2018 Second Quarter Midstream Energy Market Review

Dear Investors,

We are pleased to report that the midstream energy sector enjoyed robust performance in the second quarter of 2018. For the period, the market cap-weighted Alerian MLP Index (AMZ) produced a +11.80% total return, while the equal-weighted Cushing® 30 MLP Index (MLPX) produced a +11.31% total return.

For the first time in over a year, stock prices for the midstream sector and the overall energy sector more closely tracked the positive midstream operating results and crude oil price increases. In fact, energy equities were the best performing sector in the S&P 500 Index since what seems like forever (to be precise... two very long years). For the period, the price of West Texas Intermediate crude oil increased +14.18%; the S&P 500 Oil & Gas Exploration and Production Index (S5OILP) was up +17.35%; and the Philadelphia Oil Service Sector Index (OSX) produced a +14.49% return. All of this was despite increased trade war rhetoric and a few spikes in broader market volatility, particularly when compared to the same period last year.

Second Quarter 2018 Performance for Select Indices

Note: Represents relative total return performance from March 31, 2018 through June 30, 2018. Indexed to 100.
Source: Bloomberg.

Investor sentiment also improved during the second quarter, as evidenced by three consecutive months of positive fund flows into midstream-focused products (mutual funds, ETFs and exchange-traded notes). This is a significant reversal (and improvement) from first quarter 2018 fund flows, when the outflows during the months of February and March both set records as among the top largest monthly outflows in the history of the midstream space.¹ While some recovery could be expected as investors digested and gained an increased understanding of the March 15th Federal Energy Regulatory Commission (FERC) decision, we believe the

¹ Source: Cushing Asset Management and Bloomberg.
resilient fundamental backdrop for the midstream energy sector combined with the structural evolution of the midstream asset class will continue to attract investor interest, both retail and institutional. Accordingly, we believe these dynamics can produce the catalyst for the midstream sector to trade more in line with its positive underlying fundamentals, which, in our opinion, provide an attractive set-up for both absolute and relative total returns.

**Fundamentals Shine Amid Structural Distractions**

Similar to what you have heard from us in recent letters, midstream sector fundamentals – including commodity prices, production volumes, asset utilization, demand growth (including exports), project backlogs, earnings and cash flow – all continued to reach multi-year highs and/or show year-over-year improvement during the period. Unfortunately, structural complexities, uncertainties over simplification transactions and select distribution cuts continued to provide an inconvenient distraction for investors.

First quarter earnings announced during the second quarter generally reflected operating improvements and were very constructive. As a sector, results substantially beat expectations and management outlooks remained optimistic. Quoting from one midstream sell-side analyst, the quarter “…felt like the best earnings season we have had in several years. Both volumes and margins came in better than expected (despite a hard winter), leverage continued to trend down, coverage largely >1x, and optimism about continuing to grow the backlog while staying out of equity markets.”

As a specific example, Enterprise Products Partners, LP (NYSE: EPD), the largest master limited partnership (MLP) by market capitalization with a well-diversified asset base, announced a beat of 2nd quarter 2018 consensus EBITDA estimates by an impressive 11%.

Despite the positive operational updates, there were a couple of announcements during the period that once again reminded investors of the potential negatives of limited partner ownership of an MLP, especially when combined with an unaligned general partner.

- The price of Andeavor Logistics, LP (NYSE: ANDX) units declined by over 13% on April 30th upon the announcement that Marathon Petroleum Corp. (NYSE: MPC) would acquire ANDX’s general partner, Andeavor (NYSE: ANDV). Understandably, ANDX investors sold under the assumption they would be “orphaned,” with MPC redirecting growth opportunities away from ANDX and towards its underlying MLP, MPLX, LP (NYSE: MPLX), which units traded up by approximately 3% the same day.
- Loews Corporation (NYSE: L) announced it was considering (and later exercised on June 29th) its right to acquire the remaining interests of Boardwalk Pipeline Partners, LP (NYSE: BWP) using a special clause that allowed Loews to use a formulaic price (180-day average close) and “is entitled to exercise such right free of any fiduciary duty or obligation to any limited partner.” The price of BWP units declined by approximately 19% in the week following this announcement, as investors accepted the reality of an eventual “no-premium” takeout.

There were also three more MLP distribution cuts during the second quarter, although all three were from smaller capitalization, and in our opinion, less-significant companies for the broader midstream sector.

- TC Pipelines, LP (NYSE: TCP) announced a 35% distribution cut in response to impacts from the FERC income tax allowance decision. Unfortunately for unitholders, this announcement came just 44 days after TCP’s March 19th announcement that “the Partnership does not anticipate any material financial

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impacts to its natural gas pipeline cost of service rates to take effect in the near-term as a result of the revised FERC tax policy.”4

- CrossAmerica Partners, LP (NYSE: CAPL) and Blueknight Energy Partners, LP (NYSE: BKEP) announced distribution cuts (or expected future cuts) of 16% and 30%, respectively. The stated rationale for both was to support the cash funding of project backlogs.

Despite these negative developments, we were encouraged that none of these company-specific events managed to negatively impact the performance for the broader midstream sector, which had been a recurring problem in recent quarters. In the recent past, it appeared that a negative company-specific event would completely derail positive developments across the space. As an example, in the third quarter of 2017, a distribution cut by Plains All American Pipeline, LP (NYSE: PAA) led to a selloff across the entire midstream sector, with the AMZ trading down by nearly 3% in one day.

This quarter was different, with trading seemingly more specifically related to and correlated with fundamentals and results, perhaps the beginning signs of a healthier, or at least more fundamentally-driven, trading environment.

Structural Simplifications Accelerate

During the second quarter, several companies in the midstream sector made significant progress towards structural simplification and improved corporate governance, both of which remain key impediments for some investors. Several companies completed their previously announced “roll-ups,” or structural simplifications, during the period including the Tallgrass entities (NYSE: TEP/TEGP) and Alliance entities (NYSE: ARLP/AHGP).

The simplification trend did not slow during the quarter, with a historic day of announcements occurring on May 17th when a record six underlying MLPs were acquired in three separate transactions. In one day – Williams Partners, LP (NYSE: WPZ), Spectra Energy Partners, LP (NYSE: SEP), Enbridge Energy Partners, LP (NYSE: EEP), Enbridge Energy Management, LP (NYSE: EEQ), Enbridge Income Fund Holdings Inc. (NYSE: ENF) and Cheniere Energy Partners LP Holdings, LLC (NYSE: CQH) – all announced acquisitions by their respective corporate parent entity.

As noted by Bloomberg, “… “Simplification Thursday” does not have quite the same alliterative appeal as “Merger Monday.” But this Thursday is one for the history books if you follow that niche of the energy sector called master limited partnerships… A simpler story, combined with a simpler structure and financial metrics, should garner a friendlier reception from those “future” institutional investors... Expect even more of this.”5

In addition to these announcements, many more companies publicly announced they are actively evaluating a potential simplification of their entities, including Energy Transfer Partners, LP (NYSE: ETP/ETE), Equitable Midstream Partners, LP (NYSE: EQM/RMP/EQGP), TransCanada Corporation (NYSE: TRP/TCP), EnLink Midstream Partners, LP (NYSE: ENLK/ENLC), Antero Midstream Partners, LP (NYSE: AM/AMGP) and Western Gas Partners, LP (NYSE: APC/WGP/WES), among others.

In our opinion, this accelerating simplification of the midstream sector is a strong positive. Alleviating concerns regarding structural and governance issues will allow more investors to focus on the solid fundamentals and the underlying assets. While these changes have been a near-term distraction, they are positive long-term, in our view.

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And, we believe most of the simplification work is behind us. According to our estimates and adjusting for the transactions announced this quarter, approximately 75% of publicly traded U.S. midstream companies, as measured by market capitalization, are no longer burdened by an incentive distribution rights (IDR) structure.

**OPEC Overhang Reduced**

Internationally, the Organization of the Petroleum Exporting Countries (OPEC) and several large non-OPEC producing countries (OPEC+) held their long-awaited meeting on June 22\textsuperscript{nd} where the membership agreed, as expected, to nominally add 1 mmbbls/d of production. However, due to the fact that some OPEC members would be unable to sufficiently ramp up production, actual production is expected to increase by roughly 600,000 bbls/d per day.

We view the addition of these barrels to the market as both timely and necessary as global supply growth continues to become more difficult to achieve and global demand continues to surprise to the upside. As reported by the International Energy Agency (IEA), global demand growth for crude oil has been consistently strong over the past four years, growing by an annual average of 1.5 mmbbls/d since 2014. Meanwhile, global supply has been stagnant, only increasing by 400,000 bbls/d in 2017. Per the IEA, the addition of this incremental production will be necessary to keep the market supplied as it estimates crude oil demand will grow by another 1.4 mmbbls/d in 2018, and again in 2019.\textsuperscript{6}

Crude oil inventories continued to fall during the quarter and ended the period below the midpoint of the 5-year average.\textsuperscript{7} Between Venezuela’s crumbling energy infrastructure, the potential for sanction-related production curtailments in Iran, rebel fighting in Libya, as well as underinvestment in Angola, Nigeria, and several other large producing nations, we believe crude oil prices have firm support for the foreseeable future.

Additionally, by increasing its current production levels, OPEC’s spare production capacity will fall, likely leading to increased awareness of possible unexpected supply disruptions, as evidenced most recently by the Syncrude outage in Canada where as much as 350,000 bbls/d may be offline until September.

Ultimately, we see this change to the production curtailment as a positive sign that key players in the global crude oil market have moved beyond artificial supply restraints (quotas), and are beginning to focus on the very real supply constraint posed by limited spare capacity globally.

More importantly, we believe this decision removes a key uncertainty regarding global supply for market participants. Perhaps the resolution of this binary event may encourage generalist and long-only investors to take another look at the overlooked energy sector. This is occurring as global crude oil prices have now broken out to 3-year highs, a positive tailwind for broader energy sentiment and sector performance.

**Permian Growing Pains**

On the domestic front, the U.S. accounted for most of the global crude oil supply growth in 2017 and, we believe, will likely do so again in 2018; however, the midstream sector is struggling to build pipelines fast enough to keep up with the pace of production growth. This is currently the case in the Permian Basin, the largest oil-producing U.S. shale basin, where the lack of adequate takeaway capacity has resulted in the blowout of basis differentials — a dominant theme across the entire energy supply chain for the period.

The surge of production volumes in the Permian basin, including crude oil, natural gas and natural gas liquids (NGLs), has simply overwhelmed the existing pipeline infrastructure that facilitates the movement of these volumes out of the basin. As a result, basis differentials, or the difference in price between two locations,


widened significantly during the quarter. For reference, as indicated in the chart below, the difference in the price of crude oil in Midland versus the Gulf Coast (Magellan East Houston to West Texas Intermediate Midland) averaged over $12 per barrel during the quarter, reaching a quarter-high of over $20 per barrel.

During the quarter, investors grew concerned that some producers could be forced to shut in wells due to a lack of available pipeline capacity. Producers have resorted to hauling crude oil via trucks for hundreds of miles to reach available pipelines in other parts of Texas until new pipelines in the Permian are completed. With regards to the surge of “associated” natural gas production, takeaway options are also currently limited, and there are doubts as to how long the regulators will allow “flaring” (burning natural gas at the well head) as a short-term solution – potentially further constraining the trajectory of crude oil production growth.

![Year-to-Date Permian Crude Oil Basis Differentials](chart.png)

**Note:** Represents the difference in spot prices between indicated benchmarks indices. Includes Magellan East Houston Light Sweet Crude Oil Index, West Texas Intermediate Cushing Crude Oil Index and West Texas Intermediate Midland Crude Oil Index. Data shown from December 31, 2017 through June 30, 2018.

Source: Bloomberg. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

As a result, we did see some producers slow their drilling and completion activities and redeploy their capital spending into less constrained basins (e.g. Eagle Ford and Bakken) during the period. Perhaps this served as a ‘not so subtle’ **reminder that production growth cannot occur without adequate infrastructure, highlighting the critical importance of the midstream industry.**

From the midstream perspective, we still contend that even if Permian production were to plateau in the near-term, midstream assets should remain full, with latent demand for new projects. Said another way, given the two alternatives of 1) high asset utilization in a tight basin requiring new infrastructure, or 2) excess capacity with little need for incremental growth – we’ll gladly take the former. Historically, we believe investing in the ‘bottleneck’ has been a successful strategy across any asset class, it’s typically a clear indication of immediate growth potential.

**Collaborative Effort to Organic Growth**

As a result of the numerous ‘bottlenecks’ developing around growing U.S. production basins, demand for energy infrastructure assets continued to grow. Therefore, it was no surprise that project announcements were plentiful during the period, notably in the Permian, Denver-Julesberg (DJ) and SCOOP/STACK areas. While we won’t list all the project announcements here, we do want to highlight a growing, positive trend we are observing.
Encouragingly, companies within the midstream sector appeared to be working more collectively through joint ventures and value-added integrated solutions, a trend we believe offers numerous benefits. Most importantly, we believe these efforts could reduce ultimate capital expenditure needs while driving return on invested capital (ROIC) higher. It also helps to scale down the number of redundant projects and excess capacity, reducing pipe-on-pipe competition and the chance of overbuilding.

Recent examples include:

- SemGroup Corporation (NYSE: SEMG) and DCP Midstream LP (NYSE: DCP) are working together on the conversion of SEMG’s White Cliffs pipeline from crude oil to NGL service, which is designed to feed into DCP’s Southern Hills system. This development is beneficial on two fronts by reducing overcapacity of crude takeaway in the basin while adding NGL capacity with minimal capex.

- ANDV and Phillips 66 Partners, LP (NYSE: PSXP) are jointly constructing the large-scale Gray Oak crude oil pipeline system from the Permian basin to the Corpus Christi region in South Texas (Enbridge Inc. (NYSE: ENB) also has an option to buy into the project). Both ANDV and PSXP then teamed up with Buckeye Partners, LP (NYSE: BPL), which controls waterfront acreage near Corpus Christi, forming another joint venture to construct the South Texas Gateway terminal to export inbound crude oil from the pipeline.

- Energy Transfer Partners LP (NYSE: ETP) and Enterprise Products Partners, LP (NYSE: EPD) are working together to restore the Old Ocean pipeline to service, which will allow for additional gas takeaway capacity from the Permian Basin. This joint venture is noteworthy as it brings together two companies which historically have been considered fierce rivals.

Private Equity: Friend or Foe?

While we are seeing a more collaborative effort amongst public midstream companies, a large private equity sector armed with relatively cheap capital and an interest in energy infrastructure continues to be a competitive threat at the project level. We also believe that according to our estimates, there is a significant disconnect between public midstream valuations and the valuations of recent private midstream transactions. Consequently, we previously have stated that we believed it was only a matter of time before private equity (and other infrastructure-focused funds) elevated their interest from the project-level, to the larger entity-level.

Our thoughts were echoed by Sam Pollock, the Chief Executive Office of Brookfield Infrastructure Partners, LP (NYSE: BIP), who stated on an earnings call during the period that “We have been observing market dislocations in the North American energy sector, in particular, there has been a stock market sell-off in listed energy infrastructure companies and the sentiment is relatively negative... as the U.S. transitions to become a net exporter of energy, there is also a significant need for capital to invest in infrastructure, to extract, transport and process energy resources... We are in various stages of discussions with large midstream energy companies and are encouraged by a number of the interesting opportunities in front of us.”

During the period (and a few days after period end), there were a couple of notable announcements that may suggest this private equity base is beginning to take advantage of the current market dislocation.

- Global Infrastructure Partners (GIP) announced the acquisition of Devon Energy Corp.’s interest in EnLink Midstream (NYSE: ENLC/ENLK) for $3.125 billion on June 6th.

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8 Brookfield Infrastructure Partners, LP. “Q1 2018 Earnings Call.” May 2, 2018.
Brookfield Infrastructure Partners announced the acquisition of ENB’s Canadian natural gas gathering and processing business for CAD $4.3 billion on July 4th.

In addition to these announced acquisitions, there are numerous other examples where we are starting to see private equity being used to help plug the financing gap for public midstream companies. This is a trend we would view positively, with private equity co-investing alongside public investors.

**Regulatory Risks Remain**

Despite the positive developments, *the sector is not without its risks – particularly on the regulatory front.*

ETP remains bogged down in regulatory questions and delays on their Mariner East system. More recently, EQT Midstream was ordered to halt construction on their Mountain Valley Pipeline when lawyers representing certain environmental groups found an obscure regulation that required a stay on federal water crossing permits in West Virginia. And after numerous delays, ENB’s Line 3 Replacement proposal finally received permission by the State of Minnesota, but the opposition promises to continue its fight.

One problem that turned into a positive during the period was Kinder Morgan Inc.’s (NYSE: KMI) sale of its proposed TransMountain Expansion pipeline project to the Canadian Federal government. KMI was able to walk away from the project with the CAD $4.5 billion that Canada paid for the existing pipeline and project, allowing KMI to meaningfully reduce its leverage, possibly below 5x EBITDA. Of equal importance, the sale removed a significant regulatory overhang that would have lingered over KMI’s equity throughout the construction period.

**Conclusion and 2nd Half Outlook**

We believe there were several positive developments during the second quarter that may provide catalysts for midstream company prices to start to reflect the strong fundamental progress.

To summarize:

- Midstream sector operating volumes continued to reach multi-year highs and/or show year-over-year improvement; producing one of the best earnings seasons in years. A third consecutive strong financial quarter might begin to convince investors that there is a real and positive trend.
- The sector continued to make significant progress towards structural simplification and IDR elimination, which is reducing the governance distractions and freeing investors to focus on the solid operating fundamentals and underlying growth.
- Crude oil inventories fell below the midpoint of the 5-year average, and the return of OPEC+ barrels removed a key uncertainty regarding global supply. OPEC’s spare capacity will likely be partially absorbed, and all this has significantly reduced concerns that oil prices might move sharply lower.
- The U.S. accounted for most of the global energy supply growth in 2017 and is projected to do so again in 2018 – requiring a significant need for substantial new U.S. infrastructure development.
- A more collaborative effort among companies within the midstream sector should reduce capital expenditure needs, drive ROIC higher, and alleviate the perceived overbuilding risks.
- An increase in private equity participation in public markets has not only helped provide a source of funding, but may drive stocks higher through M&A activity and potential multiple expansion.

Our outlook for the 2nd half of the year remains positive. We believe global oil market fundamentals and increasingly constructive investor sentiment bode well for absolute and relative return prospects for energy stocks in the second half of 2018, including midstream energy.
Sector fundamentals remain strong. We have a supportive commodity environment, rising all-time high production levels and record high demand for U.S.-sourced hydrocarbons. We are seeing growing export volumes of crude oil, refined products, NGLs and liquefied natural gas (LNG). Nearly all this volume must be handled by midstream infrastructure. Asset utilization is high and basis differentials are elevated.

As we’ve stated previously, we believe structural issues – including structural complexities, simplification transaction uncertainties, and governance concerns – coupled with the surprise FERC decision, poor investor sentiment and reluctant investor demand have combined to create an attractive entry point in a sector that is benefitting from numerous tailwinds.

We expect the evolution of the midstream sector to continue, with the ongoing elimination of GP/IDR structures, improving corporate governance, increased self-funding and disciplined returns-focused capital deployment. We believe this evolution of the midstream sector is occurring at the same time free cash flow (FCF) is growing and valuations remain below historical levels – providing compelling total return potential.

Please let us know if you’d like to have an in-depth conversation of these topics. As always, we appreciate your support and continued confidence in us.

Best regards,

Cushing Investment Team
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Glossary of Indices: The Alerian MLP Index (AMZ) is a composite of the most prominent energy master limited partnerships. The Cushing® 30 MLP Index (MLPX) is an equal weighted index that tracks the performance of 30 publicly traded MLP securities that hold midstream energy infrastructure assets in North America. The S&P 500 Index is a capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries. The S&P 500 Oil & Gas E&P Sub Industry Index (S5OILP) is a capitalization-weighted index. This is a GICS Level 4 Sub-Industry group. The Philadelphia Stock Exchange Oil Service Sector Index (OSX) is a price-weighted index composed of 15 companies that provide oil drilling and production services, oil field equipment, support services and geophysical / reservoir services. The S&P 500 Utilities Index is comprised of those companies included in the S&P 500 that are classified as members of the GICS utilities sector. Indices are included for comparative purposes only.

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