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Spring 2019

## Research Project in Finance: Kinder Morgan Inc. (KMI)

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Christopher Holmes

FIN 52055

May 8, 2019

Banerjee

### Kinder Morgan Inc (KMI)



### Investment Thesis

KMI is a buy because the market is currently mispricing the company due to fears over their CO2 segment and their debt level.

First, it is currently being rumored that management is considering the sale of its CO2 business. This would be a positive because it would take away the concerns regarding CO2 and could help lead to a higher multiple. Additionally, the company's backlog would become much more concentrated in higher growth areas if this segment is sold.

Second, the debt picture is misunderstood. The company currently has an investment grade rating from the rating agencies and currently has a target debt level of 4.5x EBITDA. However, management is currently overachieving their own standards when it comes to realization of EBITDA from the backlog. With several major projects coming into service during the next 18 months. The FY2 and FY3 EBITDA numbers should be substantially better due to management's success and even if management misses slightly the EBITDA figure should still improve, the question becomes by how much?

Given these two misunderstandings, the market is currently trading KMI at the -1 St. Dev. of its earnings range when it should be trading much closer to average.

### ***Metrics to Watch***

**Share Repurchases** – Recently, KMI has resumed repurchasing their shares. Therefore, because of the impact that this could have on models, this should be watched closely.

**Declared Dividends** – Expected \$1 per share in 2019 and \$1.25 per share in 2020.

**Transport Volume** – Specifically with the natural gas segment. As these projects become more on-line throughout the year, the volumes should increase.

“For the full year, natural gas demand increased from approximately 81 Bcf a day to approximately 90 Bcf a day, a 9 Bcf a day or 11% increase. This is driving nice results on our large diameter pipes. For the fourth quarter, transport volumes increased approximately 4.5 Bcf a day on our transmission system, 15% growth. (Company Call)”

**Backlog** – the company has a stated goal of growing backlog by 2-3 billion per year. Therefore, watching the backlog as these projects get shifted off will be a key to future growth.

## Investment Thesis Part Two:

There are currently rumors surrounding KMI and the potential sale of their CO2 segment. This segment which has greater sensitivity to oil price changes (because of volumes) than the rest of the business and, therefore, their potential selling of this business would warrant a higher multiple from the market. The story was first rumored in a Bloomberg article. The link can be found below.

<https://www.bloomberg.com/news/articles/2019-01-17/kinder-morgan-is-said-to-weigh-sale-of-carbon-dioxide-business>

Lending additional credence to these rumors are recent acquisition of shares by insiders.

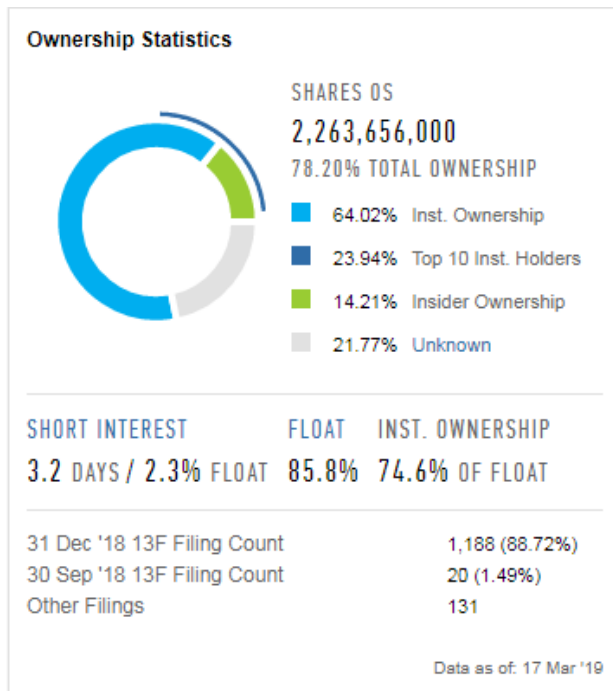
Most Recent 15 Insider/Stakeholder Transactions

Name	Title	Pos. Chg	Net Val. Chg	Price	Direct/Indirect	Date	Trans. Type	Form	Rule 10b5-1
Kinder Richard D	Executive Chairman, Director	300,000	-5,759,000	19.33	Direct	02/26/2019	P - Open market or private p...	4	N
		300,000	-5,767,000	19.29	Direct	02/25/2019	P - Open market or private p...	4	N
		300,000	-6,743,000	19.15	Direct	02/21/2019	P - Open market or private p...	4	N
		19,112	-359,114	18.79	Direct	02/19/2019	P - Open market or private p...	4	N
		200,000	-3,766,000	18.90	Direct	02/15/2019	P - Open market or private p...	4	N
		200,000	-3,679,000	18.39	Direct	02/12/2019	P - Open market or private p...	4	N
		114,932	-2,049,240	17.83	Direct	02/08/2019	P - Open market or private p...	4	N
		400,000	-7,162,000	17.90	Direct	02/07/2019	P - Open market or private p...	4	N
		200,000	-3,666,000	18.33	Direct	02/05/2019	P - Open market or private p...	4	N
		150,000	-2,746,500	18.31	Direct	02/04/2019	P - Open market or private p...	4	N
		500,000	-1,808,000	18.05	Direct	01/31/2019	P - Open market or private p...	4	N
		89,260	-1,171,420	17.95	Direct	01/30/2019	P - Open market or private p...	4	N
		60,000	-898,000	17.92	Direct	01/29/2019	P - Open market or private p...	4	N
David Joel V	Director	-	-	-	-	-	-	-	-
Sandra Payne Shandy	Director	11,930	-200,046	17.32	Direct	01/15/2019	A - Grant, award or other ac...	4	N
		11,930	-200,046	17.32	Direct	01/15/2019	A - Grant, award or other ac...	4	N

“Richard D. Kinder is a co-founder of KMI which was formed in 1997. Currently, Mr. Kinder is the Executive Chairman of KMI. Under his leadership, KMI has grown from an organization consisting of 175 employees with an enterprise value of \$325 million to one of the largest energy infrastructure companies with approximately 11,000

employees. I would consider Mr. Kinder an expert in the energy sector as he is responsible for developing and executing KMI's vision and strategy over the years.

We are not even halfway through March and Mr. Kinder has made 16 separate purchases of KMI's stock. He has paid from \$17.83 to \$19.93 per share and has acquired over 2.7 million shares since the beginning of the year. It's always refreshing to see the Chairman make an insider purchase but Mr. Kinder is making a statement spending just over \$50 million on additional KMI shares. I don't care what your net worth is, you're not going to invest \$50+ million on a hunch or a speculative bet. I would think that Mr. Kinder has a great insight to the future of KMI and his recent investments shouldn't go unnoticed (Seeking Alpha)."



## **Business Description**

Kinder Morgan is a leading energy infrastructure company. The conduct business through four major segments: Natural Gas Pipelines, Products Pipelines, Terminals, CO2.

Below are the descriptions of the four business segments according to the most recent 10-K filing.

### ***Segments***

**“Natural Gas Pipelines**—the ownership and operation of (i) major interstate and intrastate natural gas pipeline and storage systems; (ii) natural gas and crude oil gathering systems and natural gas processing and treating facilities; (iii) NGL fractionation facilities and transportation systems; and (iv) LNG facilities. (Company Filings)”

**“Products Pipelines**—the ownership and operation of refined petroleum products, NGL and crude oil and condensate pipelines that primarily deliver, among other products, gasoline, diesel and jet fuel, propane, ethane, crude oil and condensate to various markets, plus the ownership and/or operation of associated product terminals and petroleum pipeline transmix facilities. (Company Filings)”

**“Terminals**—the ownership and/or operation of (i) liquids and bulk terminal facilities located throughout the U.S. and portions of Canada that transload and store refined petroleum products, crude oil, ethanol and chemicals, and bulk products, including petroleum coke, metals and ores; and (ii) Jones Act tankers. (Company Filings)”

**“CO2**—(i) the production, transportation and marketing of CO2 to oil fields that use CO2 as a flooding medium to increase recovery and production of crude oil from mature oil fields; (ii)

ownership interests in and/or operation of oil fields and gas processing plants in West Texas; and (iii) the ownership and operation of a crude oil pipeline system in West Texas. (Company Filings)”

“Kinder Morgan Canada (prior to August 31, 2018)—the ownership and operation of the Trans Mountain pipeline system that transports crude oil and refined petroleum products from Edmonton, Alberta, Canada to marketing terminals and refineries in British Columbia, Canada and the state of Washington. As a result of the TMPL Sale, this segment does not have results of operations on a prospective basis. (Company Filings)”

### ***Recent News***

The most recent news for KMI is in regards to their CO2 Segment. The current rumor is that KMI is thinking about potentially selling this segment. Many are regarding this potential as a positive because the company has been investing heavily into the CO2 segment and the revenue has been sporadic and dependent on the price of oil. Therefore, the market is viewing the potential sale as stabilizing and a good way to increase capex for the more profitable “Natural Gas Pipelines” segment which is experiencing industry tailwind for the first time in several years. Below is the hyperlink to the Bloomberg Article which first broke the rumor.

<https://www.bloomberg.com/news/articles/2019-01-17/kinder-morgan-is-said-to-weigh-sale-of-carbon-dioxide-business>)

## Revenue Dichotomy & Growth Rate

**Sales**

	DEC '09 365 DAYS	DEC '10 365 DAYS	DEC '11 365 DAYS	DEC '12 365 DAYS	DEC '13 365 DAYS	DEC '14 365 DAYS	DEC '15 365 DAYS	DEC '16 365 DAYS	DEC '17 365 DAYS	DEC '18 365 DAYS
<b>Total</b>	<b>7,185</b>	<b>8,191</b>	<b>8,265</b>	<b>9,973</b>	<b>14,078</b>	<b>16,226</b>	<b>14,403</b>	<b>13,050</b>	<b>13,697</b>	<b>14,172</b>
Natural Gas Pipelines	2,907	4,417	4,265	5,230	8,613	10,153	8,704	8,005	8,618	8,915
Terminals	1,108	1,264	1,314	1,356	1,408	1,717	1,678	1,922	1,966	2,019
Products Pipelines	627	383	914	1,370	1,853	2,066	1,828	1,648	1,661	1,713
CO2	1,131	1,298	1,434	1,677	1,957	1,960	1,699	1,221	1,196	1,255
Kinder Morgan Canada	226	269	302	311	302	291	260	253	256	170
Historical Segments	66	60	36	28	37	37	34	-	-	-

All figures in millions of U.S. Dollar

**Percent of Total (%)**

	DEC '09	DEC '10	DEC '11	DEC '12	DEC '13	DEC '14	DEC '15	DEC '16	DEC '17	DEC '18
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Natural Gas Pipelines	53.0	53.9	51.6	52.4	61.2	62.6	60.4	61.3	62.9	63.6
Terminals	15.4	15.4	15.9	13.6	10.0	10.6	13.0	14.7	14.4	14.2
Products Pipelines	11.5	10.8	11.1	13.7	13.2	12.7	12.7	12.6	12.1	12.1
CO2	15.7	15.9	17.3	16.8	13.2	12.1	11.8	9.4	8.7	8.9
Kinder Morgan Canada	3.1	3.3	3.7	3.1	2.1	1.8	1.8	1.9	1.9	1.2
Historical Segments	1.2	0.7	0.4	0.3	0.3	0.2	0.2	-	-	-

**Growth (%)**

	DEC '09	DEC '10	DEC '11	DEC '12	DEC '13	DEC '14	DEC '15	DEC '16	DEC '17	DEC '18
<b>Total</b>	<b>-39.9</b>	<b>14.0</b>	<b>8.9</b>	<b>28.7</b>	<b>41.1</b>	<b>15.3</b>	<b>-11.2</b>	<b>-3.4</b>	<b>5.0</b>	<b>3.5</b>
Natural Gas Pipelines	-54.6	16.0	-3.4	22.6	64.7	17.9	-14.3	-8.0	7.7	4.6
Terminals	-5.5	14.1	3.9	3.2	3.6	21.9	9.4	2.3	2.3	2.7
Products Pipelines	1.3	6.8	3.5	49.9	35.3	11.8	-11.6	-9.6	0.7	3.1
CO2	-10.9	14.8	10.4	17.0	10.7	5.5	-13.3	-29.1	-2.0	4.9
Kinder Morgan Canada	13.7	18.8	12.6	2.8	-2.9	-3.6	-10.7	-2.7	1.2	-33.6
Historical Segments	2.6	-30.2	-39.9	-19.3	27.6	0.0	-8.1	-	-	-

Financial Data Source: FactSet

As can be seen, the Natural Gas Pipelines segment is the largest of the segments and CO2 is the smallest of the remaining segment (Kinder Morgan Canada was sold in 2018). Therefore, while the rumor would not have a great impact of the top line, it would have a great impact, potentially, on the markets view of the company, which should warrant a higher multiple. Because CO2 makes up a large portion of their backlog, by freeing up this capital, the firm would increase their ability to share repurchases or grow pipeline's backlog (increase the firm's growth prospect). Both of which would, in the opinion of this author, be a positive for KMI longer-term.



## Economic Analysis (Energy Sector)

The energy sector is a particularly interesting sector because it doesn't follow the same economic trends as the other industries. For example, with the consumer discretionary industry, it is important to understand what part of the economic cycle a particular country is in because an expansionary economy is going to increase consumer optimism and wealth which in turn will increase consumer product demand and aid consumer discretionary companies. However, with the analysis of KMI, it is clear that the pipelines industry and the energy sector as a whole is primarily dependent on the fluctuations of demand and supply for the particular commodity that that company helps produce or transport. In the case of KMI, the commodities are primarily natural gas with some exposure to transporting oil. Therefore, the economic analysis of this paper is going to focus on the production and supply of Nat. Gas as well as the underlying secular trend that is currently making its way through the energy space, LNG (Liquefied Natural Gas).

### *Nat. Gas/Oil Production*

Exhibit 2 - US Natural Gas Production by Basin

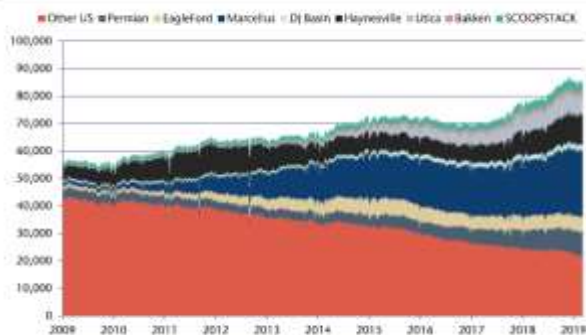


Exhibit 3 - Annual US Natural Gas Production

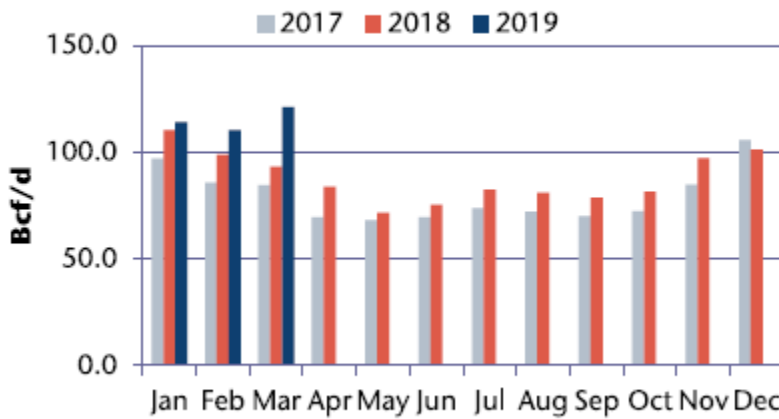


Source: Jefferies

During the first quarter of 2019, the US has seen a nice year-over-year increase in natural gas production, as can be seen in the graph above (right). This is a continuation of a decade long trend of increase natural gas production, led by growth in Permian production which can be seen in blue in the graph above (left).

*Nat. Gas/Oil Demand*

**Exhibit 12 - US Natural Gas Demand**

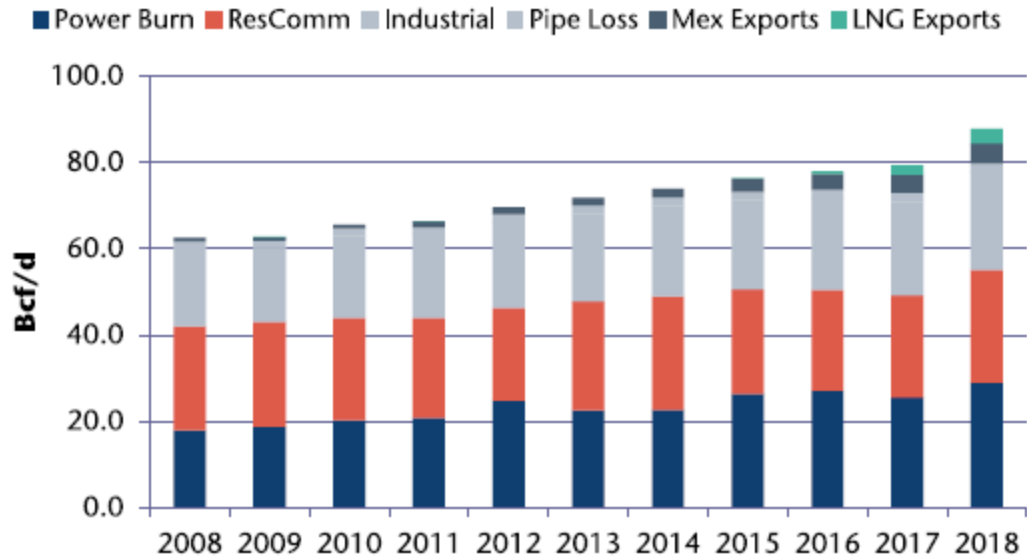


Source: Bentek, Jefferies

Source: Jefferies

This increase on natural gas has been necessitated by the growth in demand for natural gas, which is once again experiencing year-over year growth and similar to production this is a continuation of a decade long trend supported by growth across the demand sources, which can be seen below.

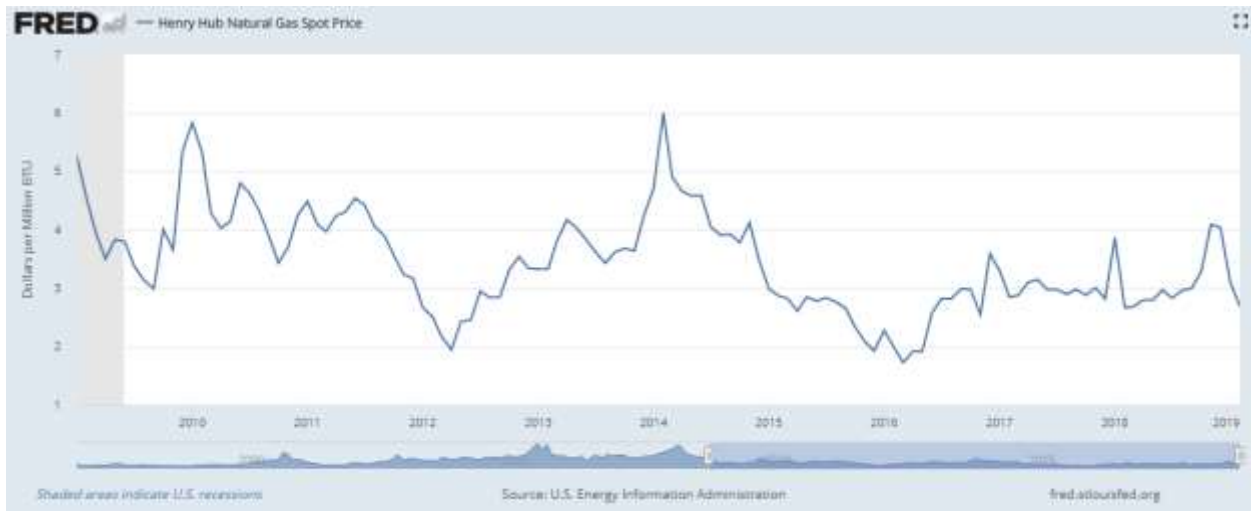
### Exhibit 13 - US Natural Gas Demand by Source



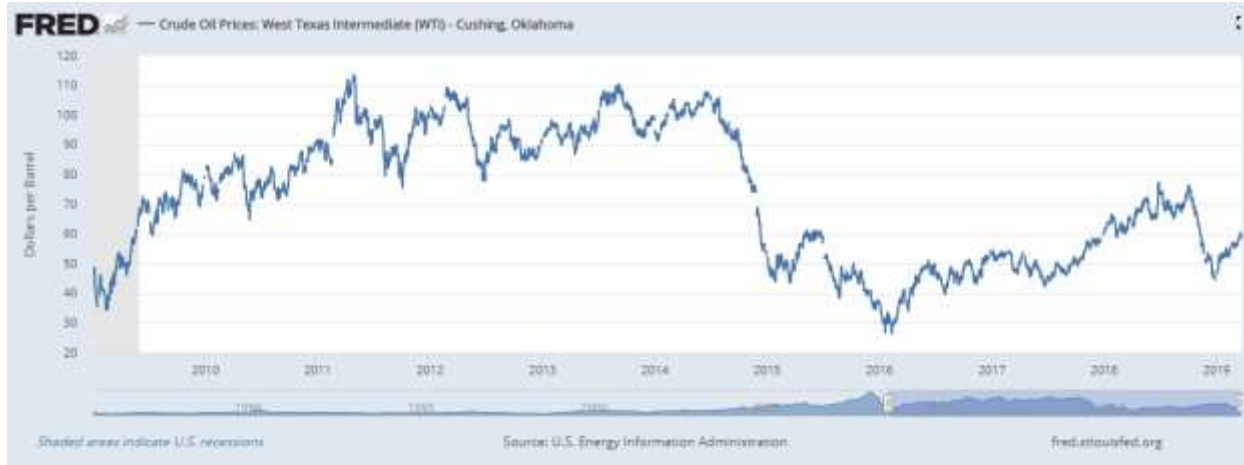
Source: Bentek, Jefferies

Source: Jefferies

### Oil & Nat. Gas Prices



Source: FRED



Source: FRED

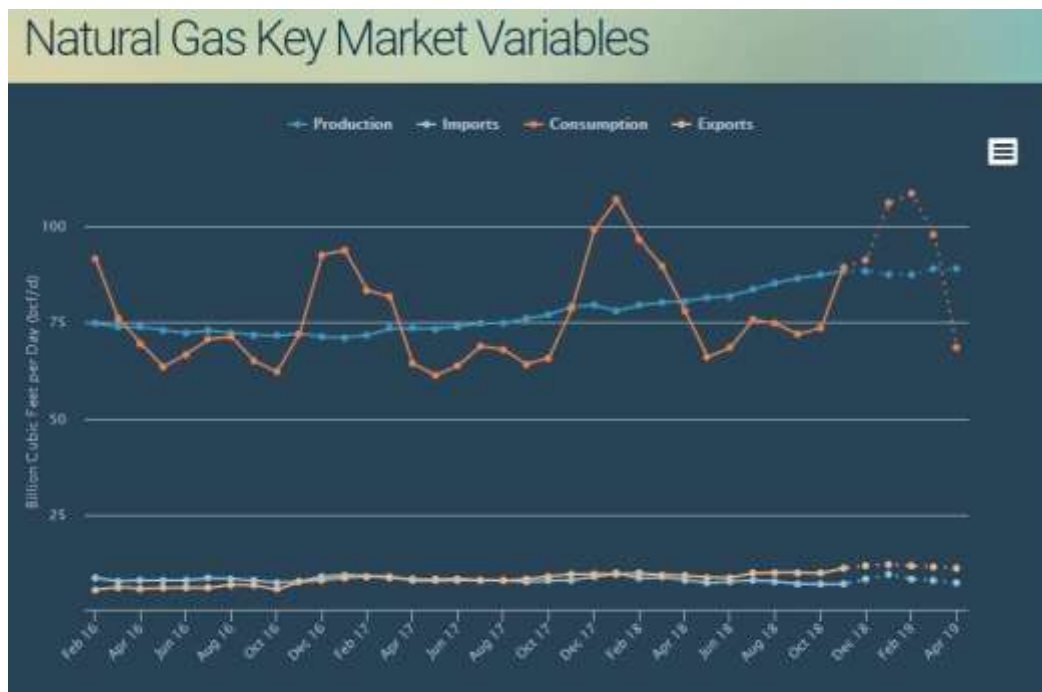
No economic analysis of the energy sector would be adequate without a mention of natural gas and oil prices. However, this paper is not aware of any way to accurately estimate oil prices, if one exists it is probably being held under lock and key as because that would be incredibly valuable. Nonetheless, it is important to realize that when prices are high the internal rate of return (IRR) requirements that companies impose are going to be able to be met with less difficulty and therefore they are going to produce more oil/natural gas. When the opposite is true, they are going to be less inclined to pump commodities and production will decrease. Therefore, it is important to realize that currently natural gas is down from the end of last year (Dec. 2018) and the same is true of oil.

### ***Energy Sector Outlook***

Due to the long run secular trends, there are two main areas to watch in terms of domestic energy plays. The first is the increase in LNG activity over the course of 2019 and into 2020+. The second is the increases being seen in the exportation of US energy.

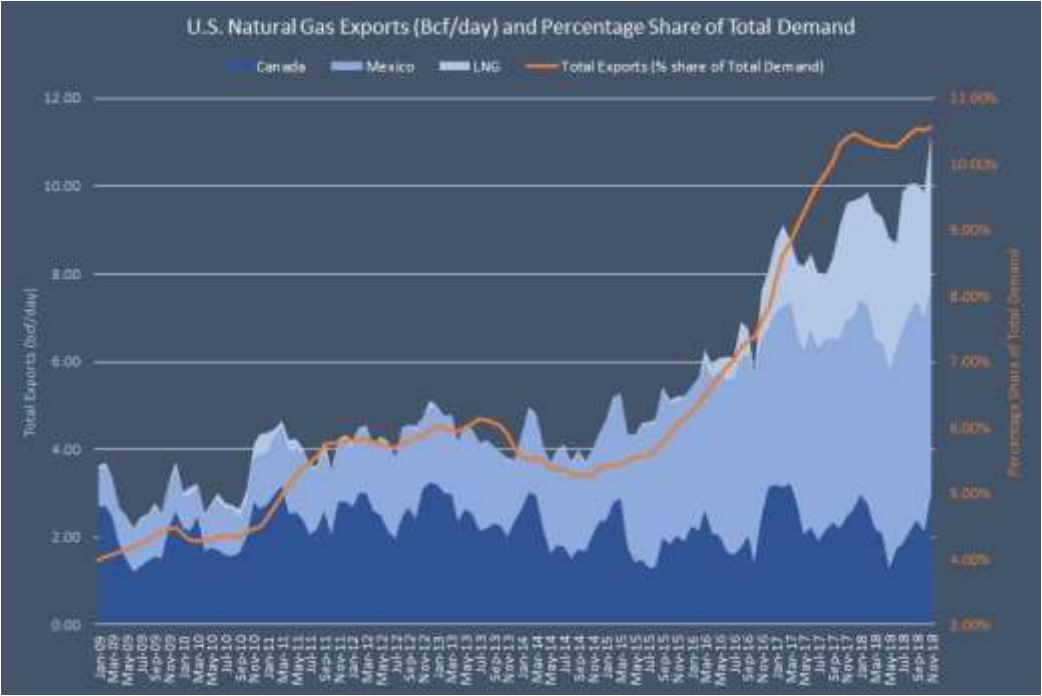
## Short-Term

In the short-term, production is expected to be flat or down slightly. However, this is due in large part to the inadequate levels of pipelines that are currently on-line to support production. As a result, Exploration & Production companies have had to slow production. This can be seen in the upper blue dashed line in the chart below. However, the other takeaway from the chart directly below is the fact that the US is now a net exporter of natural gas. This can be seen in the lower two lines which show that the US has been exporting more natural gas than it imports since February 2018. According to this forecaster, this is expected to continue.



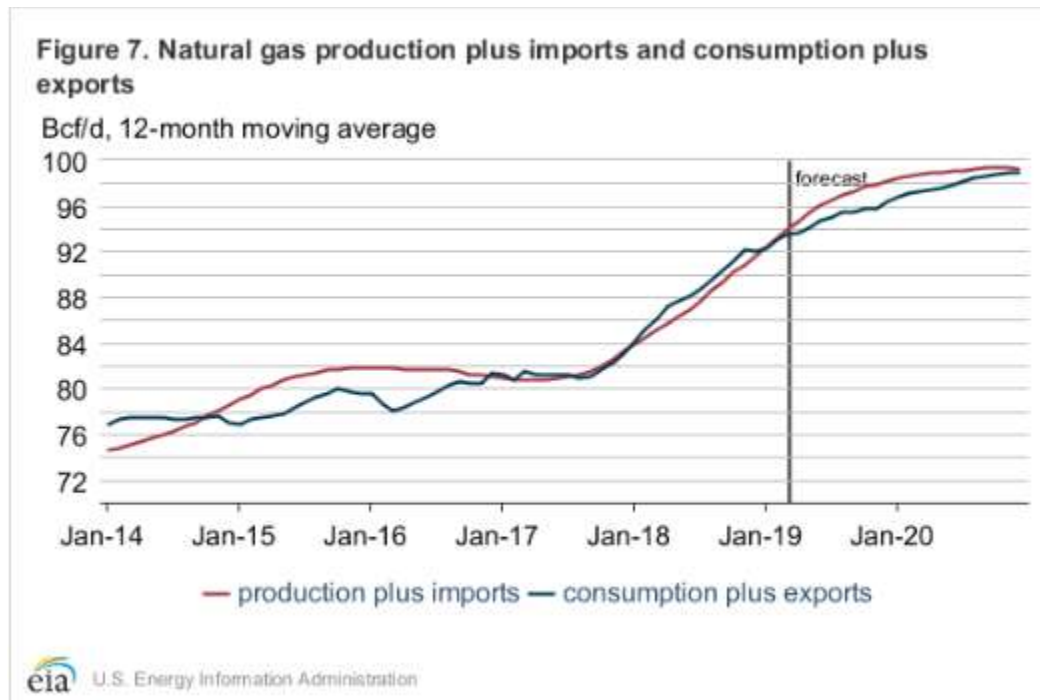
Source: Bluegold Research (Seeking Alpha)

The last short term economic takeaway is a continuation of one of the points being made above which is that exports have continued and a large portion of that is due to LNG ramping and projects being announced. This can be seen in the chart below.



Source: Bluegold Research (Seeking Alpha)

## Medium-Term



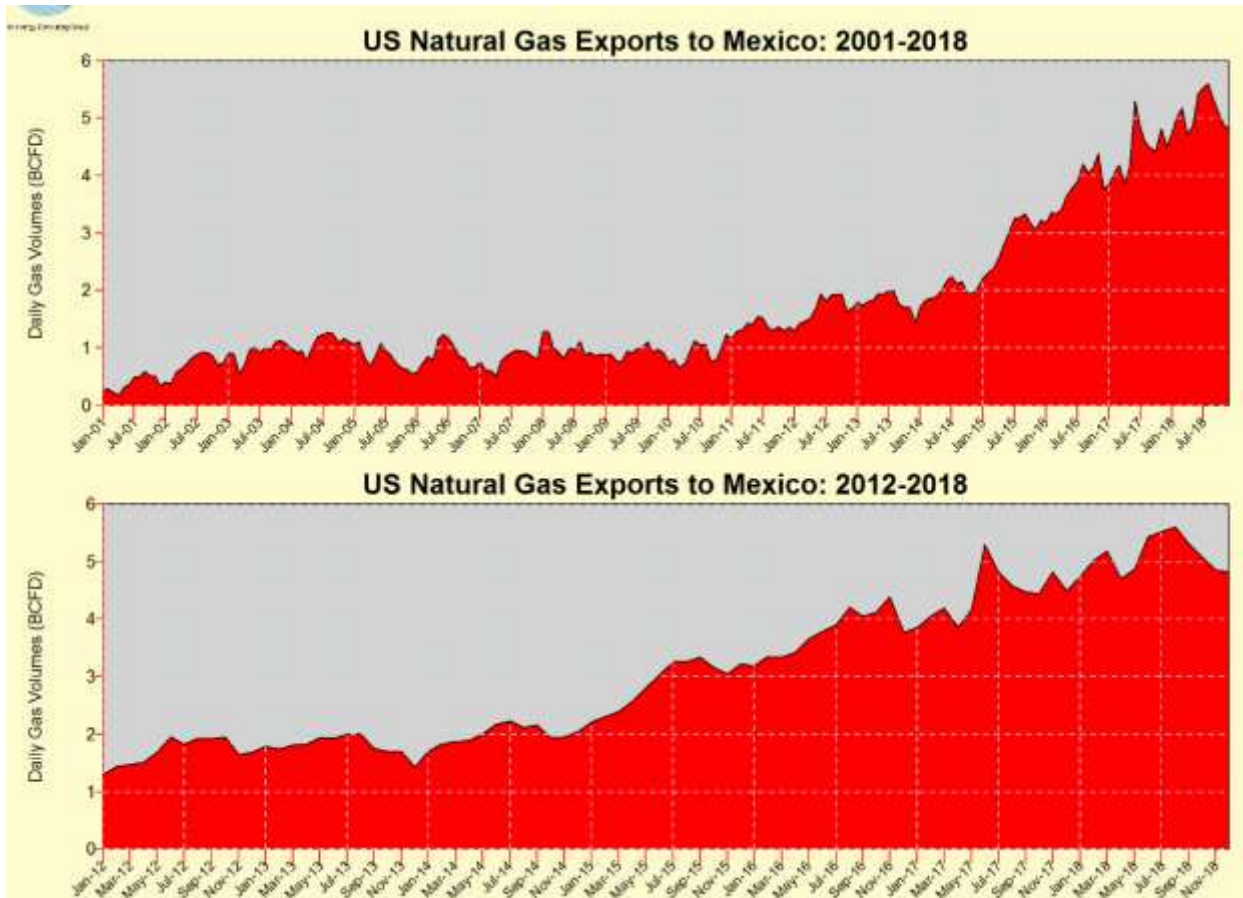
Source: US EIA

In the medium term, energy exports are expected to ramp and the natural gas demand in North America is expected to double its CAGR. The expectations for exports can be seen in the graph above and the growth in demand can be seen in the graph below. Lastly, the exports to Mexico are expected to continue to ramp and the trend generally continue as can be seen in the graph below. These trends should support a continuation of strong underlying demand to the natural gas industry and require that pipelines be both built and utilized in the transportation of liquid commodities to their processing centers.

**NORTH AMERICAN NATURAL GAS DEMAND BY SECTOR (2012-2023)**



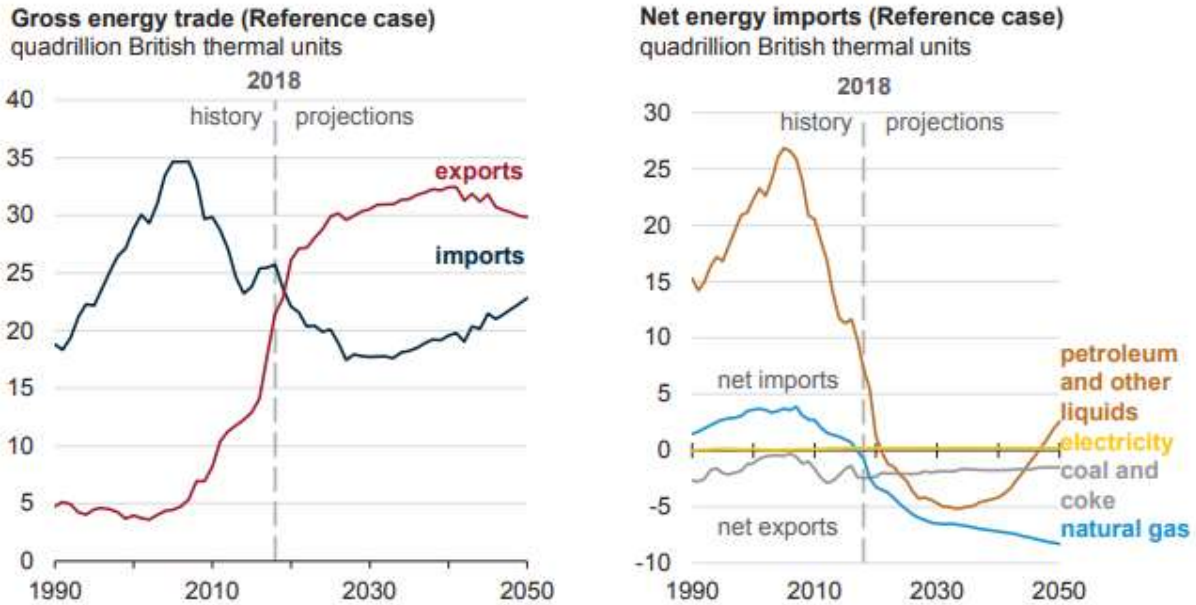
Source: Williams Company Presentation



Source: The Energy Consulting Group



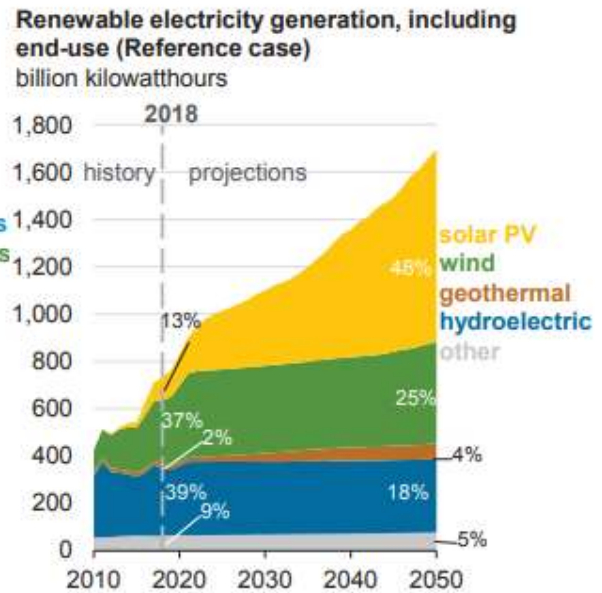
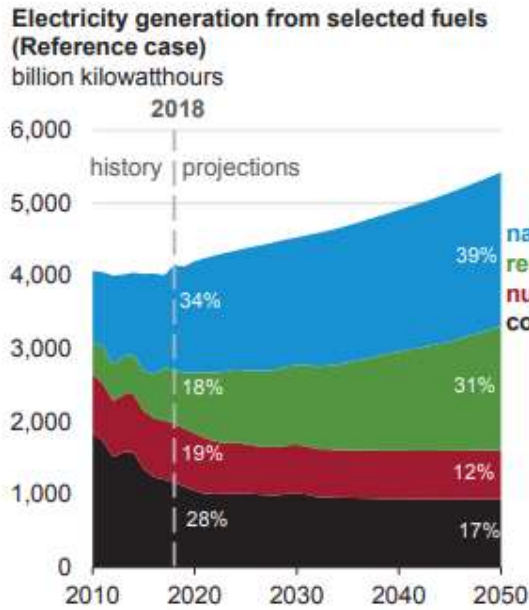
## Long-Term



Source: US EIA

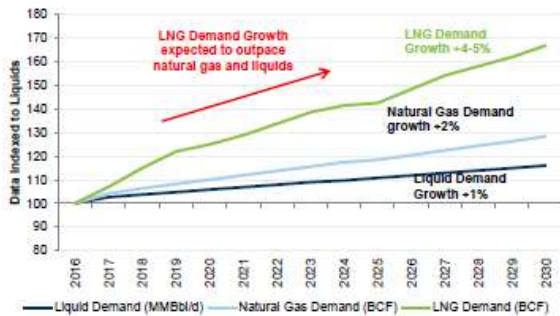
Over the long-term, The US is expected to increase its export in natural gas. This can be seen in the two charts above with the light blue line in the right graph showing the ramping of net exports in nat. gas with the current year being the inflection point. This would require additions to the current energy infrastructure in this country, specifically pipelines to transport additional liquids. Below are breakdowns in the electricity generation by fuels. The graph also

shows the capturing of nat. gas in terms of that electricity generation from 2020 to 2050.



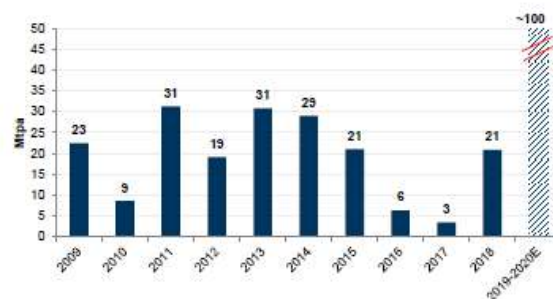
Source: US EIA

**Exhibit 22: LNG long-term demand forecast**  
LNG demand to outpace



Source: Baker Hughes, Goldman Sachs Global Investment Research

**Exhibit 23: LNG awards (Mtpa) - 2009-2020E**  
Strong growth expected



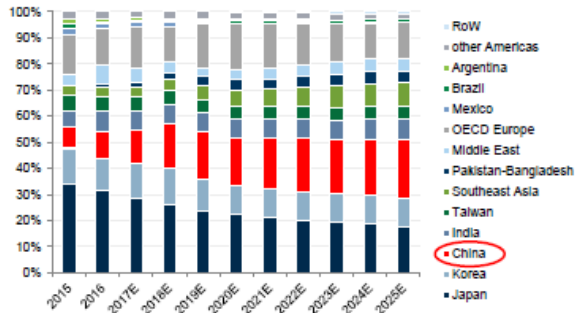
Source: IHS Markit, Company data, Goldman Sachs Global Investment Research

Source: Goldman Sachs

Part of the increase in exports is expected to be the increases in LNG being seen in the country over the next few years. The two graphs above show the increase in demand for LNG

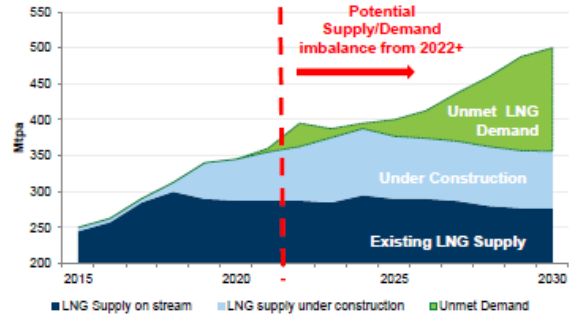
and the ramping of LNG awards that will help facilitate the LNG flow. As can be seen, the inflection point is 2019-2020E.

**Exhibit 24: LNG demand growth driven by China**



Source: Goldman Sachs Global Investment Research

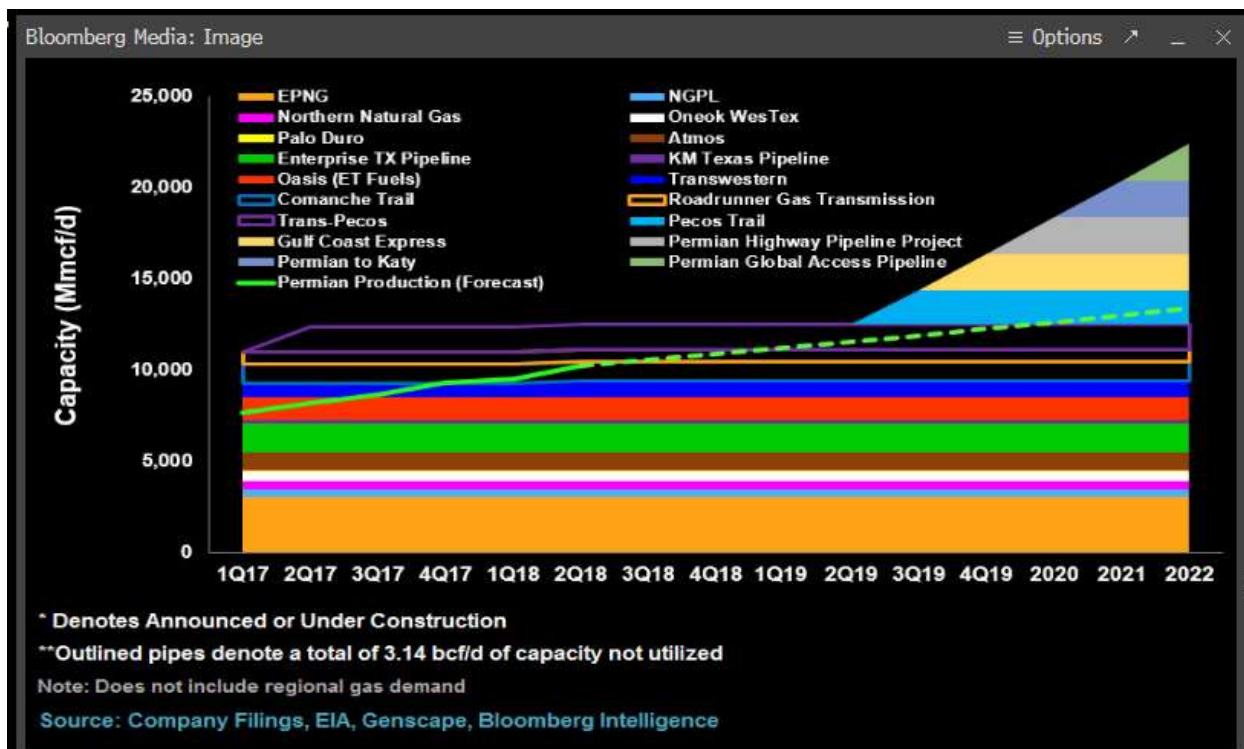
**Exhibit 25: LNG Supply/Demand Imbalance from 2022+**



Source: IHS Markit, Goldman Sachs Global Investment Research

Source: Goldman Sachs

The demand underlying the growth in production is driven primarily China and other countries in Southeast Asia. This is shown in the graph to the right above. The graph to the left shows the supply demand imbalance and the amount of LNG supply which is under construction.

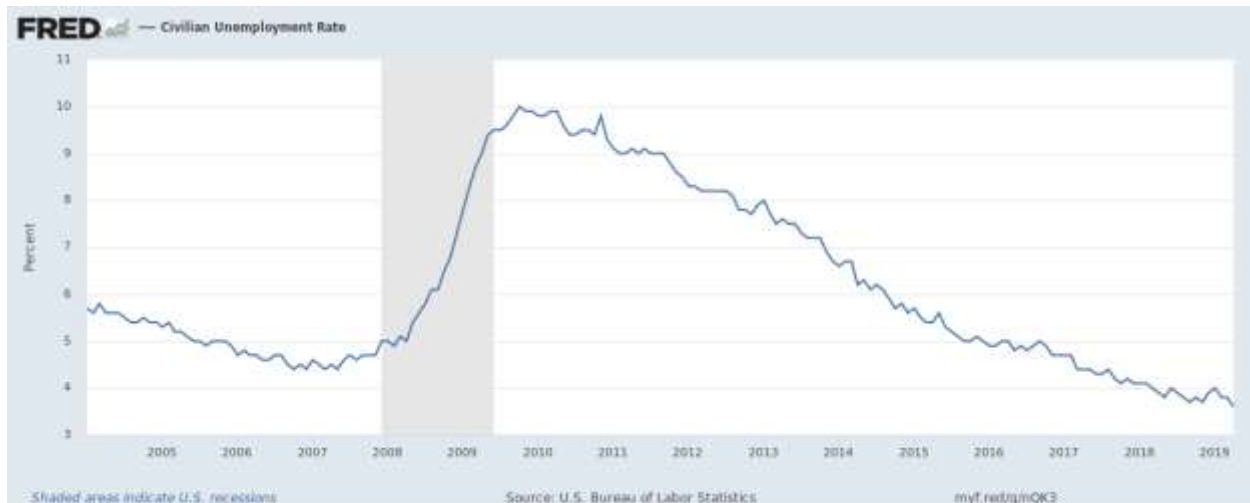


Source: Bloomberg

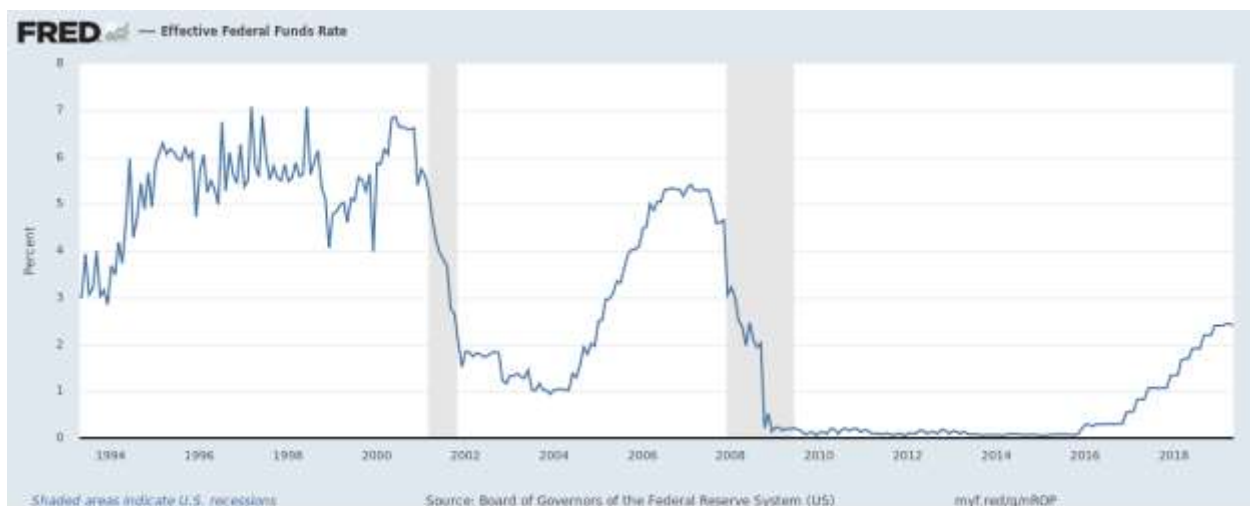
Many of the increases in general natural gas and LNG will require increases in energy infrastructure and part of that process is additional spending on pipelines as production comes on-line. In the above graph, the specific increases in pipeline capacity can be seen as well as which project they belong to/the name of the project. This is important to monitor because the companies spending on pipelines still need to execute their business strategy and make sure their pipelines become operational on time and while this is a micro issue that each company needs to solve on its own. The macro implications are still inherent as a short-term headwind currently being faced by the US energy market is the ramifications of pipeline shortages which are forcing E&P companies to delay spending and leave wells incomplete at times because they cannot transport out their commodities even if they were produced. Therefore, the above graph is extremely important to the energy sectors macro situation.

## US Economic Outlook

### Unemployment



Currently, unemployment is at one of the lowest rates that has been recorded during the last 50 years. Because of this, there is growing concern that this will begin to move in the opposite direction after the economy overheats. This fear is further cemented by Fed's decisions last year to hike interest rates, even though they have said that they are seriously evaluating whether they will hike rates in the future. Below is the Fed Funds Rate.



As can be seen, the direction of the Fed Funds Rate has changed and the longer term trend of fallen interest rates has been reversed. This will have lasting implications on energy sector IRR & NPV decisions. However, the intermediate term outlook does seem to support a relatively stable economy over the next 18-24 months. However, beyond that remains to be seen.

### **Industry Overview**

The US Pipelines industry is extremely competitive with each firm competing for the rights to transport energy fuels and gases from their wells to their refineries, liquefiers, and shipping destinations. That being said, there are only a handful of large pipeline companies because of the capital intensity required to compete. Kinder Morgan is one of these large pipeline companies. Just as a general note, the companies in this space generally fall into one of two categories. It is either an MLP (Master Limited Partnership) or a C-Corp. The MLPs are usually smaller and trade at a discount because of the legal challenges that MLPs face, which includes certain payout levels and unfavorable tax implications. Therefore, for the purposes of this analysis, this paper will only be examining the large C-corps that are pipeline “pure plays” because that is the category that Kinder Morgan is in.

### ***Comps***

The two best peers for Kinder Morgan (KMI) are ONEOK (OKE) and Williams Companies (WMB). Both of these are publically traded and have large pipeline assets throughout the country which allows them to compete with KMI. Below is some summary data about the three companies provided by FactSet. However, only OKE was analyzed because it is the only pure play other than KMI. The rest have other businesses included and are therefore conglomerates.

Company Name	Fiscal Period	Price	Shares Outstanding	Market Value	Shares Outstanding Diluted	Enterprise Value	Sales	EBIT	EBITDA	Enterprise Value/ EBIT	Enterprise Value/ EBITDA
Kinder Morgan P	12/31/2018	20.08	2,263.6	45,385.4	2,248.0	80,637.4	14,274.0	4,065.0	6,362.0	19.56x	12.67x
<b>Average</b>		<b>48.83</b>	<b>812.2</b>	<b>32,194.3</b>	<b>813.8</b>	<b>48,687.8</b>	<b>10,896.9</b>	<b>1,967.3</b>	<b>3,072.8</b>	<b>24.41x</b>	<b>15.91x</b>
<b>Median</b>		<b>48.83</b>	<b>812.2</b>	<b>32,194.3</b>	<b>813.8</b>	<b>48,687.8</b>	<b>10,896.9</b>	<b>1,967.3</b>	<b>3,072.8</b>	<b>24.41x</b>	<b>15.91x</b>
Williams Cos	12/31/2018	29.11	1,211.7	35,273.7	1,210.8	58,891.7	8,666.0	2,025.0	3,766.0	29.06x	15.64x
ONEOK	12/31/2018	70.54	412.7	29,114.8	415.1	38,483.9	12,707.6	1,848.5	2,378.1	19.74x	16.18x

Company Name	Fiscal Period	Price	Shares Outstanding	Market Value	Enterprise Value	Cash & ST Investments	Total Debt	Preferred Stock	Accumulated Minority Interest	Ownership % Insider	Ownership % Institution
Kinder Morgan P	12/31/2018	20.08	2,263.6	45,385.4	80,637.4	3,581.0	37,324.0	0.0	1,519.0	14.22%	84.11%
<b>Average</b>		<b>48.83</b>	<b>812.2</b>	<b>32,194.3</b>	<b>48,687.8</b>	<b>88.8</b>	<b>15,897.5</b>	<b>17.5</b>	<b>688.5</b>	<b>0.88%</b>	<b>85.16%</b>
<b>Median</b>		<b>48.83</b>	<b>812.2</b>	<b>32,194.3</b>	<b>48,687.8</b>	<b>90.8</b>	<b>15,897.5</b>	<b>17.5</b>	<b>688.5</b>	<b>0.88%</b>	<b>85.16%</b>
Williams Cos	12/31/2018	29.11	1,211.7	35,273.7	58,891.7	188.0	22,414.0	35.0	1,337.0	0.42%	92.40%
ONEOK	12/31/2018	70.54	412.7	29,114.8	38,483.9	12.0	3,381.0	0.0	0.0	0.77%	77.89%

Company Name	Fiscal Period	Enterprise Value	Assets 1 Yr Growth	Assets 3 Yr Growth	EBITDA 1 Yr Growth	EBITDA 3 Yr Growth	Sales 1 Year Growth	Sales 3 Year Growth	EPS (Basic) 1 Yr Growth	EPS (Basic) 3 Yr Growth
Kinder Morgan P	12/31/2018	80,637.4	-0.2	-6.0	10.7	0.1	4.8	2.8	6,500.00	371.43
<b>Average</b>		<b>48,687.8</b>	<b>3.7</b>	<b>6.4</b>	<b>16.4</b>	<b>45.4</b>	<b>6.8</b>	<b>41.7</b>	<b>4.29</b>	<b>140.68</b>
<b>Median</b>		<b>48,687.8</b>	<b>3.7</b>	<b>6.4</b>	<b>16.4</b>	<b>45.4</b>	<b>6.8</b>	<b>41.7</b>	<b>4.29</b>	<b>140.68</b>
Williams Cos	12/31/2018	58,891.7	-0.6	-5.3	5.8	14.4	8.2	18.0	-100.00	-
ONEOK	12/31/2018	38,483.9	8.2	18.0	27.1	76.5	3.8	65.4	106.58	140.68

Company Name	Fiscal Period	Gross Margin	Gross Margin NTM	EBITDA Margin	EBITDA Margin NTM	EBIT Margin	EBIT Margin NTM	Pretax Margin	Pretax Margin NTM	Net Margin	Net Margin NTM
Kinder Morgan P	12/31/2018	35.1%	-	44.8%	51.4%	28.5%	31.2%	17.8%	20.3%	11.2%	15.2%
<b>Average</b>		<b>23.0%</b>	<b>26.7%</b>	<b>31.8%</b>	<b>37.9%</b>	<b>19.3%</b>	<b>22.6%</b>	<b>7.9%</b>	<b>16.0%</b>	<b>3.8%</b>	<b>11.6%</b>
<b>Median</b>		<b>23.0%</b>	<b>26.7%</b>	<b>31.8%</b>	<b>37.9%</b>	<b>19.3%</b>	<b>22.6%</b>	<b>7.9%</b>	<b>16.0%</b>	<b>3.8%</b>	<b>11.6%</b>
Williams Cos	12/31/2018	28.9%	-	43.4%	55.3%	25.3%	28.6%	3.8%	19.1%	-1.8%	13.3%
ONEOK	12/31/2018	16.2%	26.7%	18.7%	20.5%	15.3%	15.6%	11.9%	12.5%	9.1%	5.9%

Company Name	Fiscal Period	Enterprise Value	Earnings per Share FY1	Price to Earnings Actual	Price to Earnings FY1	Price to Earnings NTM	FY1 Date	Enterprise Value/ Sales	Enterprise Value/ EBIT	Enterprise Value/ EBITDA	Total Debt/ EBITDA	Total Debt/ Enterprise Value
Kinder Morgan P	12/31/2018	80,637.4	1.01	30.36x	19.95x	19.60x	12/2019	6.85x	19.64x	12.67x	5.67x	40.29%
<b>Average</b>		<b>48,687.8</b>	<b>1.97</b>	<b>25.47x</b>	<b>27.11x</b>	<b>25.95x</b>		<b>4.96x</b>	<b>24.41x</b>	<b>15.91x</b>	<b>4.86x</b>	<b>31.22%</b>
<b>Median</b>		<b>48,687.8</b>	<b>1.97</b>	<b>25.47x</b>	<b>27.11x</b>	<b>25.95x</b>		<b>4.96x</b>	<b>24.41x</b>	<b>15.91x</b>	<b>4.86x</b>	<b>31.22%</b>
Williams Cos	12/31/2018	58,891.7	0.95	-	30.57x	29.80x	12/2019	6.75x	29.06x	15.84x	3.95x	38.96%
ONEOK	12/31/2018	38,483.9	2.98	25.47x	23.65x	22.30x	12/2019	3.00x	19.74x	16.18x	3.94x	24.38%

The above financial information provides interesting insight into the industry. For example, in the third chart, it can be seen that ONEOK is growing very fast compared to its larger peers (WMB & KMI). This makes sense given that ONEOK has been taking share from the other for about 4 years now. It can also be seen that KMI has better margins than its two other comps. This would seem to indicate its more mature phase and better operating efficiency due to that maturity.

## ***Porter's Five Forces***

### ***Competitive Rivalry***

On the topic of competition, KMI provides the following analysis in their 10-K report.

*“The market for supply of natural gas is highly competitive, and new pipelines, storage facilities, treating facilities, and facilities for related services are currently being built to serve the growing demand for natural gas in each of the markets served by the pipelines in our Natural Gas Pipelines business segment. Our operations compete with interstate and intrastate pipelines, and their shippers, for connections to new markets and supplies and for transportation, processing and treating services. We believe the principal elements of competition in our various markets are location, rates, terms of service and flexibility and reliability of service. From time to time, other projects are proposed that would compete with us. We do not know whether or when any such projects would be built, or the extent of their impact on our operations or profitability (Source 10-K).”*

This analysis seems consistent with what the numbers say about the industry. All three of the comps are large players and while their growth rates are slightly different, this has more to do with the particular geographies that these players compete in (Southeast versus West versus North). The reason for the differentiation between the sizes of the companies, which is what helps allow them to dominate the three geographies, has to do with the amount of oil being extracted from the three areas and the amount of new wells that are being built and completed. The Permian Basin in West Texas is currently one of the hottest places to be in regards to oil.



Therefore, the growth rates and infrastructure requirements for companies in that are going to be faster and larger than a company servicing the Appalachian region.

### *Supplier Power*

Because of the nature of this business, the company is paid based on the amount of fuels transported. Therefore, the supplier in that sense are E&P (Energy & Production) companies which need their fuels transported. Therefore, KMI and the industry as a whole are going to be exposed to the financial health of companies further upstream (upstream companies are E&P companies). On this subject, the company (KMI) wrote the following in their 10-K.

*“Financial distress experienced by our customers or other counterparties could have an adverse impact on us in the event they are unable to pay us for the products or services we provide or otherwise fulfill their obligations to us. We are exposed to the risk of loss in the event of nonperformance by our customers or other counterparties, such as hedging counterparties, joint venture partners and suppliers. Many of our counterparties finance their activities through cash flow from operations or debt or equity financing, and some of them may be highly leveraged. Our counterparties are subject to their own operating, market, financial and regulatory risks, and some are experiencing, or may experience in the future, severe financial problems that have had or may have a significant impact on their creditworthiness (Source 10-K).”*

As can be seen, there is exposure to suppliers, however, no supplier makes up more than 10% of total revenue which help mitigate the risk to suppliers. Therefore, there is no specific supplier that presents worry, however, given that the suppliers are heavily influenced by oil and

natural gas prices, KMI does share exposure to factors like commodity prices because most of the company's further upstream will behave in similar ways during different portions of the energy cycle.

### *Buyer Power*

Unlike suppliers, the pipelines industry is not exposed to the buyer's end of the supply chain. This is because the buyers are the refineries that make the fuels useable to consumers and there are many such facilities. Additionally, the industry standard is to have these purchase agreements arranged before the fuels move an inch and therefore once they are in transport, there is almost no risk of the buyer deciding that they no longer want to fuel that they have already paid for. Thus, the pipelines industry is not exposed in any significant way on the buyer's side of the supply chain because of these contracts and the number of facilities which buy oil and natural gas products.

### *Threats of Substitution*

As with buyer's power, this industry is not exposed to a threat of substitute at this time. It is possible that in the future the industry will fall under threats of substitute, especially as environment concerns move more and more to the front of investor concerns. However, the main reason that the industry is to some degree isolated from the threat of substitution is that pipeline transportation is still the cheapest way to get fuels from their wells to their destinations that exists and, while that can change in the future, it currently provides some insurance against suppliers substituting pipelines for another transportation method.

## Threat of New Entry

Like the threat of buyers' power and substitution, the pipelines industry is protected from new entry because of the amount of capital required to build the infrastructure good enough to compete with the large pipeline companies. This protects the margins of the companies even in bad times and also allows them to be positive even when commodity prices deteriorate. This is a massive advantage compared to other industries which don't require the same level of capital to start up operations.

## Investment Risks

**Debt-level** – the company has committed to a Debt/ Adjusted EBITDA multiple of 4.5x.

However, this is still high compared to the industry and leaves them with a Debt/Market Cap of ~80% at present.

### KMI: 2019B Sources and Uses



\$ in millions

Sources	2019 Budget	Uses	2019 Budget
DCF	\$ 5,006	Dividends declared	\$ 2,278
Cash Proceeds from TMEP sale, net of KMI cash taxes <sup>(a)</sup>	1,965	Growth capital and contributions to JVs	3,085
Revolver Borrowing <sup>(b)</sup> /Debt Issuances	1,638	Debt maturities	2,813
		CP/Revolver Borrowing as of 12/31/2018	433
<b>Total Sources</b>	<b>\$ 8,609</b>	<b>Total Uses<sup>(c)</sup></b>	<b>\$ 8,609</b>

Plan to use internally generated cash flow to fully fund dividends and the majority of growth capital expenditures and contributions to JVs

Will use the Trans Mountain sale proceeds to pay down debt

No need to access equity markets in 2019B

However, the budgeted issuance of debt/borrowing against the revolver for the year is 1.638 billion against an expiring debt figure of 2.813 billion.

### Execution Risk with Several Large Projects

For the same reason that these projects are attractive, they also introduce execution risk. The three major projects in 2019 & 2020 are the Elba Island LNG Terminal, Gulf Coast Express, and Permian Highway Pipeline.

### Expiring Contracts

Several of their sites have their average contract length nearing expiration. This adds a level of uncertainty that could keep multiples from expanding in the near term.

## Natural Gas: Interstate Pipelines



Key statistics

		Ownership	Miles	Capacity (bcfd)	Storage (bcf)	Avg. Remaining Contract Term (yrs)	Effective Date of Next Rate Case
<b>100% KMI-owned:</b>							
TGP	Tennessee Gas Pipeline	100%	11,800	12.1	110	8.4 / 3.8 <sup>(a)</sup>	NA
EPNG	El Paso Natural Gas + Mojave	100%	10,660	5.7	44	5.2	NA
CIG	Colorado Interstate Gas	100%	4,300	5.2	38	6.2 / 6.4 <sup>(a)</sup>	4/1/2022
WIC	Wyoming Interstate	100%	850	3.8	–	3.5	4/1/2022
KMLP	Kinder Morgan Louisiana Pipeline	100%	135	3.0	–	0.8	NA
CP	Cheyenne Plains	100%	410	1.2	–	1.7	NA
TCGT	TransColorado	100%	310	0.8	–	0.9	NA
EEC	Elba Express	100%	200	1.1	–	18	NA
<b>Jointly-owned (asset stats shown at 100%):</b>							
NGPL	Natural Gas Pipeline Co. of America	50%	9,100	7.6	288	5.4 / 4.0 <sup>(a)</sup>	NA
SNG	Southern Natural Gas	50%	8,950	4.3	69	6.2 / 2.8 <sup>(a)</sup>	9/1/2024
FGT	Florida Gas Transmission	50%	5,350	3.9	–	9.2	2/1/2021
FEP	Fayetteville Express	50%	185	2.0	–	2.2	NA
MEP	Midcontinent Express	50%	510	1.8	–	1.7	NA
	Ruby	50% <sup>(b)</sup>	680	1.5	–	3.5	NA
	Sierrita	35%	60	0.2	–	20.8	NA
<b>Storage and LNG (asset stats shown at 100%):</b>							
	Keystone Gas Storage	100%	15	0.4	6	2.1	NA
SLNG	Southern LNG Co. (Elba Island)	100%	–	1.8	12	13.8	NA
GLNG	Gulf LNG	50%	5	1.5	7	12.8	NA
YGS	Young Gas Storage (CIG)	47.5%	–	–	6	6.4	NA

a) Transport / Storage.

b) Reflects third party ownership of a 50% preferred interest.

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## **KMI Ratios**

### *Liquidity*

As can be seen by the chart below, KMI has significantly better liquidity than its competitor OKE. This can be seen by the fact that all of KMI's liquidity ratios were better in 2018 than OKE's. The current ratio, which is calculated by dividing the current assets by the current liabilities, is better when it is higher, assuming that it's not too high. The 2018 current ratio of KMI can be interpreted as 76% of the company's current liabilities can be funded using the company's current assets. This is compared to only 66% of OKE's current liabilities, meaning that KMI has better liquidity. This is backed up by the other two liquidity ratios (quick ratio and cash ratio). Both of these are better when they are higher and, therefore, the advantage of KMI in both ratios, 0.68 vs 0.41 for the quick ratio and 0.07 vs 0.01 for the cash ratio, further underlines the superior position of KMI's balance sheet when it comes to liquidity.

	KMI						OKE					
	DEC '18	DEC '17	DEC '16	DEC '15	DEC '14	DEC '13	DEC '18	DEC '17	DEC '16	DEC '15	DEC '14	DEC '13
Current Ratio	0.76	0.44	0.55	0.69	0.59	0.64	0.66	0.66	0.50	0.60	0.55	0.88
Quick Ratio	0.68	0.34	0.45	0.53	0.43	0.41	0.41	0.48	0.42	0.45	0.41	0.66
Cash Ratio	0.48	0.07	0.17	0.20	0.15	0.11	0.01	0.01	0.09	0.06	0.07	0.06

### *Turnover Ratios*

The two turnover ratios used in this project are the Total Asset Turnover (TAT) and the Inventory Turnover. Both of these are better when they are higher because it shows that the company is using its assets more efficiently if the turns are higher. In this category, KMI is inferior to their competitor OKE. OKE is superior in both ratios. Their TAT ratio was 1.44 at the end of 2018 vs 0.18 and

their Inventory Turnover Ratio was 24.48 in 2018 vs 22.90. Additionally, when one looks at the history of these two ratios, OKE has historically been the better company in terms of managing their assets and using them efficiently, as measured by these two ratios.

	KMI							OKE					
	DEC '18	DEC '17	DEC '16	DEC '15	DEC '14	DEC '13		DEC '18	DEC '17	DEC '16	DEC '15	DEC '14	DEC '13
Total Asset Turnover	0.18	0.17	0.16	0.17	0.19	0.19		1.44	1.38	1.81	2.01	1.25	1.21
Inventory Turnover	22.90	23.27	20.93	20.19	23.57	22.81		24.48	33.62	37.25	38.96	39.85	28.05

### *Profitability Ratio*

This is the area where the differences between the companies can easily be seen. KMI has better margins however OKE is able to get better returns on their assets and their equity due to their smaller size.

	KMI							OKE					
	DEC '18	DEC '17	DEC '16	DEC '15	DEC '14	DEC '13		DEC '18	DEC '17	DEC '16	DEC '15	DEC '14	DEC '13
Gross Margins	35.1%	33.4%	38.2%	37.2%	35.2%	34.9%		15.6%	13.0%	15.1%	14.1%	10.1%	10.1%
Net Margins	11.2%	11.2%	11.2%	11.2%	11.2%	11.2%		9.1%	3.2%	4.0%	3.3%	2.6%	1.8%
ROA	2.0%	0.2%	0.9%	0.3%	1.2%	1.6%		6.3%	2.3%	2.2%	1.6%	2.1%	1.5%
ROE	4.5%	4.4%	4.2%	4.4%	5.3%	5.6%		36.5%	12.9%	34.0%	26.9%	12.5%	8.1%

### *Margins*

Over their respective histories, KMI has managed to consistently achieve better margins than OKE. This can be seen in the graph below and in the most recent year it is very easily illustrated by the gross margin and net margin of KMI being 35.1% and 11.2%, respectively, versus 15.6% gross margin and 9.1% net margin, respectively, for OKE.

### *Return on Assets and Return on Equity*

However, the odd part of the profitability section is the fact that the margins of one company are better while the returns are better for the other. This

has everything to do with the denominators. KMI has a much larger asset base and therefore, while they generate good margins on their sales, they struggle to generate sales with their assets. This will be illustrated later in the DuPont Analysis and was already somewhat seen in the turnover ratios section. By continuation, due to the large asset base, the company also has a large book value of equity base and because of that the denominator of the return on equity calculation is also much larger for KMI than OKE, which is reflected in the numbers.

### *Debt Ratios*

The debt ratios for KMI show a company that is stable but needs to continue to be mindful their debt picture. The chart below shows the debt ratios for both KMI and OKE. In it, one can clearly see that OKE has the larger amount of debt relative to their equity, 177.1% versus 130.6%, respectively. However, OKE does a better job of converting their sales and net income into cash and therefore has a better interest coverage ratio and cash flow-to-debt ratio. This has been the case for the past six years for both companies.

	KMI						OKE					
	DEC '18	DEC '17	DEC '16	DEC '15	DEC '14	DEC '13	DEC '18	DEC '17	DEC '16	DEC '15	DEC '14	DEC '13
Debt-to-Equity Ratio	130.6%	131.3%	132.7%	139.1%	143.1%	358.2%	177.1%	177.1%	177.1%	177.1%	177.1%	177.1%
Interest Coverage	2.1x	1.9x	2.0x	2.0x	2.6x	2.3x	4.1x	3.2x	2.8x	2.5x	3.5x	4.3x
Cash Flow-To-Debt	12.0%	11.3%	11.0%	11.3%	9.5%	9.1%	19.0%	12.0%	11.0%	8.6%	11.4%	10.1%

### *DuPont Analysis*

	KMI						OKE						
	DEC '18	DEC '17	DEC '16	DEC '15	DEC '14	DEC '13	DEC '18	DEC '17	DEC '16	DEC '15	DEC '14	DEC '13	
Net Margins	0.11	0.11	0.11	0.11	0.11	0.11	Net Margins	0.09	0.03	0.04	0.03	0.03	0.02
Total Asset Turnover	0.18	0.17	0.16	0.17	0.19	0.19	Total Asset Turnover	1.44	1.38	1.81	2.01	1.25	1.21
Equity Multiplier	2.25	2.26	2.31	2.38	2.42	2.66	Equity Multiplier	2.77	2.96	4.71	4.10	3.82	3.65
ROE	0.05	0.04	0.04	0.04	0.05	0.06	ROE	0.37	0.13	0.34	0.27	0.13	0.08

## **Pro Forma Financials**

For the pro forma financial statements, the growth rate that was used was 3.9% CAGR. This estimate was gathered from Yahoo Finance and was the sales growth rate for 2020. I also used this number for 2019 for conservative reasons. The sales growth estimate for 2019, according to Yahoo Finance is 5.8%. However, in order to be conservative, this model used 3.9% for both.

### *Model*

This model applied the 3.9% growth rate to the 2018 sales figure and therefore derived an estimate for 2019 and 2020 sales, respectively. Then, the operating expenses were assumed to grow with sales, in order to keep them in line with 2018 using a constant size income statement. The interest rate was assumed to stay the same because of constant size of the debt under the model. The tax rate used was the same as the 2018 tax rate calculated using the formula tax expense divided by EBIT. The minority interest was assumed to be the same percentage of consolidated net income as 2018 (Minority Interest / Consolidated Net Income). The assets portion of the balance sheet was assumed to grow at 3.9% and the liabilities portion was assumed to be constant. The common equity portion was calculated by using the formula beginning common equity plus net income minus dividends paid. For the dividends number, the historic financials were too volatile to get a true measure of what they are likely to be in the future. Therefore, this report used the estimates for 2019 and 2020 dividends per share that management has provided during their last investor presentation (\$1.00 per share in 2019 and \$1.25 per share in 2020). This allowed the model to calculate an estimate for shareholders equity and allowed a calculation to be made for external financing needed. According to the model, the 2019 EFN is \$2.12 billion and the 2020 EFN is \$4.72 billion.



<b>Income Statement</b>	<b>Pro Forma (2023)</b>	<b>Pro Forma (2022)</b>	<b>Pro Forma (2021)</b>	<b>Pro Forma (2020)</b>	<b>Pro Forma (2019)</b>
Sales	\$ 17,286.80	\$ 16,637.92	\$ 16,013.40	\$ 15,412.32	\$ 14,833.80
Cost of Goods Sold (COGS) incl. D&A	\$ 11,215.78	\$ 10,794.78	\$ 10,389.59	\$ 9,999.60	\$ 9,624.26
<b>Gross Income</b>	<b>6071.03</b>	<b>5843.14</b>	<b>5623.81</b>	<b>5412.72</b>	<b>5209.55</b>
SG&A Expense	\$ 727.70	\$ 700.38	\$ 674.10	\$ 648.79	\$ 624.44
Other Operating Expense	\$ 417.73	\$ 402.05	\$ 386.96	\$ 372.43	\$ 358.46
<b>EBIT (Operating Income)</b>	<b>4925.59</b>	<b>4740.71</b>	<b>4562.76</b>	<b>4391.49</b>	<b>4226.65</b>
Nonoperating Income - Net	\$ 1,771.42	\$ 1,704.93	\$ 1,640.93	\$ 1,579.34	\$ 1,520.06
Interest Expense	\$ 1,904.00	\$ 1,904.00	\$ 1,904.00	\$ 1,904.00	\$ 1,904.00
Unusual Expense - Net	\$ -	\$ -	\$ -	\$ -	\$ -
Income Taxes	\$ 710.75	\$ 684.07	\$ 658.39	\$ 633.68	\$ 609.89
Other After Tax Adjustments	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Consolidated Net Income</b>	<b>\$ 4,082.27</b>	<b>\$ 3,857.57</b>	<b>\$ 3,641.30</b>	<b>\$ 3,433.15</b>	<b>\$ 3,232.82</b>
Minority Interest	\$ 662.22	\$ 625.77	\$ 590.69	\$ 556.92	\$ 524.42
<b>Net Income</b>	<b>\$ 3,420.05</b>	<b>\$ 3,231.80</b>	<b>\$ 3,050.61</b>	<b>\$ 2,876.23</b>	<b>\$ 2,708.39</b>
Discontinued Operations	\$ -	\$ -	\$ -	\$ -	\$ -
Preferred Dividends	\$ 128.00	\$ 128.00	\$ 128.00	\$ 128.00	\$ 128.00
<b>Net Income available to Common</b>	<b>\$ 3,292.05</b>	<b>\$ 3,103.80</b>	<b>\$ 2,922.61</b>	<b>\$ 2,748.23</b>	<b>\$ 2,580.39</b>

	Pro Forma (2020)	Pro Forma (2019)
<b>Balance Sheet</b>		
<b>Assets</b>		
Cash & Short-Term Investments	3877	3731
Short-Term Receivables	1657	1595
Inventories	416	400
Other Current Assets	228	219
Total Current Assets	6177	5945
	0	0
Net Property, Plant & Equipment	40911	39375
Total Investments and Advances	8076	7773
Long-Term Note Receivable	11	10
Intangible Assets	26821	25814
Deferred Tax Assets	2031	1954
Other Assets	1452	1397
Total Assets	85478	82269
<b>Liabilities &amp; Shareholders' Equity</b>		
ST Debt & Curr. Portion LT Debt	3,657	3,520
Accounts Payable	1,443	1,389
Income Tax Payable	521	502
Other Current Liabilities	2,536	2,441
Total Current Liabilities	8,158	7,852
Long-Term Debt	33,936	33,936
Provision for Risks & Charges	912	912
Deferred Tax Liabilities	315	315
Other Liabilities	1,264	1,264
Total Liabilities	52,743	52,130
Preferred Stock (Carrying Value)	0	0
Common Equity	35,258.97	34,651
Total Shareholders' Equity	35,258.97	34,651
Accumulated Minority Interest	1,519	1,519
Total Equity	36,777.97	36,170
Total Liabilities & Shareholders' Equity	89,521	88,300.26
	EFN (2020)	EFN (2019)
	(4,043.30)	(6,031.20)

## **KMI Valuation**

### *DCF Model*

The model used to calculate the valuation was a DCF model. The cash flows used was unlevered free cash flow. This was calculated using the formula: Unlevered FCF = NOPAT + D&A – Capex – Change in Net Working Capital. Using the pro forma financial statement, this unlevered free cash flow was calculated and then used in the DCF model. The model recommends a fair value price of \$36.30 for KMI vs a current market price of \$20.23 (close 4/26/2019).

Unlevered FCF Calculation					
EBITDA	\$ 7,706.84	\$ 7,417.55	\$ 7,139.13	\$ 6,871.15	\$ 6,613.24
D&A	\$ 2,781.24	\$ 2,676.84	\$ 2,576.37	\$ 2,479.66	\$ 2,386.58
NOPAT	\$ 4,214.85	\$ 4,056.64	\$ 3,904.37	\$ 3,757.81	\$ 3,616.76
Capital Expenditures	\$ (2,882.00)	\$ (2,882.00)	\$ (2,882.00)	\$ (2,882.00)	\$ (2,882.00)
Changes in Working Capital	201	201	201	201	201
Unlevered FCF	\$ 9,677.09	\$ 9,414.48	\$ 9,161.73	\$ 8,918.47	\$ 8,684.34

## *Valuation Model*

Model	
WACC:	6%
Assumed Long-term Growth Rate:	-3.0%
Valuation:	
Discounted Cash Flows	\$ 38,288
Terminal Value	\$ 77,742
Preliminary Enterprise Value:	\$ 116,030
Mid-Year Adjustment:	1.03
Enterprise Value:	\$ 119,633
Debt Value:	\$ 37,593
Equity Value:	\$ 82,040
Number of Common Shares Outstanding:	2,260
Estimated Share Price on 4/26/2019:	\$ 36.30
Actual Share Price on 4/26/2019	\$ 20.23
(Over) / Under Value:	\$ 16.07

## *Assumptions*

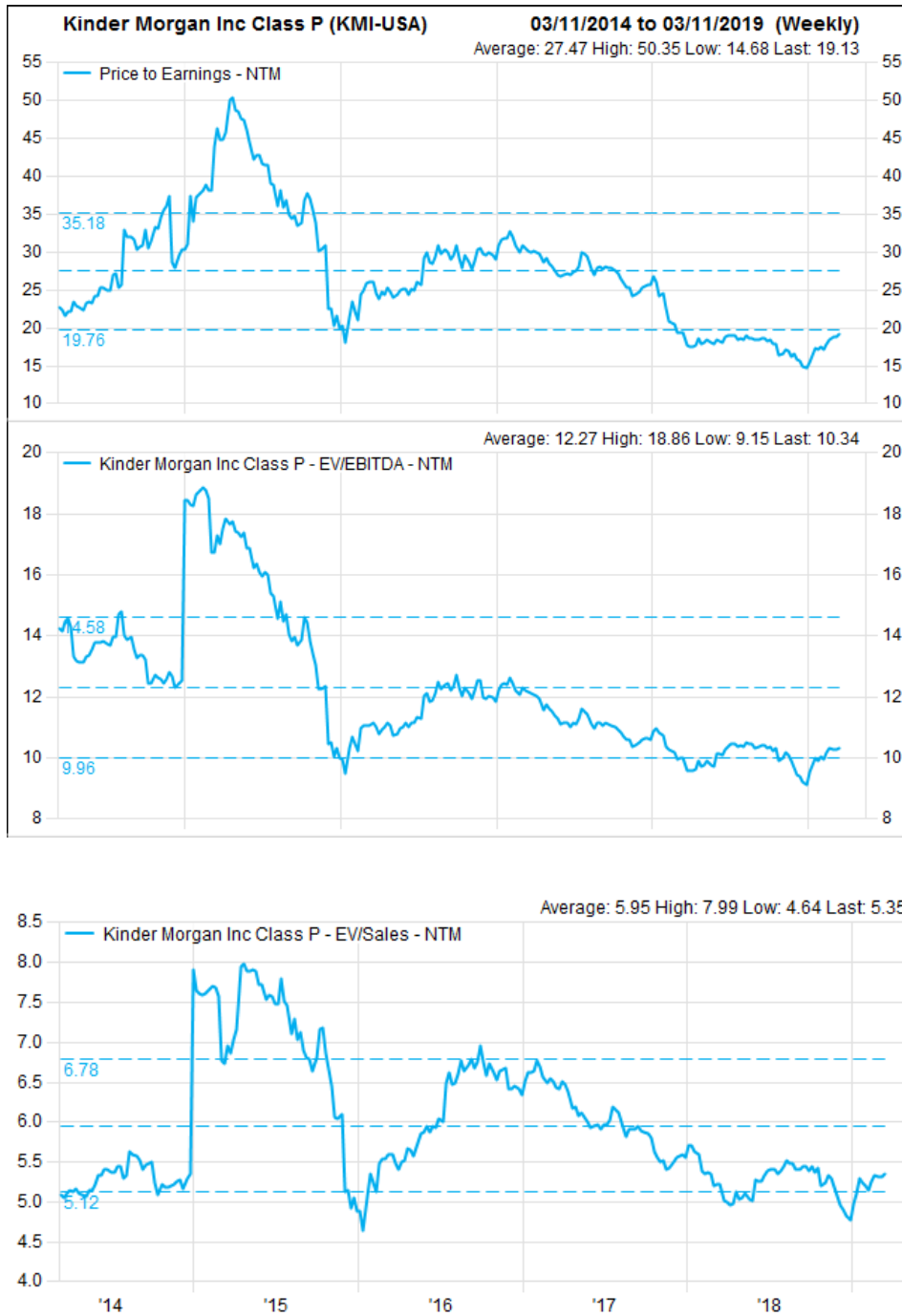
- EBITDA: EBITDA was assumed to grow at 3.9% because that was the rate used for the pro forma financials. To get the D&A expense, EBITDA was subtracted from EBIT (Operating Income). In terms of a common-size financial statement, this means that D&A is assumed to be a constant percentage of total assets.
- Capital Expenditures: Because Capex is a negative number the fact that it is subtracted in the formula means that one is adding back Capex. Therefore, due to a need to be conservative, the lowest Capex from the last 5 years (one oil cycle) was used so that the least amount is being added back.
- Change in Net Working Capital: The same reasoning was used, as in Capex, for the Change in Net Working Capital. The amount that would add back the least was used.

- WACC: The WACC used in this model is provided by the website GuruFocus which used data to calculate the WACC and ROIC figures, along with others.
- Long-term growth rate: This assumption is likely to be the most controversial. The rate used was negative GDP (-3%). This rate was used because the common criticism for Oil and Gas Pipeline companies is that they are trying to compete in a dying space and, therefore, deserve a low long-term growth rate. Therefore, negative GDP was used. Due to the fact that this model finds the stock undervalued, it is reasonable to believe that the market is applying an even lower long-term growth rate to these companies' DCF models.

### *Sensitivity Analysis*

		Long-Run Growth Rate						
	\$ 36.30	-5.0%	-3.5%	-2.0%	-0.5%	1.0%	2.5%	4.0%
	3%	\$ 49.06	\$ 59.88	\$ 77.18	\$ 109.31	\$ 189.65	\$ 752.00	\$(372.70)
	4%	\$ 41.64	\$ 49.62	\$ 61.58	\$ 81.53	\$ 121.41	\$ 241.07	#DIV/0!
	5%	\$ 35.72	\$ 41.78	\$ 50.45	\$ 63.85	\$ 87.30	\$ 138.88	\$ 345.21
	6%	\$ 30.88	\$ 35.61	\$ 42.11	\$ 51.62	\$ 66.83	\$ 95.08	\$ 165.70
	7%	\$ 26.86	\$ 30.62	\$ 35.63	\$ 42.65	\$ 53.19	\$ 70.74	\$ 105.85
	8%	\$ 23.46	\$ 26.50	\$ 30.45	\$ 35.80	\$ 43.44	\$ 55.25	\$ 75.92
WACC	9%	\$ 20.56	\$ 23.05	\$ 26.22	\$ 30.40	\$ 36.14	\$ 44.53	\$ 57.95

## PE Multiple Valuation



Because of the belief, which is outlined in the investment thesis, that there is a misunderstanding surrounding the debt of KMI and the growth potential of the company in the coming years, due to factors such as LNG, the PE multiple valuation method will assume the PE

multiple will return to the 5 year average. The five year average was used because this represents the average multiple over approximately one energy cycle. The model can be found below.

*Model*

2019 Net Income Available to Shareholders	2580.39
Shares Outstanding (Yahoo Finance)	2260
EPS	\$ 1.14
Average Multiple	27.47x
Share Price Estimate	\$ 31.36

***Price Target***

Using a 50/50 weighting, this report estimates that KMI has an intrinsic value of approximately \$33.83. Therefore, this report believes that KMI is currently undervalued and should be trading at closer to 33. This represents an upside of 73.2% =  $((\$33.83 - \$19.53) / \$19.53)$ . Therefore, this model believes KMI is a buy.

Share Price Estimate (PE Multiple)	\$ 31.36
Share Price Estimate (DCF Model)	\$ 36.30
Price Target	\$ 33.83

## **Conclusion**

This paper believes that there is a fundamental under appreciate for KMI in the market. This under appreciation is the result of a misunderstanding of the long-term growth of the company and the significant debt on their balance sheet. However, after modeling the scenarios, this paper concludes that there is significant upside potential and that the benefits currently outweigh the risks laid out in this paper.

Therefore, this paper believes that KMI is a buy with a target price of approximately \$33.



## Appendix

### \$5.7bn of Commercially Secured Capital Projects Underway



Significant opportunities primarily resulting from expansive natural gas footprint

Commercially Secured Capital Projects	Demand Pull / Supply Push	KMI Capital (\$ billion)	Estimated In-Service Date	Capacity
<b>Natural Gas</b>				
Permian takeaway projects (GCX, PHP, EPNG, NGPL)		\$ 1.3	Q4 2019 – 2020	5.6 Bcfd
Etba liquefaction and related terminal facilities		1.2	2019	0.4 Bcfd
Bakken G&P expansions (Hiland Williston Basin)		0.5	2019	Various
Expansions to supply LNG export (TX Intrastates, NGPL, KMLP)		0.4	2020 - 2022	2.7 Bcfd
Mexico export (EPNG, Sierra)		0.2	2020	0.6 Bcfd
Other natural gas		0.4	Various	>2.1 Bcfd
<b>Total Natural Gas</b>		<b>\$ 3.9</b>	<b>~68% of total at 5.4x EBITDA multiple</b>	
Other segments		1.8		
<b>Total Backlog</b>		<b>\$ 5.7</b>		

- **Other segments' backlog includes:** \$1.2 billion for CO<sub>2</sub> Oil & Gas, \$0.4 billion for CO<sub>2</sub> & Transport, \$0.1 billion for Products Pipelines and \$0.1 billion for Terminals
  - Primarily liquids-related opportunities
- **~\$2.3 billion of projects placed into service and ~\$2.5 billion of new projects added during 2018:**
- **Beyond the backlog, expect \$2 to \$3 billion per year of ongoing organic investment opportunities:**
  - Predominantly natural gas opportunities related to LNG export (supply and liquefaction), Marcellus / Utica takeaway capacity, additional power generation and incremental Gulf Coast deliverability

According to the recent Investor Day Presentation, KMI is expecting to have \$2.6 billion worth of their Natural Gas backlog come on-line during 2019. This is a majority of their \$3.8 backlog for this segment. Additionally, they have a major project coming on-line in 2020 (PHP).

The summaries of the projects can be found below.

## Project Highlight: Elba Island LNG Export Terminal

Elba Liquefaction Company (ELC)<sup>(a)</sup> / Southern LNG Company (SLNG)

### Project Scope

- Liquefaction facilities (10 small-scale modular units)
- Ship loading facilities; boil-off gas compression
- Located on Elba Island near Savannah, Georgia

### Project Statistics

- Liquefaction Capacity: 2.5 mtpa or ~350 mmcf/d
- Capital (100%):
  - ELC: ~\$1,400 million<sup>(b)</sup> / ~\$750 million KM share
  - SLNG: ~\$430 million
- In-service: Q1 2019 through Q4 2019 (phased)
- Contract term: 20 years

### Current Status

- FERC certificate issued June 2016
- DOE FTA and non-FTA authorizations received
- Construction ongoing and first unit expected online end of Q1 2019

Fully-contracted under 20-year take-or-pay agreement with Shell and ~70% of the revenue expected with in-service of the first unit



## Project Highlight: Gulf Coast Express (GCX)

Permian direct-to-Gulf Coast project satisfying multiple growth drivers

### Project Scope

- Mainline: 447.5 miles of 42" pipeline originating at the Waha Hub and terminating near Agua Dulce, Texas
- Midland lateral: 50 miles of 36" pipeline
- 214,280 HP of installed compression
- KM Texas Pipeline (KMTP) operator and constructor
- KM 35%, DCP 25%, Targa 25%, Altus (Apache) 15% ownership interest

### Project Statistics

- Capacity: 2.0 Bcfd
- Capital (100%): \$1.75 billion
- In-Service: October 2019
- Minimum contract term: 10 years

### Current Status

- Capacity fully-subscribed under long-term, binding agreements
- Construction in progress and on schedule for October 1, 2019 in-service

First-to-market Permian takeaway solution leveraging our expansive existing footprint and deliverability



## Project Highlight: Permian Highway Pipeline (PHP)

PHP provides broad U.S. Gulf Coast market optionality for Permian production

### Project Scope

- Mainline: ~430 miles of 42" pipeline from the Waha to Katy, Texas areas with connections to the U.S. Gulf Coast and Mexico markets
- 300,320 HP of installed compression, increased 42,870 HP from original scope at FID due to expansion
- KM Texas Pipeline (KMTP) operator and constructor
- **KM 40%**, EagleClaw Midstream Ventures 40%, anchor shipper affiliate 20% ownership interest<sup>(1)</sup>

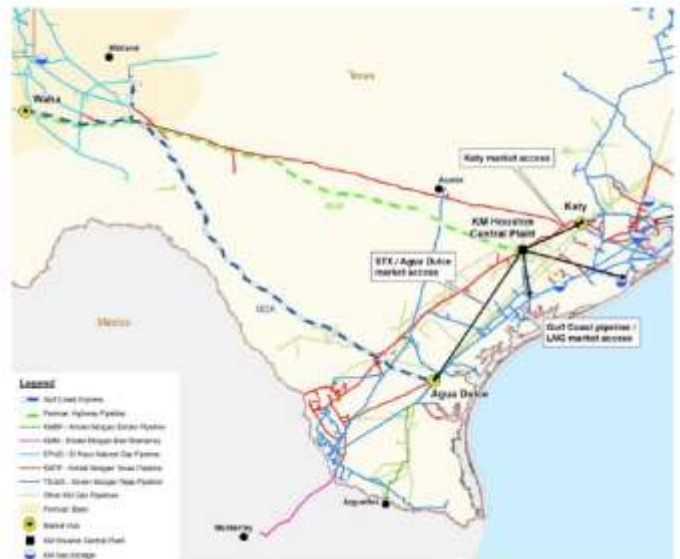
### Project Statistics

- Initial Capacity: 2.0 Bcfd
- Expansion Capacity: 0.1 Bcfd
- Capital (100%): ~\$2.1 billion
- In-Service: October 2020
- Minimum contract term: 10 years

### Current Status

- Final investment decision to proceed made September 2018
- Initial capacity fully-subscribed and under long-term, binding agreements
- Pipeline and compression procured
- Awarded pipeline construction contracts on all spreads
- In commercial discussions with shippers for expansion capacity

Second Permian solution with unmatched market optionality expected to drive investment opportunities downstream



## Key Market: Exports to Mexico

Kinder Morgan delivers ~3.1 Bcfd of U.S. natural gas exports to Mexico<sup>(a)</sup>

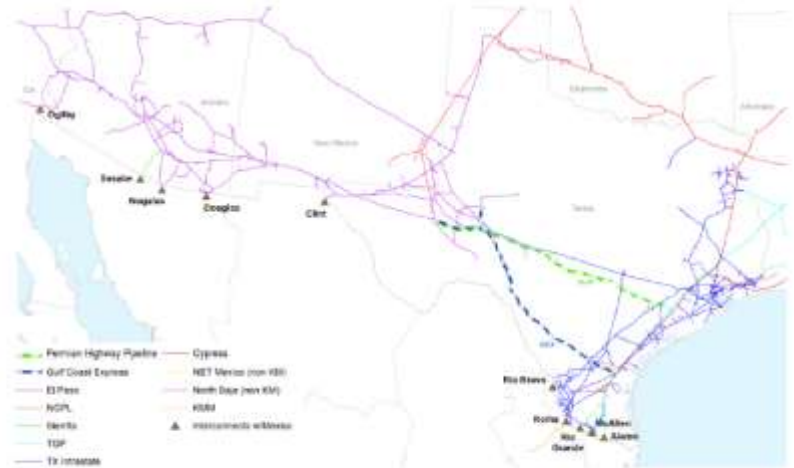
Extensive footprint offers diverse supply solutions to multiple Mexico interconnections (12 direct, 4 indirect)

- U.S. natural gas exports to Mexico are expected to grow by 36%, or ~1.6 Bcfd, to 6.1 Bcfd by 2023<sup>(b)</sup>
- Incremental opportunities include expansions of existing assets (including Monterrey and TGP), greenfield infrastructure (including GCX and PHP), new hub development, and storage near the border

~3.4 Bcfd of long term transportation contracts serving Mexico with a weighted average remaining contract term of 12.5 years

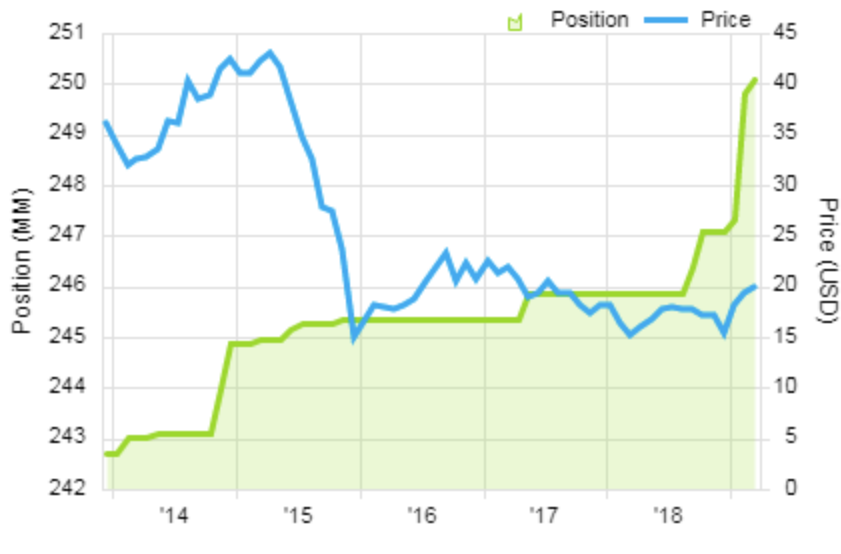
Placed ~1 Bcfd of capacity into service for ~\$0.4bn since 2014

~0.6 Bcfd of capacity in the backlog for ~\$0.2bn to further serve growing Mexican demand



Our network is well-positioned to serve growing Mexican demand

### Historical Position in Kinder Morgan Inc Class P (KMI-US)



## Successfully Achieving Attractive Build Multiples



Disciplined steward of capital

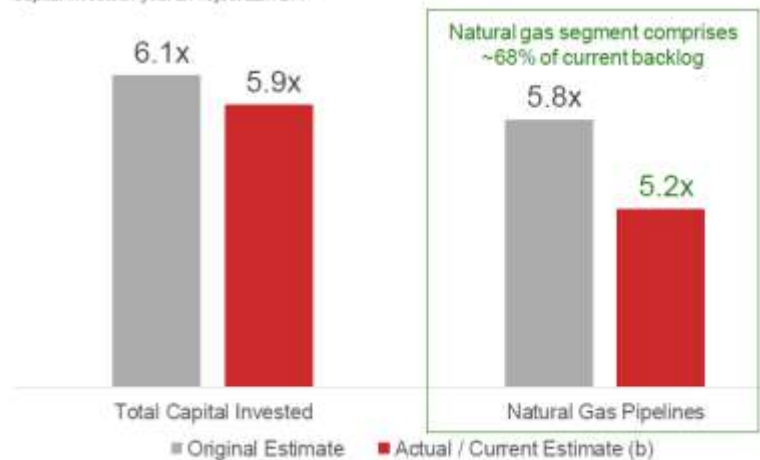
### Competitive advantages:

- Expansive asset base — ability to leverage or repurpose steel already in the ground
- Connected to practically all major supply sources
- Established deliverability to primary demand centers — final mile builds typically expensive to replicate due to congestion
- Strong balance sheet and ample liquidity — internal cash flow available to fund nearly all investment needs

Expansive footprint creates opportunities for differentiated returns

### INVESTMENT MULTIPLES: PROJECTS COMPLETED 2015-2018

Capital invested / year 2 Project EBITDA<sup>(a)</sup>



Part of the investment thesis is that management has been achieving better returns on their projects than the market is giving them credit for. This is the slide from an investor presentation where management first makes that statement.

## Beyond the Backlog



Long-term energy fundamentals create value-enhancing opportunities for existing assets and new projects

Takeaway for significant Marcellus / Utica natural gas growth

Storage to support renewable power generation and LNG exports

Infrastructure to support U.S. energy exports

Grow crude and NGL footprints out of Bakken and elsewhere

Haynesville 2.0

Market access for surging Permian Basin production

Transport natural gas to supply LNG exports

**~\$800 billion of North American energy infrastructure investment required to support expected growth through 2035<sup>(a)</sup>**

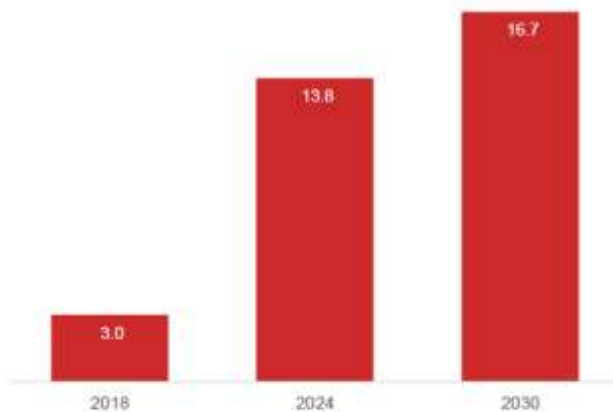
## Growth Driver: Buildout of U.S. LNG Exports



Multiple liquefaction and natural gas transport opportunities across KM footprint

GLOBAL DEMAND DRIVING SIGNIFICANT BUILDOUT OF U.S. LNG EXPORT CAPABILITIES

Forecasted U.S. Liquefaction Capacity (Bcfd)



KM is already contracted to serve ~5.3 Bcfd (18-year average term) of U.S. liquefaction capacity and is positioned to capture more

KM NETWORK REACHES MULTIPLE EXPORT FACILITIES



KM Asset	Contracted Capacity (mDthd)	KM Capital (\$mm)
TGP	1,200	\$304
KMLP	1,400	\$226
NGPL	1,635	\$241
Intractable	590	\$134
EEC	436	\$100
<b>Subtotal:</b>	<b>5,261</b>	<b>\$1,006</b>
ELC	350 mmcf	\$1,185
<b>Total</b>		<b>\$2,191</b>

Moving from 3.0Bcfd in 2018 to 13.8 Bcfd represents a CAGR of 28.96% before slowing to a projected 3.2% CAGR from 2024 through 2030.

## Growth Driver: Surging Permian Production

KM providing additional takeaway capacity for associated natural gas production

Existing footprint reaches across Texas and connects into all major demand markets

- Interconnected deliverability to Houston markets (power, petchem), substantial LNG export capacity and Mexico

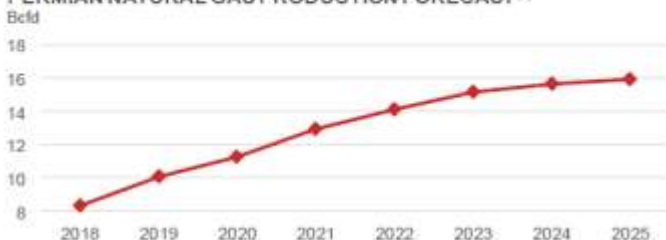
Potential to leverage existing assets into long-haul Permian crude oil pipeline projects

- KM Crude and Condensate (KMCC) pipeline to facilitate deliverability into the Houston refining and export markets

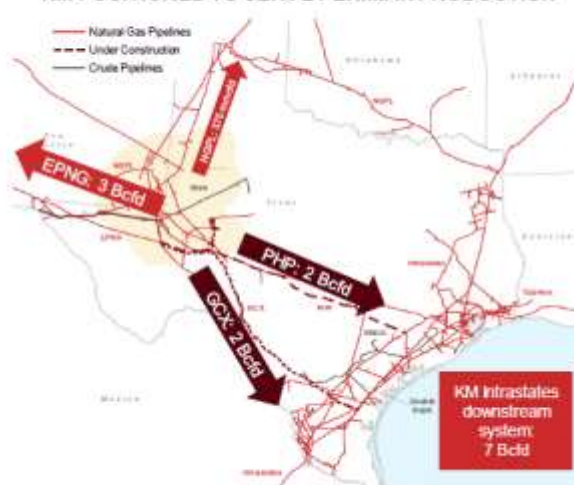
Growing Permian production will require an additional long-haul, large capacity natural gas pipeline beginning in 2021

- Gulf Coast Express (GCX) in-service Oct. 2019 and Permian Highway (PHP) in-service Oct. 2020

PERMIAN NATURAL GAS PRODUCTION FORECAST<sup>(a)</sup>



KM POSITIONED TO SERVE PERMIAN PRODUCTION



Delivering substantial Permian takeaway capacity to Midcontinent, West, and Gulf Coast markets

## Capital Allocation Priorities

Right-sized balance sheet and set dividend target through 2020; continually assessing best use of available capital

Balance Sheet	Dividend	Capital Projects	Share Repurchase
Achieved Adjusted Net Debt / Adjusted EBITDA target of ~4.5x <sup>(a)</sup>	Dividend targets set through 2020 with 25% growth in each year 2019: \$1.00/share 2020: \$1.25/share	Target return threshold well in excess of cost of capital Given current return threshold, projects expected to generate higher returns than share repurchases Continually re-evaluate	Expect to use cash in excess of capital projects and dividends for share repurchases Repurchased \$525mm of \$2bn buyback program

## Projects Placed Into Service During 2018

New natural gas projects expected to generate \$327 million of annual EBITDA

Asset	Project	In-service Date	Capacity (mDthd)	Capital, KM Share (\$mm)	EBITDA (\$mm)
TGP	Broad Run Expansion	Oct 2018	200	463.2	
	SW Louisiana Supply (Cameron)	Mar 2018	900	174.6	
	Lone Star	Dec 2018	300	106.4	
	Triad (Inenergy)	Jun 2018	180	52.8	
KMLP	Cheniere Sabine Pass LNG	Dec 2018	600	132.8	
SNG	Fairburn Expansion	Dec 2018	370	122.4	
EEC	Elba Express Modification Project	Nov 2018	245	83.7	
NGPL	Gulf Coast Expansion - Phase I	Oct 2018	385	87.8	
EPNG	Various Expansions	1Q 2018 - 4Q 2018	525	19.6	
CIG	High Plains & SAB Expansions	Nov - Dec 2018	452	18.9	
Texas Intrastates	Border Pipeline Expansion	3Q 2018	100	13.8	
	Intrastate well / market connects	1Q 2018 - 4Q 2018	Various	12.8	
Gathering / Other	Williston Basin (Hiland Gas)	1Q 2018 - 4Q 2018	Various	67.2	
	Williston Basin (Hiland Crude)	1Q 2018 - 4Q 2018	Various	61.7	
	Kinderhawk Field Services	1Q 2018 - 4Q 2018	Various	25.5	
	Oklahoma well connects / expansions	1Q 2018 - 4Q 2018	Various	24.0	
	Altamont well connects / expansions	1Q 2018 - 4Q 2018	Various	20.2	
	Other	1Q 2018 - 4Q 2018	Various	16.1	
<b>Total Natural Gas Pipeline Segment:</b>				<b>\$1,503.5</b>	<b>\$327.5</b>

## Project Backlog: Interstate Pipelines

Natural Gas

Asset	Project	Capital, KM Share (\$mm)	Capacity (mDthd)	In-service Date	Project Status
ELC / SLNG	Elba Liquefaction	\$752	357	1Q 2019	Construction near completion. Commissioning in process. Schedule is dependent on commissioning.
	SLNG Ship Loading	\$433			
NGPL	GC Southbound Phase 2 (Cheniere C.C.)	\$114	300	9/2021	FERC filing expected 1Q2018
	Sabine Pass Compression Expansion	\$31	400	2Q 2020	FERC 7(c) application filed 2Q 2018
	Lodriguez Lateral Extension	\$28	500	4Q 2020	FERC filing expected 1Q2019
	NPSCO	\$8	75	4/2019	Project engineering underway
EPNG	South Mainline Expansion	\$138	271	7/2020	FERC 7(c) application filed, EA issued 11/2018
	KTO / Malador Permian Expansion	\$33	415	10/2019	Prior notice FERC filing made 12/2018
	Line 1600 to Waha Phase II	\$2	577	10/2019	Project execution underway
KMLP	Targa Expansion / Sweete Peak	\$1	100	10/2019	Project execution underway
	LNG Expansion	\$100	800	2Q 2022	FD expected 2Q/Q3 2019
FGT	Seminole Electric	\$52	136	8/2018, 4/2022	FERC filing made
	East West	\$40	278	10/2019, 2/2018	FERC Certificate received 4/5/2018
	Sanford	\$4	400	7/2019	Board approved, preparing regulatory
	Boyer Arkansas	\$3	60	12/2018, 10/2019	FERC filing made
TGP	Line 251 Upgrade	\$58	138	11/2019, 11/2021	FERC 7(c) Application filed 10/19/2018
Sierrita	Sierrita Gas Pipeline Expansion	\$20	323	4/2020	Received FERC 7(c) 12/2018
	Discovery Midstream - New COW/CO	\$14	410	8/2019	Under development
CIG	Western Super Expansion	\$2	8	8/2019	Under development
	Black Hills Coxy Expansion	\$1	15	7/2019	Project underway
	DCP LaSalle 2 O'Connor Meter Upgrade	\$1	150	4/2018	Project underway
SNG	Pond Miller	\$1	5	3/2019	Initial modifications complete. Other work to be completed by June.
<b>Total Interstate</b>		<b>\$1,638</b>			<b>EBITDA = \$319 mm</b>

## **Works Cited**

<http://www.energy-cg.com/usnatgassupplydemandfund.html>

Goldman Sachs

US EIA

Williams Company

Bloomberg

The Energy Consulting Group

Bluegold Research (Seeking Alpha)

FRED

Jefferies