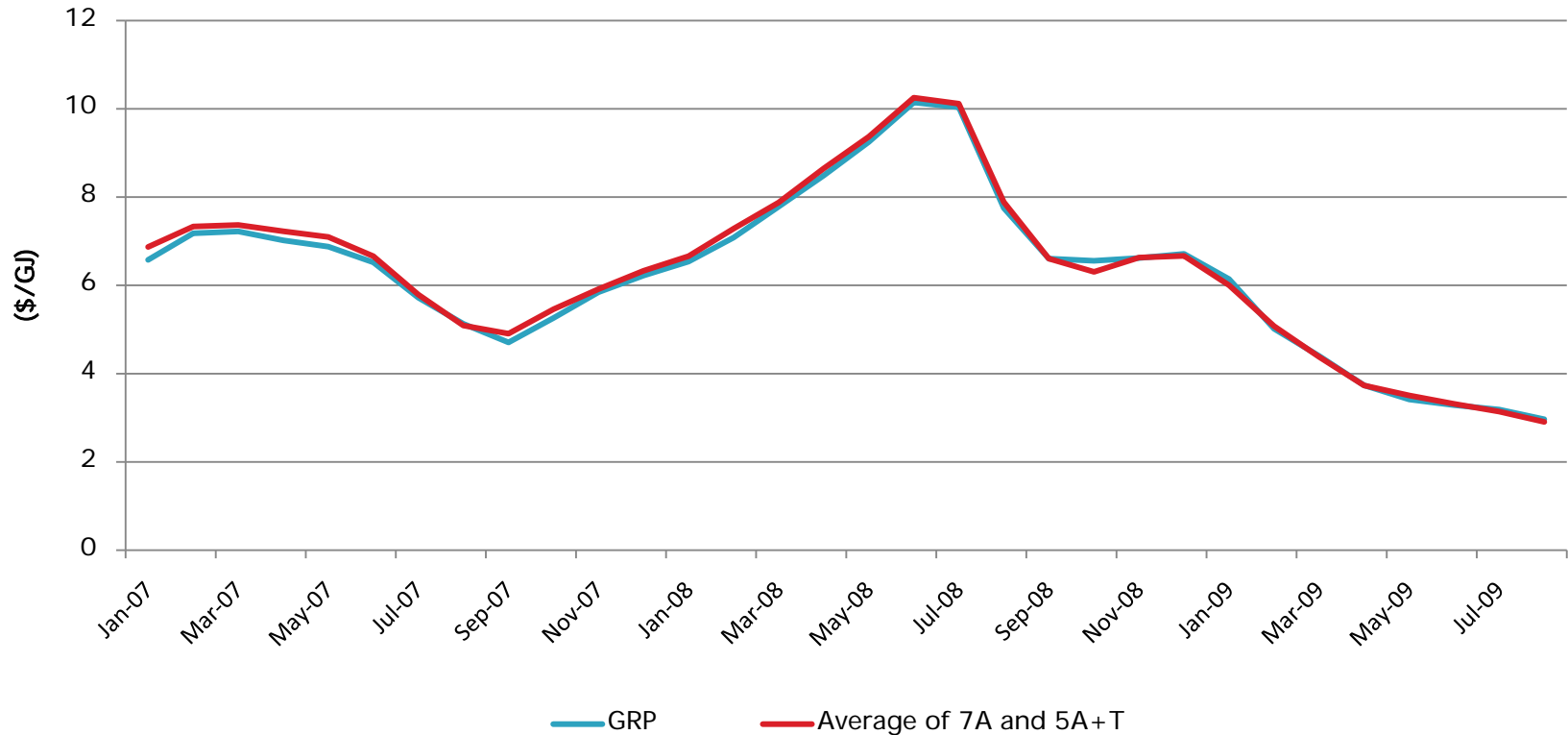
# GRP Options

- Modified “As-Is” Process
- Crown Takes Gas In-Kind
- Producers Report Actual Gas Sales Values
- Alberta Hub based on NIT Purchases  
(Nova Inventory Transfer)
- Alberta Hub Price Index

# Selected Option – Alberta Hub NIT Purchases

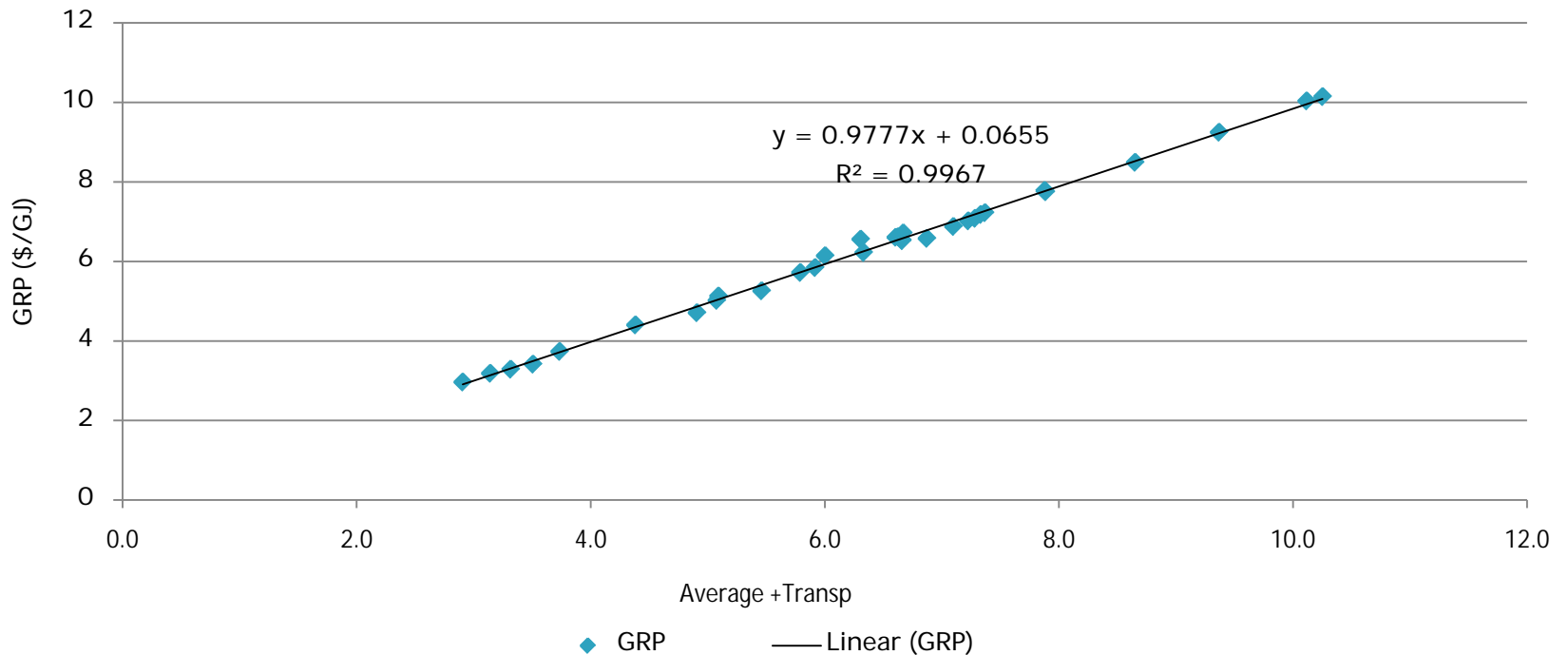
- The alternative that met all of the evaluation criteria with the highest ranking is the **Alberta Hub Gas Reference Price – NIT Purchases**.
- NIT (AECO) purchase values would be similar to sales values received by Producers.
- The NIT purchase values reflect a clear and transparent Alberta-based commodity value.
- Significant reduction in reporting requirements and complexity as compared to current GRP system.

# Relationship Between GRP and Average (Month Ahead and Spot) Price + Transp



# Correlation Between GRP and Average (Month Ahead and Spot) Price + Transp

## GRP and Avg (7A,5A)+Transp



# New GRP Process

## ALBERTA HUB NIT PURCHASES

# New GRP Process

- $GRP = NIT \text{ purchase price} - \text{Intra-Alberta Transportation deduction} - \text{fuel}$

# Alberta Hub NIT Purchase Gas Reference Price

- Determine a weighted average price based on a monthly survey of Nova Inventory Transfers (NIT) including those on the Natural Gas commodity exchange (NGX).



## NIT: Alberta's Natural Gas Hub

Gas is transported to NIT under FT-R (Receipt Service)

Gas is transported away from NIT to border points under FT-D (Delivery Service) or to intra-Alberta market under FT-A

Hundreds of counterparties transact at NIT

Access to 11bcf/d supply and 300 bcf + of storage capacity

Access to multiple downstream markets

# Background on NGX – Natural Gas Exchange

- Natural Gas Exchange Inc. (NGX), <http://www.ngx.com/> , headquartered in Calgary, provides electronic trading, central counterparty clearing and data services to the North American natural gas and electricity markets.
- Since it began in 1994, NGX has developed the AB-NIT (“AECO”) hub into one the most liquid spot and forward energy markets in North America.
- In 2008, NGX and International Exchange (ICE) launched an operational alliance whereby NGX uses ICE’s front end trading technology and provides clearing services for ICE’s US physical gas products.
- NGX is wholly owned by TMX Group Inc. which collectively manages all aspects of Canada’s senior and junior equity markets.
- NGX alone accounts for 37% of all NIT purchases
- NGX represents over 200 counterparties who trade at NIT



**SECURE AREA LOGIN:**

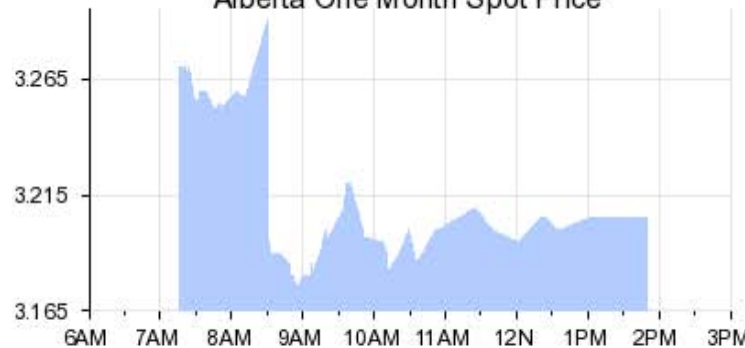
Choose a site:

Trading Reports



- + [About NGX](#)
- + [Exchange Services](#)
- + [Clearing and Settlement](#)
- + [Market Data/Indices](#)
- + [Contracts Listed](#)
- + [Customer Resources](#)
- + [Customer Sign-up Process](#)
- + [Public Downloads](#)
- + [Power Auctions](#)
- + [News and Notices](#)
- + [Glossary](#)
- + [Frequently Asked Questions](#)
- + [Contact Us](#)

### Alberta One Month Spot Price



**Prompt Month (Nov) Last:** \$ 3.2050      **Change:** \$-0.0850 (%-2.58)

**Deferred Month (Dec) Last:** \$ 3.4950      **Change:** \$-0.0625 (%-1.76)

**Last refreshed:** Oct 21 2010 14:05:01 MT (Quotes delayed up to 15 mins)

NGX is Canada's leading energy exchange and North America's largest physical clearing and settlement facility. Since 1994, NGX's unique market model has provided traders with one of the most highly liquid, secure and efficient environments available for trading and clearing natural gas and electricity contracts. NGX is based in Calgary and wholly owned by **TMX Group Inc.**, which collectively manages all aspects of Canada's senior and junior equity markets.



**FEATURE**

NGX's markets are available on the ICE Trading Platform, pursuant to the **previously announced technology and clearing alliance** with ICE.

All functional areas of NGX.com, such as the **index pages**, have been updated to reflect changes related to this transition. Public content areas are being progressively updated and



## NGX ALBERTA MARKET PRICE™

The NGX Alberta Market Price is a volume weighted average of transacted prices for all physically delivered natural gas in a calendar month at the Alberta AB-NIT market centre. A final index price is calculated in Canadian Dollars/Gigajoule when all physical deliveries have been completed for the specified month (delivery month). The final index price will be made available two business days following the final scheduled delivery for the delivery month.

### CURRENT MONTH DATA

PRODUCT TYPE	% OF INDEX	QUANTITY (GJ)	\$ / GJ
Basis	31.23	146,218,023	3.2127
Fixed	54.92	257,180,902	3.3227
2a Index	0.71	3,311,500	3.1249
5a Index	1.06	4,967,500	3.0842
7a Index	11.97	56,059,311	3.3870
Day Ahead Index	0.11	525,000	3.1050
TOTAL	100.00	468,262,236	3.2919

[Current Month Details](#)

© 2010 Natural Gas Exchange Inc. and/or TSX Inc.

For full optimization and view of this web site, users are recommended to use Internet Explorer 6.0 or later and set their screen display at 1024x768. Links to third party sites are provided for informational purposes only. Neither NGX, TSX Group Inc., or any of its affiliates have prepared, reviewed, verified, or updated any content on third party sites and assumes no liability or responsibility for the information posted on them or any use thereof.

[Terms of Use | Privacy Policy](#)

**Total Delivered Volume**

Market Date	Buy/Sell	Product Name	Trade Size/Day	Weighted Average	Index Price	Index Calc	mmbtu/GJ 1.05506	US\$ to CDN Avg Noon Day Rate	Final Converted to GJs	Final Price	Value	Cumulative Daily Average
01-OCT-10	Receipt	NGX Phys, BS, LD1 (US/MM), AB-NIT	6,599.400	-.5188	3.8370	3.3182	1.05506	1.0215	6,962,763	3.2126	22,369,269	3.3224
	Receipt	NGX Phys, FP (CA/GJ), AB-NIT	12,300.100	3.3771		3.3771			12,300,100	3.3771	41,538,668	
	Receipt	NGX Phys, ID, 2a (CA/GJ), AB-NIT	145.700	-.0004	3.1903	3.1899			145,700	3.1899	464,768	
	Receipt	NGX Phys, ID, 5a (CA/GJ), AB-NIT	428.900	-.0023	3.1756	3.1733			428,900	3.1733	1,361,028	
	Receipt	NGX Phys, ID, 7a (CA/GJ), AB-NIT	2,012.400	.0110	3.3770	3.3880			2,012,400	3.3880	6,818,011	
	Receipt	NGX Phys, ID, 7a (US/MM), AB-NIT	622.800	.0069	3.4881	3.4950	1.05506	1.0215	657,091	3.3839	2,223,465	
	Receipt	NGX Phys, ID, Day Ahead (CA/GJ), AB-NIT	25.000	.0000	3.3700	3.3700			25,000	3.3700	84,250	
02-OCT-10	Receipt	NGX Phys, BS, LD1 (US/MM), AB-NIT	6,599.400	-.5188	3.8370	3.3182	1.05506	1.0215	6,962,763	3.2126	22,369,269	3.3170
	Receipt	NGX Phys, FP (CA/GJ), AB-NIT	12,362.900	3.3569		3.3569			12,362,900	3.3569	41,501,019	
	Receipt	NGX Phys, ID, 2a (CA/GJ), AB-NIT	149.600	-.0004	3.2427	3.2423			149,600	3.2423	485,048	
		NGX Phys, ID										

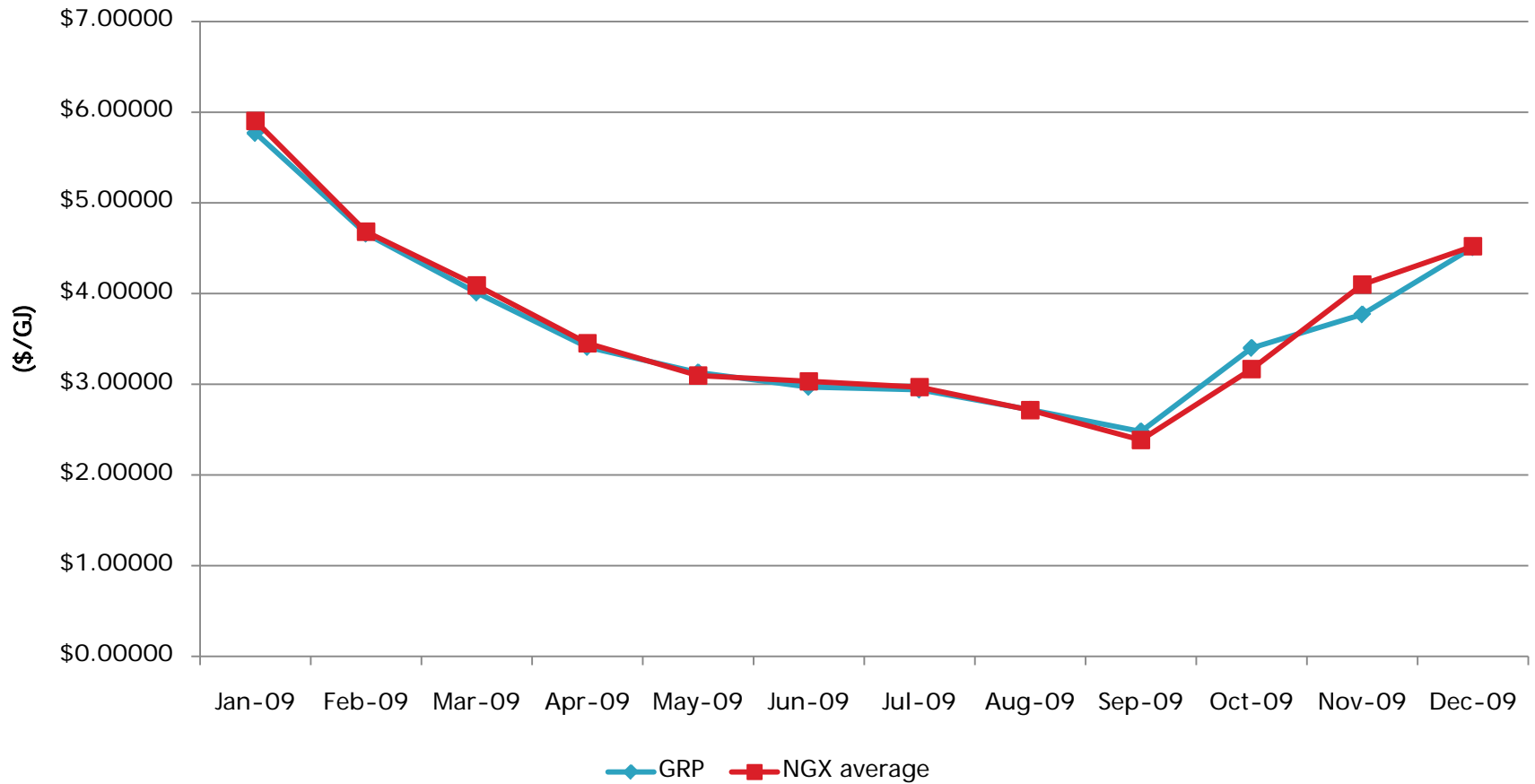
# October 2009 NGX purchases

<u>Contract Type</u>	<u>by value by quantity</u>		<u>Quantity (GJ)</u>	<u>\$/unit</u>
◦ <b>Basis Differential</b>	<b>28.5%</b>	<b>29.0%</b>	<b>254,943,432</b>	<b>\$3.305</b>
◦ <b>Fixed</b>	<b>57.2%</b>	<b>55.8%</b>	<b>491,056,139</b>	<b>\$3.445</b>
◦ <b>2a</b>	<b>1.4%</b>	<b>1.1%</b>	<b>10,076,700</b>	<b>\$4.108</b>
◦ <b>5a</b>	<b>1.8%</b>	<b>1.5%</b>	<b>12,859,118</b>	<b>\$4.061</b>
◦ <b>7a</b>	<b>11.1%</b>	<b>12.6%</b>	<b>110,751,159</b>	<b>\$2.970</b>
◦ <b>Total</b>	<b>100%</b>	<b>100%</b>	<b>879,686,548</b>	<b>\$3.361</b>
◦ <b>NGX average price - \$3.36166 – (transp + fuel) = \$3.16804</b>				
◦ <b>Net GRP - \$3.40</b>				

- **Total NIT activities – 2,363,756,235 GJ**
- **Total Production – 390,982,400 GJ**
- **Total Gas Royalty Quantity - 45,910,448 GJ**

# 2009 GRP vs NGX Average



# High level Impact

- Comparing the 2009 Annual Average GRP of \$3.65/GJ to the 2009 Annual Average NGX value of \$3.68/GJ results in an overall price increase of \$.03/GJ
- Although the new calculation would have resulted in a \$03/GJ increase in 2009, the NGX\NIT model is expected to be similar to the existing GRP over time.

# Changes to the Intra Alberta Transportation Deduction



# Intra Alberta Transportation Deduction

- Required to calculate a plant gate netback price.
- Today:
  - Includes receipt and border delivery charges for the major Intra Alberta pipelines. (NOVA, Alliance, Altagas, ATCO – North, ATCO – South). Each Receipt Meter Station has a unique factor.
- January 2011:
  - NOVA 3 year firm service receipt rate for each royalty location connected to a NOVA Meter Station. Dually locations connected would receive the corresponding NOVA FSRR. Each Receipt Meter Station on NOVA will have a unique factor. Non NOVA receipt points would receive the average 3 year firm service receipt rate.



# NOVA\TCPL Receipt Tariffs

[2010 Proposed Final Receipt Point Rates.pdf](#)

# New Process to Value Each ISC

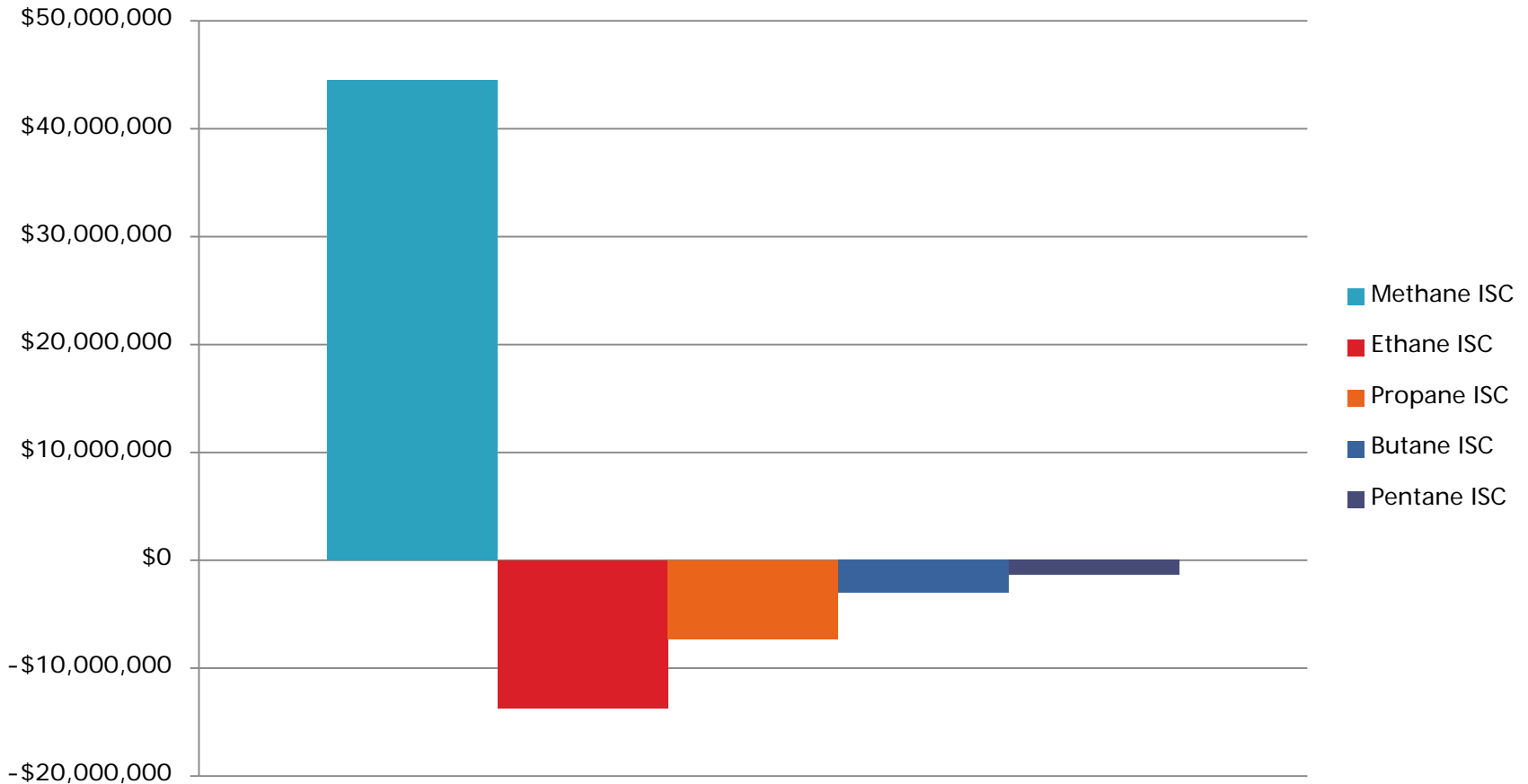
# In-Stream Components

- For 2011 as a transition year, we will deem all ISC Reference Prices to be the Gas Reference Price.

# Gas Royalty Impacts

- 2011 Gas Royalty Impacts as compared to the 2009 Gas Royalty attributes = \$19M increase
- 2009 Total Gas Crown Royalty \$2.363B
- 2009 Total Crown Royalty quantity 620,173,936 GJ

# 2011 Royalty Impact



# Key Next Steps

- Complete NGX business rules
- NGX to begin publishing Alberta Market Price (AMP) based on daily deliveries. Target go live date is November 1
- Industry communication
  - [Information letter 2010-24 issued July 6, 2010](#)
  - Final Business Rules included in the November Gas Royalty IB
- Make the necessary Gas Royalty Guideline changes
- Begin using the NGX\AMP for calculating January 2011 royalties
- Initiate policy discussions on valuation methodology for NGLs and In-Stream Components October\November 2010
- Industry consultation on NGLs and ISCs to begin in January 2011

# Closing Remarks