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## **Forecast commentary**

Ralph Glass, Director, Energy Valuation & Operations

Creating the third quarter price forecast every year has always meant a change in focus. This year is no exception with the three quarters of data for 2011 now having a greater influence than 2010's data. For natural gas we are moving into the withdrawal season coming out of the summer injections which tend to be a measure of where the price will be going into 2012. Coupled with this is the shape of the production profile, both in the US and Canada, which influences the price direction as well.

Natural gas prices have continued to be in the doldrums within the North American supply/consumption container, which fundamentally dictates the direction of the US NYMEX and Canadian AECO price trends. Continued concerns on a stagnant US economy with limited growth potential is also weighing down the need for added natural gas volumes. There is some positive news in that the US storage levels forecast for the November withdrawal period are near the prior five year minimum, as shown in Figure 1. The graph represents the 52 week injection/ withdrawal cycle with the initial point at November 1st.

We, however, have not seen the turn in overall US production. Wells are still being drilled to hold land leases and for liquids recovery. Figure 2 shows the production data, for the lower 48 states, to the end of June 2011 along with the active natural gas drilling rigs over the same period.

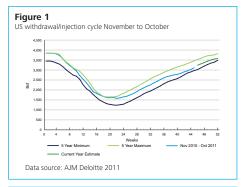
US production continues to be flat or even inclining despite that there has been a significant drop in wells drilled since 2008. The positive for natural gas prices is that storage levels are well below the five year maximum.

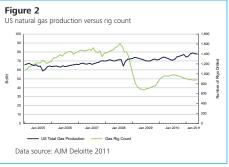
"The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails."

- William Arthur Ward

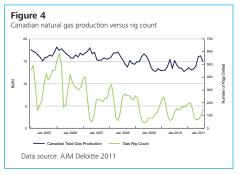
Figures 3 and 4 show the Canadian picture on natural gas. Current Canadian storage levels are at their lowest in a three year cycle. The production has also seen increases into 2011 as liquid rich gas wells continue to add volumes into the natural gas profile.

AJM Deloitte has reduced its natural gas forecast to \$3.85/Mcf for the balance of 2011; with November and December being withdrawal months and prices have historically trended upwards. For 2012, AJM Deloitte sees flat prices to 2011 with no growth until 2013. Fundamentally, AJM Deloitte has shifted its forecast back one year from the June 30, 2011 release due to the continued natural gas over supply in North America.





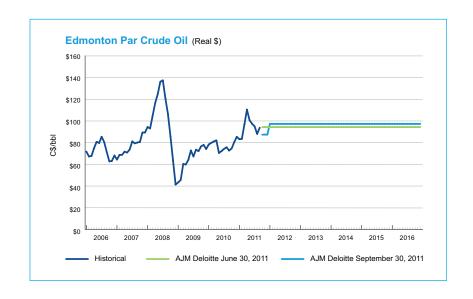




# **Crude oil price and market demand forecast**

## **Forecast considerations**

- Adjustments for oil consider the most recent pipeline tariffs and exchange rates to arrive at a Canadian Edmonton par equivalent price.
- Edmonton Par price is used as the basis to arrive at the remaining crude reference points. Offsets are based on five-year historical statistics with more recent data weighted more heavily in the determination.
- Adjustments on each individual property are made to account for transportation and crude quality from the Edmonton posted price or the reference price used for the specific property.

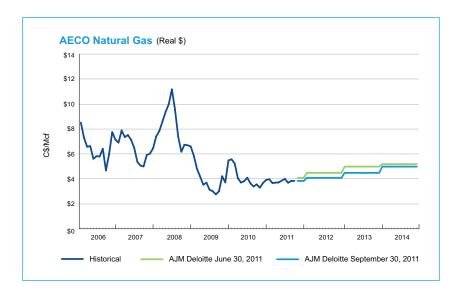


Year	WTI Cushing, OK (40 Deg. API)	WTI Cushing, OK (40 Deg. API)	Canadian Par Edmonton, AB (40 Deg. API)	Canadian Par Edmonton, AB (40 Deg. API)	SE SK Med. Oil Cromer, MB (29 Deg. API)	Bow River Oil Hardisty, AB (25 Deg. API)	Heavy Oil Hardisty, AB (12 Deg. API)	Cost inflation	CAD to USD exchange
	US\$/bbl	US\$/bbl	C\$/bbl	C\$/bbl	C\$/bbl	C\$/bbl	C\$/bbl		
	Real	Current	Real	Current	Current	Current	Current	Rate	Rate
Historical									
2008	\$102.32	\$99.58	\$105.66	\$102.83	\$93.26	\$83.97	\$73.17	0.0238	0.943
2009	\$61.98	\$61.78	\$66.41	\$66.21	\$62.77	\$59.90	\$54.49	0.0031	0.880
2010	\$79.42	\$79.42	\$77.79	\$77.79	\$73.48	\$68.16	\$60.59	0.0176	0.971
2011									
6 Months H	\$94.77	\$94.77	\$95.00	\$95.00	\$87.24	\$75.38	\$67.44	0.0286	1.021
6 Months F	\$90.00	\$90.00	\$88.00	\$88.00	\$81.50	\$72.80	\$68.00	0.0000	1.000
Avg.	\$93.58	\$93.58	\$93.25	\$93.25	\$85.81	\$74.74	\$67.58	n/a	1.016
Forecast									
2011	\$90.00	\$90.00	\$88.00	\$88.00	\$81.50	\$72.80	\$68.00	0.0000	1.000
2012	\$100.00	\$102.00	\$98.00	\$99.95	\$92.25	\$82.10	\$77.00	0.0200	1.000
2013	\$100.00	\$104.05	\$98.00	\$101.95	\$92.95	\$82.15	\$76.75	0.0200	1.000
2014	\$100.00	\$106.10	\$98.00	\$104.00	\$94.25	\$82.00	\$76.00	0.0200	1.000
2015	\$100.00	\$108.25	\$98.00	\$106.10	\$95.60	\$84.10	\$78.10	0.0200	1.000
2016	\$100.00	\$110.40	\$98.00	\$108.20	\$96.95	\$86.20	\$80.20	0.0200	1.000
2017	\$100.00	\$112.60	\$98.00	\$110.35	\$98.35	\$88.35	\$82.35	0.0200	1.000
2018	\$100.00	\$114.85	\$98.00	\$112.55	\$99.05	\$90.55	\$84.55	0.0200	1.000
2019	\$100.00	\$117.15	\$98.00	\$114.80	\$99.80	\$92.80	\$86.80	0.0200	1.000

# Natural gas price and market demand forecast

## **Forecast considerations**

- The NYMEX to Canadian AECO price historical differential is used to arrive at the AECO forecasted price.
- Gas prices have been determined independently from oil prices but still reflect the current competitive nature of the two fuels. Direct spot sales prices are currently receiving a \$0.10/Mcf premium over system gas which is reflected in the forecast.
- Even though the Western Canadian gas market is highly competitive and prices have historically varied between purchasers, it is the view of AJM Deloitte that this will not hold as true in the future. The supply, demand and competition will keep the purchasers in close proximity to each other. Saskatchewan direct prices receive a slight premium over Alberta direct due to the occasional bottlenecks that occur in Alberta.
- The NYMEX price is based on delivery at the Henry Hub in Louisiana, the nexus of 16 intra- and interstate natural



gas pipeline systems that draw supplies from the region's prolific gas deposits.

Year	AB Ref. Avg. Price	AB AECO Avg. Price	AB AECO Avg. Price	AB System Plant Gate Sales	AB Direct Plant Gate Sales	BC Direct Station 2 Sales	SK Direct Plant Gate Sales	NYMEX	NYMEX
	C\$/Mcf	C\$/Mcf	C\$/Mcf	C\$/Mcf	C\$/Mcf	C\$/Mcf	C\$/Mcf	US\$/Mcf	US\$/Mcf
	Current	Real	Current	Current	Current	Current	Current	Real	Current
Historical									
2008	\$7.88	\$8.38	\$8.15	\$8.13	\$7.92	\$8.21	\$8.19	\$9.12	\$8.88
2009	\$3.84	\$3.97	\$3.96	\$3.94	\$3.74	\$4.16	\$4.14	\$3.92	\$3.90
2010	\$3.76	\$4.00	\$4.00	\$4.07	\$3.76	\$4.00	\$3.90	\$4.38	\$4.38
2011									
6 Months H	\$3.58	\$3.82	\$3.82	\$3.92	\$3.61	\$3.50	\$3.50	\$4.28	\$4.28
6 Months F	\$3.60	\$3.85	\$3.85	\$3.55	\$3.65	\$3.55	\$3.80	\$4.30	\$4.30
Avg.	\$3.58	\$3.83	\$3.83	\$3.83	\$3.62	\$3.51	\$3.58	\$4.29	\$4.29
Forecast									
2011	\$3.60	\$3.85	\$3.85	\$3.55	\$3.65	\$3.55	\$3.80	\$4.30	\$4.30
2012	\$3.95	\$4.10	\$4.20	\$3.90	\$4.00	\$3.90	\$4.15	\$4.50	\$4.60
2013	\$4.45	\$4.50	\$4.70	\$4.40	\$4.50	\$4.40	\$4.65	\$5.00	\$5.20
2014	\$5.05	\$5.00	\$5.30	\$5.00	\$5.10	\$5.00	\$5.25	\$5.50	\$5.85
2015	\$5.40	\$5.20	\$5.65	\$5.35	\$5.45	\$5.35	\$5.60	\$5.75	\$6.20
2016	\$5.70	\$5.40	\$5.95	\$5.65	\$5.75	\$5.65	\$5.90	\$6.00	\$6.60
2017	\$6.05	\$5.60	\$6.30	\$6.00	\$6.10	\$6.00	\$6.25	\$6.10	\$6.85
2018	\$6.40	\$5.80	\$6.65	\$6.35	\$6.45	\$6.35	\$6.60	\$6.35	\$7.30



# **Pricing philosophy**

AJM Deloitte looks to both the futures and the past when we create our forecasts Price forecasting takes into account many variables that can influence future prices. While experience tells us we must continually review the tools we use to predict future oil and gas prices, one constant is the impact that the geopolitical landscape has on pricing. This impact is most accurately reflected in the financial industry's futures market for commodities. That is why the futures market is the main influence in the creation of AJM Deloitte's price forecast.

At AJM Deloitte, we understand that sound analysis of changing trends can influence the decisions made about mergers, acquisitions, divestitures and investments. One of the ways we ensure our price forecasts are as accurate as possible is to review our pricing assumptions on a quarterly basis. Accurate and realistic information ensures better long-term decisions for our clients.

#### These forecasts are AJM Deloitte's best estimate of how the future will look

In preparing the price forecast, AJM Deloitte considers the current monthly trends, the actuals and trends for the year to date, and the prior year actuals in determining the forecast. The base forecast for both oil and gas is based on NYMEX futures in US dollars. Crude oil and natural gas forecasts are based on yearly variable factors weighted to a higher percentage for the current data and then reflecting a higher percentage to prior year historical data for the later years. Gas prices have been determined independently from oil prices but still reflect the current competitive nature of the two fuels and reflect historical oil-to-gas ratios for the latter years of the gas forecast.

AJM Deloitte prepares our price and market forecasts based on information we collect from numerous government agencies, industry publications, oil refineries, natural gas marketers and industry trends. Inflation forecasts and exchange rates have also been considered.

While these forecasts are considered reasonable, changing market conditions or additional information may require alteration from the indicated effective date.

## **Glossary**

Some of the words, phrases and acronyms we use frequently when talking about pricing are listed below:

AECO	Alberta Energy Company - historical name of a

virtual trading hub on the NGX system

ANS Alaska North Slope
ASCI Argus Sour Crude Oil

**AWB** Access Western Blend - Canadian condensate/

bitumen mix

BR Bow River Crude Oil
CBOT Chicago Board Of Trade
CGA Canadian Gas Association
DCQ Daily Contract Quantity

**EIA** Energy Information Administration **FERC** US Federal Energy Regulatory Commission

FOB Free on Board (shipper term)

IEA International Energy Administration
LLB Lloydminster Blend Crude Oil

LNG Liquefied Natural GasMESC Middle East Sour CrudeMSO Mixed Sour Crude OilMSW Canadian Light Sweet

**NEB** Canadian National Energy Board

NIT Nova Inventory Transfer

NYMEX New York Mercantile Exchange

**OECD** Organization of Economic Cooperation and

Development

OPEC Organization of Petroleum Exporting Countries
PADD Petroleum Administration Defense District

USGC US Gulf Coast
USWC US West Coast

**WCS** Western Canada Select Crude Oil

WTI West Texas Intermediate

WTS West Texas Sour

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