Fight 'Em 'Til You Can't – The Battle for Gas Market Share

Canadian and U.S. Gas Producers in for Fight of Their Lives

- **With Western Canadian gas production near 10-year highs and U.S. production at all-time record levels, Canada's export markets across the northern U.S. are nearing the saturation point.**
- **Rampant production growth, high pipeline utilization rates and limited demand growth will increasingly pit Canadian supply against Marcellus/Utica, Haynesville, Anadarko, Rockies, Bakken and even Permian production, battering gas prices.**
- **The severe oversupply situation sets the stage for cross-border battles for market share, with important consequences for production areas large and small.**
- **Marcellus/Utica and Permian gas producers appear to be well-positioned, but producers in other regions — including Western Canada — may be in for tough times.**

1. Introduction

U.S. and Canadian natural gas producers are on a collision course that's been in the making for some time — ever since the Shale Revolution hit the U.S. Northeast region starting in late 2009 and early 2010. Until recently, the market was able to delay the clash. When burgeoning Marcellus/Utica shale gas supplies lowered Northeast destination prices, TransCanada lowered transportation rates on its mainline to help Canadian suppliers compete. When Northeast supply eventually overtook Northeast demand, Canadian producers and shippers redirected more gas exports to the Midwest and West markets.

But, those days of kicking the proverbial (gas) can down the road are fast disappearing. That's because supply congestion on *both* sides of the U.S.-Canada border is worsening in every border region, and pipeline routes and destination markets are nearing saturation to the point where options to maneuver into alternative markets are shrinking. The bottom line: competition for U.S. gas market share between Canadian and U.S. producers is about to get much stiffer and the price discounts much deeper — deep enough to eventually price some production basins out of the market. A race to the bottom, in other words.

There are several factors that are driving the market toward this reckoning.

On the Canadian side, there is a growing imbalance between supply and demand in Alberta (where 80% of Canada's natural gas is produced), which is further exacerbated by the constraints for gas moving from the supply area to intra-provincial destination markets, namely the oil sands demand area in eastern Alberta. Gas production has been climbing for the better part of this decade, and just last November (2017) it breached the 16-Bcf/d mark, returning to the highest level since 2008, after it had dropped back to less than 14 Bcf/d in 2012.

Intra-provincial demand for gas in Alberta has been on the rise as well, from the two largest gas-consuming sectors: bitumen production in Alberta's oil sands in eastern Alberta, which depends on large volumes of gas-generated steam, and gas-fired power generation. But demand hasn't grown quite as fast as production, and, what's more, the incremental demand there has been challenging to get to, considering that most Alberta producers primarily rely on one main legacy gathering and transportation system — TransCanada's NOVA Gas Transmission Ltd. (NGTL) — to access intra-provincial demand, and that system wasn't originally designed to move that much gas from west to east within Alberta. (Alliance Pipeline also provides takeaway capacity from the Alberta producing area, but it bypasses local demand markets and moves the gas directly into the U.S. Midwest.) NGTL has faced punishing constraints in the past nine months or so, at times sending Alberta gas prices at the AECO hub into negative territory.

But the biggest factor driving oversupply conditions in North America is what's happening south of the border in the U.S. Since January 2017, Lower-48 gas production has catapulted from about 70 Bcf/d — which marked the lowest point since the oil-price crash in mid- to late-2014 — to nearly 80 Bcf/d currently, an astounding 14% jump in the span of less than 18 months.

As has been the case in recent years, the bulk of that increase has come from the Marcellus/Utica shale region in Pennsylvania, Ohio and West Virginia, where regional supply surpassed regional demand in 2014. Unlike the first wave of Marcellus/Utica supply growth, most of the incremental gas this time around is moving well past the boundaries of Northeast states to other U.S. regions and even Canada, effectively "stealing" market share from other supply basins. East-to-west pipeline expansions from Ohio, like the reversal of Tallgrass Energy's Rockies Express Pipeline Zone 3 segments and Energy Transfer Partners' new Rover Pipeline, are opening the floodgates for Marcellus/Utica gas to increasingly permeate the Midwest and Gulf Coast, where it is running head-on into supplies from other growing U.S. producing regions, as well as from Canada.

Nearly every other U.S. supply basin is in growth mode. Higher crude prices have spurred on drilling in oil-focused basins, especially the Permian, while "dry" gas areas like the Haynesville are also making a strong showing. The result is a deluge of supply hitting the central one-third of the U.S. from just about all sides, including Canada, and these supplies are increasingly competing for the same demand and the same pipeline capacity to get to market. While demand on the U.S. side of the U.S.-Canada border is also ratcheting up, it's geographically concentrated along the Texas and Louisiana Gulf Coast in the form of LNG export terminals and pipeline exports to Mexico. Of major significance, gas demand is not coming on at nearly the same pace as supply.

So, supply congestion is worsening on both sides of the border and pipeline utilization for takeaway capacity south from Canada is running high. Amid these conditions, Canadian producers have been surprisingly resilient, maintaining overall net exports to the U.S. in the 5.3-5.9 Bcf/d range on an annual average basis. One factor has been those low prices at AECO, which have helped Alberta gas remain competitive in some U.S. markets, at least for now. The other tactic Canadian producers and shippers have taken is to utilize the various import/export

points along the border to shuffle gas from one region to another. The regional import/export graphs in Figure 1 illustrate this phenomenon.

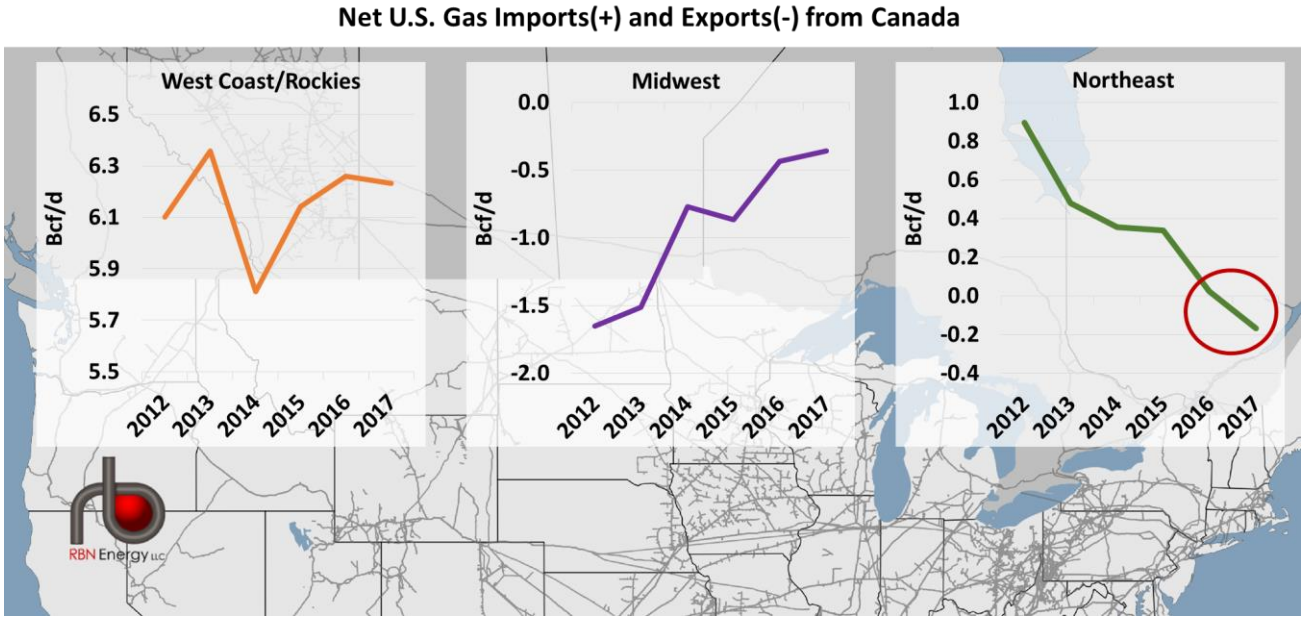

Figure 1 – Net U.S. Gas Imports/Exports by Border Region; Source: OPIS PointLogic

For example, as Canadian supply has been largely displaced from the U.S. Northeast (green line), more of it ended up in the Midwest and West (purple and orange lines, respectively). But, now, with nearly every region becoming inundated with supply, that flexibility to offset exports to one region with another is becoming a thing of the past. Worse yet for Canada, the U.S. Northeast last year flipped to being a net *exporter* of gas to Canada on an annual average basis (red circle). In other words, Eastern Canada demand that used to be served by Western Canadian gas supply is now increasingly being served by Marcellus/Utica supply.

There is still at least some room for Canadian gas flows to increase across border points in the U.S. West and Rockies, but the options are limited there as well. Takeaway capacity for imports of Canadian gas into the Rockies on the Northern Border and Alliance pipelines — which primarily move gas southeast into the Chicago market area — is running full and Canadian gas has been losing market share to Bakken producers on those pipes. On the U.S. West Coast, throughput and capacity utilization similarly suggest there is limited space for imports to grow much more, at least not without displacing inflows from the Rockies that target the California market via the Ruby Pipeline. And, even if there was space on the pipelines, the gas would likely run into demand constraints, given that renewable energy capacity is displacing overall gas consumption in the Golden State.

And, finally, there's the Midwest market, which so far has been helping to absorb Canadian gas displaced from the Northeast and Eastern Canada but is now becoming a key battleground for U.S. and Canadian suppliers. The region historically has been a net exporter of gas to Ontario via the Dawn Hub but is seeing the pushback effects of outflows from the Northeast into Eastern Canada. More of the Alberta supply that used to go to the Northeast via the TransCanada mainline is being shoved into the Midwest via the border crossings with Great Lakes Gas Transmission and Viking pipelines. At the same time, less gas supply is leaving the Midwest for Ontario via the Dawn Hub, as Marcellus/Utica takes more of that market share. So what used to be net *outflows* from the Midwest to Canada in the past couple of years have flipped direction

and are net *inflows* for a chunk of the year. But that wiggle room is likely to narrow drastically too, as more Marcellus/Utica takeaway pipeline capacity is added from Ohio into the Midwest, as well as a little bit from the East Coast directly into Ontario. Once the Rover project is fully operational — possibly as soon as June 1 (2018) — the pipeline's westbound flows from the Marcellus/Utica can increase to 3.25 Bcf/d, and nearly 1.0 Bcf/d of that supply can be delivered into Michigan and the Dawn Hub area via a new interconnect with the Vector Pipeline. There's also another 1.5 Bcf/d on the way from Enbridge's new NEXUS Gas Transmission in the third quarter of 2018. On top of that, the Midwest is now also receiving gas year-round from the Permian, which is itself running out of takeaway options.

As overall North American supply growth continues, routes to market fill up and optionality disappears, gas-on-gas competition will pit the supply regions against each other to the point that something will have to give. When that happens, there are certain to be winners and losers, with likely a few producing areas succumbing to the price competition. Which supply regions will succumb and which will prevail? That will boil down to producers' pain thresholds — i.e., how low prices can go before they fall below breakeven levels. Regardless, Canadian producers are facing some stiff competition.

In this Drill Down Report, we take a detailed look at the supply-demand fundamentals on both sides of the Canada-U.S. border, before we dive into the infrastructure and flow analysis to assess how supply growth has affected cross-border flows and pipeline utilization across each of the border regions. From there, we take a forward look at pipeline capacity additions and other factors that will exacerbate supply competition and ultimately force a producer showdown. And, finally, we'll conclude with an assessment of the potential winners and losers.

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