

**Bitumen's Deep Discount Deception
And Canada's Pipeline Mania:**

An Economic and Financial Analysis

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Table of Contents

	Page
Overview and Findings	3
1. The Bitumen Differential: Poor Quality Always Gets A Discount	6
2. Levels and Spreads—Wider Differentials Do Not Mean Lower Prices	8
3. A Trail of Deception	11
3.1. CIBC’s Discount—\$50 Million a Day	11
3.1.1. “Current Levels” Explored	12
3.1.2. “Oil Sands Industry” More Than Oil Sands Producers	13
3.1.3. “Opportunity Cost”	17
3.2. The Enbridge Discount—\$60 Million a Day	18
3.3. Joe Oliver’s Discount—\$50 Million a Day Repackaged	19
3.4. Alberta’s Discount—\$75 Million a Day	19
3.5. The Cenovus Discount—\$100 Million a Day	22
3.6. The Canada West Discount—\$70 Million a Day	24
3.7. Canadian Chamber of Commerce Discount—\$50 Million a Day Recycled	26
4. What Supply Glut?	27
Conclusion	29
<u>Graphs</u>	
Graph 1: Cold Lake Bitumen and WTI 1998 - 2007	6
Graph 2: WTI and Brent Prices 2007 - 2013	14
Graph 3: Weekly Commercial Crude Oil Inventories Cushing, Oklahoma	28
Appendix A—Canadian Consumers and Businesses Price-Gouged	31

Overview and Findings

More than a year ago, major Canadian media outlets warned about disastrous financial losses from “double discounting” of Canadian unconventional crudes in US markets.

Politicians and financial analysts regularly alerted Canadians to the challenges producers face as Alberta’s ultra-heavy crude seemingly backed-up in Cushing, Oklahoma. They claimed that a supply glut was driving down prices relative to the US benchmark for conventional light, West Texas Intermediate (WTI)—because, although our oil gets to the Cushing hub, it is having difficulty getting out.

The analysts also claimed that WTI has its own problems. For decades WTI was closely aligned to Brent—another important international benchmark for oil from the North Sea mostly sold into the European market. Although moving in tandem with Brent, WTI usually maintained a slight premium price because of its slightly better quality.

In late 2010 these two benchmarks began to decouple. West Texas Intermediate was not only consistently discounted to Brent, but Brent more readily retained its resiliency because of international market conditions, often leading to a widened negative WTI to Brent differential.

As a result industry commentators talked endlessly about the “double discount” phenomenon affecting western Canadian heavy crude. Not only did bitumen sell at a discount to WTI, now the spread between WTI and Brent had widened.

Some economists, financial analysts and industry executives added to the story further. Estimates of how much the double discount is costing were fabricated. They claimed losses totaled anywhere from \$50 million to \$100 million a day.

Banks, federal politicians, newspapers, and pipeline lobbyists repeated these sensational losses *ad nauseum*. In particular pipeline lobbyists hawked the numbers to make an irrational argument. The solution to a glutted market and low prices was to add more cheap bitumen to the market with the expeditious approval of more bitumen export pipelines such as Keystone XL, Northern Gateway and Trans Mountain’s twin.

Standing in the way of prosperity and growth were radical environmentalists unreasonably concerned about climate change and working Canadians concerned about the loss of value-added products in refining and upgrading. Commercially unsophisticated citizens just didn’t understand the vulnerability of Canada’s impoverished oil sands producers.

But this story is untrue and the financial claims are false. The bogus financial losses have no basis in reality. Their repeated use in the media constitutes not only industry propaganda but also public fraud.

This paper identifies a number of cases where the double discount story using fraudulent numbers has appeared publicly. It discusses how these numbers were created and fed to the media. And it dissects the inherent unreliability of these made-up numbers.

It also documents how the oil industry knowingly turns a blind eye to this deception. While industry allows its lobbyists to bombard the public with the deep discount disaster narrative, it tells its shareholders a very different story: one of sustained profit.

The financial truths include the following:

- 1.) Bitumen is a junk crude that requires upgrading and complex refining. It has always sold at a discount. And that discount, which is more volatile than normal oil prices, has not changed significantly. Nor is it related to pipeline capacity. The discount simply reflects the resource's poor quality.
- 2.) Wider differentials between poor crudes and light crudes in North America do not mean lower prices for Canadian bitumen or lower profits for the oil sands industry. The prices for western Canadian crude have increased significantly over the last number of years.
- 3.) None of the price benefits from differentials are passed onto consumers or businesses. In particular, western Canadians are price-gouged—about 14 cents a litre at the pumps in 2012—as the oil sand's industry, with its extensive refinery interests, create supernormal profit margins for refined products.
- 4.) Daily losses of \$50 million to \$100 million as touted by CIBC, the Canada West Foundation, the Canadian Chamber of Commerce, Enbridge, Cenovus, Natural Resources Minister Joe Oliver and Alberta's Financial Minister Doug Horner are made-up numbers. The authors of these bogus losses could not account for their origin let alone produce basic formulas and assumptions. The alleged losses remain fraudulent statistics with no basis in financial accounting. Moreover the media published these figures without checking their facts.
- 5.) Alberta's so-called "bitumen bubble" is not the product of any discount but of poor governance and bad forecasting. Alberta's Bitumen Valuation Methodology favors the export of raw

unprocessed bitumen. This strategy makes money for industry but ultimately impoverishes the owners of the resource due to low royalties and greater volatility in bitumen pricing.

- 6.) The supply glut in Cushing, Oklahoma was predicted and largely industry-made.
- 7.) The double discount is a hard luck con. It creates public sympathy for multinational pipeline companies such as Enbridge, Kinder Morgan, and TransCanada, and multinational oil producers such as Suncor, Total, Imperial and the Chinese National Offshore Oil Company. The con pushes a bitumen export strategy not in Canada's best interest. The con allows the world's wealthiest industry to achieve supernormal profits by granting them an unfettered public license to build "all pipelines, going anywhere" for an unrefined resource.

Big oil does not want the Canadian public to understand the real weaknesses in their bitumen export strategy. They think obfuscation and deflection, with equal parts of demonization and deceit, can get these bitumen export pipelines approved. Once these pipelines are built, there is no turning back. For big oil, the ends justify the means.

Exporting vast quantities of diluted bitumen will hollow the oil sector as value added opportunities are shipped to the US and Asia. Exporting diluted bitumen at the expense of upgrading in Alberta will increase Canada's condensate import dependency and require twice the pipeline capacity and double the tanker traffic than if bitumen is upgraded in Alberta.

Canadian refineries in the east are not generally able to process oil sands bitumen blends. If upgrading to light equivalent synthetic oil does not take place in Alberta, then Canada will not realize energy self-sufficiency but continue to import oil from volatile, uncertain and expensive international markets.

Oil interests encourage sympathetic elected leaders, bankers, and media to pick up their cause and make it their own. Some of the bitumen export pipeline pushers know better and are engaging in deliberate misrepresentation, some of them don't, and are played like pawns in big oil's game.

The debate about oil pipelines is not about economic benefit stacked against environmental cost to see if the risk is worth it. This is a false dichotomy developed by oil interests to pit ordinary Canadians against ordinary Canadians. They hope our fear of economic loss if we don't approve these pipelines is greater than our fear of environmental harm if we do. The double discount is used to increase our fear of economic loss.

The double discount is a fraud.

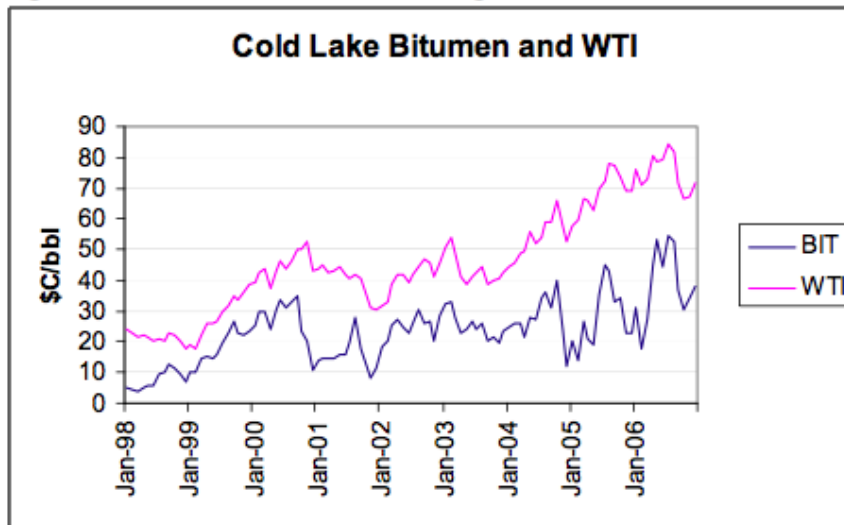
1.) The Bitumen Differential: Poor Quality Always Gets A Discount

Bitumen is an ultra-heavy hydrocarbon full of complex molecules that has always fetched lower relative prices than light oil.¹ And always will.

Graph 1 illustrates the historical differential between West Texas Intermediate—WTI—and Cold Lake Bitumen from 1998 - 2007.

Graph 1

Figure 13: Bitumen Prices versus Light Crude Prices



Source: NYMEX, Bank of Canada, Purvin and Gertz

The bitumen hydrocarbon, badly degraded by bacteria over millions of years, typically contains too much carbon and not enough hydrogen. The tarry substance is so thick and dense that it will not move through a pipeline unless assisted with diluent.

To add value to the resource raw bitumen requires upgrading and then complex refining. It takes 1.2 barrels of bitumen to make one barrel of synthetic crude oil. Bitumen prices depend on access to refineries that can maximize the yield of higher valued products. The high cost of the equipment needed to produce higher valued products from bitumen influence how much even complex refineries can afford to pay—hence the differential.

In addition to bitumen's quality discount, bitumen prices as "compared to light crude oil prices, are typified by large dramatic price drops and recoveries. In fact, over the period shown [in Graph 1 above], bitumen prices were 63% more volatile

¹ [Alberta Royalty Review 2007](#), Alberta Department of Energy, Appendix "A", Technical Report OS#1.

than WTI prices.”²

Essentially there are two alternatives for oil sands bitumen—upgrade it to SCO a higher valued, light crude oil, or, dilute it and export it by pipeline as unprocessed heavy crude to markets where they upgrade and refine it into petroleum products.³

WCS stands for Western Canadian Select, a bitumen blend launched in December 2004 by Cenovus, Canadian Natural Resources, Suncor and Talisman Energy.⁴ These firms produce 300,000 barrels a day in Canada with Canadian Natural Resources Ltd., the largest contributor to the WCS blend, responsible for 53% of the supply.⁵

WCS is often referenced as the highest standard of heavy non-conventional western Canadian blended bitumen most closely resembling, but of slightly less quality, than the heavy oil grade called Maya, imported from Mexico into the US Gulf Coast.

In recent years, the natural, or expected, discount for WCS to WTI is about \$20 per barrel.⁶ All other bitumen blends would be expected to sell at a discount to WCS, and therefore, an even greater discount to WTI because of quality considerations. “Historically, the average price differential between light and heavy crude oil benchmarks in markets where western Canadian oil competes has been around 30 percent.”⁷

Industry understands and plans for this differential, whereas, the natural quality discount is ignored by lobbyists and politicians pushing the double discount deception.

Natural differentials exist no matter how much pipeline capacity is available. When there is excess transportation infrastructure, the natural differential as well as transportation costs to get a particular crude to market would be expected to explain price differences between two grades of crude oil. Toll rates are more expensive for pipeline transport of heavy oil like WCS than light oil like SCO because it takes longer and requires more energy.⁸

Whenever western Canadian light oil and heavy oil are compared to prices in other markets it is important that the natural differential for quality and transportation costs be understood and backed out of the discussion, because even under conditions of market equilibrium, prices for different grades of oil, in different locations, would be expected to be different.

² Ibid. Page 15.

³ Some refineries, like [Regina Co-op](#), are integrated and process heavy oil. From 2003-2012 capacity at Regina Co-op increased from 55,000 to 130,000 barrels a day.

⁴ [WCS Fact Sheet](#).

⁵ Canadian Natural contributed [157,000 bbl/d](#) of WCS in 2012. Financial Results 2012, page 9.

⁶ [Baytex WTI and WCS](#) differentials, Canadian dollar equivalent 2005 – 2012 (\$19.77 CDN average).

⁷ Canadian Pipeline Transportation System, NEB, July 2009, [page 7](#).

⁸ Canadian Association of Petroleum Producers, [Crude Oil Forecasts](#), June 2012, page 40.

2.) Levels and Spreads—Wider Differentials Do Not Mean Lower Prices

All the focus on Canadian oil priced at a deep discount to WTI leaves the impression that prices for our various crudes have declined, or they have fallen to lower than historical levels, threatening the ability of the industry to operate. This is not true.

Price levels and price differentials are two different things. Price levels tell you what the price actually is. For example, WTI at \$100 US a barrel is a price level.

Since WTI is the benchmark for western Canadian crudes, grades such as synthetic crude oil—SCO—sells at a premium or discount to WTI—that's the differential. SCO at a \$2 per barrel discount, or differential, to WTI means it sells for \$98 US per barrel.

If the price of WTI goes up to \$105 US per barrel, and the price of SCO goes to \$102 US per barrel, the discount has widened to \$3 US per barrel. We would be told this is bad news even though the price producers receive for their SCO has gone up by \$4 US per barrel.

So it's possible for western crude to sell at a discount to WTI while the price producers receive for their oil keeps going up. That's exactly what's been happening.

Reviewing historical prices we find the price for western Canadian crude, amidst short run daily and monthly volatility, has increased in past years—not declined.

This is easily illustrated by looking at the two most representative grades of oil sands crude, SCO representing light upgraded bitumen and WCS representing heavy diluted bitumen blends.

SCO is produced by upgrading bitumen from the oil sands in upgraders like Syncrude's or Suncor's and is most appropriately compared to WTI or Brent in terms of similar quality, or grade, since both these benchmarks represent high quality conventional light oils. Having undergone some processing SCO also represents value added wealth and jobs for the Alberta economy.

There are seven streams of SCO including Syncrude's SYN, Suncor's OSA, Canadian Natural Resources Ltd.'s CNS, Husky's HSB, Shell's PAS⁹ and SSX, and Nexens's PSC. Each stream has its own pricing. There are approximately 900,000 barrels a day of SCO—upgraded bitumen—produced in Alberta with capacity for upgrading running closer to 1.3 million barrels a day.¹⁰

⁹ [Shell's PAS](#) is Premium Albian produced in partnership with Chevron (20%) and Marathon (20%).

¹⁰ CAPP 2012, [Crude Oil Forecasts](#), page 39.

From 2009 to 2012 average SCO prices in Edmonton rose from \$69.20 CDN per barrel to \$92.50 CDN per barrel—**an average annual increase of 11.2%**.¹¹ For the first two months of 2013 SCO prices averaged \$95.86 CDN per barrel. On March 27, 2013 SCO closed at \$105.60 CDN. This was a \$7.37 CND premium for SCO as compared to WTI.¹²

There are essentially only four oil sands producers who mine bitumen and almost all mined bitumen is upgraded to SCO in facilities owned by these producers. These companies are Canadian Natural Resources Ltd., Shell¹³, Suncor and Syncrude. Husky has an upgrader but relies on conventional heavy oil as input, and Nexen has an upgrader that relies on bitumen from in situ sources.¹⁴

A survey of annual reports reveals that companies with related upgraders had healthy results in both 2011 and 2012 for their mined-bitumen-upgraded-to-SCO activity. In short, they tell their shareholders, it pays to upgrade.

Since WCS was introduced into the market as a representative oil sands bitumen blend for non-conventional heavy oil its price level has risen from an average of \$43.87 CDN a barrel to \$73.11 CDN a barrel—**an average annual increase of 9.5%**.¹⁵

Bitumen is dense, like tar or wet cement, and must be diluted with higher quality oil like condensate, SCO, or other product to enable it to flow down a pipeline. When bitumen is diluted with a product like condensate, its called dilbit. When diluted with a product like SCO its called synbit. As a rough approximation, dilbit requires 30% diluent, while synbit requires 50% SCO.

Most of the bitumen extracted by an in situ method like SAGD (steam assisted gravity drainage pronounced SAG-Dee) or CSS (cyclic steam stimulation), does not have access to upgrading (other than Nexen's 72,000 barrels a day upgrader¹⁶) and is intended for export as a bitumen blend.

¹¹ <http://www.sproule.com/forecasts> Click on Escalated Forecast to access the data for Synthetic Crude Oil Edmonton 2009 – 2012. Canadian dollars, in Edmonton, so does not include transportation costs. For the first two months of 2013 SCO (\$95.86) has been at a premium to WTI (\$94.91).

¹² March 27, 2013 SCO <http://www.firstenergy.com/research/news/News-2013-03-28.pdf>

¹³ Shell has a 60% joint venture partnership interest in its Athabasca Oil Sands project with Chevron at 20% and Marathon Oil at 20%.

¹⁴ [Alberta Oil Sands Industry Quarterly Update](#), Winter 2013, Alberta Government and CAPP 2012 Forecast, page 31, 32.

¹⁵ Based on WCS in Canadian dollars 2005-2012 [Baytex](#). March 27, 2013 WCS was [\\$82.71](#) CDN a barrel.

¹⁶ The Chinese National Offshore Oil Corporation, CNOOC recently purchased Nexen. Prior to purchase Nexen planned three further upgrading phases for an additional 175,000 barrels a day of in situ bitumen upgrading. CNOOC is a National Oil Company and given Chinese government's preference for dilbit, Nexen could shelve these plans if bitumen pipelines are approved.

The diluent of choice for bitumen export is condensate. Since 2005 domestic condensate production has not kept pace with demand and condensate imports have grown steadily.

This is why Enbridge reversed its Southern Lights oil export pipeline in 2010—they turned it into a condensate import pipeline. The need for increasing amounts of condensate for bitumen export purposes is why Kinder Morgan has applied to reverse its Cochin pipeline that extends from Alberta to Illinois. The need for condensate imports is also why Northern Gateway has a twin pipeline—one to import condensate from the Middle East.¹⁷

Four companies own 75 percent of operating in situ capacity in the oil sands. These are Canadian Natural Resources, Suncor, Cenovus and Imperial Oil.¹⁸ If bitumen producers were distressed by the double discount, we would find evidence of this pain in their financial results and other communications with shareholders. But this is not the case.

Contrary to the deep discount story that leaves the impression of depressed oil prices; real oil prices for synthetic crude and blended bitumen such as WCS have increased significantly. There has been no collapse in price levels. Although volatile, and prone to wide swings—as is the nature of the oil market—the general trend for Canadian oil prices during the past decade is undeniably upward.

The discount discussion is based on relative prices between western Canadian crude and other crudes. It is not a discussion about price levels, or a concern that oil producers are cutting back on production because they do not receive enough revenue for their oil. They are making—and they expect to continue to make—better than normal profits from our oil resources.

The double discount is a hard luck con. It is designed to garner public sympathy to allow multinational pipeline companies such as Enbridge, Kinder Morgan, and TransCanada, as well as multinational oil producers like Suncor, Imperial and Cenovus, and National Oil Companies owned by foreign countries like Chinese National Offshore Oil Company (CNOOC who recently bought Nexen), Sinopec and Statoil, to achieve supernormal profits by granting them an unfettered public license to build “all pipelines, going anywhere.”¹⁹

¹⁷ National Energy Board Hearings, Northern Gateway, [paragraph 17060](#).

¹⁸ Alberta Oil Sands Industry Quarterly Update, [Winter 2013](#), Alberta Government, Project Listings. The four largest producers have capacity of 730,000 bbl/d with the total capacity of in situ at 970,000 bbl/d, or 75%.

¹⁹ Brian Ferguson, Cenovus CEO, [CIBC Investor's Conference](#), January 23, 2013, minute 12:31

3.) A Trail of Deception

3.1. CIBC's Discount—\$50 Million a Day

“Oil price gap costs producers \$50-million a day” claims a Globe and Mail headline on March 12, 2012.²⁰ The lead-in sentence to the article warns that this is the cost to the energy patch “every day that Canadian oil sells on the cheap”.

“That’s an \$18-billion annual hit to companies, and it could endure into 2013 or longer, according to a new analysis of the damage wreaked by an ongoing supply glut.

“If you don’t think this is a big issue, think again,” said CIBC World Markets Inc. analyst Andrew Potter, who calculated the dollar impact of the current lower value of Canadian oil.

Mr. Potter based his analysis on what he called, in a recent report, the “double discount” facing the Canadian oil patch.”

It’s a nice number—\$50 million a day. It makes an appetizing sound bite and it takes a big chunk out of bitumen export pipeline concerns. But where did this calculation come from.

On March 6, 2012 CIBC Institutional Equity Research Update published “Double Discounting of Canadian Crudes”. The report is not publicly available. That makes it extremely difficult for any member of the general public who wants to “think again” to do so by checking the veracity of its claims and accuracy of its numbers.

CIBC discusses why “WTI and Brent are disconnected from a pricing perspective” and why “for US Bakken producers, and for Canadian producers...prices (are) being even further discounted vs. WTI.” But it offers no dollar estimate on the potential impact.

That follows in the March 20, 2012 edition of the Institutional Equity Research Industry Update titled “Differentials—The \$18 billion Opportunity Cost” where the reader is informed “Producers (are) Missing Out On \$50 Million/Day at Current Differentials”.

By dividing \$18 billion by 365 days, we arrive at the \$50 million and can confirm these two figures are directly related. But how the \$50 million per day is derived cannot be determined from the CIBC report.

²⁰ Globe and Mail, March 12, 2012. <http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/oil-price-gap-costs-producers-50-million-a-day/article4096108/>

The report offers no underlying assumptions for oil prices and product volumes. Readers cannot tell how the estimate was derived to support the vast tale of financial loss. The text states, "...discounts on SCO reached US \$23.00/Bbl or 24% vs. WTI in early February, while WCS pricing ballooned to US \$35.50/Bbl or a 37% discount vs. WTI...At current levels, the oil sands industry would post an \$18 billion/year opportunity cost."

To track the origin of the \$50 million a day figure I personally contacted CIBC. Its analyst was unwilling to provide price and volume figures. He said, "I don't have that data anymore."

There is no transparency or accountability for the \$50 million per day CIBC estimate. Yet CIBC quotes it repeatedly.²¹ Natural Resource Minister Joe Oliver adopts the figure for a December 2012 speech. Cenovus CEO Brian Ferguson doubles the figure in January 2013. The Canadian Chamber of Commerce then makes the number a focal point of their 2013 report. Yet the underlying analysis and data upon which this figure is based has mysteriously disappeared.

But all is not lost. Even without the information to test the estimate, CIBC's claim can be evaluated. There are three very important phrases in the March 20, 2012 report in the sentence "At current levels, the oil sands industry would post an \$18 billion/year opportunity cost". The phrases are "current levels", "oil sands industry" and "opportunity cost".

3.1.1. "Current Levels" Explored

To evaluate the reliability of the \$50 million a day, and measure whether or not the prophesized \$18 billion is real, we need to first know what "current levels" are and monitor them for a year. The CIBC document records SCO levels at a \$23 US per barrel discount, and WCS levels at a \$35.50 US discount, to WTI. Let's look at SCO first.

SCO was, in fact, discounted to WTI in early February 2012. The widest discount for one day during February was \$23.04 consistent with CIBC's statement, while the narrowest for one day—just five days later than the widest differential in February—was \$1.00.²²

If CIBC had elected to select the narrowest differential instead of the widest differential of WTI-SCO in February 2012 for its report, there would have been no SCO deep discount story for CIBC to tell. What a difference a day makes.

²¹ March 21, 2012, [Financial Post](#). An updated estimate was offered by CIBC in its January 30, 2013 report, but again no insight was provided as to how the estimate was calculated. CIBC was asked directly to provide the calculation, but no response was forthcoming.

²² WTI-SCO spread February 10, 2012 \$23.04; February 15, 2012 \$1. [First Energy Capital](#).

The relationship between WTI and SCO has changed in the past year with the differential consistently narrowing and SCO at times selling at a premium to WTI. Prices for February 2013 show that SCO was selling at a premium to WTI except for one day. By March 27, 2013, the premium for SCO above WTI was \$7.37 a barrel.²³ Using CIBC's logic, and these numbers, that's an opportunity gain from upgrading—not a cost—at “current levels”.²⁴

During the calendar year 2012 the differential between WTI and SCO averaged about \$1.60 a barrel—well within the historical and expected range of the natural discount between these two grades.²⁵ Although the one-day CIBC picked as their representative “day” had a very wide differential between WTI and SCO, the average differential for the year was business as usual. In short, no doomsday story for pricing differentials exists for oil sands upgraded oil and its relationship to WTI in 2012. There is no double in the double discount for SCO.

But what about diluted bitumen pricing in 2012. Relying on WCS as a proxy—as CIBC has suggested—the average price for WCS was \$73.11 CDN and for WTI was \$94.12 CDN—a discount differential for the year of \$21.01 CDN. That's only slightly wider than the eight-year historical and anticipated natural discount related to quality. From the introduction of WCS in 2005 to 2012 the average price differential between WTI and WCS was \$19.72 CDN.²⁶

On an annualized basis, and adjusting for natural differentials, we don't need supply volumes to conclude there was no real loss posted to the oil industry for SCO or for diluted bitumen as compared with WTI in 2012.

3.1.2 “Oil Sands Industry” More Than Oil Sands Producers

The WTI to Brent gap is the second part of the double discount narrative. Graph 2 below illustrates the relationship between these two benchmarks and their decoupling in late 2010.

²³ March 27, 2013 SCO <http://www.firstenergy.com/research/news/News-2013-03-28.pdf> SCO \$105.60 per barrel price level.

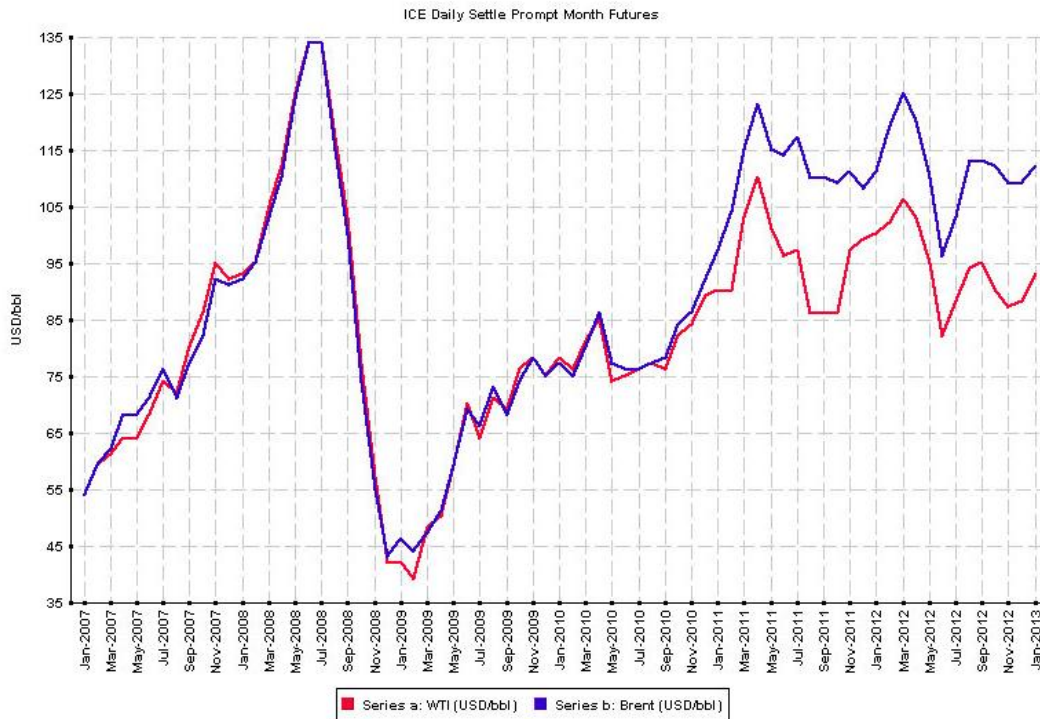
²⁴ This reveals the fallacy of picking data on a selected day to draw annual conclusions. The recent premium for SCO relative to WTI is likely best explained by planned outages at some upgraders and a slight reduction in SCO supply as a result.

²⁵ See [Sproule](#) Summary of Price Forecasts. SCO Edmonton at \$92.50 CDN per barrel for 2012 as compared to WTI Cushing at \$94.09 CDN per barrel with an exchange rate of 1.001 for the year. These figures do not consider the transportation cost of getting Edmonton SCO to the Cushing hub.

²⁶ The [Baytex](#) data provides the differential in US dollar equivalent, and exchange rate data. Transportation costs to get WCS to Cushing of approximately \$5 per barrel, are not included. These would widen the natural differential.

Graph 2

**WTI and Brent Prices
(2007 - 2013 \$US per barrel)**



Proponents argue that because insufficient pipeline capacity is available to get western Canadian crude to the US Gulf Coast where higher prices are paid oil producers are stuck in traditional markets. Pipeline pushers suggest that the correct price—the price western Canadian producers would be getting if their crude was able to sell into these markets—is the differential for western Canadian crudes benchmarked off an international price like Brent—not WTI.

The corollary should also be true. If western crude oil producers are experiencing a lost opportunity because they fail to command Brent prices, then somewhere along the supply chain their opportunity loss must be someone’s opportunity gain.

Obviously the next link in the chain is the first place to look. Refineries in Canada and the US that rely on western Canadian crude must be benefitting from lower feedstock costs because of the decoupling of WTI to Brent than if WTI had risen in concert with Brent during the past two years.

This is where the story gets interesting. The majority of oil sands producers—whether upgrading bitumen to SCO in Alberta or shipping it down a pipeline diluted with higher quality products like imported condensate—also own and operate the majority of refineries in Canada and have extensive refinery interests in the US.

Much of the trade in western Canadian crude oil takes place between parties that do not have arms length relationships. To the extent that crude oil discounts widen—these producers are well positioned to pick-up this benefit in their refinery margins. That is what they have done, and they have relied on Canada’s import dependency on internationally, higher priced Brent based crude in eastern Canada, to do so.

More than forty percent of the oil consumed in Canada is imported. The Atlantic Provinces and Quebec are almost completely dependent on international and volatile foreign markets that rely on the Brent benchmark.

In late 2010 as the decoupling of WTI to Brent began to take hold this meant the prices paid for more than 750,000 barrels a day²⁷ of crude oil imports into eastern Canadian refineries rose more rapidly than the price paid for crude oil used in western Canadian refineries.

There are two very distinct refining markets in Canada—eastern Canada from Quebec through the Atlantic Provinces, based on higher priced foreign imports and western Canada, from Ontario to BC, based on lower priced domestic inputs.²⁸ We might expect end-user petroleum product prices in 2011 and 2012 to be lower in western Canada where refineries face lower priced western Canadian crude.

This is not the case. For the past two years the benefit of western Canadian crude oil selling at a discount to Brent has been captured almost exclusively by refiners—most of them the same companies we are told are losing out as oil producers because of the WTI to Brent decoupling.

The same holds true in the US where higher, internationally priced imports in the Gulf Coast set the benchmark for petroleum product prices in the US mid-continent.

Imperial Oil explains its ability to price-gouge consumers in its most recent Management Proxy Circular to shareholders.

The average prices the company paid for most of its crude oil processed at three of the company’s four refineries are set on Western Canadian crude oil markets. In 2012, the average prices of Western Canadian crude oils continued to be markedly lower than that of Brent crude oil. Canadian wholesale prices of refined products in particular are largely determined by wholesale prices in adjacent U.S. regions, where wholesale prices are predominantly tied to international product markets. Stronger industry refining margins in 2012 were the result of the widened differential between product prices and cost of crude oil

²⁷ Canadian Association of Petroleum Producers, [Fact Sheet](#), 2010.

²⁸ Ontario imports roughly 25% of its crude oil needs from foreign, Brent priced markets, while 75% is imported from western Canada benchmarked off WTI.

*processed.*²⁹

What this means is that end-user petroleum product pricing in Canada—even in western Canada—reflects the highest priced source of crude supply. The benefit from WTI benchmarked crude as compared to Brent benchmarked crude is retained by the refiner, and when that refiner is also an oil sands producer, there is no loss from lack of access to world markets.

In 2012 western Canadians paid an average of 14 cents more a litre at the pumps because western Canadian oil producers absorbed the gains from lower priced WTI benchmarked crude in their refinery margins.³⁰

We are told that prices are higher again in Asia, and when western Canadian exports make their way to Asian markets we know the industry plans to charge those higher prices on every barrel they produce. And when they do, the Asian price will set the new higher standard for petroleum product prices across the country.

In western Canada there are 14 upgrading and refining facilities.³¹ The companies that own these facilities—except for the Regina Co-op upgrader/refinery and the Moose Jaw asphalt plant—are owned by oil producers Suncor, Imperial, Husky, Nexen, Canadian Natural Resources Ltd., Shell and Chevron.

Major oil sands in situ producer Cenovus jointly owns two refineries in the US with ConocoPhillips—Borger in Texas and Wood River in Missouri with total capacity in excess of 450,000 barrels a day.³² Cenovus supplies 130,000 barrels a day of its own heavy crude production directly to Wood River³³ and indirectly benefits from any discount on crudes utilized in both refineries.

Suncor owns a 98,000-barrel a day refinery in Denver, Colorado. Husky owns a 160,000-barrel a day refinery in Lima, Ohio and is in joint partnership with BP in a refinery in Toledo, Ohio for total benefit from 325,000 barrels a day of discounted crude.³⁴ Imperial Oil's parent Exxon Mobile owns a number of refineries including a 250,000-barrel a day refinery in Chicago, Illinois, likely benefitting from the WTI to Brent spread.

David and Charles Koch, active in the oil sands are among the top consumers of Canadian crude in their Flint Hills Pine Bend refinery in Minnesota. Flint Hills is capable of processing 320,000 barrels a day. They access this oil through their Canadian marketing company Flint Hills Resources Canada LP, which purchases and

²⁹ [Imperial Oil Proxy Circular](#), page A-7. March 14, 2013.

³⁰ See Appendix to this report, page 33 -34.

³¹ [CAPP 2012](#) Crude Oil Forecast Markets and Pipelines, Appendix C, page 39.

³² [Cenovus Refinery Operations](#)

³³ [CIBC Institutional Investors Conference](#), Cenovus, Brian Ferguson, January 23, 2013, Minute 17.

³⁴ BP is in joint partnership with Husky in its oil sands project [Sunrise](#) with the intent of directly supplying heavy crude to the [Toledo refinery](#).

ships along Enbridge's Mainline system.³⁵ There is no financial loss from discounted western Canadian crude oil for the Koch Brothers integrated activities.

It is completely misleading for CIBC to refer to the "oil sands industry" and then fail to net off the benefit integrated producers receive at the refinery gate as they price-gouge Canadian consumers and businesses while padding their refinery margins.

It is also misleading to exclude the positive impact for integrated Canadian producers who are able to benefit from lower priced crude in their refinery margins in the US.

3.1.3. "Opportunity Cost"

CIBC was correct in referring to "opportunity cost" rather than calling its estimate just a "cost", although its measurement of "opportunity cost" is biased. A proper opportunity cost analysis would have explored all costs and benefits and provided a net figure. It would have explored the cost of not upgrading more bitumen in Alberta, and the cost of not getting western Canadian crude to eastern Canadian markets.

Opportunity cost is an estimate of the value of the next best alternative that has been foregone when one strategy is pursued over another but it must be done with great care. Any measurement of opportunity cost must be undertaken with decidedly more rigour, responsibility, and accountability than the estimate prepared by CIBC.

By the time the CIBC's estimate is picked up by the media it's no longer an opportunity cost, its an "annual hit", a "dollar impact", a "cost", a "loss", and the subtle and important "opportunity" aspect has disappeared.

When the idea of opportunity cost was first developed in 1848 by Frédéric Bastiat in the Parable of the Broken Window, the economic philosopher stressed the need to identify and evaluate that which we can see, but also that which we cannot. Replacing a broken window may generate economic activity, but it is actually an economic cost because when a window is broken, its repair simply returns the economy to a state where it was, before the window broke. By not clearly seeing the opportunities given up, erroneous conclusions are easily drawn.

Building bitumen export pipelines—at the expense of value added and energy security in Canada—is like breaking windows to create work for glaziers.

³⁵ <http://www.fhr.com/refining/minnesota.aspx> and <http://www.bloomberg.com/news/2011-10-02/koch-brothers-flout-law-getting-richer-with-secret-iran-sales.html>

3.2. The Enbridge Discount—\$60 Million a day

Al Monaco, CEO of Enbridge floated a loss of \$60 million a day in a speech to the Toronto Board of Trade in June 2012.³⁶ Making a case in Ontario to get support for the Northern Gateway pipeline through BC he said, “Canadian light oil is selling for \$20 to \$30 off world prices. If you do the math, that translates to lost value of some \$60 million a day. A massive loss of value for Canadians.”³⁷

When you do the math the results do not directly correlate to oil sands production figures for light or heavy volumes or their relevant differentials in June 2012. Math can only be done if underlying assumptions and sufficient data are made available.

What’s particularly intriguing is that the price differentials and deep discount narrative Mr. Monaco relies on to make a case for Northern Gateway is in direct contradiction with the information filed by Enbridge as evidence with the National Energy Board (NEB) in support of Northern Gateway.³⁸ Granted the analysis was submitted in May 2010 when the historical, tight knit, relationship between WTI and Brent was still in play.

By June 2012 Mr. Monaco—and by extension Enbridge—is fully aware of the decoupling of WTI and Brent. The company is clearly concerned about deep discounts for western Canadian crudes and maintains that this problem can only be solved if pipelines, particularly Northern Gateway, are built. “Every day that goes by without access to tidewater and world markets for our oil and natural gas is another day of lost opportunity for Canada.”³⁹

A month after Mr. Monaco’s public plea Enbridge submitted updated evidence to the NEB in support of Northern Gateway—the very pipeline Mr. Monaco says needs to be built to remove differentials that range from \$20 to \$30 a barrel. There was no mention of these differentials or Mr. Monaco’s deep discount concern in the more than 200 hundred pages filed with the Panel.⁴⁰ The differentials in Enbridge’s evidence forecasted from 2014 – 2048 reflect natural discounts; WTI and Brent are happily coupled.

Enbridge has two stories for differentials, discounts and the need for Northern Gateway—the one it tells the public and the one it tells the regulator.

³⁶ Al Monaco, [Speaking Notes](#), Toronto Board of Trade, June 18, 2012.

³⁷ Ibid. Page 4.

³⁸ [Application for Northern Gateway](#), Volume 2, Appendix A, Tables A-5, A-15 and A-16.

³⁹ Al Monaco, [Speaking Notes](#), op. cit. Page 5.

⁴⁰ Muse Stancil Reply Evidence, Exhibit [B83-3](#) and Wright Mansell Reply Evidence, Exhibit [B83-4](#). Table A-5 of the Muse Reply Report identifies the WTI-Brent differential for 2011 as -\$16.23, and for 2012 as -\$7.89; not the \$30 or \$40 suggested by Mr. Monaco. Muse has the WTI - Brent differential falling to historical levels by 2014; well before Enbridge assumes Northern Gateway would be operational in 2018.

3.3. Joe Oliver’s Discount—\$50 Million a Day Repackaged

For much of the summer and into the fall the deep discount story was noticeably absent. It might have something to do with the fact that differentials are seasonal—they tend to widen every winter.

On December 11, 2012 Natural Resources Minister Joe Oliver spoke to the Saint John New Brunswick Board of Trade and, according to his office, relied on the CIBC estimate. Instead of checking the CIBC figure and underlying analysis to understand it was a measure of oil producer opportunity cost, Mr. Oliver claimed, “our oil is selling at a considerable discount right now. We’re losing some \$50 million every single day — \$18-19 billion every year because our resources are landlocked.”⁴¹

He ignored the direct refinery pick-up producers here at home capture in their domestic and foreign downstream operations. When they get their bitumen export pipelines, and crude prices go up, we’ll be told upgraders and refineries are losing money and in need of tax concessions and other taxpayer funded subsidies to keep them afloat or else they’ll close down their domestic operations.

Mr. Oliver maintains that if western Canadian crude arrived at international markets, it would garner world prices. He claims he sees “a future in which oil that is produced in Alberta and Saskatchewan can travel by pipeline to refineries like the one in Saint John.” Then why have companies like Valero, Shell and BP been allowed to gain approval in the US to export crude from Texas to eastern Canadian refineries? Shell and BP have oil sands producing assets and Valero owns the Ultramar 265,000-barrel a day refinery in Quebec City but plans to access oil from Corpus Christi in Texas. Why can’t it come as Edmonton SCO instead?⁴²

Mr. Oliver also ignored the fact that in December 2012, the differentials for SCO—the quality of oil eastern refineries can process—were not what they were the day CIBC did its analysis. By December last year, SCO and WTI were closely aligned, but with SCO hovering about two dollars higher than WTI in the week leading up to Mr. Oliver’s speech. SCO closed at a \$2.22 premium to WTI on December 10—unlike the \$23 negative differential CIBC chose almost a year earlier.⁴³

3.4. Alberta’s Discount—\$75 Million a Day

By the New Year the story is bigger and better than ever. On January 21, 2013 Alberta’s Treasury Board President and Minister of Finance, Doug Horner, spoke to the Calgary Chamber of Commerce to impress upon its members the need for pipelines to access to markets other than the US. He claimed “selling Alberta bitumen for more than \$40 less than the benchmark price costs the Canadian economy about \$27 billion a year. That’s around \$75 million a day.”⁴⁴

⁴¹ [Remarks](#) by Natural Resources Minister Joe Oliver, December 11, 2012. And related [press](#).

⁴² <http://www.bullfax.com/?q=node-valero-ship-us-crude-its-quebec-refinery>

⁴³ [December 3-10, 2012](#). SCO averaged \$1.34 above WTI.

⁴⁴ Calgary Chamber of Commerce Luncheon [Speech](#), January 21, 2013, Minister Doug Horner, page 8.

Mr. Horner's figures are bogus. Furthermore, there was no discussion of natural differentials, transportation costs or upgrading and refinery pick-up as producers sell Alberta bitumen and SCO largely to themselves or their partners.

As Mr. Oliver before him, Mr. Horner cried wolf and the media came running. The Financial Post headline read "Landlocked Alberta facing budgetary 'perfect storm' as oil price gap stings: Horner".⁴⁵

The budgetary losses are not real losses. They are largely due to the government of Alberta's own making. For the 2012 - 2013 Budget, Mr. Horner's office forecasted significant price hikes for Alberta crude, favourable exchange rates, and unrealistically inexpensive prices for condensate.⁴⁶ None of these favourable conditions occurred. When the forecast proved false, he blamed a lack of pipelines. It's like buying a lotto ticket and when it doesn't win saying you lost money. The absence of winning is not always losing.

Alberta pushes bitumen export pipelines, spends taxpayers money on New York Times ad space, and shamelessly appeals to shared values with returning US vets when it should be looking at its Bitumen Valuation Methodology and how its robbing Albertans of their royalty revenue.⁴⁷

The Alberta government was forewarned years ago about the significant risk facing Alberta's residents—the real owners of the resource—because of its royalty formula.

*"Another important risk for the Province comes from valuation of the bitumen. Due primarily to the volume of non-arms length sales bitumen prices are generally less transparent than crude prices. Downstream integration and upgrading are causing more and more prices to become non-arm's length transfer prices, thus eroding the confidence the Province can have in market pricing. This underscores the need for the Province to develop a reliable framework to value its bitumen."*⁴⁸

Oil producers rub their hands in glee at the royalty formula's imbedded subsidy, while hard working Albertans give up social programs.

Not only does Mr. Horner not appear to understand the imbedded corporate subsidy in the Bitumen Valuation Methodology, he does not grasp the oil sector's integrated

⁴⁵http://business.financialpost.com/2013/01/21/landlocked-alberta-facing-budgetary-perfect-storm-as-oil-price-gap-stings-horner/?_lsa=77d2-1d33

⁴⁶ Alberta Budget documents, <http://budget2012.alberta.ca/details/index.html>

⁴⁷ [New York Times ad](#). The Bitumen Valuation Method treats condensate as a cost in non-arms length downstream transactions as if producers purchase it when they do not. Condensate prices track Brent. When condensate prices rise more quickly than bitumen, as in the past few years, producers receive a royalty holiday by virtue of the formula.

http://www.energy.alberta.ca/OilSands/pdfs/Royalty_Guidelines.pdf

⁴⁸ [Alberta Royalty Review 2007](#), Appendix "A", page 21.

inter-relationships and the super-normal refinery margin benefits resulting from the WTI - Brent spread.

If he did understand the royalty holiday and the oil-producer-to-refiner shell game, he would know Albertan's paid about 14 cents more for each litre of gasoline they bought at the pumps in 2012 than what should occur in a functioning "free" market system.⁴⁹ With this knowledge and as the representative of the public interest he would need to do something about that—not lobby on behalf of price-gouging big oil, enabling greater price-gouging once they get their bitumen pipeline access to Asian markets.

"I was at an Edmonton Economic Development Luncheon last week where Rick George, former CEO for Suncor, was the keynote speaker.

Mr. George called our situation "a matter of Canadian sovereignty". He talked about how our lack of pipeline capacity in Canada is driving down the price paid for Canadian oil, hurting resource companies and gouging government revenue."⁵⁰

Accepting at face value the self-serving narrative of former Suncor CEO Rick George is shocking. Suncor is a huge integrated oil operator and one of the largest beneficiaries of the WTI to Brent decoupling.

"Results from 2012 for the Refining and Marketing segment were strong, reinforcing the value of an integrated business model to Suncor's overall strategy. The Refining and Marketing segment translated lower price realizations impacting the Oil Sands to strong refining margins. The segments financial performance was supported by 100% utilization rates at the company's Western North America refineries."⁵¹

Suncor owns four refineries, a 428,000-barrel a day bitumen upgrader and is a 12% owner in Syncrude's 407,000-barrel a day upgrader. Its four refineries include Edmonton's 135,000-barrel a day, Commerce City, Colorado at 98,000 barrels a day, Sarnia at 85,000 barrels a day and Montreal at 137,000 barrels a day.⁵²

"In 2012, the company's inland refinery network (Edmonton, Sarnia and Commerce City) was again able to capture the favourable WTI to Brent and Canadian crude differentials through strong refining margins. The integration of these refineries with crude output from Suncor's Oil Sands segment also resulted in lower feedstock costs. Suncor's focus on

⁴⁹ Appendix A of this report provides a detailed analysis of the increased price at the pumps Canadians in eastern and western Canada paid in 2011 and 2012.

⁵⁰ Mr. Horner's Speech to the Calgary Chamber of Commerce, January 21, 2013, page 7.

⁵¹ [Suncor Management Discussion and Analysis](#), 2012, page 39.

⁵² Suncor promotes [expanded refinery output](#), while the public is lead to believe that investment in refineries is not economic.

reliability and continuous improvements enabled the company to sustain high throughput levels, which resulted in nameplate capacity increases for the Sarnia and Commerce City refineries, effective January 1, 2012, and the Edmonton refinery, effective January 1, 2013."⁵³

Mr. George no longer works for Suncor, so does not speak for the company. He is sufficiently distanced to enable an imbalanced picture without triggering shareholder fallout or being accountable for it. Meanwhile, Suncor pursues a stealth strategy to keep downstream potential slightly ahead of the bitumen production curve.

*"In 2013, Suncor will continue to focus on optimizing overall integration. As bitumen production exceeds upgrading capacity in the Oil Sands, the company continues to explore opportunities to capture the potential value in the refining operations. In 2013, the company will focus on bringing the Montreal refinery into the inland refining network, and plans to transport western Canadian crudes via rail to the refinery."*⁵⁴

So as far as Suncor goes, its SCO and diluted bitumen production is not subjected to the vagaries of the double discount because its operations are integrated up the supply chain, just as we found was the case for Imperial Oil.

3.5. The Cenovus Discount—\$100 Million a Day

At an investor's conference hosted by CIBC in Whistler in late January, Cenovus CEO Brian Ferguson grabbed headlines by relying on, and embellishing, CIBC's \$50 million a day.⁵⁵

He doubled the figure, went beyond the notion of producer opportunity cost, swept pass the phony and now apparently boring impact on the Canadian economy, and turned the burden into a subsidization of US consumers by Canadian consumers. The sensational headline in the Financial Post was "Oil price discount costs each Canadian \$1,200 a year: Cenovus CEO."⁵⁶

During the conference Q&A Mr. Ferguson **claimed** the double discount in crude prices was due to a lack of pipeline capacity and is a "subsidization to the United States consumer by the Canadian economy" which he calculated is "\$1,200 per Canadian."

⁵³ Suncor 2012, [MD&A](#), op cit., page 39. Suncor explains it pays to increase refining capacity.

⁵⁴ Ibid., page 40.

⁵⁵ [Full presentation](#). For a detailed critique of the numbers See [Crocodile Tears](#) .

⁵⁶ http://business.financialpost.com/2013/01/24/oil-price-discount-costs-each-canadian-1200-a-year-cenovus-ceo/?_lsa=e19f-e862

The message he's sending? If each one of us wants to keep that \$1,200 a year instead of providing income support for Americans, then get those pipelines approved.

Mr. Ferguson referenced the CIBC March 20, 2012 report and claimed "that number, I think is about double that given today's differentials" and raised the CIBC estimate to \$36 billion a year. The differentials in January 2013 were not double those used by CIBC. In the two weeks prior to Mr. Ferguson's statement WTI and SCO were within \$2, with SCO sometimes at a premium—certainly in line with historical, or natural, differentials. CIBC's March 2012 report cited a \$23 WTI – SCO spread.

The WTI to WCS spread in the two weeks leading up to Mr. Ferguson's speech was similar to CIBC's \$35.50. It averaged \$36.92, but Mr. Ferguson turned it into \$71.⁵⁷

Mr. Ferguson didn't know what he was talking about when he chose to rely on CIBC's estimate. CIBC's Mr. Potter, hosting the meeting didn't correct the claim. But it made the media and no one checked to see if the differentials for SCO or WCS were, in fact, double.⁵⁸

After claiming a huge hit for the industry, and by implication, Cenovus, five minutes later Mr. Ferguson told his audience, "we are substantially benefiting (from the wide differentials) at our refinery in Wood River" where 130,000 barrels a day of Cenovus' crude is delivered.⁵⁹

Mr. Ferguson spent a fair length of time explaining how, as an integrated operator, his company benefits from their downstream activity and that Cenovus has "locked in the differential" on WCS for 2013, so this protects the company.⁶⁰

Cenovus' Management Discussion and Analysis explains to shareholders how important integrated activities are as well. "Our refining operations allow us to capture the value from crude oil production through to refined products such as diesel, gasoline and jet fuel to mitigate volatility associated with North American commodity price movements."⁶¹

And now there are three: Cenovus, Suncor and Imperial—all flourishing under the double discount deception. Where are the headlines "Integrated operations reduces volatility and substantially benefits oil sands producers: Cenovus CEO"?

⁵⁷ [January 10-23, 2013](#). WTI – WCS differentials.

⁵⁸ http://www.calgaryherald.com/business/energy-resources/Cenovus+pipeline+squeeze+means+Canadians/7867301/story.html?_lsa=59d9-dbe9

⁵⁹ [Minute 17](#) of the telecast.

⁶⁰ Cenovus 2012 [Management Discussion and Analysis](#), page 4. Cenovus produced 165,000 barrels a day on average in 2012, and experienced no "hit" from discounts or differentials.

⁶¹ Wood River has coking capability, which means it can directly process diluted bitumen and operate like an upgrader-refiner in a single facility. [Management Discussion and Analysis](#), 2012, page 2.

3.6. The Canada West Discount—\$70 Million a Day

On February 7, 2013 the Canada West Foundation released a report commissioned by the Saskatchewan Government in support of Premier Wall and his quest with US politicians to get Keystone XL approved. The report, ominously called “Pipe or Perish: Saving an Oil Industry at Risk” boldly claims that pipeline delays are costing Canadians \$70 million a day in foregone economic activity.⁶²

A number of articles and telecasts appeared in the media with headlines like CBC’s “Pipeline delays ‘devastating’ to the Canadian economy,”⁶³ or the Financial Post’s Canadian Press story titled “Stalled pipeline projects costing Canada \$30 - \$70 m a day new report suggests”⁶⁴ and the Calgary Herald’s “Canadian economy at risk if pipeline projects delayed, says Canada West report.”⁶⁵

The Canada West Foundation report claims there is a deeply discounted price for Canadian oil because there is a current lack of pipeline capacity.

“The consequences of inaction are considerable. Already, the deeply discounted price for Canadian oil is resulting in billions of dollars lost to the Canadian economy. The longer-term consequence if this situation endures is under-investment, stranded assets, reduced government revenue and market opportunities foregone to others. Delaying even a single pipeline project that improves market access can cost up to \$70 million per day in foregone economic activity.”⁶⁶

This is the only time the Canada West Foundation report mentions a \$70 million per day loss to the Canadian economy. How it was developed is not explained in the body of the report, a footnote, or appendix.

The press release accompanying the report presents the estimate as a range. “Research from the Foundation’s newly released report, *Pipe or Perish: Saving an Oil Industry at Risk*, reveals significant economic losses to the Canadian economy – between \$30 and \$70 million per day for each stalled pipeline project that would open up access to the right markets.”⁶⁷

Curious as to how the \$70 million a day was determined and how it became a very wide range in the press release, the Foundation was contacted. The \$30 - \$70 million is not based on research from the Foundation as suggested in the press

⁶² [Pipe or Perish](#), Canada West Foundation, February 2013.

⁶³ <http://www.cbc.ca/news/business/story/2013/02/07/business-pipeline-report.html>

⁶⁴ http://business.financialpost.com/2013/02/07/each-stalled-pipeline-project-costing-canada-30m-70m-a-day/?_lsa=dfec-b3ff

⁶⁵ http://www.calgaryherald.com/business/energy-resources/Canadian+economy+risk+pipeline+projects/7934519/story.html?_lsa=59d9-dbe9

⁶⁶ Pipe or Perish, op cit., page 2.

⁶⁷ <http://cwf.ca/news-releases/broad-cooperation-required-to-address-critical-lack-of-energy-pipeline-capacity>

release, nor is the \$70 million a day loss which is mentioned in the report. It is a number adopted from the Canadian Energy Research Institute (CERI) in conversation with CERI staff after the report was written.

Canada West has accepted CERI's number at face value, whereas there is nothing available publicly to determine how CERI developed its estimate. As for the \$30 million lower end of the fabricated range mentioned in the press release—it was inadvertently dropped from the report—but what's \$40 million a day among pipeline pushers.

The Canada West Foundation press release also claims “If pipeline project proposals such as Trans Mountain, Keystone XL and Northern Gateway don't move forward, Canada will be foregoing \$1.3 trillion in economic output, 7.4 million person-years of employment and \$281 billion in tax revenue between now and 2035,” says Michael Holden, Senior Economist at the Canada West Foundation and author of the report.” Those figures are not the Canada West Foundation's. They are lifted right from CERI Study No. 129.⁶⁸

In study 129, CERI attempts to measure the impact of the Keystone XL, Trans Mountain's twinning and Northern Gateway (constructed in that order) as they facilitate access to new markets. According to CERI, Keystone isn't operational until 2016, and is not fully utilized until 2018. Northern Gateway isn't even built until 2019.⁶⁹

It is fraudulent for the Canada West Foundation to rely on a CERI estimate and imply there is a current loss of \$70 million a day, when CERI is very clear this is not the case.

CERI's analysis is not of differentials and discounts. CERI's proprietary input-output methodology (which means there is no transparency or accountability for the estimates CERI develops) is incapable of addressing this issue; it has to be dealt with in the relative prices assumed prior to running the model. An input-output model relies on the assumption that the economy is in equilibrium—the antithesis of the deep discount narrative.⁷⁰

In short, the \$70 million a day was not actually derived by the Canada West Foundation and cannot be calculated using CERI's numbers. The range of

⁶⁸ [Pacific Access Part I](#) and II, CERI, July 2012. Table 1, page ix. The \$1.3 trillion claim, for example, comes from the All Canada \$1,520.8 billion Existing Pipeline Case deducted from the Northern Gateway Case of \$2,819.6 billion. The Northern Gateway Case is supposed to represent the cumulative impact of all three pipelines (\$2.8 - \$1.5 = \$1.3). Canada West Foundation has not undertaken any calculation that relates the \$70 million a day to the claimed GDP figure.

⁶⁹ Part 1, page 13.

⁷⁰ CERI Study 129, Part 1, page 77. For a critique of the inappropriate application of Input-Output Models in assessing the impact on the Canadian economy of new pipeline construction see: [An Analysis of Canadian Oil Expansion Economics](#), Robyn Allan, April 11, 2012.

fundamental economic principles violated by the Canada West Foundation in their report and press release are staggering—the affront to the public trust, disgraceful.

3.7. Canadian Chamber of Commerce Discount—\$50 Million a Day Recycled

On February 12, 2013 the Canadian Chamber of Commerce decided to weigh in and focus on the need for new pipelines as fundamental to Canada’s competitiveness in its report “Tackling the top 10 barriers to Canadian competitiveness”.⁷¹ To support the allegation that lack of tidewater access is costing the Canadian economy, the Chamber lifted the CIBC \$50 million a day figure, did not check its reliability and misrepresented it.

“CIBC estimates that not securing a world price for these exports cost the Canadian economy approximately \$19 billion—more than \$50 million per day—in 2012.”⁷²

CIBC did not estimate that the lack of securing world prices cost the Canadian economy in 2012, it picked a day with a wide differential and then postulated an annual impact “if” the differential lasted a year. Not only is the CIBC estimate misrepresented the Chamber adds a billion. CIBC’s number was \$18, not \$19, billion. The Chamber also says “more” than \$50 million a day when CIBC did not. The Chamber did not check with CIBC prior to the release of its report as to the accuracy or reliability of the CIBC estimate.

The article on the Chamber’s report in the Vancouver Sun accurately described the Chamber’s strategy. “Canadian business lobby pressures B.C. to approve Northern Gateway, Kinder Morgan pipelines”.⁷³ The Canadian Chamber of Commerce chose Vancouver to release its report, and appealed to the national interest and the need for co-operation to get these pipelines built.

“Our first thought should be, as Canadians, what is in the interest of Canada and how do we work together to advance it?” Perrin Beatty, a former Progressive Conservative cabinet minister under Brian Mulroney, told The Vancouver Sun Monday.

“Because all of us benefit if Canada is stronger. We’re all weaker if Canada is weaker.”

It would be helpful if the Canadian Chamber of Commerce actually understood the implications of the oil sector’s bitumen export strategy on the Canadian economy—

⁷¹ <http://www.chamber.ca/index.php/en/media-centre/C197/canadian-chamber-unveils-top-10-barriers-to-competitiveness-for-2013/>

⁷² Ibid., page 8.

⁷³ <http://www.vancouversun.com/business/Canadian+business+lobby+pressures+approve+Northern+Gateway/7952560/story.html>

how it promises to make Canada much weaker—before arriving in Vancouver to lecture British Columbia’s on how we should work together.

4.) What Supply Glut?

Before drawing this quest for accountability and transparency to a close it is important to address the so called “supply glut” in Cushing, Oklahoma and how this relates to the discounting of WTI, western Canadian crudes and the urgent need for Keystone XL, Northern Gateway and Trans Mountain’s twinning.

The short answer is that the bottleneck is not a surprise. It is largely of the industry’s making and expected to be sorted out within the next year, or so, as industry solves its management inefficiencies and technical difficulties. The realignment will come without any of the three bitumen export pipeline approvals.

The “supply glut” in Cushing was part of a deliberate plan dating back to 2006 to “access new markets” in the Cushing hub.⁷⁴ Enbridge acquired a pipeline from BP, renamed it Spearhead, reversed it to flow from Chicago to Cushing and expanded throughput capacity from 125,000 barrels a day to 190,000 barrels a day in May 2009.⁷⁵

In 2006 BP announced plans to enhance its Whiting Refinery to accept 350,000 barrels a day of heavy western Canadian crude by 2011.⁷⁶ BP has a feeder pipeline from Cushing to its refinery. BP’s refinery upgrade has run into problems. Its in-service date has repeatedly been delayed. BP recently announced Whiting’s increased demand for Canadian heavy oil is not expected until early 2014.⁷⁷

Meanwhile, Enbridge, in an effort to find ways to get Cushing crude to the Gulf Coast bought a half share in the Seaway pipeline from ConocoPhillips in November 2011. Seaway had transported crude oil from the Houston, Texas area to Cushing. In order to capture new market access for western Canadian and growing Bakken shale oil supplies, Seaway was prepared for reversal. Throughput capacity to the Gulf Coast of 150,000 barrels a day was expected by June 2012.

Before oil can flow from north to south, Seaway must be purged. In early 2012 Enbridge purges the pipeline adding 2.2 million barrels—or 20 percent of the

⁷⁴ Enbridge Energy Partners, [10-Q SEC](#) filing, April 30, 2007, page 22. Spearhead Reversal.

⁷⁵ http://www.enbridge.com/InvestorRelations/FinancialInformation/~/_media/www/Site%20Documents/Investor%20Relations/2009/ENB-YE2009-MDA-EN.ashx page 15

⁷⁶ <http://www.resourceinvestor.com/2006/09/20/bp-to-retrofit-chicagoarea-refinery-for-canadian-h> It is interesting to note the author points out as common knowledge in 2006 that “Oil sands producers are keen to have refining or downstream capacity since raw bitumen sells on the market at a steep discount to upgraded crude.”

⁷⁷ Reuters, [BP expects Whiting refinery upgrade benefits in 2014](#), February 5, 2013.

supply already stored in Cushing—to the hub.⁷⁸ This contribution to the “supply glut” was fully anticipated in order to open the opportunity for oil to ship in the reverse direction.

As the industry geared up for the promised reversal of Seaway, capacity utilization on Spearhead increased significantly and well ahead of the June in-service date. Capacity became over-subscribed in February 2012 contributing directly to the deepened discounts, but it made business sense for oil sands producers to do so. They accepted the discounts as part of a cost of doing business.

Enbridge allocates space on Spearhead based on usage in the preceding nine to twelve months. In order to get an assured direct route from Alberta to Houston, oil producers had to be willing to store their oil in Cushing ahead of time.

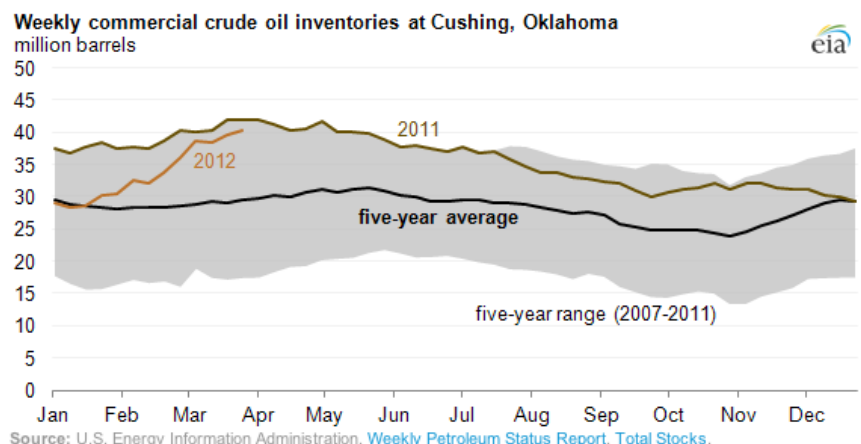
“In order to assure themselves of space on Spearhead later this year, traders must become “regular shippers” on the line now (January 31, 2012).

This is what is causing the sudden jump in shipments on Spearhead, and what will likely reverse the trend of lower stockpiles at Cushing.”⁷⁹

Transportation bottlenecks in Cushing were anticipated and if sophisticated oil companies did not think they could maximize profits by shipping into the Cushing storage hub (its called a storage hub for a reason) they wouldn’t have done it.

Graph 3

Cushing crude oil inventories rising in 2012



⁷⁸ <http://www.eia.gov/todayinenergy/detail.cfm?id=5690>

⁷⁹ Financial Post, [Get Ready for a Cushing Stock Build this Spring](#), January 31, 2012.

Graph 3, above, illustrates that in January 2012 inventories in Cushing were consistent with the five-year average. In February as western Canadian crude producers geared up for Seaway access, and Seaway was purged, oil inventories mounted.

Enbridge had promised the market that by early 2013 Seaway would be expanded to 400,000 barrels a day—sufficient capacity to meet demand without the need for new pipelines. Although Enbridge and its partner Enterprise managed to add pumping power to accommodate this greater throughput, they have encountered engineering and storage problems on the south end of Seaway. Throughput volumes have not reached anticipated levels. Only 295,000 barrels a day are expected to flow to the Gulf during the first half of the year.⁸⁰

Enbridge has also announced plans to twin Seaway providing total capacity throughput to the Gulf Coast of 850,000 barrels a day. This pipeline is forecast to be in service by the first quarter 2014.⁸¹

The industry knows the WTI – Brent decoupling will narrow without Presidential approval for the northern part of Trans Canada’s Keystone XL, the construction of Enbridge’s Northern Gateway or Kinder Morgan’s Trans Mountain’s twinning as soon as pipeline and refinery problems sort themselves out.

Conclusion

The industry understands natural discounts and accommodates them in their plans. Canadian Natural Resources explains how its WCS differential is in line with long-term expectations and expects the volatility to settle as known constraints sort out.

“The WCS heavy crude oil differential (“WCS differential”) as a percent of WTI averaged 22% during 2012 compared with 18% in 2011. During Q4/12 the WCS differential averaged 21%, in line with the Company’s long-term expectations. The Company anticipates continued volatility in the differential for the first half of 2013 and narrowing of the differential thereafter as additional heavy oil conversion and pipeline capacity come on stream.”⁸²

The four largest integrated oil sands producers—Suncor, Cenovus, Imperial and Canadian Natural Resources—do not express the tale of woe imbedded in the double discount narrative sweeping the nation when talking to their shareholders.

⁸⁰ Wall Street Journal, February 19, 2013, [Seaway Pipeline to Carry 295,000 Barrels a Day of Crude Through May](#)

⁸¹ <http://seawaypipeline.com>

⁸² http://www.cnrl.com/upload/media_element/593/07/0307_q412.pdf page 9.

The industry understands refineries in Canada and the US pick up any benefit left on the table by producers—both hands are generally attached to arms of the same loving parent. When the decoupling dissolves it will be an internal transfer from refinery margins to producer margins.

The industry knows there are oil export transportation costs ignored in the discussion. They know these affect the numbers when WCS and SCO finally make their way to elusive world markets. They know condensate import transportation costs are ignored leaving an important cost consideration out of the discussion.

Big oil does not want the Canadian public to understand the weaknesses in their bitumen export strategy. They think obfuscation and deflection, with equal parts of demonization and deceit, can get these bitumen export pipelines approved. Once these pipelines are built, there is no turning back.

Exporting vast quantities of diluted bitumen will hollow the oil sector as value added opportunities are shipped to the US and Asia. Exporting diluted bitumen at the expense of upgrading in Alberta increases Canada's condensate import dependency and requires twice the pipeline capacity and double the tanker traffic than bitumen upgraded in Alberta.

Oil interests encourage sympathetic elected leaders, bankers, and media to pick up their cause and make it their own. Some of the willing pushers behind bitumen export pipelines know better and are engaging in fraudulent misrepresentation, some of them don't, and are played like pawns in big oil's game.

The double discount is a fraud.

Appendix A

1.) Canadian Consumers and Businesses Price-Gouged

There's a disconnect. We keep hearing about low oil prices while seeing higher prices at the pump. We keep hearing about producer losses while companies release record or near record profits.

There is a fundamental flaw in the current market structure, but it's not the price facing western Canadian crude producers—it's the price facing Canadian consumers and businesses for petroleum products.

While the double discount fraud and bitumen pipeline Ponzi scheme tightens its hold on the public psyche the real loss to the Canadian economy is ignored.

It's a simple question that needs to be asked. If western Canadian crude oil prices are lower when compared to international prices for oil of similar quality, shouldn't consumers and businesses be benefiting at the pumps?

For more than two years western Canadians have been price-gouged while oil producers cry crocodile tears and reap huge profits in their direct and indirect downstream activities in Canada and the US. In 2012 this was an average of 14 cents a litre at the pumps in western Canada where vast oil resources abound.

For more than two years eastern Canadians have faced higher petroleum product prices than if Canada had a policy of energy self-sufficiency which ensured bitumen upgraded to SCO in Alberta and made its way to eastern Canadian refineries. In 2012 this was an average cost to eastern Canadians of 16 cents a litre at the pumps.⁸³

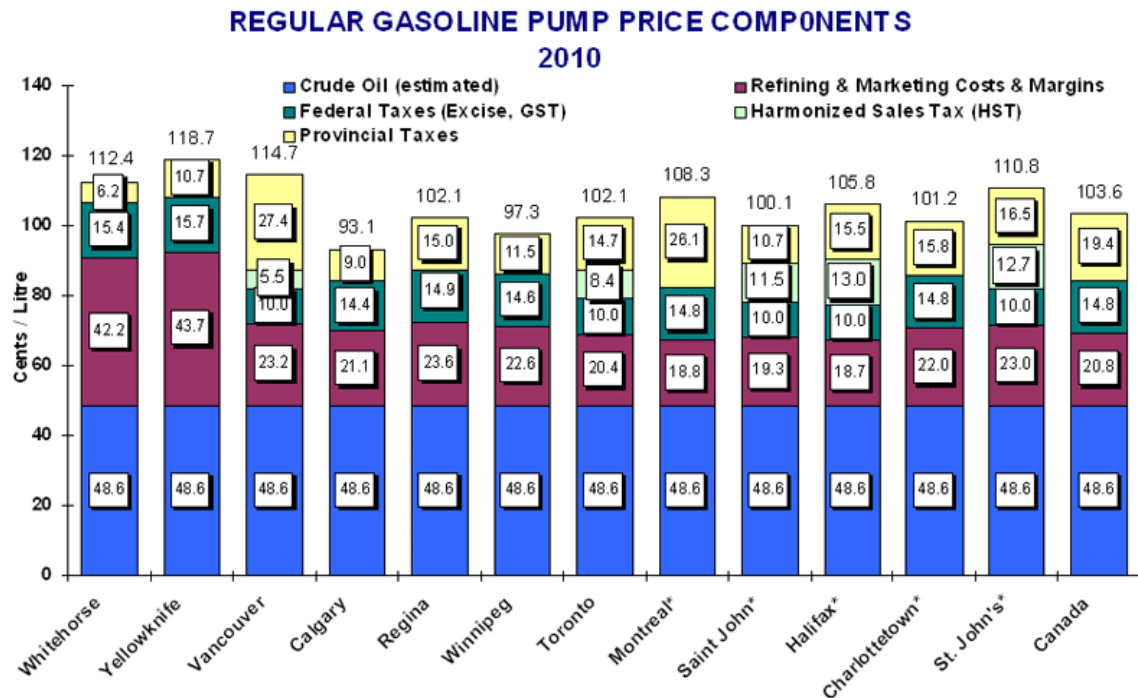
These figures are provided by Natural Resources Canada (NRC) and summarized in the Ministry's Fuel Focus Annual Reviews. The data tables for 2010 - 2012 are provided below.

In 2010, as Table 1 illustrates, NRC estimated the average cost component of crude oil in gasoline, in selected cities across the country, was 48.6 cents per litre. The

⁸³ Transportation costs to get oil to market when a route does not exist need to be considered. If the route goes through Canada instead of the US, (as is currently the case) transportation activity for western Canadian crude to eastern Canadian markets would be a stimulus to the Canadian economy. So, even if it cost \$5 per barrel to get western Canadian crude to eastern Canadian markets, and this translated into roughly 6-8 cents a litre, (assuming a barrel of light oil makes 75 litres of regular gasoline), these toll costs to producers become domestic revenue to transporters—not a leakage as is the case with bitumen export pipelines such as Keystone XL. Therefore, the direct Canadian economic cost of not getting western crude to eastern Canadian markets is 16 cents a litre even when transportation costs are considered, assuming the transportation infrastructure for ensuring energy-self sufficiency is built in Canada.

average refinery and marketing costs and margins were 22.2 cents per litre in western Canada,⁸⁴ and slightly lower in eastern Canada from Montreal to St. John’s at 20.4 cents a litre.

Table 1



Source: Natural Resources Canada, Fuel Focus, 2010 Annual Review, Table 3.⁸⁵

Then as the decoupling between WTI – Brent began to widen in late 2010 with WTI selling at a discount in North American markets, the price for refinery feedstock rose higher and more quickly in eastern Canada than in western Canada. This is illustrated in the 2011 average results in Table 2 below.

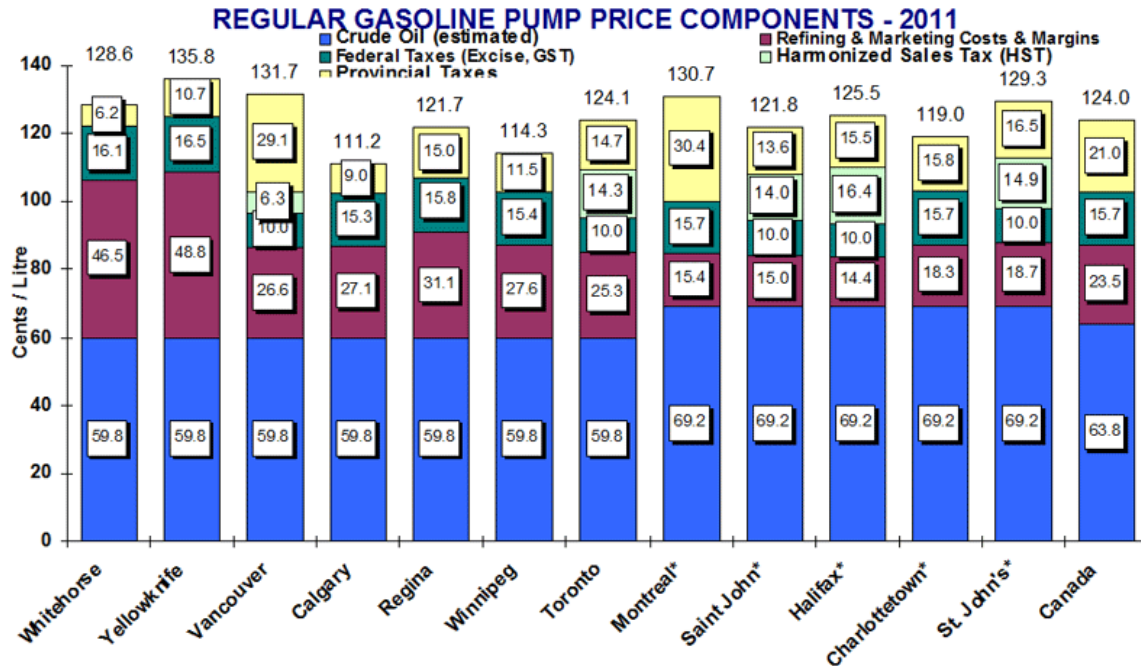
Table 2 also illustrates that western Canadian crude feedstock prices were an average of 11.2 cents a litre higher in 2011 than 2010 (59.8 - 48.6), just not as great as the increase in Brent feedstock costs at 20.6 cents a litre (69.2 – 48.6).

The higher relative price of eastern Canadian refinery feedstock in 2011—because western Canadian SCO did not make its way to eastern Canadian refineries—was 9.4 cents a litre (20.6 – 11.2) or (69.2 – 59.8).

⁸⁴ Ontario received about 75% of its crude oil feedstock from western Canadian sources, so it is most appropriate to include Toronto as part of the western Canada analysis.

⁸⁵ <http://www.nrcan.gc.ca/energy/sources/petroleum-crude-prices/gazoline-reports/1542>

Table 2



Source: Natural Resources Canada, Fuel Focus, 2011 Annual Review, Table 3.⁸⁶

The import dependency cost to Canadians increased even more in 2012 as illustrated by Table 3 below. The Brent price component in a litre of gasoline rose to 70.3 cents for 2012, while the WTI price component fell to 54.4 cents a litre in western Canada. The cost of import dependency to the Canadian economy was 15.9 cents a litre in 2012.

However, even with lower feedstock costs in western Canada in 2012, the total combined crude oil and refinery component went up for western Canadians. In Calgary, for example, 87.5 cents of each litre of gasoline went to producers and refiners (essentially the same companies), while in 2011, when crude prices were slightly higher, only 86.9 cents a litre went to the oil industry from Calgary consumers.

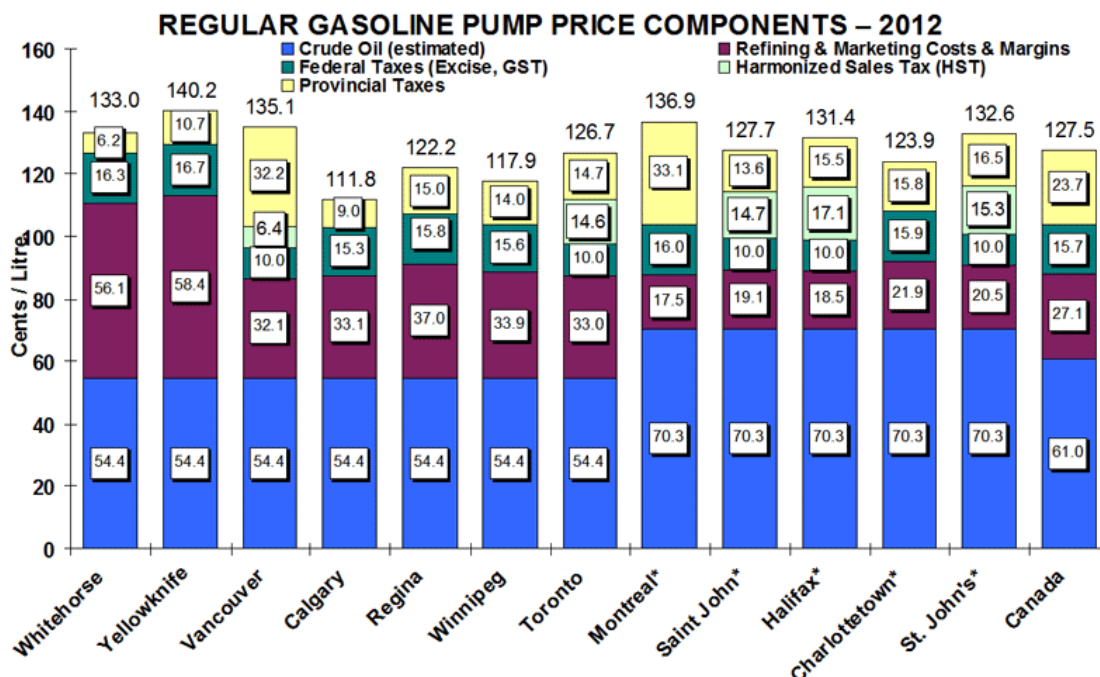
⁸⁶ <http://www.nrcan.gc.ca/energy/sources/petroleum-crude-prices/gazoline-reports/2012-01-13/2080>

By taking the difference between refinery margins in eastern Canada as compared to western Canada in 2012 we get a price-gouging estimate in the selected cities surveyed by Natural Resources Canada.

The refinery margin in the five eastern cities average 19.5 cents a litre in 2012. In western Canada it was 33.8 cents a litre. The difference between refinery margins in eastern Canada where Brent prices are paid, and in western Canada where WTI benchmarked prices are paid — is 14.3 cents a litre.

Western Canadians are charged as if we imported our crude at international benchmark prices. When bitumen pipelines are built to access the US Gulf Coast and Asian markets, price-gouging by the oil industry will be higher yet, only masked in crude oil prices, rather than refinery margins.

Table 3



Source: Natural Resources Canada, Fuel Focus, 2011 Annual Review, Table 3.⁸⁷

In 2012, 42 billion litres of gasoline were sold in Canada.⁸⁸ At an average per litre cost of 15 cents (taking the mid point of the western Canadian price-gouging and the

⁸⁷ <http://www.nrcan.gc.ca/energy/sources/petroleum-crude-prices/gazoline-reports/2012-AnnualReview/2268>

⁸⁸ <http://www.nrcan.gc.ca/energy/sources/petroleum-crude-prices/gazoline-reports/2012-03-09/2112> "Canadian gasoline consumption is over 42 billion litres per year."

eastern Canadian import dependency) this represents a cost to Canadians of \$6.3 billion per year, or \$17 million per day.⁸⁹

This is not a fabricated or biased opportunity cost, but a real cost to Canadians at the end-user point in the supply chain. This cost affects our standard of living, competitiveness, productivity, security and stability. This cost exists because the oil industry is not held accountable or responsible for processing and distributing our resources in a way that serves our economy and our country. Higher end-user product prices represent a transfer of income from Canadians to big oil.⁹⁰

Media attention should be directed to why Canadians—all across Canada—pay prices at the pumps as if we import all our crude oil through international markets that pay Brent prices rather than endorsing a false narrative of phony losses made whole with bitumen export pipelines.

There is something not right in Canada and many Canadians know it. The federal government should be protecting our interests. It should be developing guidelines to assist the industry towards a solution that supports a reasonable business bottom line while supporting our budgets.

The Government of Canada is not protecting the public interest, but using its public license to transfer Canadian public resources to other hands—many of them extending from foreign shores.

The false urgency invented by oil interests to push more bitumen pipelines will ensure Canadians pay, and pay and pay, while multinational oil companies and state owned oil companies from foreign governments reap the rewards.

⁸⁹ This estimate does not include the higher cost of jet fuel, heating fuel or other end user products inflated because of the lack of meaningful policy in Canada. An estimate of the cost to the Canadian economy related to those products requires further exploration.

⁹⁰ In economic lexicon this is a transfer of consumer surplus to producer surplus facilitated by a breakdown in market forces. The approval of bitumen export pipelines will erode our competitive market economy further.