

Longreach Energy Investments LLC

November 2019 Report


1.0 Market and Portfolio Commentary

1.1 Macro Industry Commentary

General Market Commentary

Oil markets remain focused on the US/China trade war and OPEC while US gas markets are, notwithstanding steady LNG demand growth, driven by near term weather forecasts.

US rig count continues to fall, the full Baker Hughes Rotary Rig Count table as at 6 Dec is below.

Baker Hughes rig count **Baker Hughes** 

Rotary Rig Count
12/6/19

Location	Week	+/-	Week Ago	+/-	Year Ago
Land	777	-3	780	-273	1050
Inland Waters	0	0	0	-2	2
Offshore	22	0	22	-1	23
United States Total	799	-3	802	-276	1075
Gulf Of Mexico	22	0	22	-1	23
Canada	138	12	126	-48	186
North America	937	9	928	-324	1261
U.S. Breakout Information	This Week	+/-	Last Week	+/-	Year Ago
Oil	663	-5	668	-214	877
Gas	133	2	131	-65	198
Miscellaneous	3	0	3	3	0
Directional	52	-1	53	-20	72
Horizontal	695	-6	701	-238	933
Vertical	52	4	48	-18	70
Canada Breakout Information	This Week	+/-	Last Week	+/-	Year Ago
Oil	87	10	77	-15	102
Gas	51	2	49	-33	84
Major State Variances	This Week	+/-	Last Week	+/-	Year Ago
Alaska	7	0	7	0	7
California	15	0	15	0	15
Colorado	23	0	23	-10	33
Kansas	0	0	0	-1	1
Louisiana	56	-1	57	-8	64
New Mexico	103	0	103	-7	110
North Dakota	50	1	49	-2	52
Ohio	13	0	13	-1	14
Oklahoma	50	-1	51	-92	142
Pennsylvania	24	1	23	-23	47
Texas	400	-5	405	-129	529
Utah	4	0	4	-2	6
West Virginia	13	0	13	1	12
Wyoming	29	0	29	-1	30

There are now 663 rigs focused on onshore oil, 214 less than this time last year and 133 drilling for gas, a reduction of 65 from a year ago. During November CEOs of public companies EQT, Continental, Chesapeake and Pioneer all flagged that the reduced activity would likely deliver production declines in 2020.

Notwithstanding the falling rig count and widespread reductions in 2020 capital expenditure budgets, on 14 November the Energy Information Administration (EIA) increased its US crude production estimates for 2019 of 12.29mmbbl/d increasing to 13.29mmbbl/d for 2020. The EIA also forecasts a modest year-on-year increase in daily gas production for 2020 over 2019 (2020 to average 94.9bcf/d vs 2019 92.1bcf/d). Longreach Energy Holdings (LEH) believes that it is probable US oil and gas production in 2020 will see a fall rather than increase in production and that this will provide good support for oil and gas prices.

The Oklahoma (OK) rig count has fallen by 92 rigs from 142 to 50 over the last 12 months. The OK rig count fall is principally due to the relatively large number of Private Equity backed operators who have been active in the state. These firms have been unable to sell themselves as planned and have now run out of capital. We are likely to see attractive investment opportunities emerge from this market dislocation.

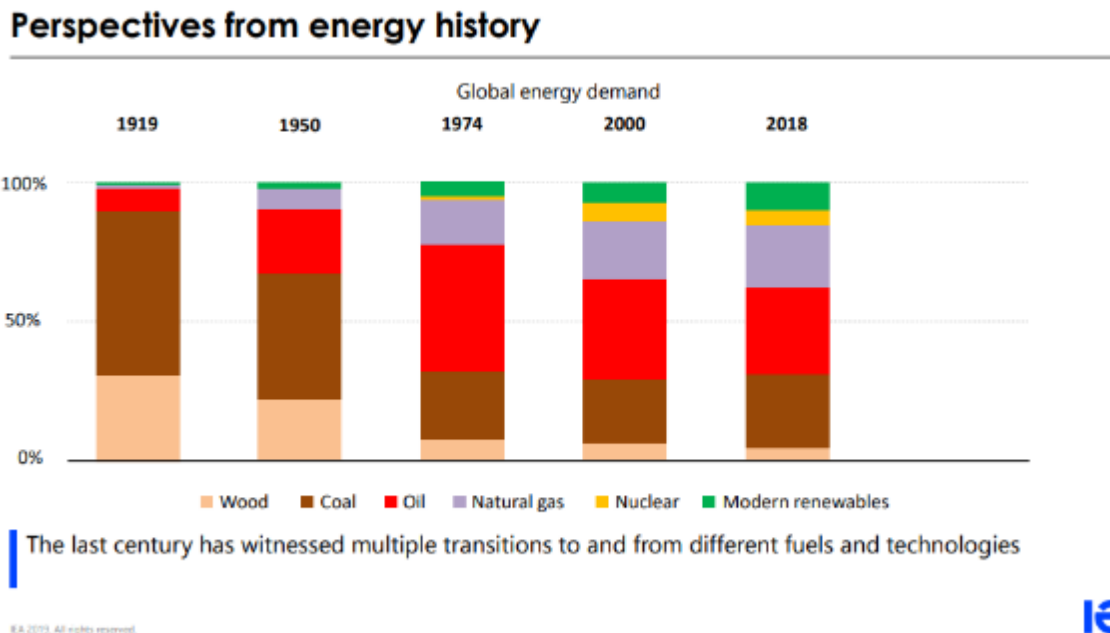
In the near term this OK rig count fall will see some reduction in the amount of new drilling on our OK minerals portfolio, however asset prices in areas where we own minerals are protected by disciplined buying, high quality rock and the assets' long-term intrinsic value. There are areas in Oklahoma that have seen meaningful fall in minerals prices but that is mostly a correction for over-bid assets that we have avoided.

The International Energy Agency (IEA) published its annual World Energy Outlook. Selected slides are provided below as high-level summary:

- IEA said global oil demand will hit a plateau around 2030 as the use of more efficient cars and EVs ends an expansion that dominated the past century
- Forecast that current demand growth of 1 mmbbl/d – or about 1% - will hold for the next five years, then fall to 0.1 mmbbl/d in the 2030s
- The necessity to find new supplies should cause prices to rise from current levels of about \$60/bbl to reach \$90/bbl in 2030 and \$103/bbl in 2040.

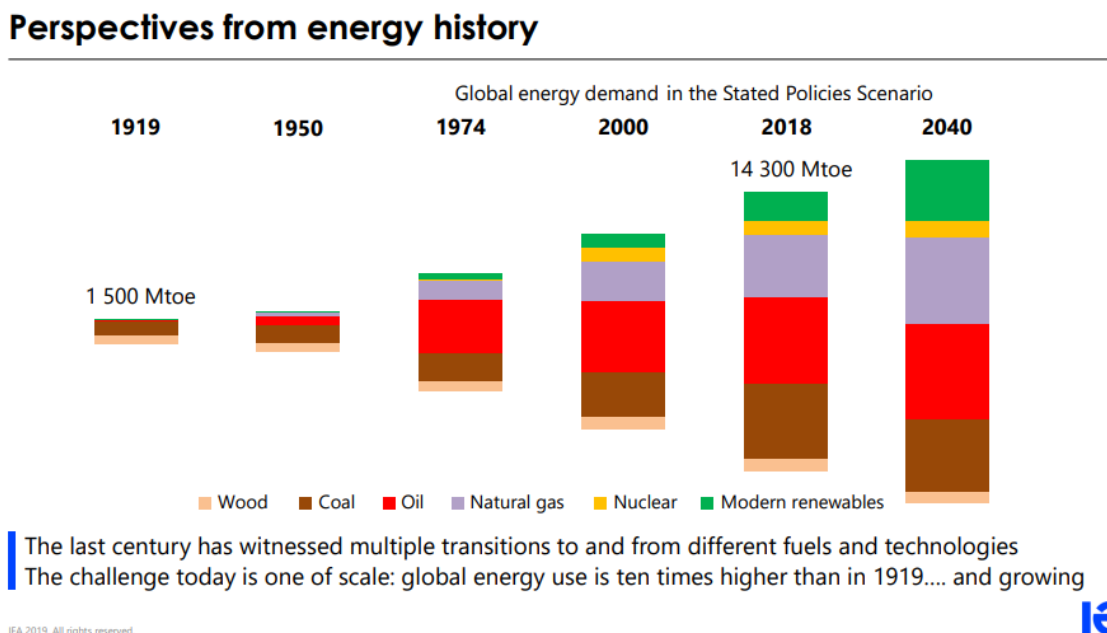
Figure 1 shows the multiple transitions to and from different fuels and technologies over the last century.

Figure 1: Perspectives from Energy History (source IEA)



The transition challenge today is one of scale. As shown in Figure 2 global energy use is ten times higher than in 1919 and growing.

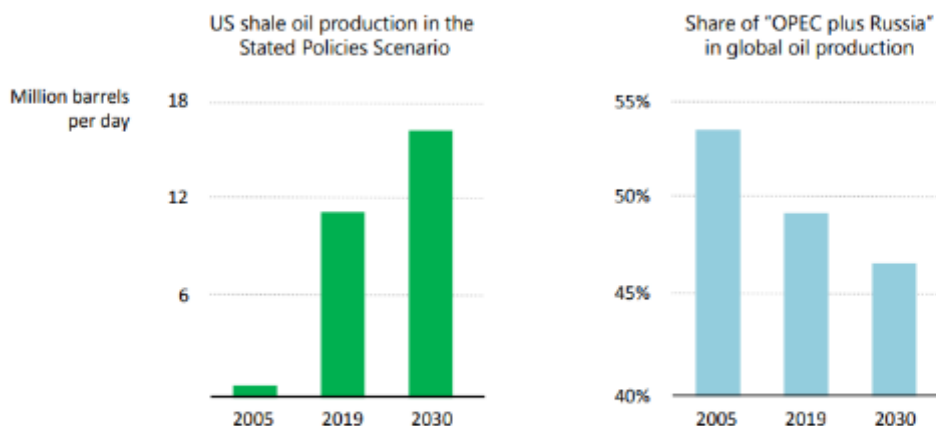
Figure 2: Global Energy Demand (source IEA)



While the growth in US shale supply is set to slow, the resources are there to maintain high output for many years to come. This will make it harder for OPEC and its allies to “manage oil markets” (Figure 3).

Figure 3: Oil Market Share (source IEA)

Shale can stay higher for longer



The dramatic growth of recent years in US shale is set to slow, but the resources are there to maintain high output for many years to come. This provides a strong counterweight to efforts to “manage oil markets”

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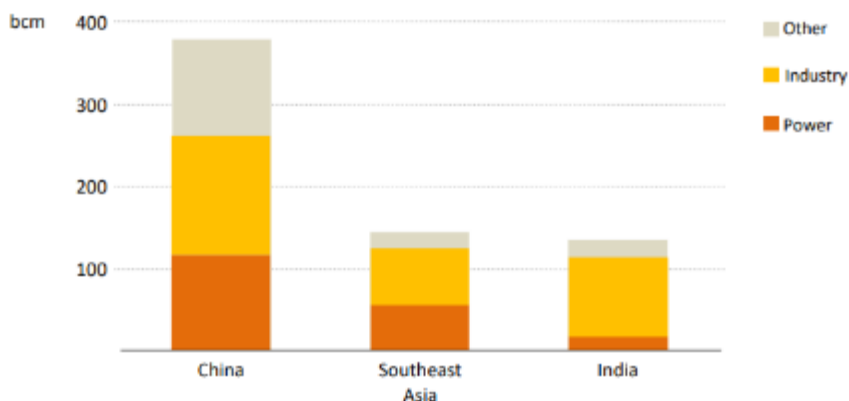


Asia is the driver of global growth in gas demand.

Figure 4: Natural Gas Demand in Asia (source IEA)

Natural gas turns to Asia

Growth in gas demand and supply in selected Asian markets in the Stated Policies Scenario, 2018-2040



Developing economies in Asia account for half of global growth in gas demand, with industrial consumers taking the largest share

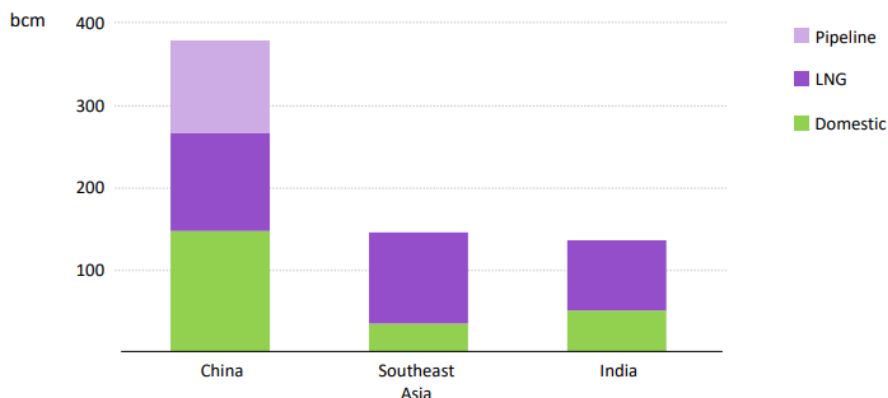
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Figure 5: Natural Gas Supply in Asia (source IEA)

Natural gas turns to Asia

Growth in gas demand and supply in selected Asian markets in the Stated Policies Scenario, 2018-2040



Developing economies in Asia account for half of global growth in gas demand, with industrial consumers taking the largest share, and this provides the spur for almost all the growth in gas trade, led by LNG

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Gas Market

Gas prices increased modestly early in the month because of cold weather though by mid-November had fallen back to \$2.30 - \$2.40/mcf, as record gas production averaging near 96bcf/d met average weather forecasts.

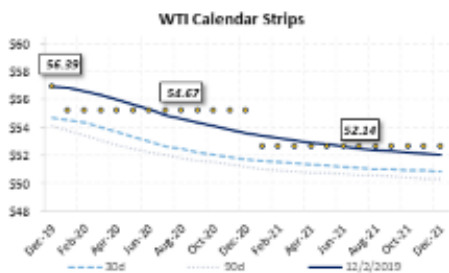
The EIA expects US LNG exports to average 4.7bcf/d in 2019 and 6.4bcf/d in 2020 as three new liquefaction projects come online. US LNG capacity is due to reach 8.9bcf/d by the end of the year. On 8 December US LNG feed gas demand reached a record 8.25bcf.

EIA also expects that the share of US total utility-scale electricity generation from natural gas-fired power plants will rise from 34% in 2018 to 37% in 2019 and 38% in 2020.

Oil Market

Oil prices were slightly up month-on-month. In early December OPEC announced a surprise additional supply cut of 400mmbbl/d that drove WTI to almost \$60/bbl. Resolution of the China/US trade war looks to be far in the horizon.

Gas and Oil Prices 2 December 2019



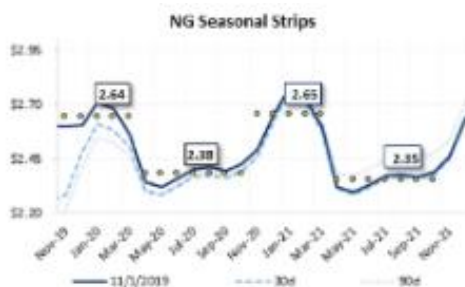
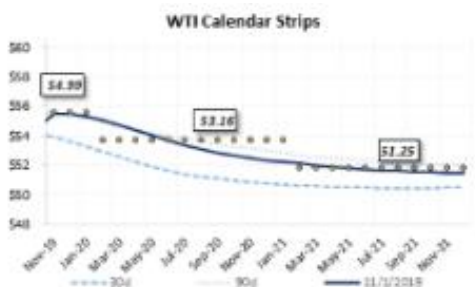
Swap Pricing				
	Cal 20	Cal 21	Cal 22	Cal 23
NYMEX WTI Crude	\$ 54.67	\$ 52.14	\$ 51.20	\$ 51.08
ICE Brent Crude	\$ 59.06	\$ 57.07	\$ 56.47	\$ 56.63
Louisiana Light Sweet	\$ 58.04	\$ 54.96	\$ 53.90	\$ 53.78
TM Midland Differential	\$ 1.00	\$ 1.08	\$ 1.08	
NYMEX Natural Gas	\$ 2.31	\$ 2.43	\$ 2.45	\$ 2.52

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

Natural Gas Basis				
Location	Spot	Q1 '20	Summer '20	Winter '20/'21
Henry Hub Fixed	\$2.46	\$2.31	\$2.22	\$2.56
TETCO M3	\$ (0.12)	\$ 1.92	\$ (0.35)	\$ 1.25
MichCon	\$ (0.16)	\$ (0.15)	\$ (0.21)	\$ (0.13)
CIG	\$ (0.26)	\$ (0.43)	\$ (0.65)	\$ (0.41)
Dominion S	\$ (0.59)	\$ (0.37)	\$ (0.50)	\$ (0.41)
TETCO M2	\$ (0.60)	\$ (0.37)	\$ (0.55)	\$ (0.43)
NGPL-Midcon	\$ (1.01)	\$ (0.68)	\$ (0.58)	\$ (0.40)
Waha	\$ (1.49)	\$ (1.31)	\$ (1.57)	\$ (1.13)

All prices as of close yesterday

Gas and Oil Prices 1 November 2019



Swap Pricing				
	Bal 19	Cal 20	Cal 21	Cal 22
NYMEX WTI Crude	\$ 54.99	\$ 53.16	\$ 51.25	\$ 50.82
ICE Brent Crude	\$ 59.52	\$ 57.53	\$ 56.32	\$ 56.30
Louisiana Light Sweet	\$ 58.12	\$ 56.07	\$ 54.02	\$ 53.37
TM Midland Differential	\$ 0.76	\$ 0.83	\$ 0.95	
NYMEX Natural Gas	\$ 2.61	\$ 2.48	\$ 2.47	\$ 2.51

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

Natural Gas Basis				
Location	Spot	Winter '19/'20	Summer '20	Winter '20/'21
Henry Hub Fixed	\$2.73	\$2.66	\$2.38	\$2.65
CIG	\$ (0.24)	\$ (0.43)	\$ (0.67)	\$ (0.45)
MichCon	\$ (0.28)	\$ (0.16)	\$ (0.20)	\$ (0.12)
TETCO M3	\$ (0.85)	\$ 2.39	\$ (0.33)	\$ 1.43
TETCO M2	\$ (0.98)	\$ (0.38)	\$ (0.53)	\$ (0.42)
Dominion S	\$ (0.98)	\$ (0.37)	\$ (0.48)	\$ (0.38)
Waha	\$ (0.99)	\$ (1.30)	\$ (1.67)	\$ (1.32)
NGPL-Midcon	\$ (1.08)	\$ (0.75)	\$ (0.44)	\$ (0.53)

All prices as of close yesterday

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