Deloitte.
Resource Evaluation & Advisory

Canadian domestic price forecast March 31, 2014

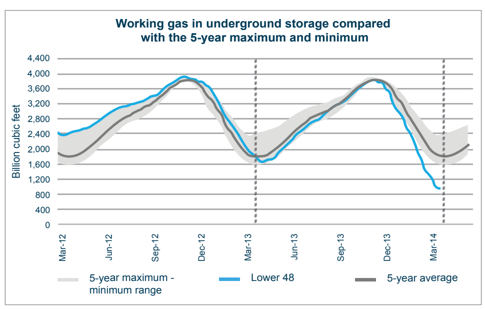
Forecast commentary

Andrew Botterill
Senior Manager, Resource Evaluation & Advisory

Of Polar Vortexes and disappearing references

"No winter lasts forever; no spring skips its turn."- Hal Borland

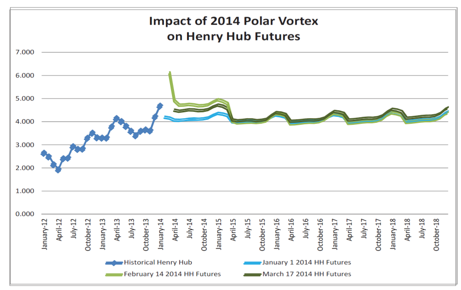
As the snow melts slowly from my front yard, and spring (knock on wood) is approaching, I can't help but reflect on how long and cold a winter we have had. With Polar Vortexes, snowstorms along the eastern seaboard, and all-time-low winter temperatures across much of North America, we should not be surprised by the huge withdrawal that occurred in the U.S. natural gas supplies. Nor should we be surprised by the dramatic effect this winter has had on the short-term natural gas prices in both Canada and the United States.



Source: U.S. Energy Information Administration

We certainly have seen a remarkable increase in the futures for Henry Hub gas prices for 2014. But just as remarkable is how little the futures market has moved for 2015 and beyond. This indicates, as we have noted in previous forecasts, that the market recognizes the shortages are short-term in nature, and will have little effect beyond this calendar year. The mood of the futures market signals a firm belief in over-supply for a significant time, resulting in soft long-term gas prices.

Also significant is the decline of the Canadian dollar (valued at USD $0.8915 on March 24, 2014) and the decrease in the differential between Henry Hub and AECO gas prices. The differential ranged from $0.66/mcf at year-end to actually receiving a premium in the coldest stretches of the winter. This decrease in differential, coupled with the Canada-U.S. exchange rate, has seen strong cash flows on the north side of the border. However, as the U.S. sees a drop in their own demand and gets storage levels back to normal, we expect Canadian gas will return to a more recent differential (~$0.50/mcf).



Another phenomenon influencing domestic oil and gas forecasting – and oil and gas reserves evaluations for that matter – is the disappearance, over the last year or so, of traditionally steadfast Canadian benchmarks such as Cromer Medium, Shell Edmonton Par and others. These benchmarks are disappearing into a vortex because some companies have made the election to no longer publish the prices being paid for oil and gas at the refinery gate.

The Edmonton Par reference price was traditionally comprised of prices published by Shell, Imperial and Suncor (previously Petro Canada). But, with Shell and Suncor no longer providing public information on this benchmark, we can't help but wonder if and/or when Imperial will follow suit. The exact reasons for this shift in practice are uncertain. Some speculate that it may be related to the current price-fixing lawsuits in the U.S. and abroad, while others feel that the large shift to oil by rail shipping has caused a change in the competition within the trading market. Press releases by both Shell and Suncor do not provide any more clarity on the reasons behind the decisions.

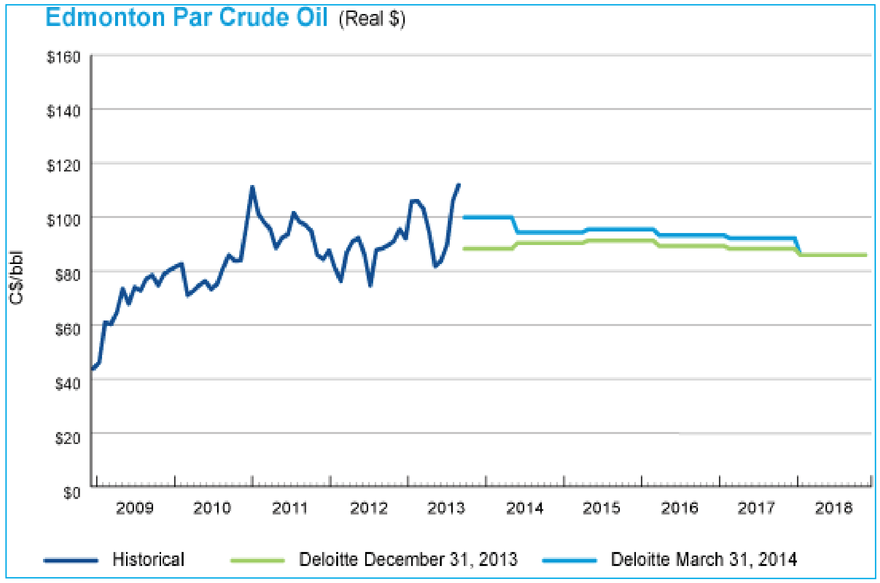
The public availability of more benchmark prices provides forecasters and evaluators with the data they need to draw upon to help lend a greater degree of transparency to price forecasts and reserve evaluation results. Comparing historical oil and natural gas revenues to these benchmarks provides evaluators with a price relationship. Using these pricing relationships and our own independent quarterly price forecasts allows evaluators to provide supported forecasts to oil and gas products and revenues. Certainly other acceptable benchmarks can and will be adopted, but none offer the same level of relevance to the Canadian market.

While the reasons for it may not be, it's clear that the potential loss of Edmonton Par means forecasters, evaluators, and the public may lose one of the most important benchmark prices in Canada.

Crude oil price and market demand forecast

Forecast comments

- On average, the differential between WTI and Edmonton Par has been around $7/bbl in the first quarter of 2013, due to Canadian volumes of oil being backed out from the U.S. market. We have forecast this differential to be $5/bbl for 2013 and 2014.
- In 2015, Deloitte is forecasting a return to the historical WTI to Edmonton Par differential of $2/bbl, when pipeline and infrastructure constraints are expected to ease with further rail transport, and major pipeline reconfigurations and optimizations.
- 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 recent data weighted more heavily in the determination.
- Adjustments for oil consider the most recent pipeline tariffs and exchange rates to arrive at a Canadian Edmonton Par equivalent price.

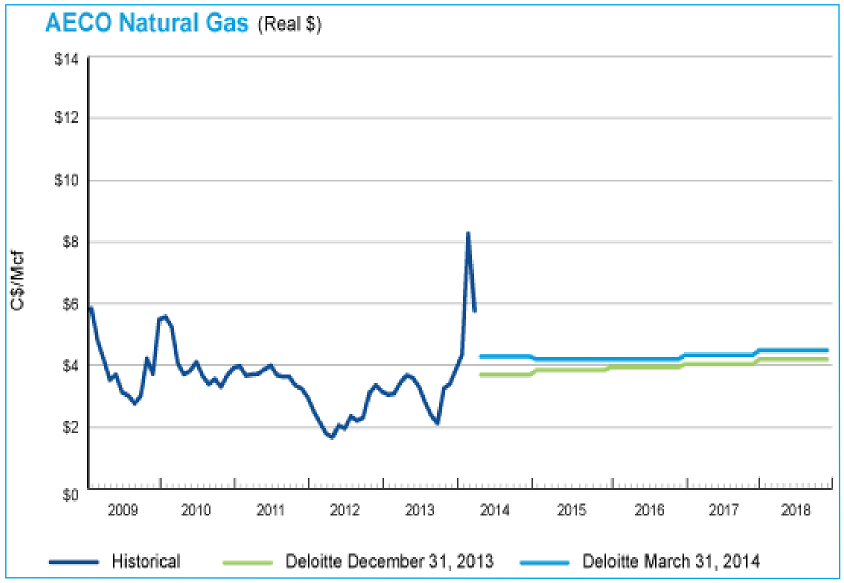


Year	WTI Cushing, OK (40 Deg. API)	WTI Cushing, OK (40 Deg. API)	Canadian Par Edmonton, AB (40 Deg. API)	Canadian Par Edmonton, AB (40 Deg. API)	Bow River Oil Hardisty, AB (25 Deg. API)	Heavy Oil Hardisty, AB (12 Deg. API)	Cost inflation	CAD to USD exchange
	US$/bbl	US$/bbl	C$/bbl	C$/bbl	C$/bbl	C$/bbl		
	Real	Current	Real	Current	Current	Current	Rate	Rate
Historical								
2011	$100.21	$94.91	$100.91	$95.58	$78.50	$69.56	0.018	0.971
2012	$96.43	$94.07	$88.68	$86.51	$74.34	$63.99	0.029	1.012
2013	$98.87	$97.94	$94.30	$93.41	$76.42	$65.61	0.015	1.001
2014								
3 Months H	$99.41	$99.41	$102.68	$102.68	$86.07	$74.77	0.018	0.906
9 Months F	$95.00	$95.00	$100.00	$100.00	$84.25	$73.00	0.000	0.900
Avg.	$96.10	$96.10	$100.67	$100.67	$84.70	$73.44	-	0.902
Forecast								
2014	$95.00	$95.00	$100.00	$100.00	$84.25	$73.00	0.0000	0.900
2015	$90.00	$91.80	$94.45	$96.40	$79.60	$69.40	0.0200	0.900
2016	$88.00	$91.55	$95.60	$99.50	$81.65	$72.50	0.0200	0.900
2017	$86.00	$91.25	$93.35	$99.05	$80.15	$72.05	0.0200	0.900
2018	$85.00	$92.00	$92.25	$99.85	$79.90	$72.85	0.0200	0.900
2019	$85.00	$93.85	$92.25	$101.85	$79.85	$73.85	0.0200	0.900
2020	$85.00	$95.70	$92.25	$103.90	$81.90	$75.90	0.0200	0.900
2021	$85.00	$97.65	$92.25	$105.95	$83.95	$77.95	0.0200	0.900
2022	$85.00	$99.60	$92.25	$108.10	$86.10	$80.10	0.0200	0.900

Natural gas price and market demand forecast

Forecast comments

- The NYMEX to Canadian AECO price historical differential is used to arrive at the AECO forecasted price.
- In Deloitte's most recent price forecast, we increased 2013 prices by $0.15/Mcf.
- In contrast to other forecasts in the industry, Deloitte's long-term views consider two more years of growth in terms of real dollars.



Year	AB Ref. Avg. Price	AB AECO Avg. Price	AB AECO Avg. Price	BC Direct Station 2 Sales	NYMEX	NYMEX
	C$/Mcf Current	C$/Mcf Real	C$/Mcf Current	C$/Mcf Current	US$/Mcf Real	US$/Mcf Current
Historical						
2011	$3.46	$3.83	$3.63	$3.34	$4.21	$3.99
2012	$2.25	$2.45	$2.39	$2.30	$2.83	$2.76
2013	$2.98	$3.20	$3.17	$3.08	$3.76	$3.72
2014						
3 Months H	$5.36	$6.15	$6.15	$4.07	$5.34	$5.34
9 Months F	$4.00	$4.30	$4.30	$4.00	$4.30	$4.30
Avg.	$4.34	$4.76	$4.76	$4.02	$4.56	$4.56
Forecast						
2014	$4.00	$4.30	$4.30	$4.00	$4.30	$4.30
2015	$4.00	$4.20	$4.30	$4.00	$4.25	$4.35
2016	$4.05	$4.20	$4.35	$4.05	$4.25	$4.40
2017	$4.30	$4.35	$4.60	$4.30	$4.35	$4.60
2018	$4.55	$4.50	$4.85	$4.55	$4.50	$4.85
2019	$4.90	$4.70	$5.20	$4.90	$4.70	$5.20
2020	$5.25	$4.95	$5.55	$5.25	$4.90	$5.50
2021	$5.60	$5.15	$5.90	$5.60	$5.10	$5.85
2022	$6.05	$5.40	$6.35	$6.05	$5.30	$6.20

Pricing philosophy

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 Deloitte's price forecast.

At 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 Deloitte's best estimate of how the future will look
In preparing the price forecast, 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 U.S. 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.

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 Gas
MESC	Middle East Sour Crude
MSO	Mixed Sour Crude Oil
MSW	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

Deloitte
Bankers Court
700, 850 - 2 Street SW
Calgary AB T2P 0R8
Canada

Tel: 403-267-1700
Fax: 587-774-5398