LONGREACH ENERGY

Longreach Energy Investments LLC

January 2019 Report

Market and Portfolio Commentary

1.1 Macro Industry Commentary

General Market Commentary

Capital Raising by E&P's

Debt and equity issuance by US exploration and production companies has slowed sharply. Debt and equity investors are both aligned to encourage gas and oil producers to pursue cash generation rather than borrowing or raising equity to pursue growth.

Just $157m has been raised from the sale of new equity issues in the last four months, the S&P Oil & Gas Exploration and Production Sector Index has fallen 29% since October. There has not been an initial public offering of an oil & gas company in the U.S. for over a year.

The E&P sector has relied heavily on debt to finance growth, E&P companies have raised about $300bn from bond issuance over the last 10 years. The declines in recent capital raising are illustrated in Figure 1.

Figure 1: Source Financial Times

The consequence of reduced capital will be lower investment and therefore lower production, this should provide support for prices ("the cure for low prices is low prices").

Rig Counts

As a reaction to lower capital spending and recent price weakness the number of operating drilling rigs ("Rig Count") has been falling. On 14 Jan 2019 there were 1,075 rigs operating in the US (compared to 231 rigs operating in the whole Asia Pacific region according to Baker Hughes) and by 4 February 2019 this number had fallen to 1,045. This will reduce future supply.

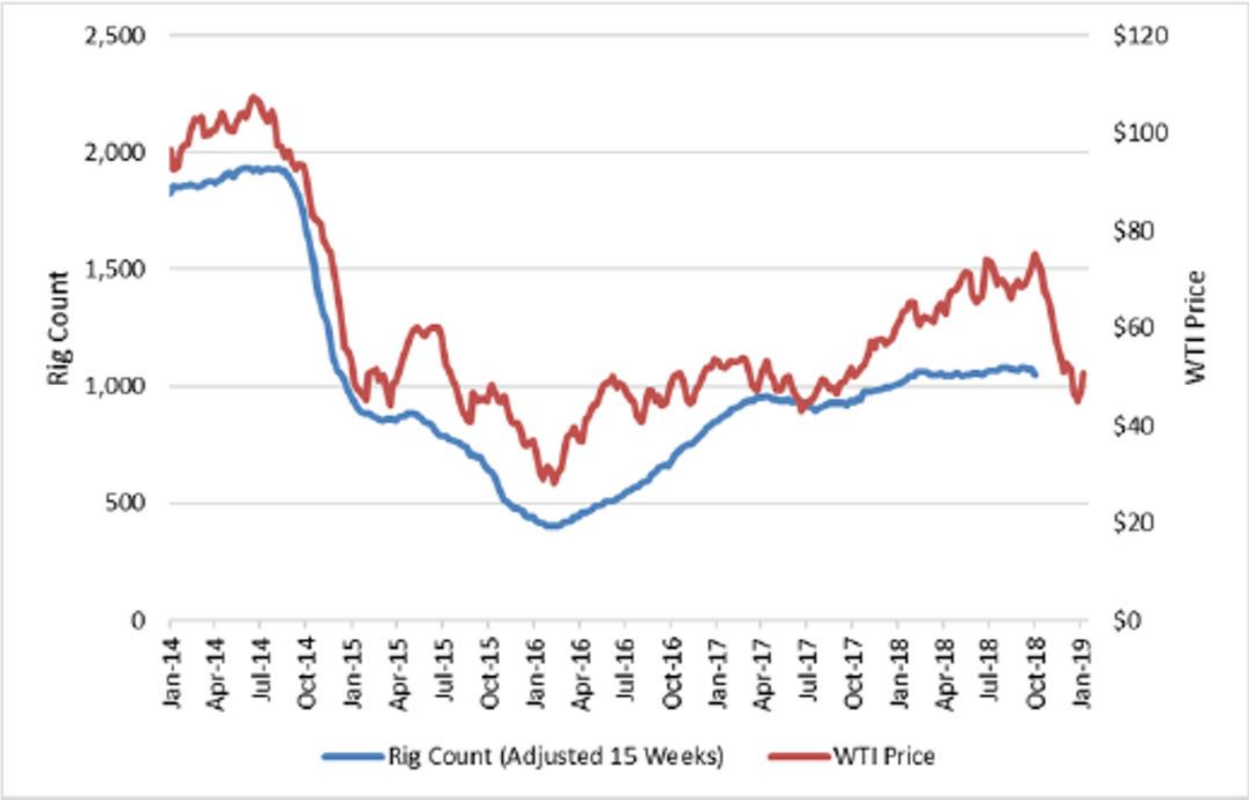


Figure 2: US Rig Count and WTI, Source Oil and Gas 360

Gas rigs contribute approximately 20% of total US rig activity.

2018 Market Data

Figure 3 shows data collected by Oil & Gas 360 showing land acquisition costs over 2018 by basin. These data include both royalties and leasehold working interests. The Midland Basin (a sub-region of the Permian Basin) had the highest dollar per acre cost at $56,414. LEI's average STACK/SCOOP entrance cost of $6,542/nma is right in line with basin average of $6,650/nma. We expect market prices to increase over time as the STACK/SCOOP is further developed.

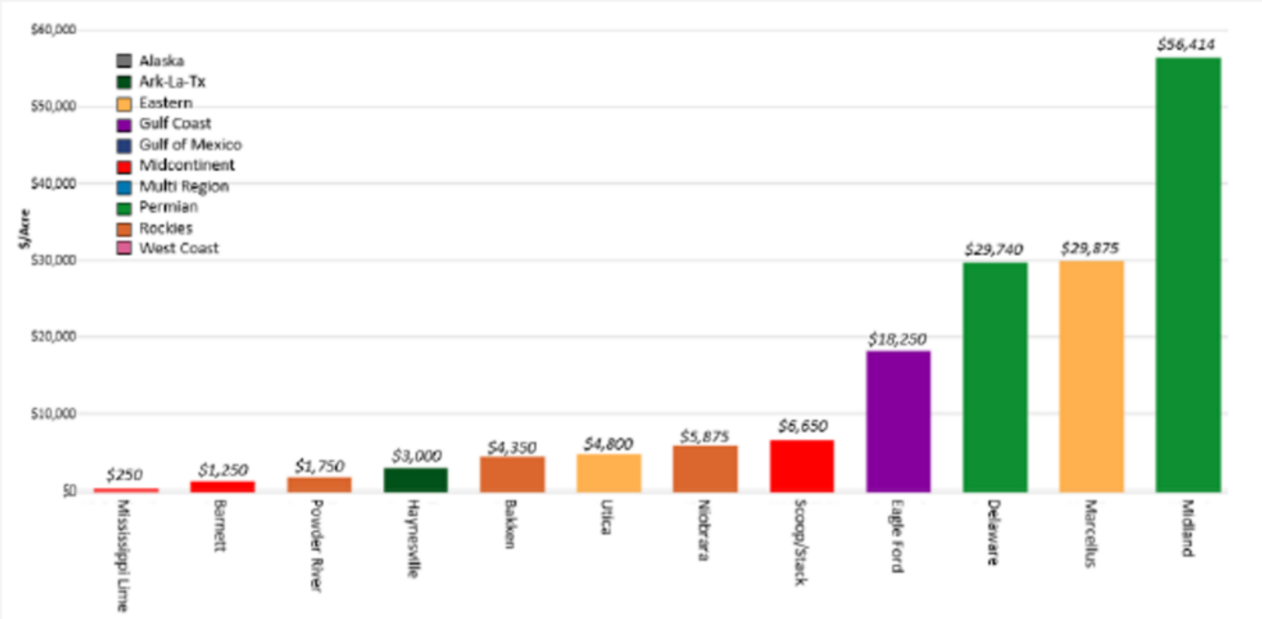


Figure 3 – Breakdown ($/Acre)

IHS Markit reported in early January that only about 20 per cent of the Anadarko Basin's STACK "sweet-spot" locations have been drilled or developed. The firm noted further that they can easily envision an additional 4,000 to 5,000 horizontal wells drilled in the play. This is consistent with our analysis and supports the excellent upside exposure for our OK royalties.

Oil & Gas 360 reported "*another clear theme from 2018 was the institutionalisation of the minerals market, where deal activity doubled YOY to reach nearly $3bn. Buyers came from across all capital sectors from public royalty companies like Kimbell Royalty Partners to institutional players like the Ontario Teachers' Pension Plan to public E&P's like Continental Resources"*. This is a positive trend for Longreach Energy as it provides a deeper market of large portfolio buyers to whom we can sell aggregated positions.

Energy Information Agency (EIA) Annual Energy Outlook (AEO)

The U.S. EIA has released its Annual Energy Outlook, examining major trends in energy in America through to 2050. Headlining the findings is that the U.S. is expected to become a net energy exporter by 2020, a major milestone as the country has been a net importer of energy for the last 66 years. The development is driven primarily by shipments of LNG and refined products. Natural gas will surpass coal to become the U.S.'s largest net energy export in 2020, while net imports of oil and refined products rapidly approach zero.

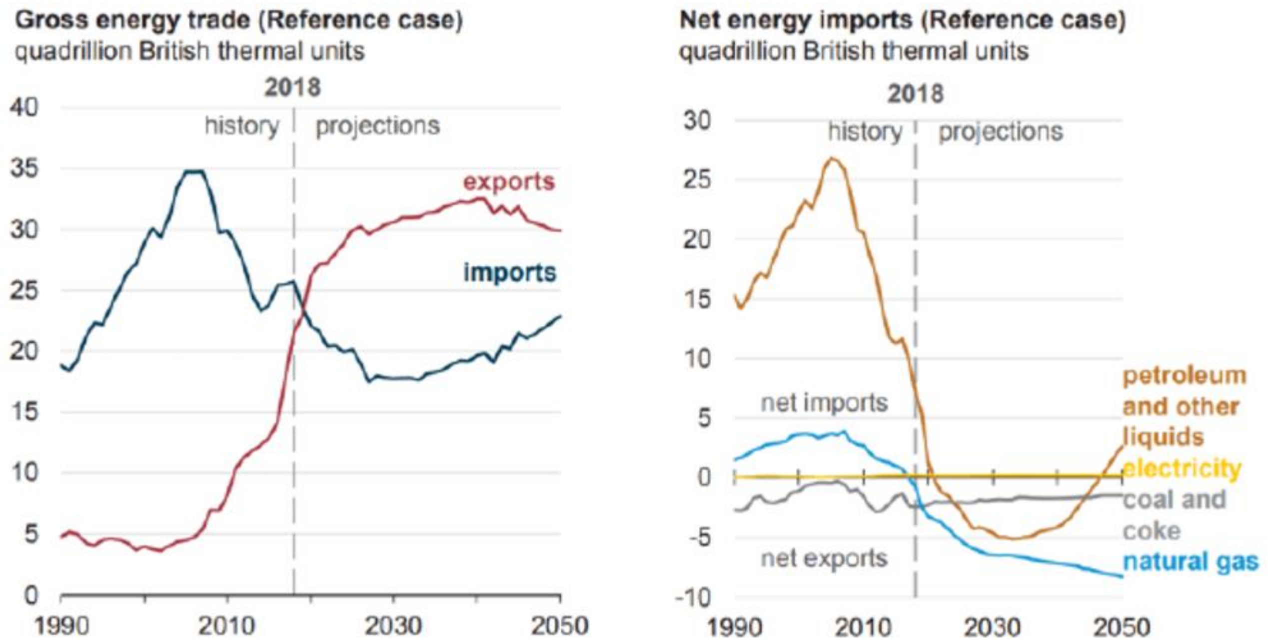


Figure 4: Gross U.S. Energy Trade and Net Imports, Source EIA

U.S. energy consumption is expected to be nearly flat for the next 20 years, gradually rising after that, as efficiency improvements roughly counteract the expanding economy. Natural gas and renewables will show the largest demand growth through 2050, continuing the displacement of coal. Industrial demand will grow significantly, driven by expanded petrochemical activity. Transportation related energy demand is projected to fall in the coming years, though this is primarily due to improved vehicle mileage rather than a shift toward electric vehicles.

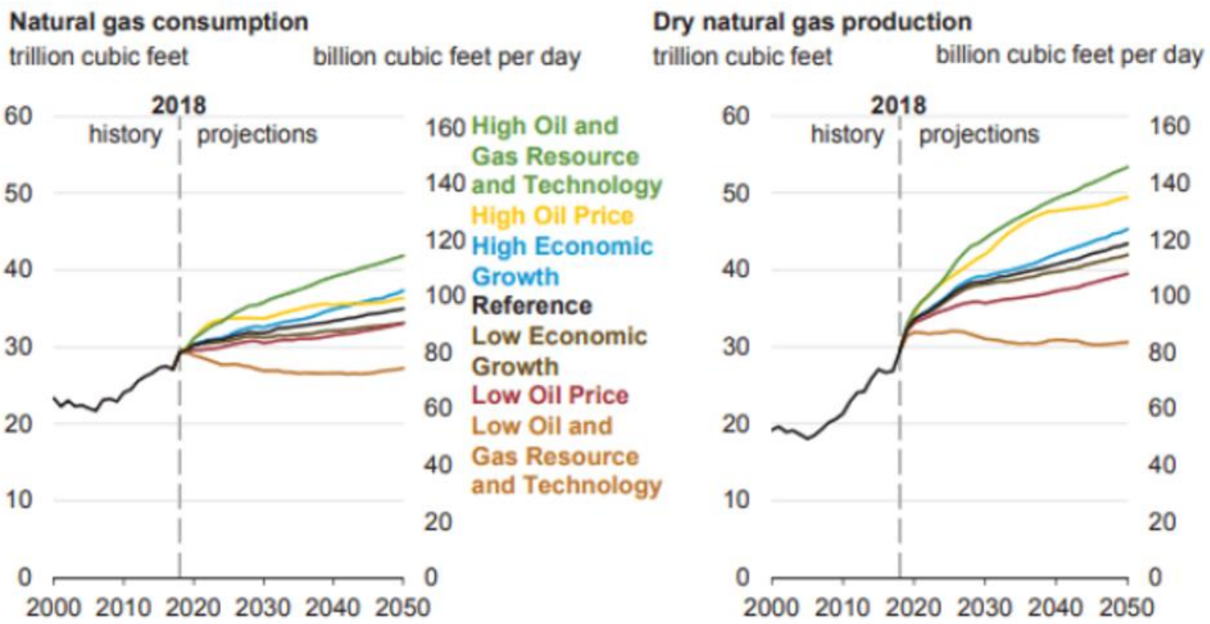


Figure 5: Natural Gas Consumption and Production Forecasts, Source EIA

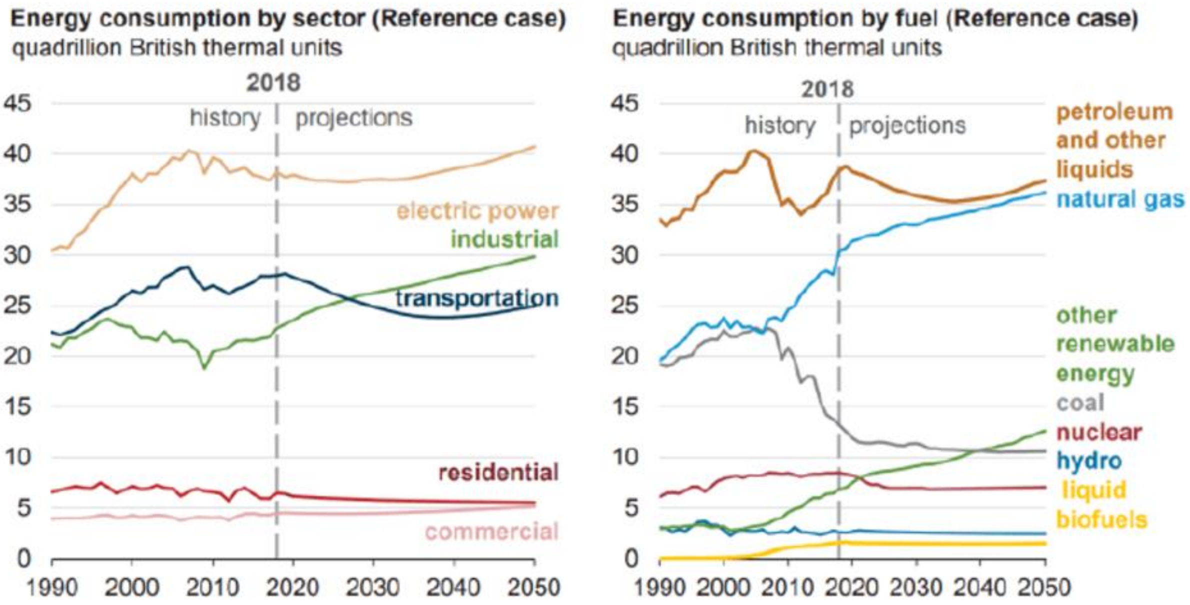


Figure 6: U.S. Energy Consumption Forecasts, Source EIA

Finally, a review of the last 10 year's of AEO Oil and Gas forecasts highlights that production forecasts have been extremely low relative to actual for oil and quite low for gas. This indicates that actual production volumes have a higher probability to exceed rather than match or undershoot these forecasts (although recent gas forecasts have been more accurate than those for oil)

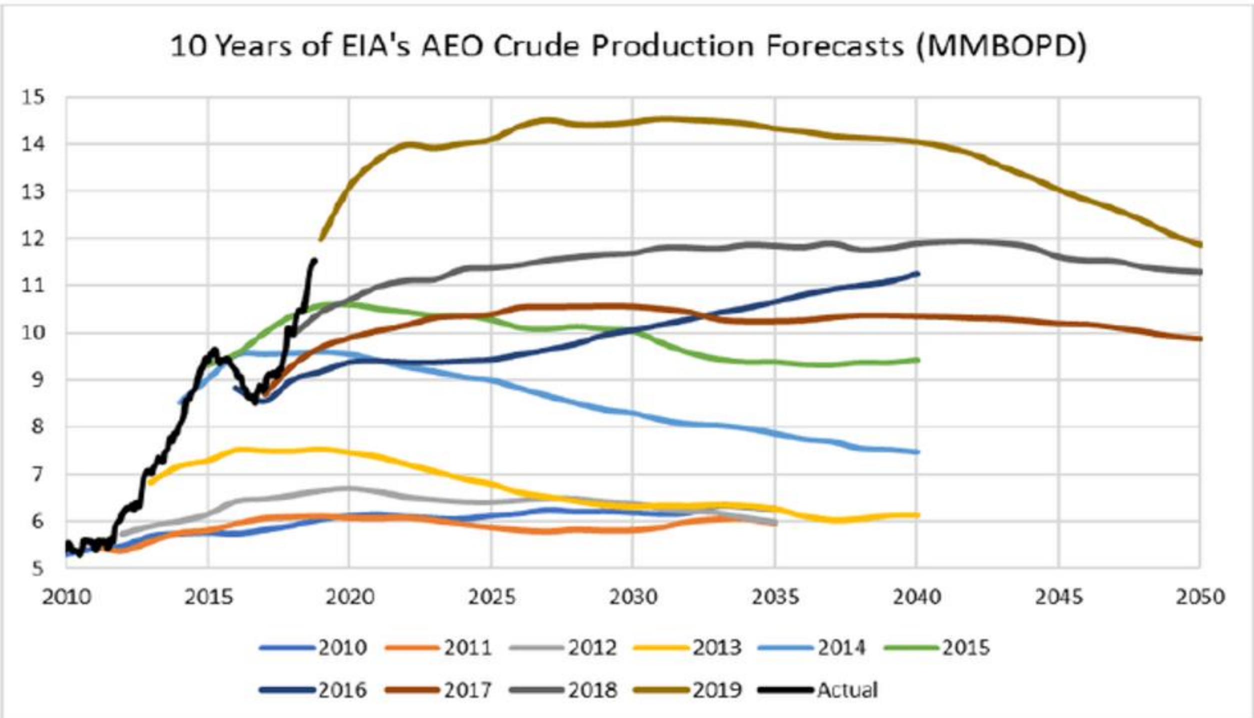


Figure 7: Comparison of Prior Years' AEO Oil Forecast to Actual, Source EIA, Oil & Gas 360

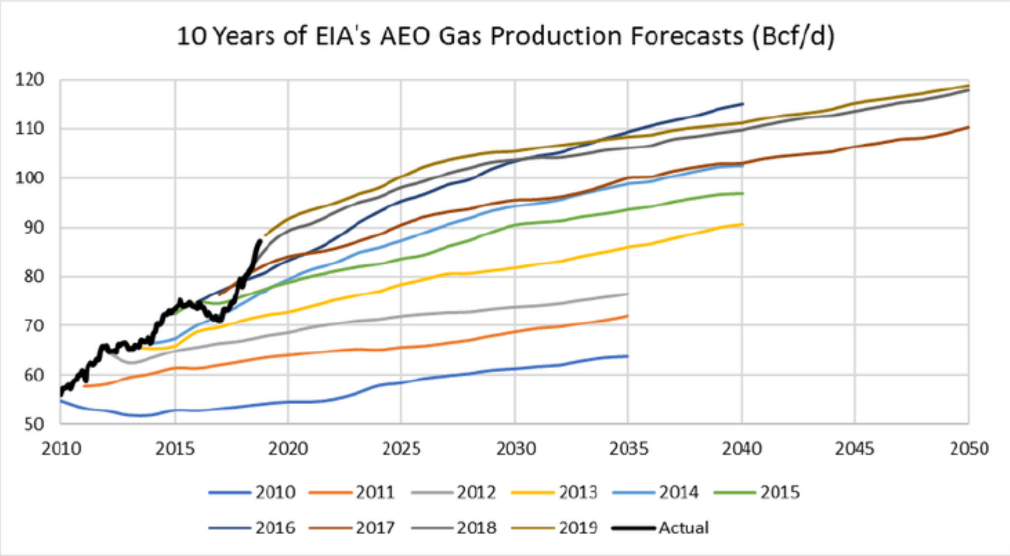


Figure 8: Comparison of Prior Years' AEO Gas Forecast to Actual, Source EIA, Oil & Gas 360

While not EIA data, in January 2019 the FT produced an interesting graph below showing the long-term share of U.S. energy consumption. After a steady contribution from 1995 to 2007 recent years have seen significant increase in gas use which is now in both absolute and relative terms higher than ever.

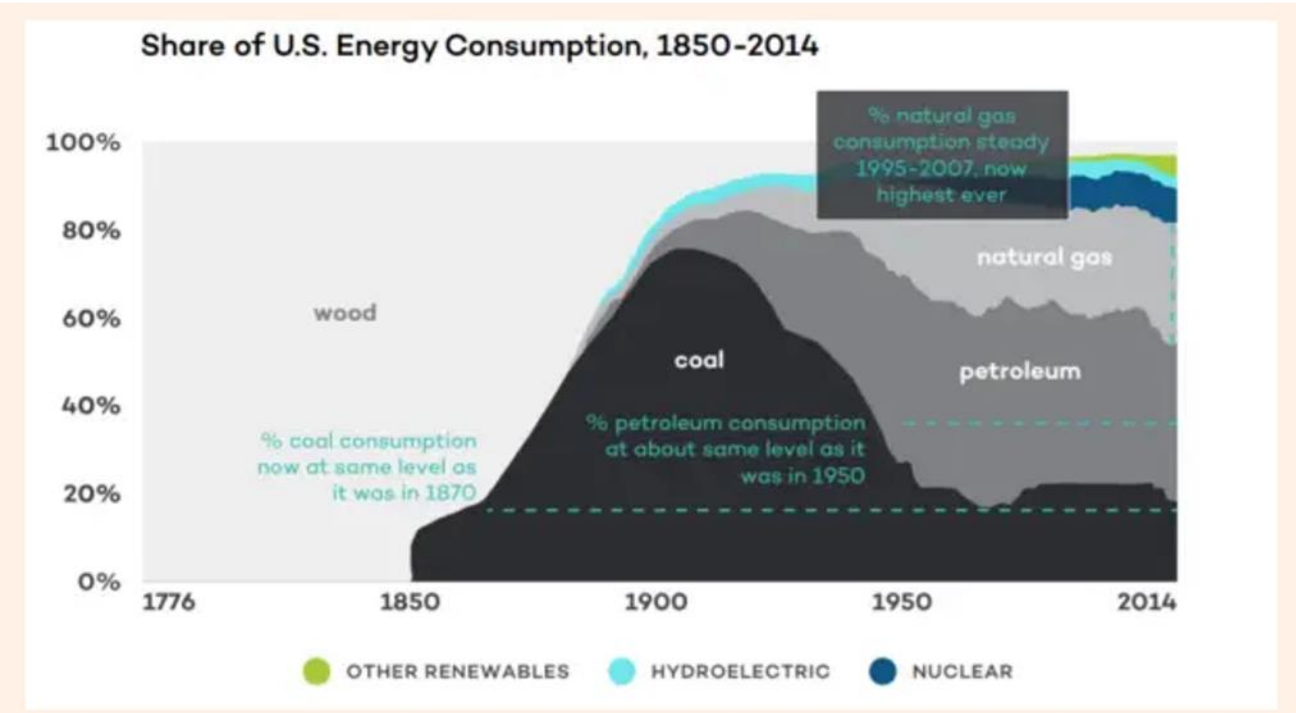


Figure 9: Long Term Share of U.S. Energy Consumption, Source Financial Times

The FT also reported that 2018 was a near-record for closures of coal-fired power plants in the U.S., with about 14.3GW of capacity shut down, according to S&P Global Market Intelligence, not far short of the 14.8GW retired in 2015.

Gas Market

In various LNG related news:

According to the Wall Street Journal "*Saudi Arabia is nearing a deal to invest in U.S. LNG, a landmark decision for the kingdom, which in the past has been a huge supplier of energy to America. Saudi Arabian Oil Co, known as Aramco, has narrowed its focus to a shortlist of at least four U.S. LNG projects and intends to announce a deal in the first half of this year, people familiar with the matter said".*

Forbes reported that over the final week of 2018, U.S. feed gas for LNG exports exceeded 5 billion cubic feet per day (bcfd) for the first time, an increase of over 60% form the same time in 2017. LNG now provides 4% of gas demand. There are now three operating U.S. LNG export facilities: Sabine Pass (LA), Cove Point (MD) and Corpus Christi (TX), with the latter having only just commenced operations in November. By the end of 2019 there will be 6 LNG export facilities operating with export capacity expected to reach 8.9 bcfd. Additional facilities are awaiting final investment decisions over the next 6 months and Forbes projects that over the next seven years LNG export capacity could increase to between 20 and 25 bcfd, around a quarter of current U.S. gas production.

Asia is responsible for 70-80% of new gas demand in the world. China is the driver, the largest new gas user in the world has nearly 15 regasification terminals scheduled to come on line 2020-2023. In December China imported a record 6.29 million tons of LNG (Reuters), up 25% from the same time last year. For 2018 Chinese LNG imports grew 41% from 2017 to 53.78 million tons, cementing China as the second largest buyer of LNG behind Japan. South Korea is third.

In the near term there are risks to the industry. In 2018 China was the third-largest buyer of U.S. LNG after Mexico and South Korea (despite having no offtake agreements). Since Trump initiated his trade war China has not bought any U.S. LNG.

Oil Market

Oil prices increased over the course of January driven by global economic and supply considerations. Fears of a global slowdown, accentuated by the U.S. China trade dispute and growing U.S. petroleum inventories are tempering the oil price however supply reductions are providing price support. Principal supply issues are:

- OPEC reduced production by nearly 1 million bbld in January;
- U.S. sanctions on Venezuela (the main impact of which has been an increase in demand for and price of heavier crude blends such as MARS and Canadian Heavy, as U.S. refiners that are set up to process heavier blends replace Venezuelan crude);
- U.S. sanctions on Iran; and
- Ongoing security issues in Libya

In its monthly oil report, the International Energy Agency ("IEA") maintained its outlook for oil demand growth of 1.3 million bbl/d (mmbbld) in 2018 and 1.4 mmbbld in 2019. The impact of higher oil prices in 2018 has faded, which will help to offset lower economic growth. The IEA did comment that "*the mood music in the global economy is not very cheerful*".

Location basis is a very important factor in determining how much gas and oil production is worth. We have seen the negative impact of high Permian Basin differentials through the second half of 2018 on our LEIAC1 (Strand) oil revenue. Pleasingly a combination of new transport capacity and reduced drilling activity has now removed this negative differential to WTI.

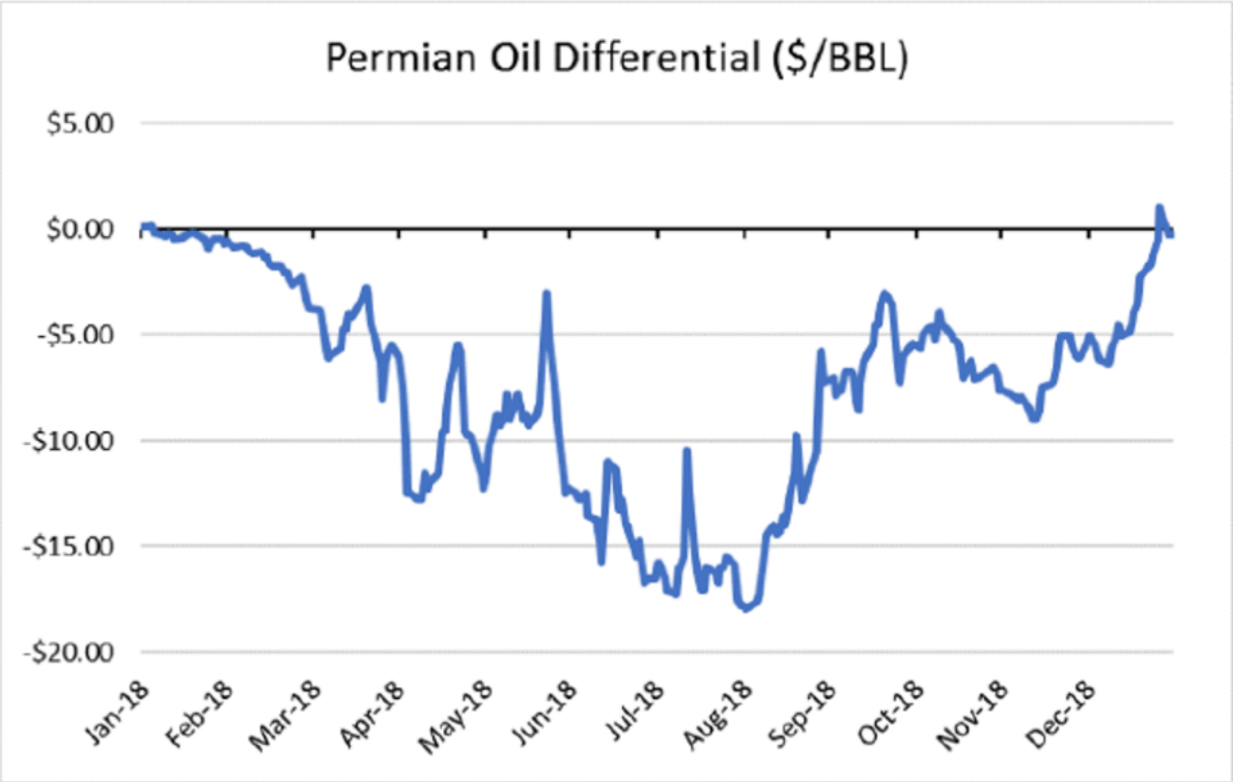
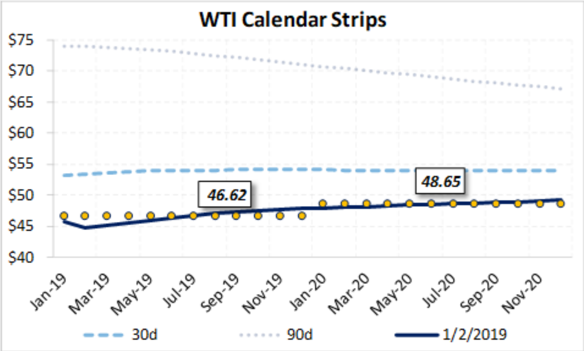
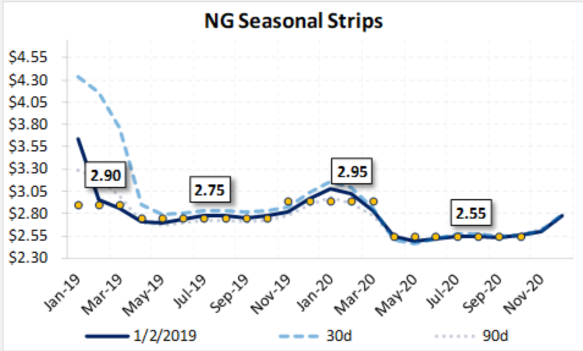


Figure 10: Permian to WTI Oil Differential, Source Platts

Gas and Oil Prices 2 January 2019





Swap Pricing

		Bal 18		Cal 19		Cal 20		Cal 21
NYMEX WTI Crude	$	45.81	$	46.62	$	48.65	$	49.81
ICE Brent Crude	$	53.80	$	54.15	$	55.46	$	56.63
Louisiana Light Sweet	$	52.11	$	51.22	$	52.35	$	53.03
TM Midland Differential			$	(4.10)	$	(0.08)	$	0.60
NYMEX Natural Gas			$	2.80	$	2.68	$	2.61

Source: Bloomberg LP

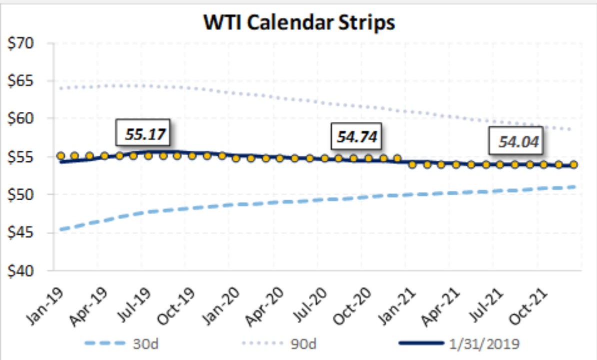
Note: Midland diff changed to TM computation Oct 1. All prices indicative only.

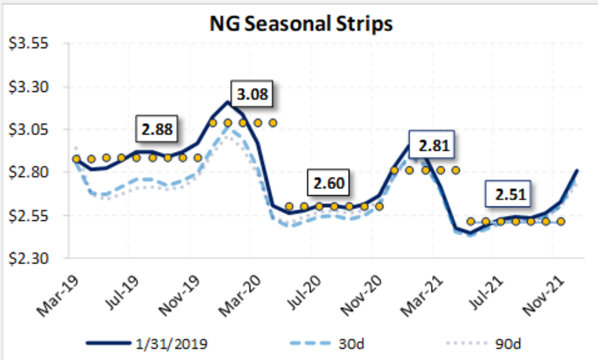
Natural Gas Basis

Location		Spot		Winter '18/'19		Summer '19		Winter '19/'20
Henry Hub Fixed	$	3.19	$	2.89	$	2.72	$	2.93
CIG	$	(0.13)	$	(0.60)	$	(0.81)	$	(0.66)
MichCon	$	(0.14)	$	(0.15)	$	(0.25)	$	(0.18)
TETCO M3	$	(0.16)	$	1.33	$	(0.39)	$	1.15
Dominion S	$	(0.38)	$	(0.35)	$	(0.51)	$	(0.45)
NGPL	$	(0.56)	$	(0.70)	$	(0.68)	$	(0.51)
Waha	$	(1.04)	$	(1.80)	$	(1.60)	$	(0.91)

All prices as of close yesterday

Gas and Oil Prices 2 January 2019





Swap Pricing

		Bal 19		Cal 20		Cal 21		Cal 22
NYMEX WTI Crude	$	55.17	$	54.74	$	54.04	$	53.66
ICE Brent Crude	$	61.67	$	61.04	$	60.65	$	60.73
Louisiana Light Sweet	$	59.59	$	57.92	$	56.87	$	56.49
TM Midland Differential	$	(1.42)	$	0.00	$	0.45		
NYMEX Natural Gas	$	2.92	$	2.75	$	2.63	$	2.65

Source: Bloomberg LP

Note: Midland diff changed to TM computation Oct 1. All prices indicative only.

Natural Gas Basis

Location		Spot		Winter '18/'19		Summer '19		Winter '19/'20
Henry Hub Fixed	$	3.00	$	2.85	$	2.87	$	3.08
TETCO M3	$	4.23	$	0.21	$	(0.32)	$	1.25
MichCon	$	1.05	$	(0.07)	$	(0.23)	$	(0.19)
CIG	$	0.44	$	(0.43)	$	(0.68)	$	(0.52)
Dominion S	$	(0.04)	$	(0.27)	$	(0.43)	$	(0.40)
NGPL	$	(0.47)	$	(0.61)	$	(0.66)	$	(0.48)
Waha	$	(0.57)	$	(1.62)	$	(1.61)	$	(0.93)

All prices as of close yesterday

Important Disclaimer.

This report has been issued by Longreach Alternatives Limited ABN 250 828 52364 AFSL 246 747 ("Longreach"). Data is at 31 October 2018 unless stated otherwise. This document is not an offer of securities or financial products, nor is it financial product advice.

As this document has been prepared without taking account of any individual investor's particular objectives, financial situation or needs, you should consider its appropriateness having regard to your objectives, financial situation and needs before taking any action.

This document has been prepared without taking into account of your objectives, financial situation and needs, you should consider its appropriateness having regard to your objectives, financial situation and needs.

The information stated, opinions expressed and estimates given constitute best judgement at the time of publication and are subject to change without notice. Consequently, although this document is provided in good faith, it is not intended to create any legal liability on the part of Longreach or any other entity and does not vary the terms of a relevant disclosure statement. Past performance is not an indicator of future results. All dollars are US dollars unless otherwise specified.

This document describes some current internal investment guidelines and processes. These are constantly under review and may change over time. Consequently, although this document is provided in good faith, it is not intended to create any legal liability part of Longreach or any other entity and does not vary the terms of a relevant disclosure statement. Past performance is not an indicator of future results. In cases where information contained in this document derives from third parties, Longreach accepts no liability for the accuracy, completeness or appropriateness of such information.