



Longreach Energy Holdings LLC

FIRM INFORMATION

Investment Manager

Longreach Alternatives Ltd
ABN 25 082 852 364
AFSL 246747

Sub-Advisor

Longreach Energy Holdings LLC
Delaware registered #565928

KEY INVESTMENT PERSONNEL

Andrew Sinclair

Principal – Commercial Director

Thomas Wagenhofer

Principal – Technical Director

1.0 Market and Portfolio Commentary

1.1 Macro Industry Commentary

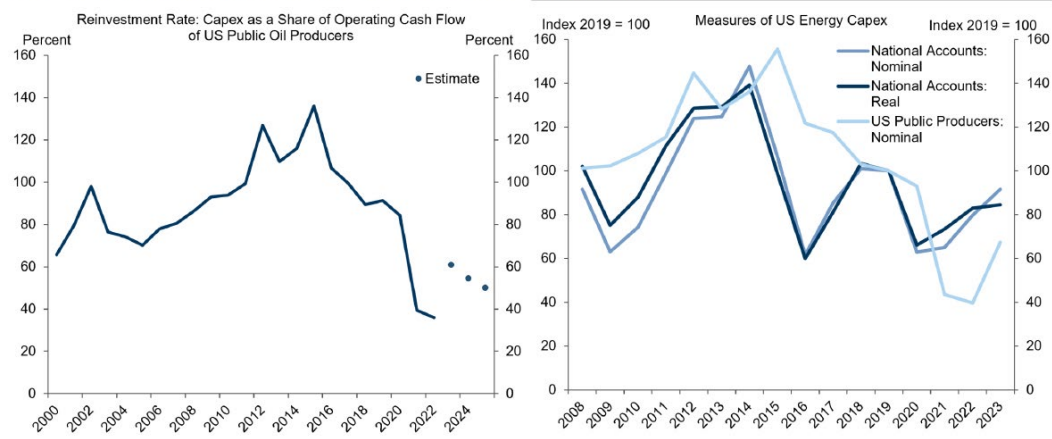
US Henry Hub prompt gas prices rose again in September, the prompt was \$2.77/mmbtu at close on 31 August and finished at \$2.93/mmbtu at close on 29 September. Calendar 2023 fell modestly, beginning September at \$3.18/mmbtu and closing at \$3.12/mmbtu.

Oil prices continued to rise. The prompt opened September at \$83.63/bbl and closed the month at \$90.79/bbl. Calendar 2023 started the month at \$82.46/bbl and closed at \$88.88/bbl.

In the first half of 2023 measures of US energy capital expenditure have trended up (RHS Figure 1), however the trend over recent years remains down and the reinvestment rate (capital expenditure as a share of operating cash flow), remains well below the average level for the past decade (LHS Figure 1). Low investment reduces supply and should prevent material falls in oil and gas prices.

Figure 1: US Energy Reinvestment Rate and Capital Expenditures (Source: Company data, Haver, vis GS)

Exhibit 11: A Lower Reinvestment Rate Even if Capex Levels Have Trended Up in 2021-2023



Source: Haver Analytics, Company data, Goldman Sachs Global Investment Research

CONTACT US

Longreach Alternatives Ltd

Level 13
1 Margaret Street
Sydney NSW 2000

T+61 2 9135 0428

client.services@longreachalternatives.com

The latest Baker Hughes rig count data follows. In September, US total land rigs continued to fall, decreasing by 14 from 610 to 596. Oil rigs fell by 16 from 513 to 497 while gas rigs rose by 5 from 113 to 118.

Baker Hughes rig count



Rotary Rig Count

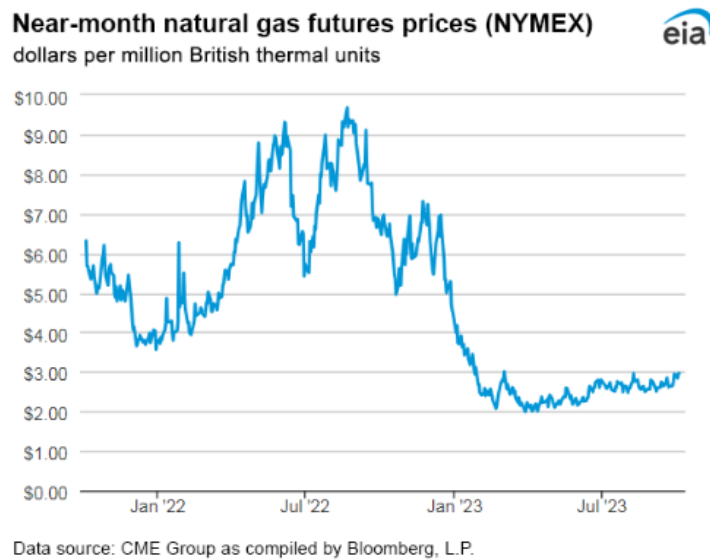
10/6/23

Location	Week	+/-	Week Ago	+/-	Year Ago
Land	596	-4	600	-150	746
Inland Waters	3	0	3	0	3
Offshore	20	0	20	7	13
United States Total	619	-4	623	-143	762
Gulf Of Mexico	18	0	18	6	12
Canada	180	-11	191	-35	215
North America	799	-15	814	-178	977
U.S. Breakout Information	This Week	+/-	Last Week	+/-	Year Ago
Oil	497	-5	502	-105	602
Gas	118	2	116	-40	158
Miscellaneous	4	-1	5	2	2
Directional	53	-2	55	12	41
Horizontal	553	0	553	-145	698
Vertical	13	-2	15	-10	23

Gas Market

In September, prompt Henry Hub gas futures sustained their recent upward trend to climb steadily towards \$3.00/mmbtu (Figure 2).

Figure 2: Near Month Henry Hub Futures (Source: EIA)

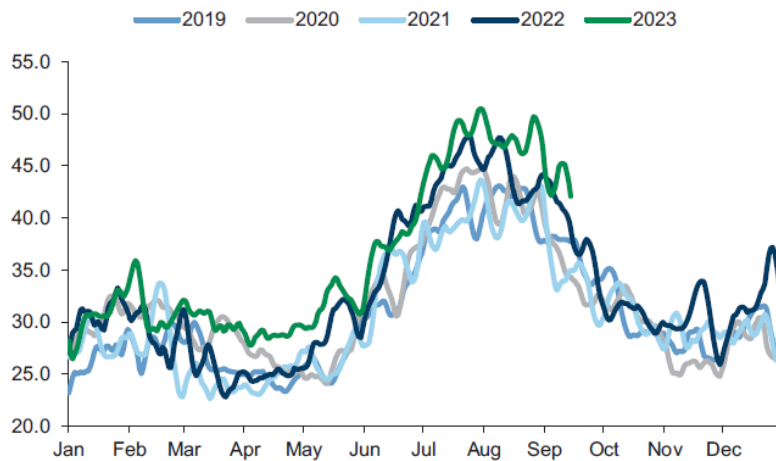


Strong electric power demand for gas (Figure 3) has led to lower injections into storage than have been delivered in recent years (Figure 4).

Figure 3: Power Demand for Gas (Source: various, via GS)

Exhibit 12: ... driven by high power demand for gas

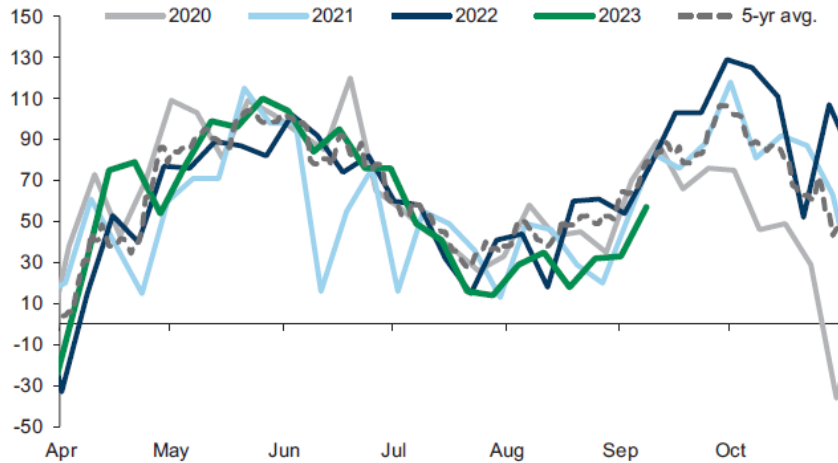
Power demand for gas (7dma), Bcf/d



Source: EIA, S&P Global Commodity Insights, Radiant Geospatial Solutions, Goldman Sachs Global Investment Research

Figure 4: US Lower 48 Gas Storage Injections (Source: EIA, via GS)

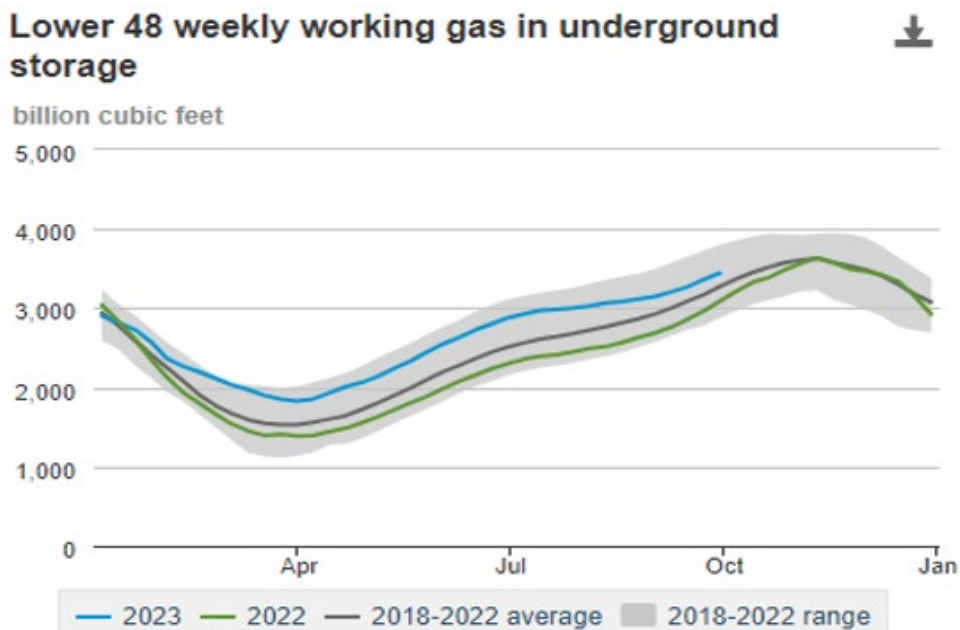
Exhibit 11: Storage injections have remained tight... L48 storage injections, Bcf



Source: EIA, Goldman Sachs Global Investment Research

Net injections into storage totalled 86bcf for the week ending 29 September, compared to the five-year (2018-2022) average net injections of 103bcf and last year's net injections of 126bcf during the same week. Working natural gas stocks now total 3,445bcf, which is 172bcf (5%) more than the five-year average and 357bcf (12%) more than last year at this time (Figure 5).

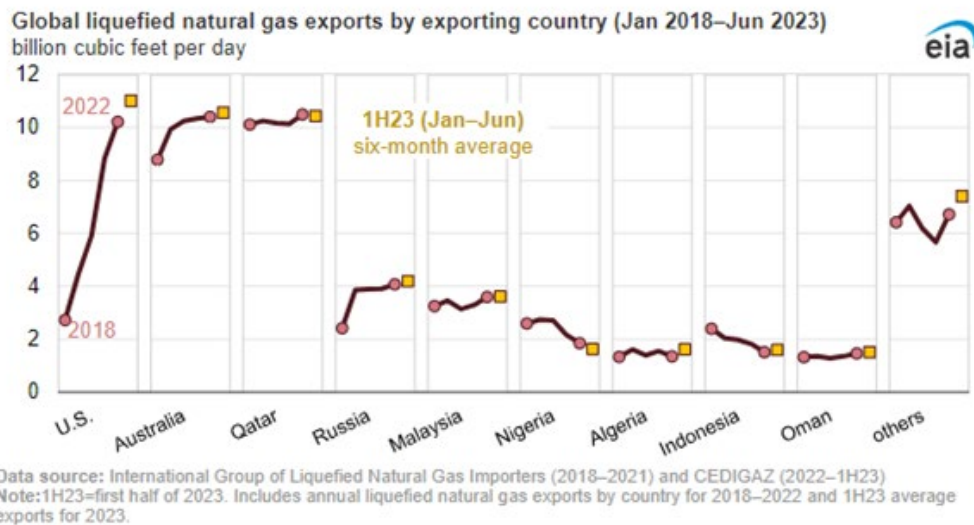
Figure 5: US Lower 48 Weekly Working Gas in Underground Storage (Source: EIA)



In the first half of 2023, the United States exported more LNG than any other country (Figure 6). US LNG exports averaged 11.6bcfd during this period. In 1H23 Australian exports averaged 10.6bcfd with Qatar third at 10.4bcfd. The growth in US LNG export volumes has been rapid in the last 4 years and with new LNG facilities under construction that growth is set to continue.

Figure 6: Global LNG Exports by Exporting Country (Source: EIA)

The United States exported more LNG than any other country in the first half of 2023



From January 2021 to June 2023, Europe was the main destination for US LNG exports followed by Asia and then the rest of the world (Figure 7).

Figure 7: US LNG Exports by Destination Country Jan 2021–Jun 2023 (Source: EIA)

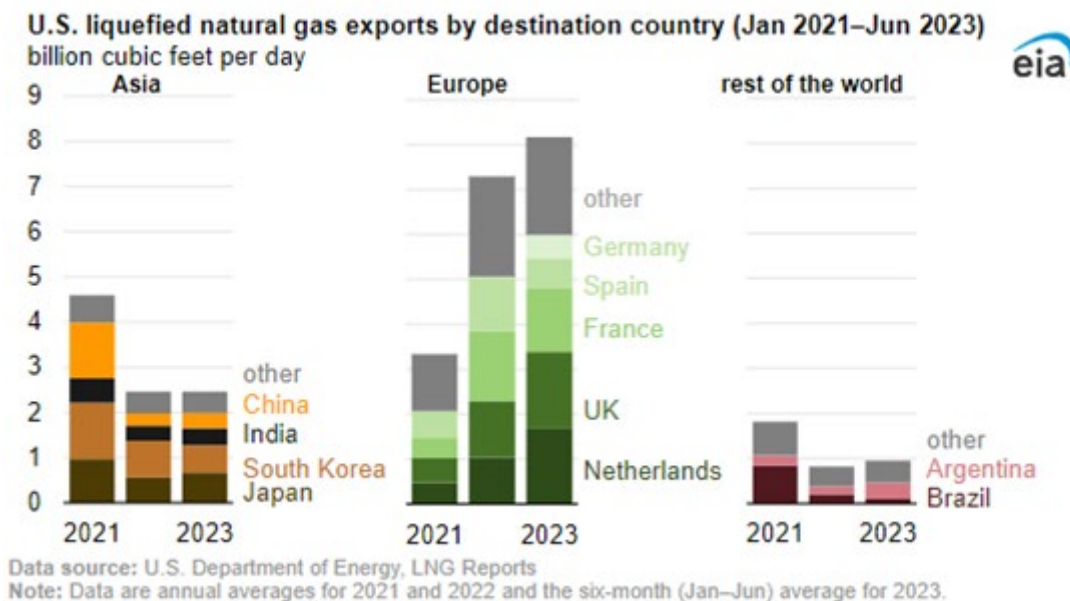
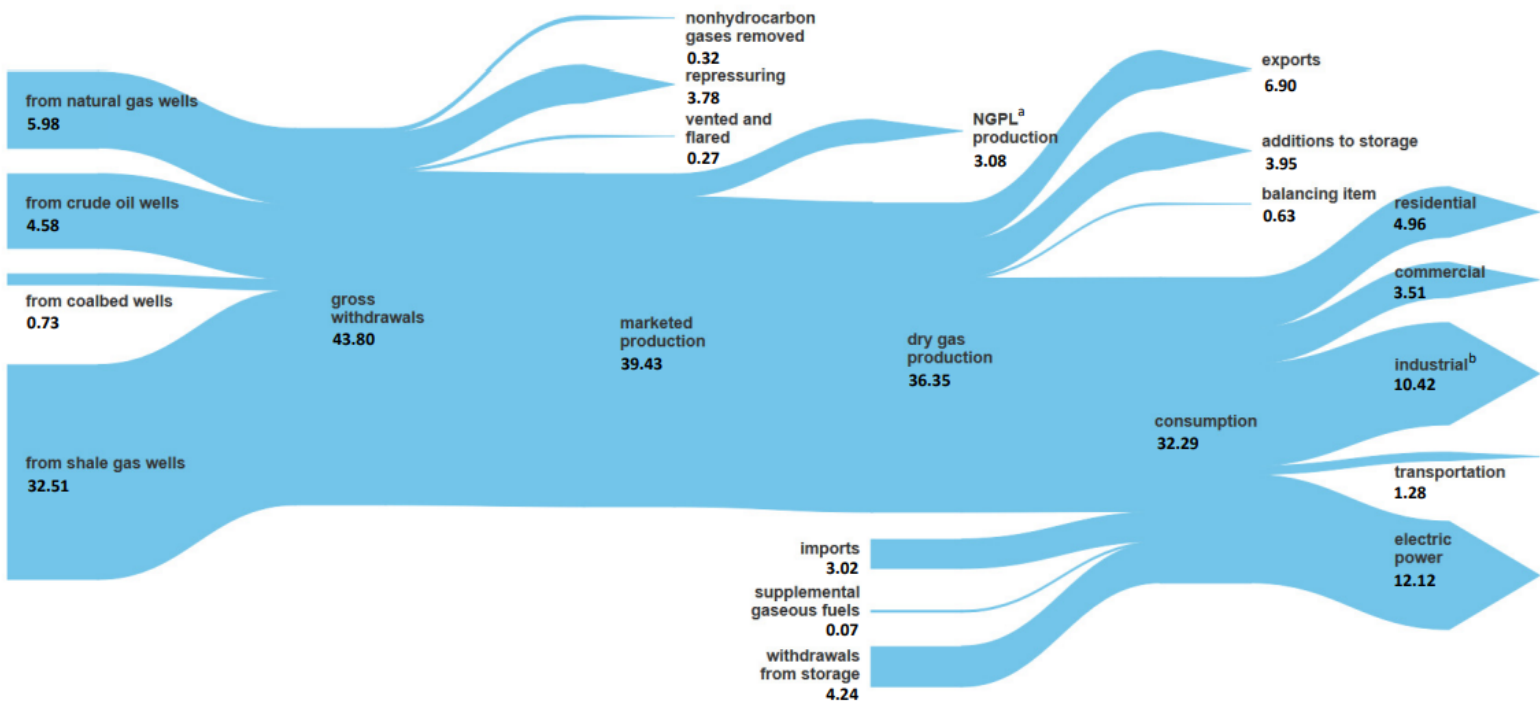


Figure 8 illustrates the flow of natural gas in the United States during 2022. Shale gas is the primary source of production with electric power the primary consumer.

Figure 8: Natural Gas Flow in the United States, 2022 (Source: EIA)

Figure 1. Natural gas flow in the United States, 2022
trillion cubic feet



^a NGPL refers to natural gas plant liquids.

^b Industrial includes lease and plant fuel.

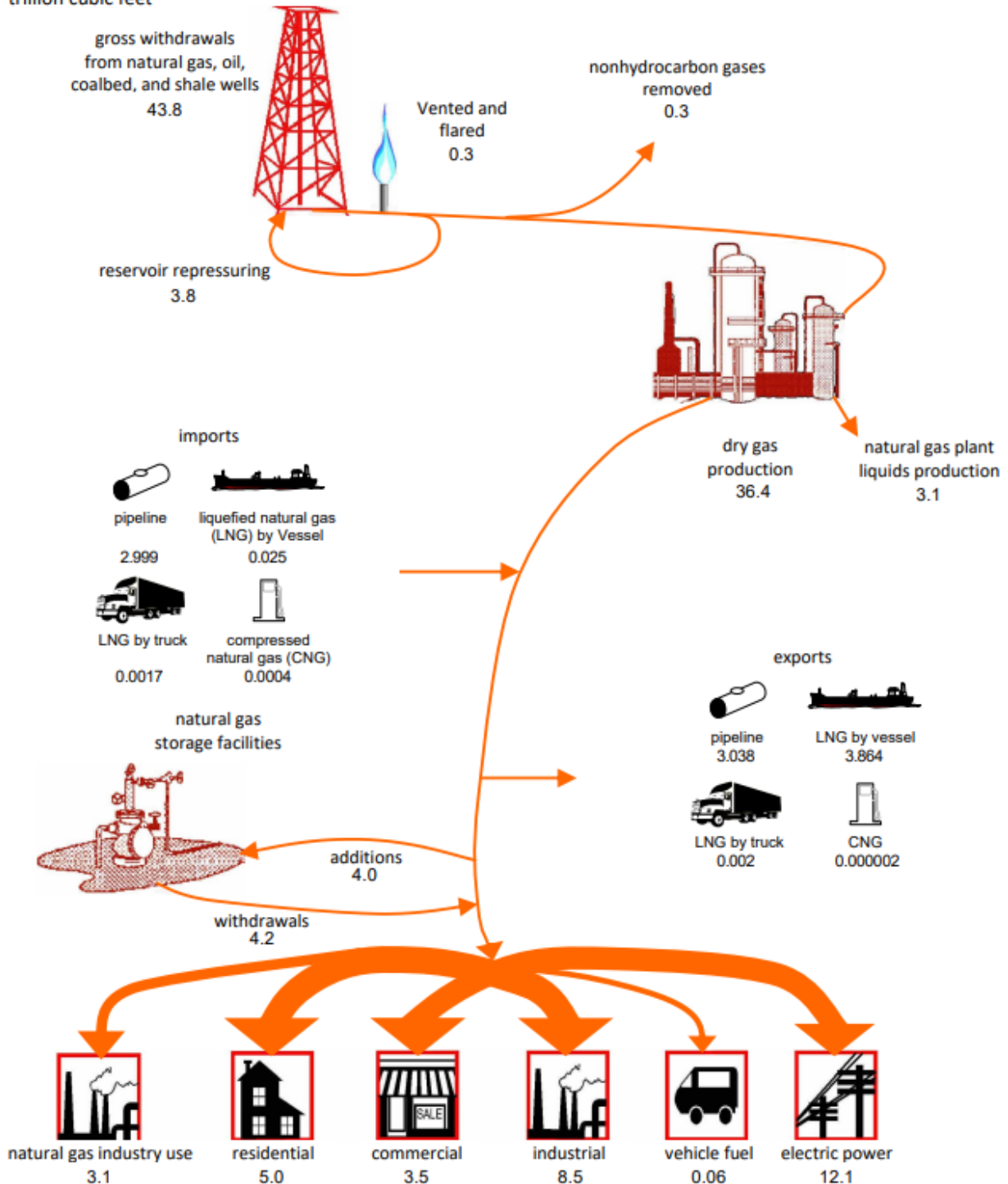
Source: U.S. Energy Information Administration (EIA), Form EIA-176, *Annual Report of Natural and Supplemental Gas Supply and Disposition*; Form EIA-914, *Monthly Natural Gas Production Report*; Form EIA-857, *Monthly Report of Natural Gas Purchases and Deliveries to Consumers*; Form EIA-816, *Monthly Natural Gas Liquids Report*; Form EIA-64A, *Annual Report of the Origin of Natural Gas Liquids Production*; Form EIA-191, *Monthly Underground Gas Storage Report*; Form EIA-923, *Power Plant Operations Report*; Form EIA-23, *Annual Survey of Domestic Oil and Gas Reserves*; Office of Fossil Energy and Carbon Management, U.S. Department of Energy, *Natural Gas Imports and Exports*; the Bureau of Safety and Environmental Enforcement and predecessor agencies; state and federal agencies; IHS Markit; Enverus; and EIA estimates based on historical data.

Note: The balancing item is expressed in this flow diagram as an outflow and is therefore a positive number. In the *Natural Gas Annual* tables, it is expressed as -0.63 trillion cubic feet because U.S. total supply is greater than disposition for 2022. *Transportation* includes vehicle fuel and pipeline and distribution use.

Supply and disposition of natural gas in the US in 2022 is illustrated in Figure 9. Vessel based exports of LNG at 3.864tcf are currently well behind electric power (12.1tcf) and industrial (8.5tcf), though the gap will narrow in coming years.

Figure 9: US Natural Gas Supply and Disposition, 2022 (Source: EIA)

Figure 2. Natural gas supply and disposition in the United States, 2022
trillion cubic feet

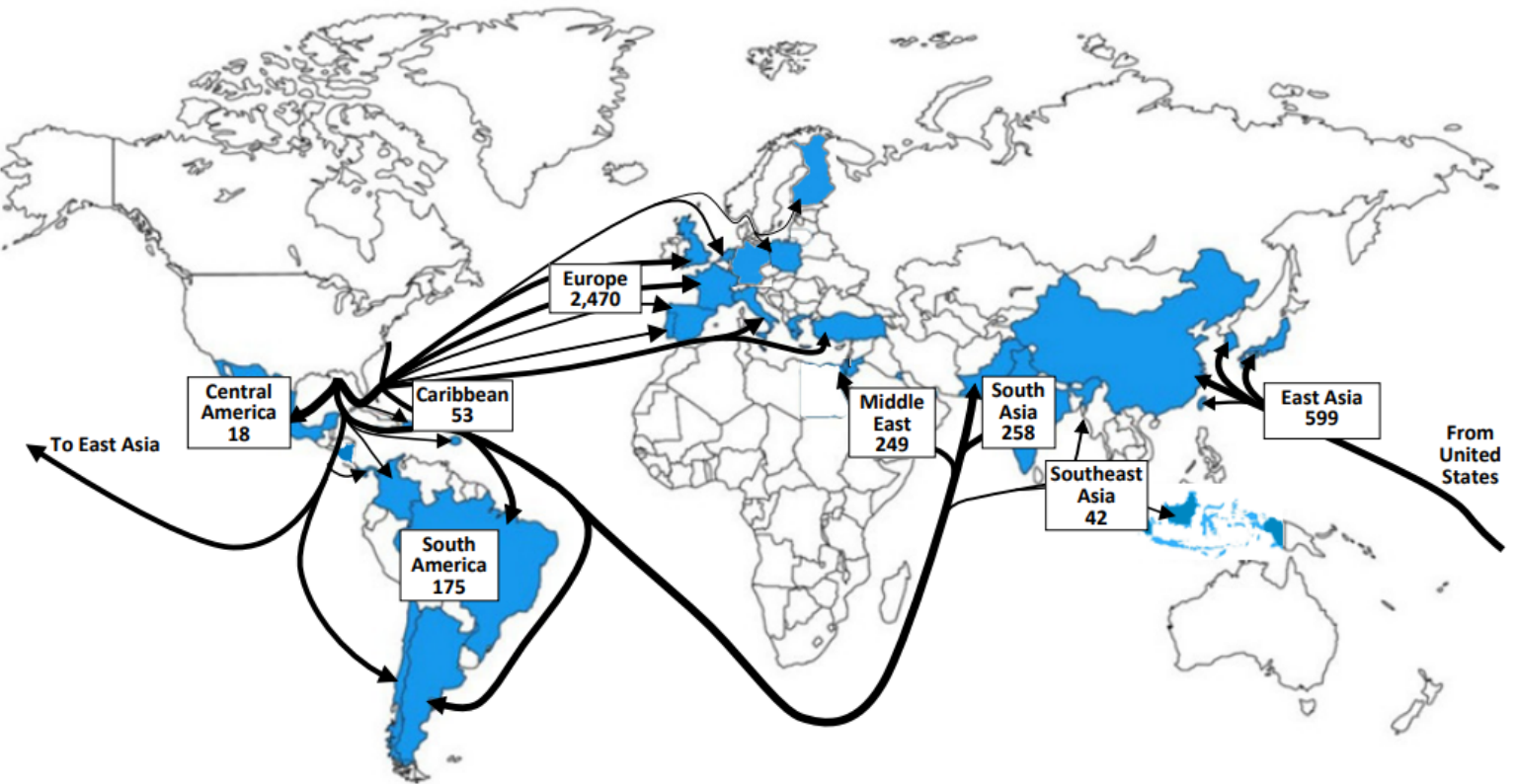


Source: U.S. Energy Information Administration (EIA), Form EIA-176, Annual Report of Natural and Supplemental Gas Supply and Disposition; Form EIA-914, Monthly Crude Oil and Lease Condensate, and Natural Gas Production Report; Form EIA-857, Monthly Report of Natural Gas Purchases and Deliveries to Consumers; Form EIA-816, Monthly Natural Gas Liquids Report; Form EIA-64A, Annual Report of the Origin of Natural Gas Liquids Production; Form EIA-191, Monthly Underground Gas Storage Report; Office of Fossil Energy, U.S. Department of Energy, Natural Gas Imports and Exports; the Bureau of Safety and Environmental Enforcement and predecessor agencies; Form EIA-923, Power Plant Operations Report; state and federal agencies; Form EIA-23, Annual Survey of Domestic Oil and Gas Reserves; PointLogic Energy; Enverus; and EIA estimates based on historical data.

Figure 10 shows the flow of US LNG exports in 2022. Europe dominated demand.

Figure 10: Flow of US LNG Exports, 2022 (Source: EIA)

Figure 10. Flow of liquefied natural gas (LNG) exports, 2022
billion cubic feet



Source: Map by the U.S. Energy Information Administration, based on data from the Office of Fossil Energy; U.S. Department of Energy, *Natural Gas Imports and Exports*.

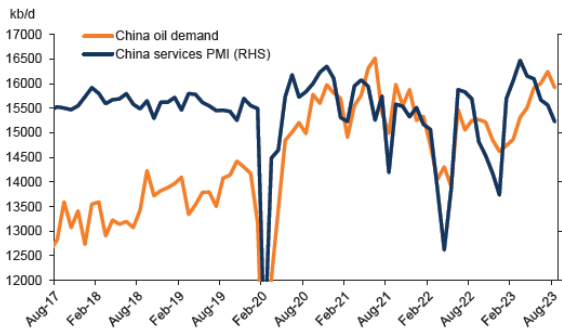
Note: This map shows LNG exports that were shipped by vessel during 2022. The United States also shipped LNG by truck; these trucked volumes were: 76 million cubic feet (Mcf) to Canada and 1,552 Mcf to Mexico. Arrows indicate origin and destination and may not reflect actual shipping routes taken. Thickness of arrows is not accurately proportional to volumes of deliveries. The countries that receive LNG exports are grouped as follows: Central America (Mexico and Panama); Caribbean (Antigua and Barbuda, Bahamas, Barbados, Dominican Republic, Haiti, and Jamaica); South America (Argentina, Brazil, Chile, and Colombia); Europe (Belgium, Croatia, Finland, France, Germany, Greece, Italy, Lithuania, Malta, Netherlands, Poland, Portugal, Spain, and United Kingdom); Middle East (Kuwait and Türkiye); South Asia (India, Pakistan, Taiwan, and Thailand); Southeast Asia (Bangladesh, Indonesia, and Singapore); and East Asia (China, Japan, and South Korea).

Oil Market

It has been noteworthy this year that oil demand has grown more quickly than would be expected given its traditional linkage to GDP growth. This is particularly true in China, where demand is growing more quickly (+7% yoy to end September) than GDP due to the rapid recovery in oil-intensive services sectors such as transportation, and because of the ramp-up in petrochemical capacity (LHS Figure 11). China's integrated petrochemical capacity sits low on the global cost curve and this has allowed it to increase oil demand at the expense of chemical plants in other parts of Asia, and especially Europe (RHS Figure 11).

Figure 11: China Oil Demand and Petrochemical Capacity (Source: GS)

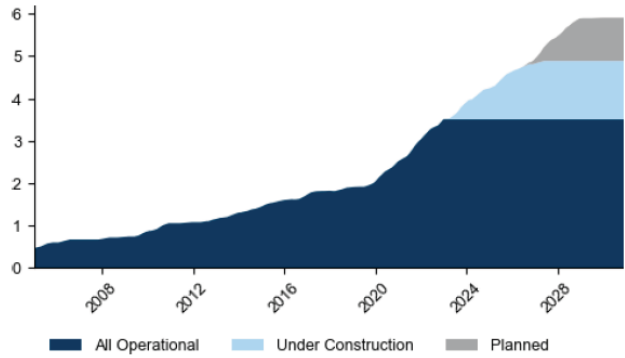
Exhibit 7: China's oil demand has grown rapidly on recovery in oil-intensive services sectors like transportation



Source: Goldman Sachs Global Investment Research, Haver Analytics

Exhibit 8: China has been ramping up significant and often integrated petrochemical capacity that sits low on global cost curves

Petrochemical units additions by capacity in feedstock requirement terms (kb/d of LPG/ethane/naphtha)

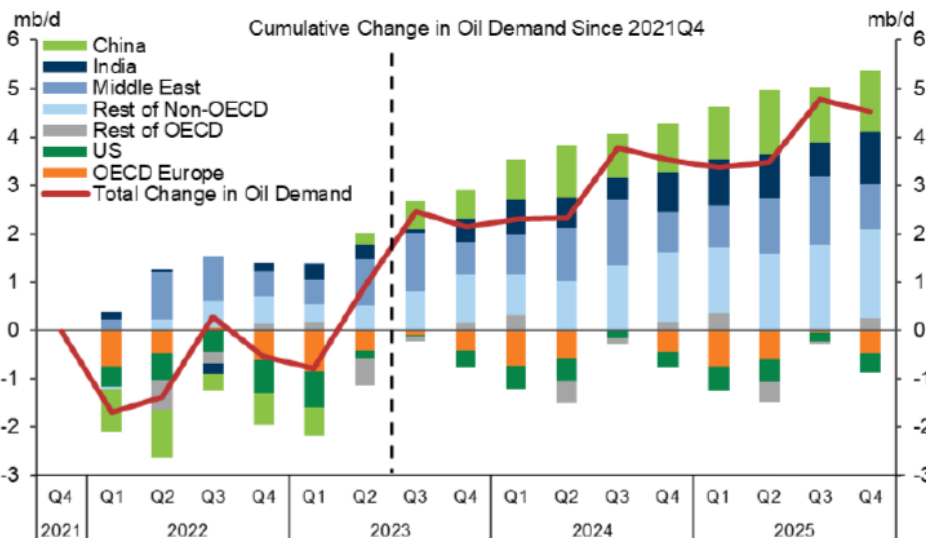


Source: Goldman Sachs Global Investment Research, IEA, ICIS, Bloomberg, Kpler, Oilchem

Globally, oil demand growth is driven by Emerging Markets and transportation (Figure 12).

Figure 12: Cumulative Change in Oil Demand since 4Q21 (Source: GS)

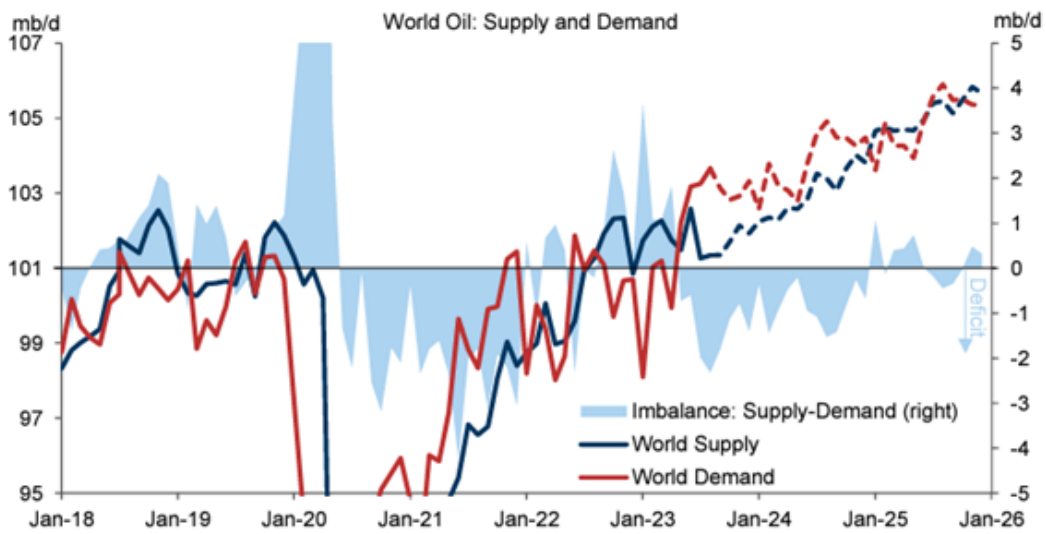
Goldman Sachs Solid Demand Growth Driven by EMs and Transportation



Extended Saudi and Russian oil production cuts and the rise in global oil demand to a record high of 103.7mmb/d in August, have pushed the market back into a large deficit that Goldman estimates at 2.0mmb/d in 3Q23 and 1.1mmb/d in 4Q23 (Figure 13).

Figure 13: World Oil: Supply and Demand (Source: various, via GS)

Exhibit 1: A Q3 Return to Deficits on Record High Demand and OPEC Cuts

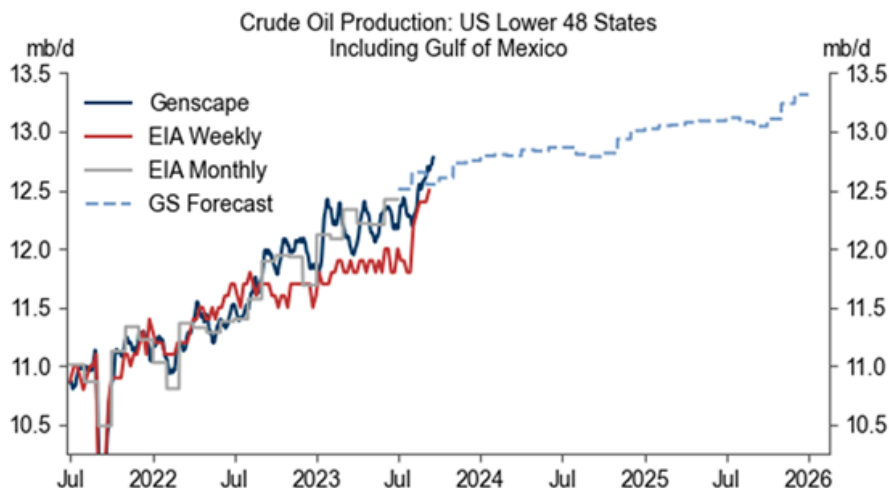


Source: IEA, Kpler, JODI, EIA, National Sources, Goldman Sachs Global Investment Research

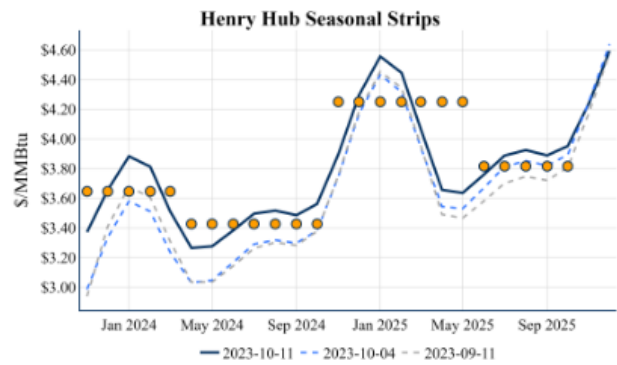
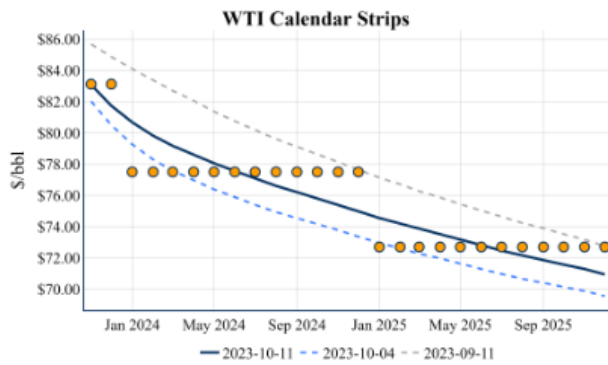
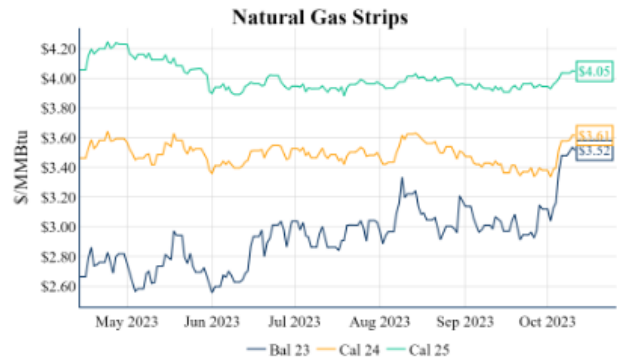
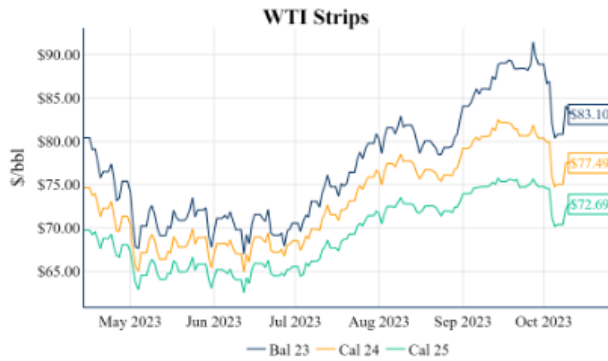
Continued growth in US oil supply (Figure 14) has been delivered because of easing operational restraints (availability of people and equipment) and efficiency gains. Producers have to date maintained their capital discipline as evidenced by reinvestment rates and rig counts discussed above.

Figure 14: US Lower 48 Oil Production (Source: various, via GS)

Exhibit 8: US Crude Production Continues to Trend Higher

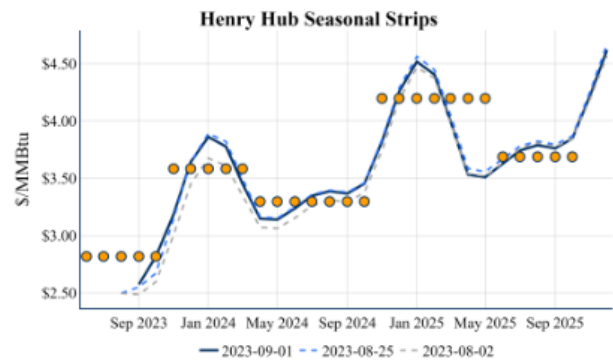
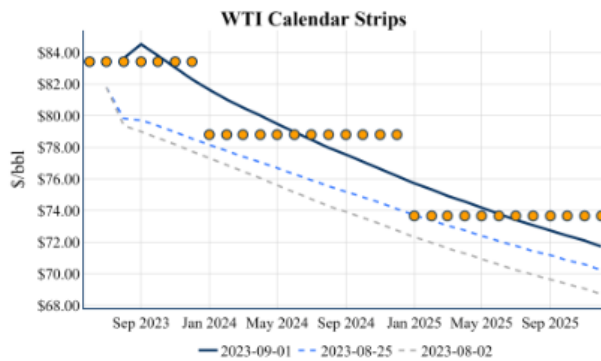
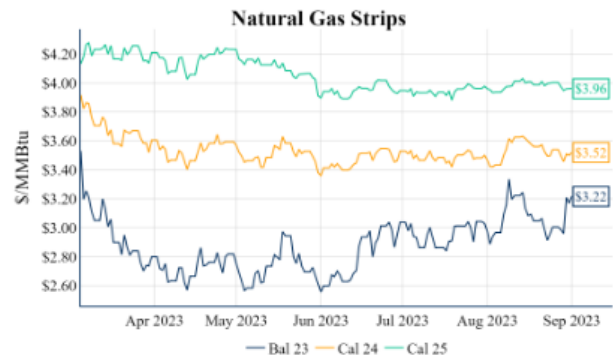
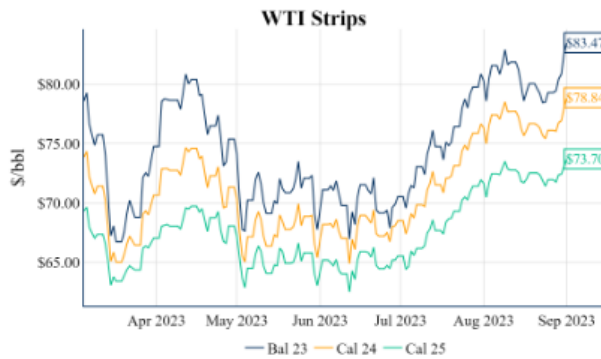


Source: EIA, Genscape, Baker Hughes, Haver Analytics, Goldman Sachs Global Investment Research

Gas and Oil Prices 1 October 2023


Swap Pricing	Bal 23	Cal 24	Cal 25	Cal 26
NYMEX WTI	\$83.10	\$77.50	\$72.69	\$69.16
ICE Brent	\$85.81	\$81.47	\$77.25	\$74.09
LLS	\$85.32	\$79.94	\$75.29	\$71.91
Mars	\$81.60	\$76.52	\$70.29	\$66.96
West TX Sour (WTS)	\$82.64	\$76.84	\$72.21	\$68.51

Swap Pricing	Month 1	Summer 25	Winter 23/24	Summer 24	Winter 24/25
Henry Hub Fixed	\$3.372	\$3.817	\$3.649	\$3.428	\$4.247
Eastern Gas South	-\$1.281	-\$1.188	-\$0.855	-\$1.106	-\$0.879
Waha	-\$0.890	-\$0.738	-\$0.316	-\$0.831	-\$0.299
TETCO M3	-\$0.911	-\$1.007	\$1.255	-\$0.945	\$0.992
Houston Ship Channel	-\$0.474	-\$0.304	-\$0.046	-\$0.332	-\$0.043
Columbia Gulf Mainline	-\$0.470	-\$0.233	-\$0.257	-\$0.254	-\$0.236
Panhandle East	-\$0.456	-\$0.431	\$0.159	-\$0.416	\$0.117
NGPL MidCon	-\$0.411	-\$0.350	\$0.123	-\$0.335	\$0.071
SoCal	\$2.226	\$0.702	\$3.663	\$0.961	\$2.258
AECO	-\$1.245	-\$1.127	-\$1.247	-\$1.314	-\$1.288
Chicago City-Gates	-\$0.298	-\$0.218	\$0.348	-\$0.223	\$0.321

Gas and Oil Prices 1 September 2023


Swap Pricing	Bal 23	Cal 24	Cal 25	Cal 26
NYMEX WTI	\$83.42	\$78.81	\$73.67	\$69.72
ICE Brent	\$86.87	\$82.79	\$78.28	\$74.77
LLS	\$85.56	\$81.03	\$76.27	\$72.46
Mars	\$83.73	\$78.27	\$71.31	\$67.53
West TX Sour (WTS)	\$83.92	\$78.96	\$73.42	\$69.07

Swap Pricing	Month 1	Summer 23	Winter 23/24	Summer 24	Winter 24/25
Henry Hub Fixed	\$2.815	\$2.815	\$3.587	\$3.300	\$4.197
Eastern Gas South	-\$1.673	-\$1.673	-\$0.871	-\$1.078	-\$0.851
Waha	-\$0.892	-\$0.892	-\$0.385	-\$0.704	-\$0.398
TETCO M3	-\$1.551	-\$1.551	\$1.666	-\$0.883	\$1.003
Houston Ship Channel	-\$0.295	-\$0.295	-\$0.011	-\$0.268	-\$0.059
Columbia Gulf Mainline	-\$0.492	-\$0.492	-\$0.255	-\$0.240	-\$0.245
Panhandle East	-\$0.445	-\$0.445	\$0.249	-\$0.364	\$0.132
NGPL MidCon	-\$0.385	-\$0.385	\$0.185	-\$0.288	\$0.093
SoCal	\$1.300	\$1.300	\$3.338	\$0.899	\$1.761
AECO	-\$0.670	-\$0.670	-\$0.959	-\$1.080	-\$1.197
Chicago City-Gates	-\$0.281	-\$0.281	\$0.455	-\$0.187	\$0.373

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