

Longreach Energy Investments LLC

September 2018 Report

Market and Portfolio Commentary

1.1 Macro Industry Commentary

IEA Petrochemicals Review

The Paris based International Energy Agency (IEA, not to be confused with the US Energy Information Agency or EIA) has released a report into the global Petrochemicals industry.

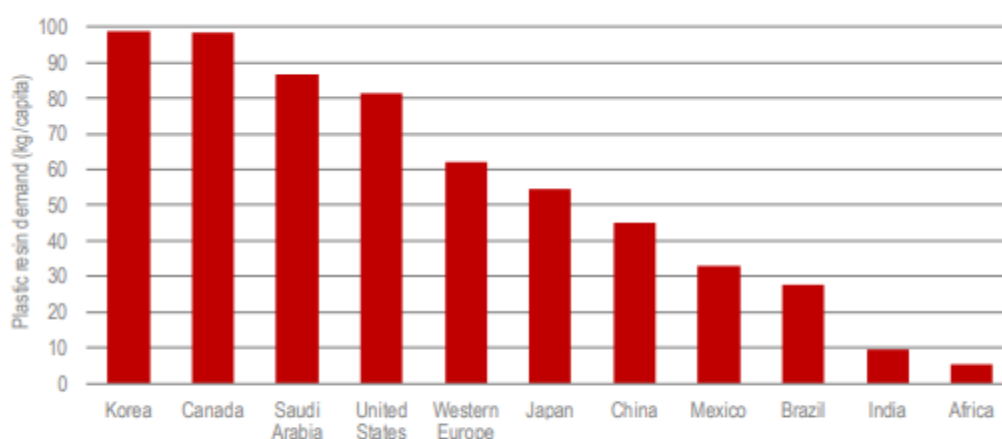
Key findings are:

The growing role of petrochemicals is one of the key “blind spots” in the global energy debate. The diversity and complexity of this sector means that petrochemicals receive less attention than other sectors, despite their rising importance.

Petrochemicals are rapidly becoming the largest driver of global oil consumption. They are set to account for more than a third of the growth in oil demand to 2030, and nearly half to 2050,¹ ahead of trucks, aviation and shipping. At the same time, currently dominant sources of oil demand, especially passenger vehicles, diminish in importance thanks to a combination of better fuel economy, rising public transport, alternative fuels, and electrification. Petrochemicals are also poised to consume an additional 56 billion cubic metres (bcm) of natural gas by 2030, equivalent to about half of Canada’s total gas consumption today.

Western developed economies use 20 times as much plastic and up to 10 times as much fertiliser as many developing countries in Asia on a per capita basis (see Figure 1), indicating the sector’s significant growth potential.

Figure ES.2 • Per capita demand for major plastics



Notes: Plastics includes the main thermoplastic resins and excludes all thermosets and synthetic fibre. The quantities are for 2015 and reflect the apparent consumption (production less exports plus imports) by the next tier in the manufacturing chain following primary chemical production (e.g. plastic converters).

Source: METI (2016), *Future Supply and Demand Trend of Petrochemical Products Worldwide*, Tokyo, www.meti.go.jp/policy/mono_info_service/mono/chemistry/sekkaiyukyudoukou201506.html.

Figure 1: Per Capita Demand for Major Plastics

The report notes:

The combination of a growing global economy, rising population, and technological development will translate into an increasing demand for petrochemical products. Although substantial increases in recycling and efforts to curb single-use plastics take place, especially led by Europe, Japan and Korea, these efforts will be far outweighed by the sharp increase in developing economies of plastic consumption (as well as its disposal). The difficulty in finding alternatives is another factor underpinning the robust overall demand growth for petrochemical products.

The petrochemical industry currently provides 14% of total oil demand (13 million bbls/d) and 8% of total gas demand (10.6 trillion cubic feet / day). IEA projects that 30% of growth in oil demand to 2030 and 7% of the growth in gas demand over the same period will come from the petrochemical industry (see Figure 2).

Figure ES.3 • Oil demand growth by 2030

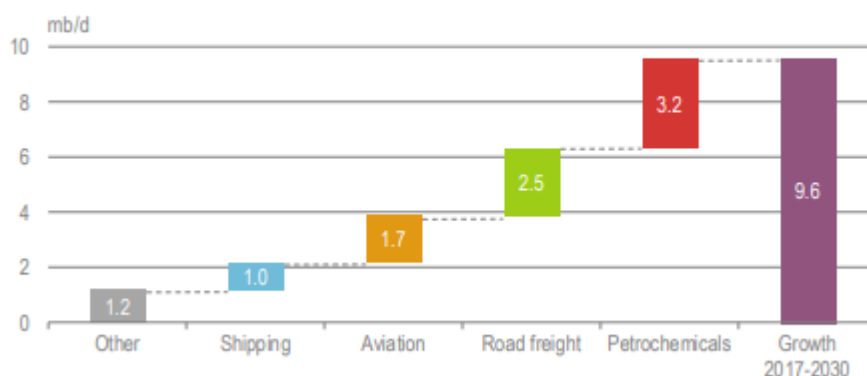


Figure 2: Oil Demand Growth to 2030, Source IEA

Permian Basin Transport

The low prices being received in the Permian Basin that have delayed the Strand drilling programme are affecting all producers. Figures 2 and 3 illustrate the delay to completions as industry waits for new pipeline capacity to come on stream.

Executive Summary

Takeaway Constraints: Permian Basin

Supply chain and midstream bottlenecks are forcing E&Ps to slow down the completion activities in the Permian...



Energent



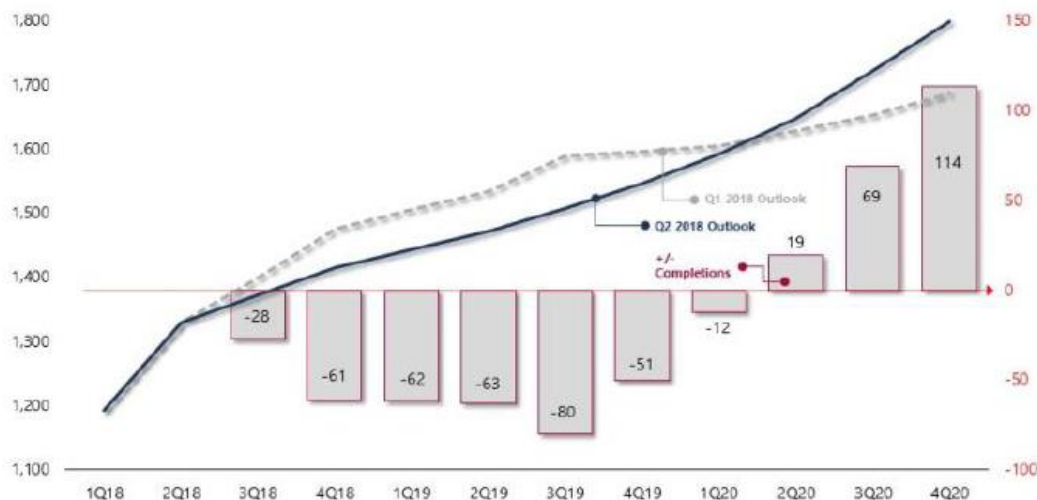
Westwood
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Mid-year Revision to Permian Completions

Horizontal Completions

Number of Completions Lost/Deferred

Horizontal Completions



Source: Westwood Analysis

U.S. Drilling & Completion Outlook | Q3 2018

© Westwood Global Energy Group

Figure 3: Permian Basin Forecast Completions

The growing backlog of drilled but uncompleted wells in the Permian

— Number of wells drilled — Number of wells completed
— Stock of wells drilled but not completed



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Figure 4: Permian Basin Wells Drilled, Completed and Not-Completed

As shown in CMA Midland Differential in price tables below the Permian basin discount is already declining as new transport is brought on-line. During Sept the Plains All American Sunrise expansion was completed.

This 259mi pipeline from Midland to Wichita Falls will provide an additional 220 mbbl/d transport out of the Permian Basin.

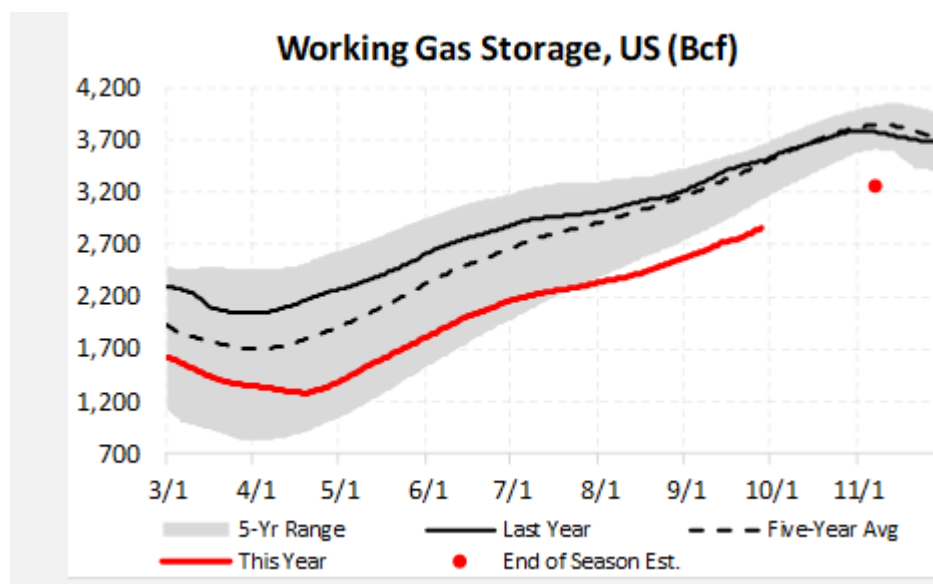
Gas and oil prices have both increased during the month. Gas's move was in the near dated curve while oil has increased across all maturities.

Relatively low gas storage inventories should continue to provide price support for gas.

Total storage now (Bcf)	2,866
Total storage last year	3,502
Total storage YoY	-636
Total storage YoY %	-18%
Five year average	3,473

Inventories for the US are now at a deficit of 636 Bcf to last year and a deficit of 607 Bcf to the five-year average.

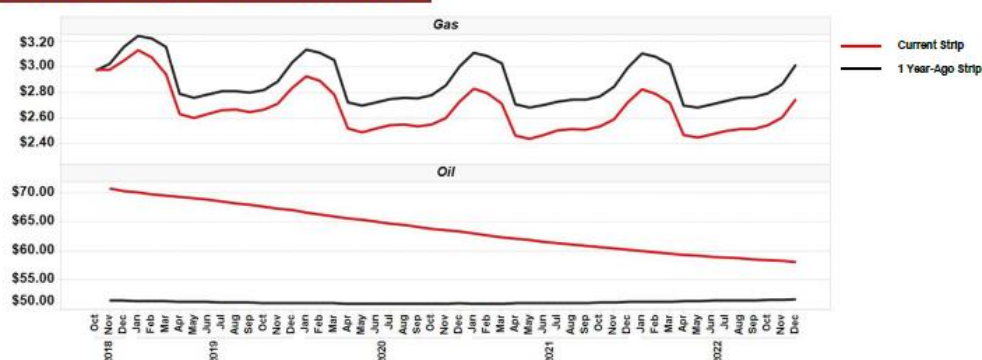
EIA data @28/9/18



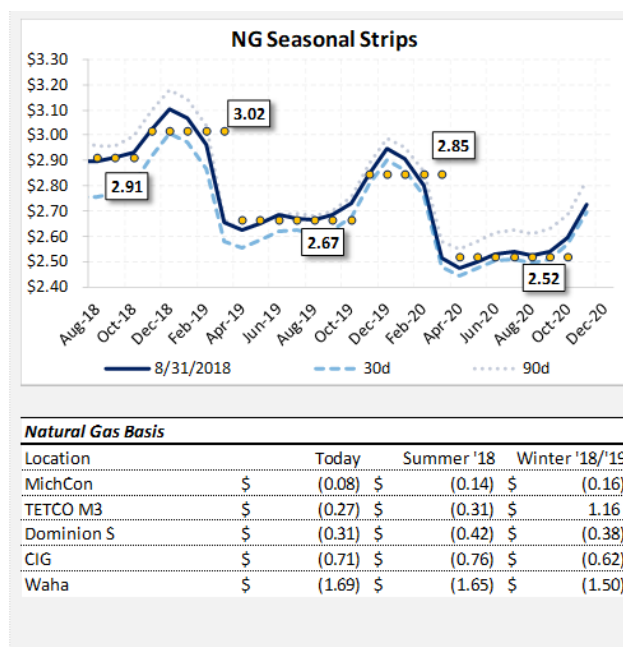
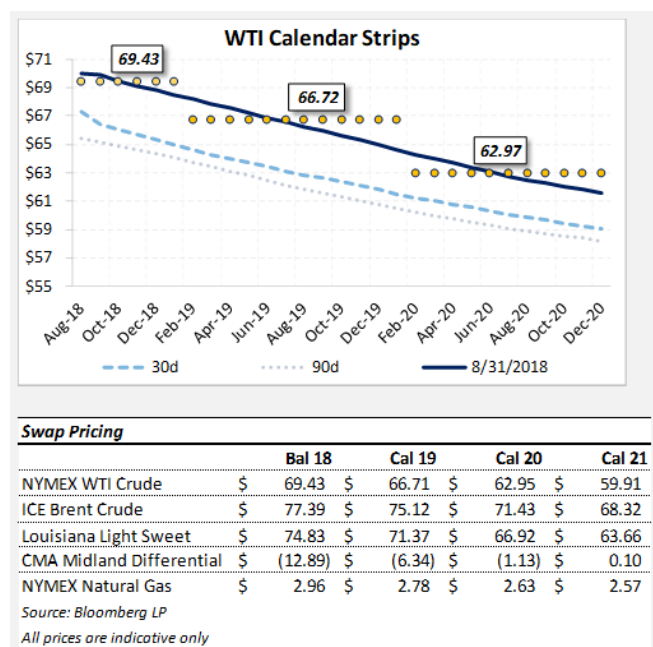
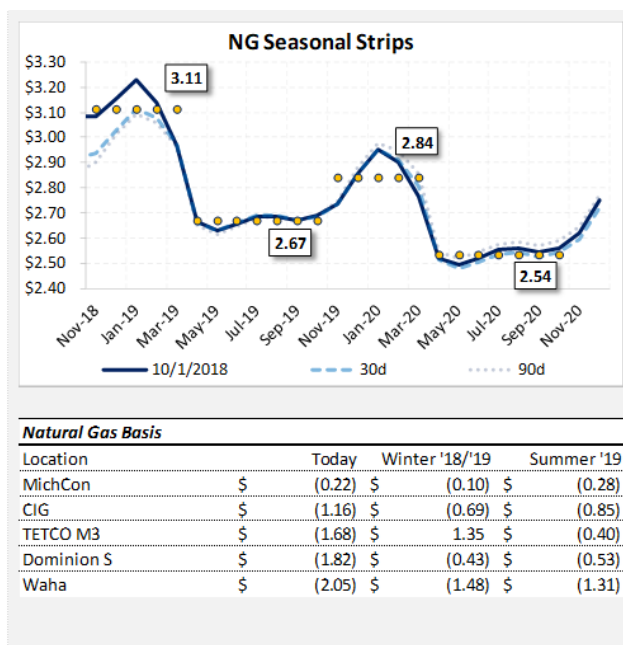
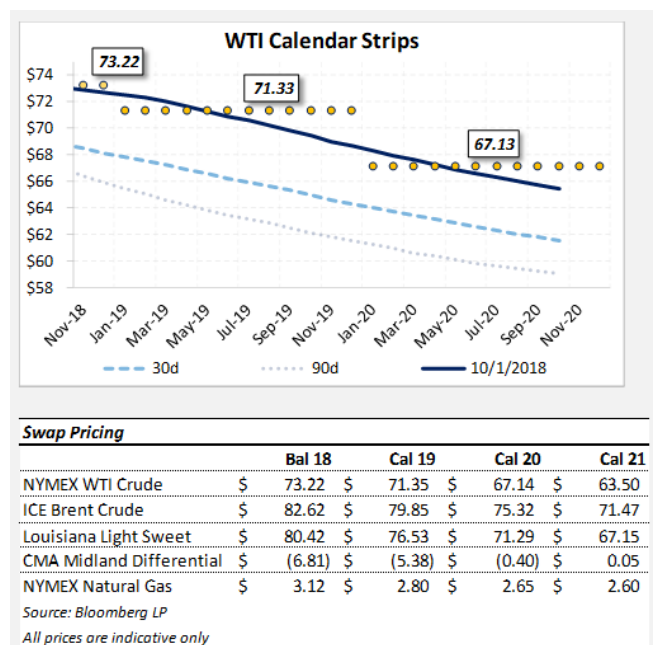
EIA data @ 28/9/18

Gas and oil strips have both increased significantly from those 1 year ago.

NYMEX 5 YEAR FUTURES STRIP PRICING



Source: CME Group

Gas and Oil Prices 31 August 2018**Gas and Oil Prices 1 October 2018**

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