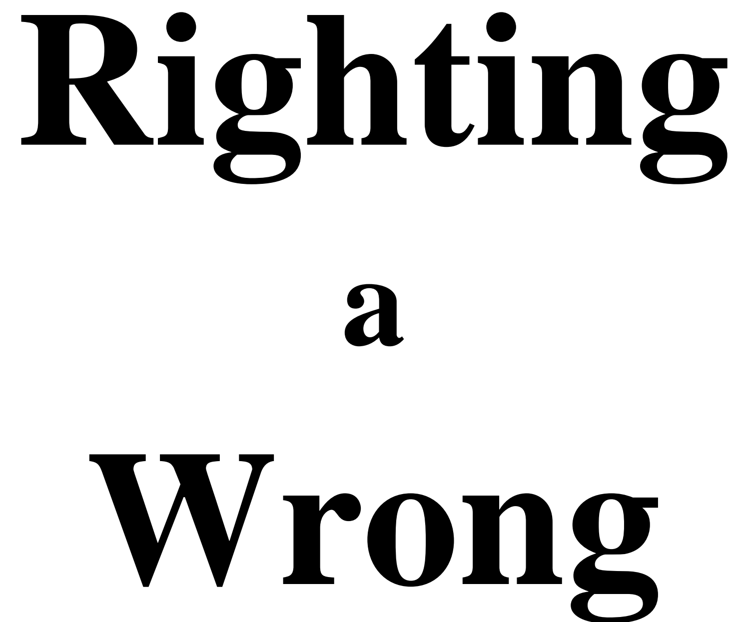

The Marcellus/Utica: Balanced on a Knife's Edge

April 2017

REPORT OVERVIEW - CONTACT EAST DALEY FOR FULL REPORT

Righting a Wrong

The Marcellus/Utica: Balanced on a Knife's Edge

- Expansions out of northeast Pennsylvania (NE PA) will result in $1.9 billion in EBITDA split almost evenly between midstream gathering and long-haul transportation.
- Higher-risk long-haul transport projects account for $182 million in transportation EBITDA but $254 million in midstream gathering EBITDA.
- Productive capacity for producers in NE PA is limited to 14.2 Bcf/d, 5.2 Bcf/d higher than current production levels
- Cabot, Chief, Seneca and Shell will all see over 100% increases in production growth.
- Williams Partners (WPZ) will realize an upside of $658 million from NE PA, driven by production linked through their gathering systems to new long-haul expansions.
- ETP's NE PA gathering system will almost double from 16% to 28% of midstream segment EBITDA.

1 Introduction

Over the last several years, commodity and equity market oracles have been prophesizing of burgeoning natural gas production growth in the Marcellus and Utica. Typical of an oracle, the message has often been obscure, either too high level to make company specific conclusions or too company specific to decipher reality within the wider context of the market. Commodity market oracles have prophesized at a regional level of massive production growth, expansions and displacement and a new reality for basis markets. Equity market oracles have also dug in, analyzing the rock, the commitments and the cashflow. Both have been right in some prognostications; but both have been wrong in ultimately piecing together this complex region. *Righting a Wrong* solves this dilemma and details the knife's edge balance in the Marcellus and Utica, where a single event impacts every party along the value chain from producer, to gatherer, to processor to long-haul pipeline. This two-part investigation dissects the interconnection between players and commodity markets and determines which players sit on either side of the razor-thin line between mere growth and prosperity.

Part One focuses on natural gas production growth centered in northern Pennsylvania (Box 1 – Figure 1.1) and demand markets directly to the east (Box 4). Box 1 is defined by its productive capacity, which is the maximum allowable capacity available to producers. That capacity currently sits at 9.04 Bcf/d and will grow to 14.2 Bcf/d by 2020. However, there is a much higher downside risk of productive capacity getting smaller than there is upside risk of it getting larger. Additionally, the allocation of that capacity to producers and midstream gatherers is in large part fixed. Today there is around 4.3 Bcf/d of contestable productive capacity, which is capacity that is owned by end-users and not producers. Producers have made up most of the contractual commitments on the new expansions, thus contestable productive capacity is growing by only 1.8 Bcf/d. By 2020, 8.3 Bcf/d of total productive capacity will be contractually committed by producers.

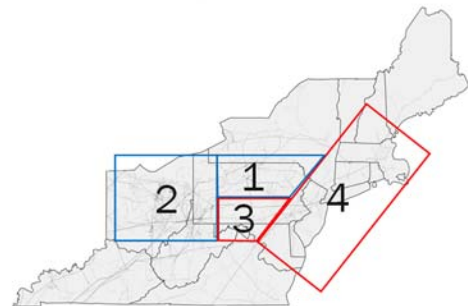

Figure 1.1: Northeast Boxes

Since productive capacity is fixed, for a single producer to grow above expectations into the 6.1 Bcf/d of contestable capacity, another producer must decline to maintain the balance. A reallocation of production growth will also impact the allocation of midstream gatherer throughput. Additionally, Box 1 must remain balanced in the event of any delay or cancelation of a long-haul pipeline. Such an event creates the knife's edge as it will result in cuts that impact the EBITDA of pipeline, gatherer, and producer financials. For vertically integrated systems, these

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cuts would be deep as there is an impact on the upside at several points in the value chain. To quantify that financial ripple effect, each producer is mapped to each gathering system which is then mapped to each long-haul pipeline. Figure 1.2 shows a high-level representation of this relationship matrix that binds players in Northeast Pennsylvania.

The total upside for midstream gatherers and long-haul pipelines leaving Box 1 is $1.9 billion in annualized EBITDA. Often, long-haul pipelines are thought of as the growth driver but in fact more than 50% of the total EBITDA uplift will come from midstream gathering in the area. As shown in Figure 1.3 below, systems like Williams Susquehanna Supply Hub and NFG Midstream will see triple-digit volumetric growth. The total uplift for midstream companies is estimated at $961 million and as noted previously any long-haul pipeline cancellation would not only cut EBITDA from the project but also reduce uplift to the associated midstream gathering assets.

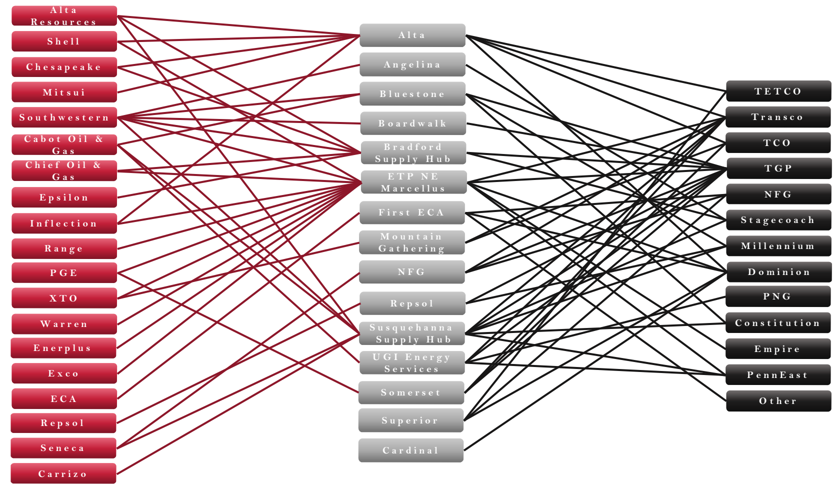

Figure 1.2: Northeast Pennsylvania Relationship Matrix

Box 4, which is home to some of the largest load centers in the U.S., must maintain an even tighter balance than Box 1. While Box 1 can manage some supply fluctuations by utilizing underground storage, Box 4 does not have that flexibility as every molecule of gas pushed into Box 4 must be consumed. The gas sent into the area above the consumption level must either push out another molecule or physically be moved out on one of the pipeline expansions leaving the area. Interestingly, the timing of expansions in the region will create a situation where in the near term, Box 4 will be short, with more new capacity demand than new supply. However, by the fall of 2018 the pendulum will swing, and the area will not have enough demand to support the available supply. This dynamic will eventually result in supply displacement from Box 4, particularly effecting supply coming out of Box 2.

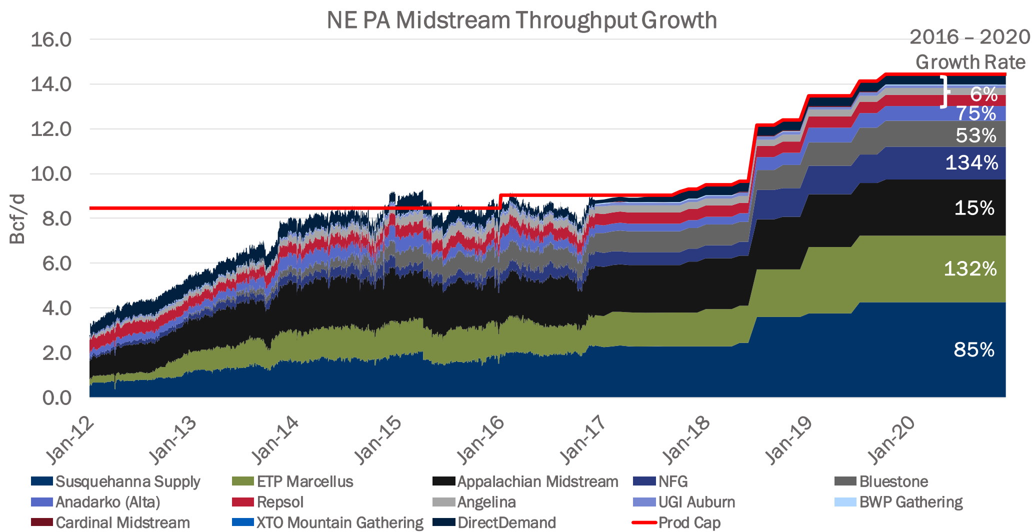

Figure 1.3: Midstream Box 1 Throughput Growth

Part Two of this in-depth analysis will focus on the Marcellus and Utica in Eastern Ohio, Southwest Pennsylvania and West Virginia (Box 2). This part of the paper will explore the interaction between Box 2 and Boxes 1 and 4. It will also explore the expected battleground where the volatility of the interaction between the Boxes is expected to occur (Box 3). Additionally, *Part Two* will explore the impact on pricing and basis as the U.S. natural gas market is once again transformed.

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Like natural gas, the natural gas liquids (NGLs) market in the Northeast in recent years has been characterized by pipeline constraints limiting liquids takeaway and stifling producer netbacks. *Part Two* will also explore the role of the NGLs that are an associated product with natural gas production in wet areas (Box 2). Because of constraints producers have had no choice but to continue to produce NGLs and pay the processing, fractionation, and transportation fees, often relying on expensive truck and rail transportation to clear the basin. However, major long-haul NGL pipeline expansions coming online in the next few years are poised to change the flow of liquids out of the basin, with the impact reverberating from producers to midstream players.

Righting a Wrong bridges the gap that often exists between commodity market and equity market analysis. It defines the dynamics that are impacting the Marcellus and Utica and translates those into the upside for energy companies operating in the region. Producers, traders, pipeline operators, midstream companies, marketers and institutional investors leverage East Daley Capital's insight to connect and analyze markets in new and unprecedented ways.

1.1 About East Daley

East Daley Capital is an energy asset research firm that exposes the complex risks in the midstream energy market. In addition to using top-level financial data to forecast a company's performance, East Daley delivers asset-level analysis that provides comprehensive, fact-based intelligence. Supported by a team of unbiased, experienced research analysts, East Daley provides its clients unparalleled insight into how midstream companies operate and generate cash flow. East Daley uses publicly available fundamental data and intersects that data with a company's reported financials to break down midstream companies to asset-level cash flows. The result allows for more informed portfolio decisions.

Exclusive Consultation

For subscribers, in addition to this report, East Daley will provide an in-person or web-based presentation for organizations interested in the findings discussed in this analysis. This presentation is generally 1-2 hours with several of the analysts available to answer any questions you have. For more information, contact:

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