

April 24, 2025 11:11 PM GMT

US Natural Gas | North America

Pullback is Overdone

While we had called for a seasonal pullback in Henry Hub, the move has now surpassed what is fundamentally warranted. LNG growth is progressing well and activity remains subdued, setting up for a very tight late 2025 & '26. We reiterate our constructive view for prices to rise >\$5 later this year.

Key Takeaways

- Prices have fallen ~30% in April. Some of this is warranted with softer seasonal fundamentals, but the move has been exacerbated by broader macro uncertainty.
- Industry-wide activity remains well below what is needed to meet rising demand from LNG exports, leaving the market very tight later this year and into 2026.
- Gas demand has limited economic sensitivity. Industrial demand was -0.6 Bcf/d in 2020. This compares to total consumption (all end markets) now of >100 Bcf/d.
- Oil is more economically sensitive. Lower crude prices can slow associated supply, which is >30% of total. US oil rig counts have already started to fall.
- End-Oct 2025 inventory est rises from 3.5 to 3.7 Tcf, while end-Mar '26 is largely unchanged at 1.6 Tcf, pointing to a very tight late 2025 and 2026.

Pullback is overdone, remain constructive on US gas. Over the past few weeks Henry Hub prices have fallen ~30%. While we had called for a seasonal pullback as supply-demand fundamentals soften post-winter, the move has been exacerbated by broader de-risking and selling pressure stemming from economic uncertainty. At this point, with prices now back sub-\$3, we think the move is far overdone. Industry-wide activity remains well below what is needed to meet rising demand from LNG exports, leaving the market very tight later this year and into 2026. We reiterate our constructive call for prices to rise >\$5 in 2H25 and average \$5 in 2026.

Industry activity remains subdued, while LNG growth is on track. Lower 48 dry gas production has averaged ~105.7 Bcf/d so far in April, +0.3 bcf/d from March. That said, the gas directed rig count is still largely unchanged year-to-date, at <100 currently, with ~31 in the Haynesville – below our estimated sustaining level of 40-45. At the same time. LNG feedgas flows have continued to ramp, hitting another monthly record of 16 bcf/d in April so far. We forecast LNG feedgas +3.6 bcf/d in 2025 versus 2024 (up from +3.5 prior). Supply is unlikely to keep pace.

Gas supply & demand in a recession...less risky than appreciated. The biggest area of economic sensitivity is industrial consumption, which represents ~20% of total US demand. Looking back at historical recessions, industrial gas demand contracted ~1.3 bcf/d y/y in 2009 during the Financial Crisis, ~0.3 bcf/d in 2015 as economic activity slowed, and only ~0.6 bcf/d in 2020 during Covid. This compares to total demand (all end markets) of >100 bcf/d currently. While US electricity sales can also be sensitive to economic activity, gas demand from the power sector (~34% of

MORGAN STANLEY & CO. LLC		
Devin McDermott		
Equity Analyst and Commodities Strategist		
Devin.McDermott@morganstanley.com	+1 212 761-1125	
Vincent Andrews		
Equity Analyst		
Vincent.Andrews@morganstanley.com	+1 212 761-3293	
David Arcaro, CFA		
Equity Analyst		
David.Arcaro@morganstanley.com	+1 212 761-1817	
Robert S Kad		
Equity Analyst		
Robert.Kad@morganstanley.com	+1 212 761-0065	
Joe Laetsch, CFA		
Equity Analyst		
Joe.Laetsch@morganstanley.com	+1 212 761-8804	
Andrew S Percoco		
Equity Analyst		
Andrew.Percoco@morganstanley.com	+1 212 296-4322	
Helen Lin		
Research Associate		
Helen.Lin@morganstanley.com	+1 212 761-0766	
Turner W Hinrichs		
Research Associate		
Turner.Hinrichs@morganstanley.com	+1 212 761-1269	
Jacqueline M Kenny		
Research Associate		
Jacqueline.Kenny@morganstanley.com	+1 212 761-2253	

EXPLORATION & PRODUCTION	
North America	
Industry View	In-Line

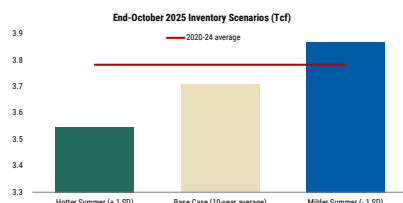
Morgan Stanley does and seeks to do business with companies covered in Morgan Stanley Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Morgan Stanley Research. Investors should consider Morgan Stanley Research as only a single factor in making their investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

total consumption) actually still rose y/y in both 2009 and 2020. Importantly, there are also supply-side offsets. Associated gas from oil drilling is now >30% of total supply and growth could slow alongside softer crude prices. US oil rig counts have already started to fall in recent weeks, a tailwind for gas prices if the trend continues. See [Gas Demand in a Recession](#) for more.

Balance & forecast changes. Our end-October 2025 inventory estimate is increasing from ~3.5 to ~3.7 Tcf. The change largely reflects milder spring weather and higher storage builds over the last few weeks relative to our estimates. Lower prices, if they hold, could also reduce gas-to-coal switching in the Power sector - an upside risk to our summer demand forecast. Our end-Mar 2026 estimate is largely unchanged at 1.58 Tcf, reflecting a very tight late 2025 and 2026.

Exhibit 1: Summer weather is a key variable for end-October '25 inventories. We forecast below-normal storage assuming 10-year average weather.



Source: NOAA, EIA, Commodity Weather Group, Morgan Stanley Research estimates.

Exhibit 2: We still expect Henry Hub to rise >\$5 in 2H25 and average ~\$5 in 2026, ~24% above futures.

MS Henry Hub Average Price Forecast						
	Base Case	Tail Risks		Forward Curve	Previous Forecast	Price Change
		Bear	Bull			
1Q24	\$ 2.10					
2Q24	\$ 2.32					
3Q24	\$ 2.23					
4Q24	\$ 2.98					
1Q25	\$ 3.87					
2Q25e	\$ 3.71	2.25	5.25	2.99	\$ 4.00	\$ (0.29)
3Q25e	\$ 5.00	3.50	6.50	3.41	\$ 5.00	\$ -
4Q25e	\$ 5.50	4.00	7.00	3.91	\$ 5.50	\$ -
2022	\$ 6.54					
2023	\$ 2.66					
2024	\$ 2.40					
2025e	\$ 4.50	3.50	6.50	3.82	\$ 4.50	\$ -
2026e	\$ 5.00	3.25	7.00	4.03	\$ 5.00	\$ -
LT	\$ 3.75	2.75	4.75	-	\$ 3.75	\$ -

Source: Bloomberg, Morgan Stanley Research estimates. 2Q25 forecast is the weighted average of QTD actuals and \$4 for the balance of the quarter.

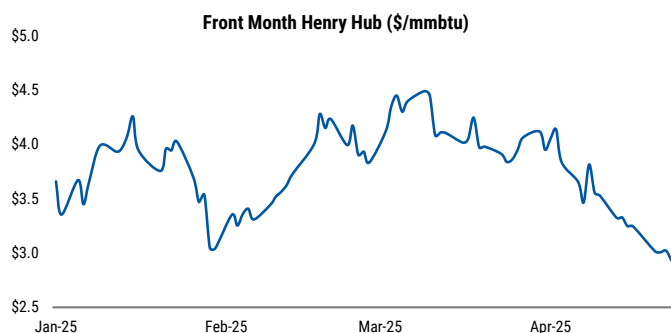
Stock Impacts:

- **Energy:** We continue to prefer natural gas over oil exposure. Within natural gas E&Ps, which are the most direct beneficiaries of any increase in Henry Hub prices, we are Overweight **EQT** (Top Pick), **EXE** and **AR**.
- In **US Chemicals**, we note that **CF Industries** has the most meaningful exposure to natural gas as it represents the feedstock for its nitrogen fertilizer. Likewise, **Mosaic** and **Nutrien**, though both make many other products that do not directly consumer natural gas. Importantly, CF and Nutrien's profitability is more a function of the differential between US gas prices and ROW gas prices & Chinese coal prices rather than just the US price alone. Celanese is a large consumer of methanol, which is derived from natural gas. Dow, Eastman, LyondellBasell and Westlake all buy natural gas liquids, the prices of which would likely increase close to if not 1:1 with higher natural gas prices, though tariffs on NGL exports to China may loosen the US S&D. **Olin** and **Westlake** are large purchasers of electricity for chlor-alkali production.
- **Power:** Higher natural gas prices would be positive for all the IPPs: **CEG**, **NRG**, **PEG**, **TLN**, and **VST**. Natural gas plants set power prices for the majority of the time in key markets ERCOT and PJM, so we would expect upside to power prices and power plant margins across the board for these companies. The strongest margin expansion would accrue to the companies with greater non natural gas-fired fleets. Near-term EBITDA is largely hedged

so most meaningful impacts would come in 2027 and beyond.

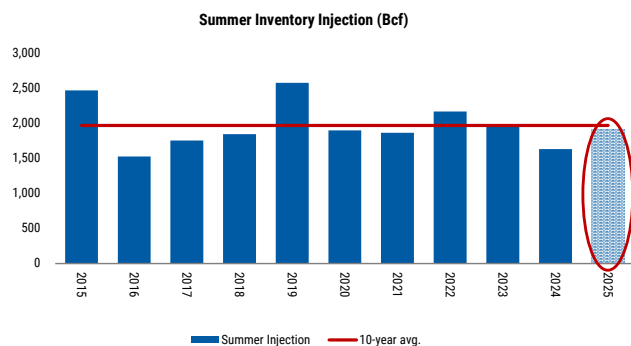
Key Charts & Market Trends

Exhibit 3: Henry Hub is now at ~\$3, -29% since the start of April and -19% YTD alongside strong supply, seasonally softer demand and macro uncertainty.



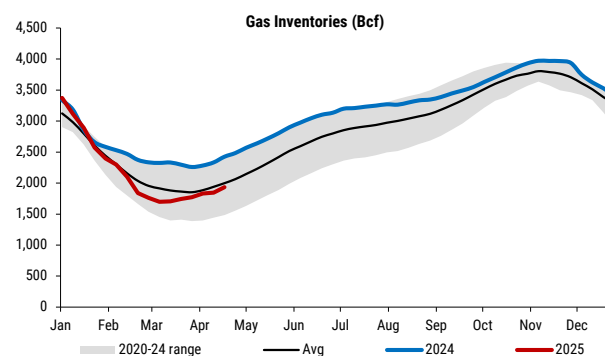
Source: FactSet, Morgan Stanley Research

Exhibit 5: We forecast a ~1.91 Tcf injection in April-October, 3% below the 10-year average and less than what is needed to refill storage to "normal" levels ahead of next winter



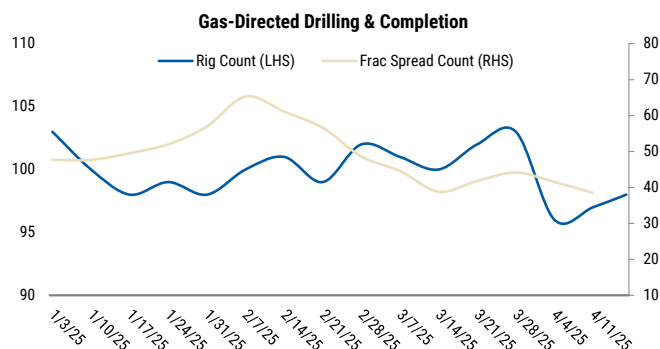
Source: NOAA, EIA, Commodity Weather Group, Morgan Stanley Research estimates

Exhibit 4: Natural gas storage sits at ~1.93 Tcf as of April 18, 2% below the 5-year average and 20% below the same time last year.



Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 6: Gas-directed drilling and completion remains subdued, activity adds are ultimately needed by the market.

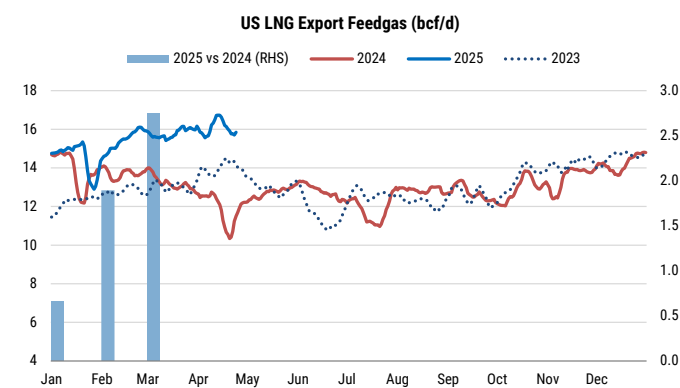


Source: Baker Hughes, Rystad Energy, Morgan Stanley Research

Demand

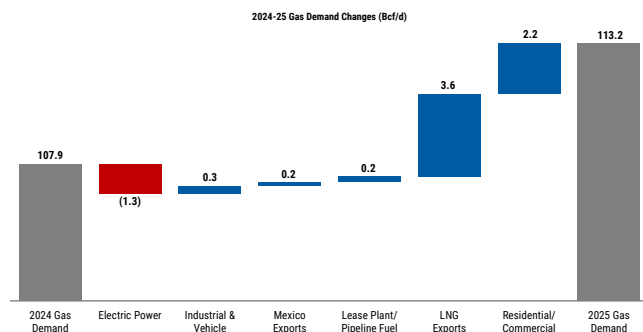
Raising our LNG demand estimates, again. So far in April, LNG feedgas flows have hit a record monthly level of ~16 bcf/d. This has been supported by Plaquemines, which has pulled ~2 bcf/d so far this month and continues to trend ahead of our expectations. With this update, we are again raising our 2025 LNG demand growth estimate to 3.6 bcf/d (up from 3.5 bcf/d prior) and 2026 growth to 2.9 bcf/d (up from 2.3 bcf/d prior). As we have previously highlighted, under-construction projects should add ~11 bcf/d of demand over the next few years while the recent lifting of the LNG permitting pause could support even more US FIDs, potentially adding 4-5 bcf/d of new demand above our base case in the late 2020s / early 2030s.

Exhibit 7: US LNG feedgas demand has averaged ~16 bcf/d in April so far, the highest monthly levels on record driven by Plaquemines and Freeport.



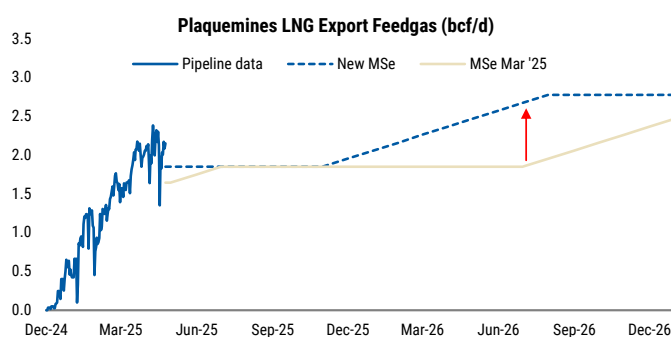
Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 9: We forecast total US gas demand will rise ~5.2 bcf/d in 2025, driven by LNG exports (+3.6 bcf/d) and residential/commercial (+2.2 bcf/d due to colder winter), partially offset by decline in electric power (-1.3 bcf/d).



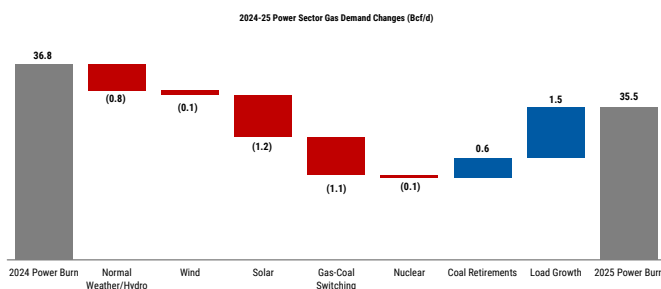
Source: Morgan Stanley Research estimates

Exhibit 8: Plaquemines LNG feedgas has continued to ramp and averaged ~2 bcf/d this month, trending ahead of our forecast. With this note, we are raising our growth estimate for 2025 LNG feedgas demand to 3.6 bcf/d (from 3.5 bcf/d) and 2026 growth to 2.9 bcf/d (from 2.3 bcf/d).



Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 10: Our estimated power sector gas demand is ~3% lower y/y in 2025 from normal weather, wind & solar, and gas-coal switching, partially offset by coal retirements and load growth. If prices do not recover there could be upside to our forecast via less gas-coal switching.

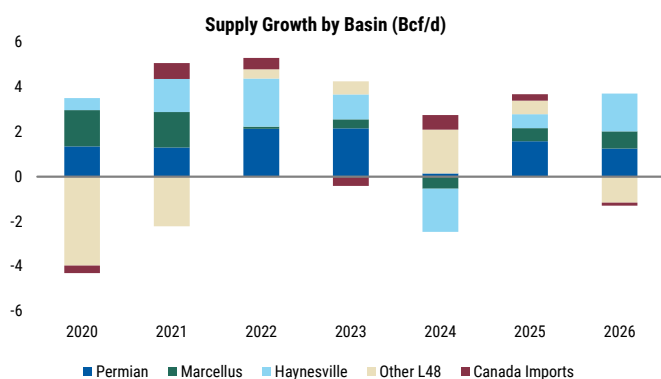


Source: Morgan Stanley Research estimates

Supply

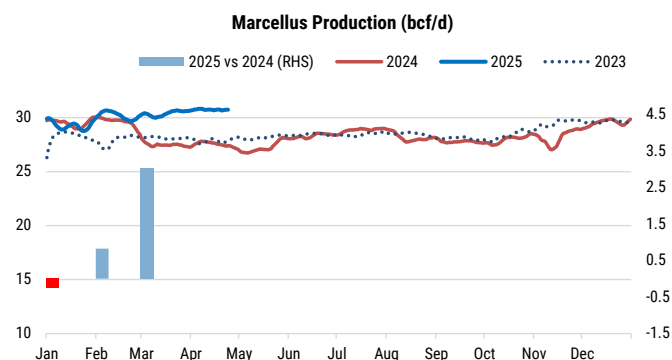
Highest monthly gas output YTD, but still not enough. Based on pipeline data, April production has averaged 105.7 bcf/d so far, up 0.3 bcf/d from March driven by the Haynesville (+0.8 bcf/d), Eagle Ford (+0.3 bcf/d) and Marcellus (+0.3 bcf/d) offset by declines in other areas. This was mostly tied to DUC (drilled but uncompleted wells) draws and/or DTILs (deferred turn-in-lines). Guidance across our US gas coverage implies organic production growth of only ~5% y/y (+1 bcfe/d) and 2% exit-exit (+0.6 bcfe/d), skewed heavily toward the first half of the year. Including private operators, majors, and associated gas, we forecast total supply growth of ~3.7 bcf/d y/y, well below incremental demand (MSe +5.2 bcf/d y/y). The Haynesville rig count remains low at 31, well below our estimated maintenance level of 40-45. We do not expect any changes to activity plans alongside 1Q results and continue to forecast a very tight winter '25-'26, skewing Henry Hub price risks to the upside.

Exhibit 11: We forecast ~3.7 Bcf/d of supply growth in 2025, falling short of demand. Growth is driven by the Permian, Haynesville and Marcellus. Most other supply regions are on pace to remain flatish y/y.



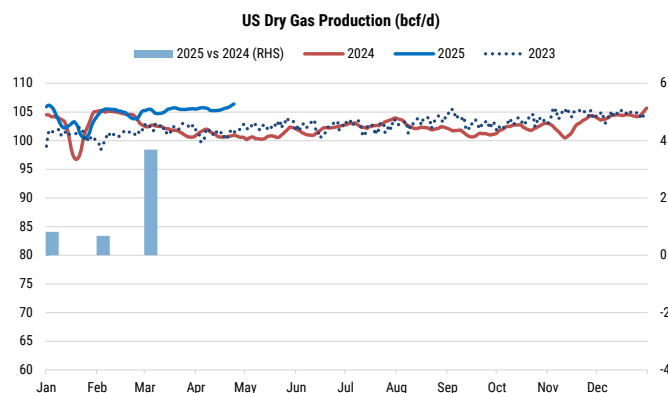
Source: FactSet, Morgan Stanley Research

Exhibit 13: Marcellus production is roughly flat MTD, +0.3 bcf/d from March and is ~0.9 bcf/d above February '24 levels (last year's peak)...



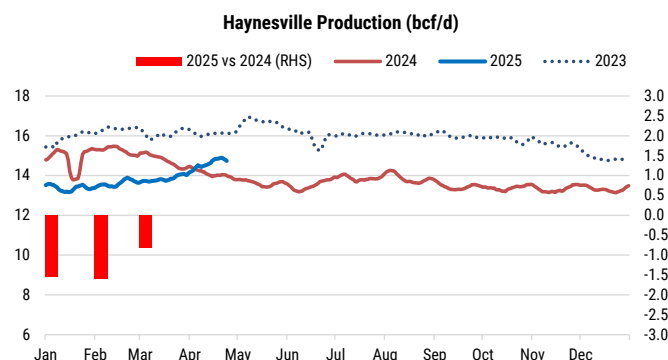
Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 12: US dry gas production is up 0.3 bcf/d in April so far relative to the March average, and is ~4.7 bcf/d higher than year-ago levels.



Source: S&P Global Commodity Insights, Morgan Stanley Research

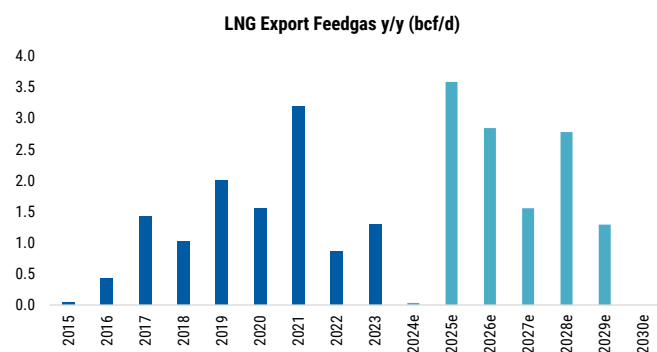
Exhibit 14: ...Haynesville has risen by ~1.3 bcf/d YTD but is still down ~0.7 bcf/d vs February '24. We attribute most of this recent increase to EXE's acceleration of DTIL's (deferred turned-in-lines).



Source: S&P Global Commodity Insights, Morgan Stanley Research

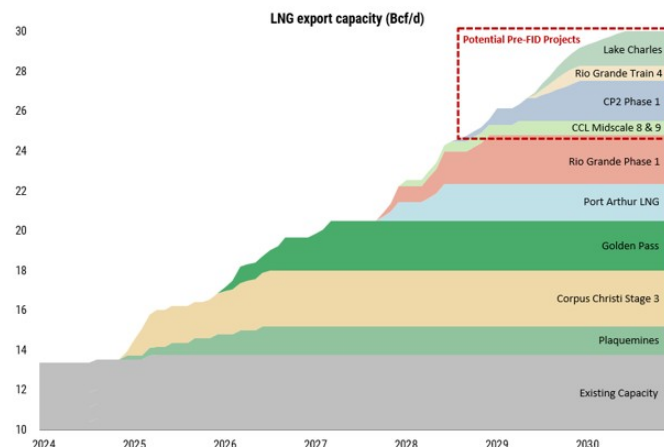
Long Term

Exhibit 15: After a multi-year period of limited expansion, LNG feedgas demand growth should accelerate in 2025 (MSe +3.6 bcf/d) as the next wave of capacity adds start to come online.



Source: EIA, Company Data, S&P Global Commodity Insights, Morgan Stanley Research estimates

Exhibit 16: US LNG export capacity is set to increase by ~85% over the next five years, adding ~11 bcf/d of domestic consumption. Lifting the LNG permitting pause could support more US FIDs, potentially adding 4-5 bcf/d of new demand above our base case in the late 2020s / early 2030s.



Source: EIA, Company Data, S&P Global Commodity Insights, Morgan Stanley Research estimates

Exhibit 17:

Assuming no new LNG FIDs (final investment decisions), we expect US gas demand to rise to ~127 bcf/d by 2030, +19 bcf/d from today.

Bcf/d	Actual										Forecast						
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2024-2030
Total US	77.3	78.8	80.1	89.8	95.1	95.2	99.4	104.4	107.1	107.9	113.2	115.7	118.6	123.0	125.5	126.7	18.8
Residential/Commercial	21.5	20.3	20.7	23.3	23.4	21.3	22.0	23.2	21.5	20.6	22.8	22.8	22.8	22.9	23.0	23.1	2.5
Industrial	20.6	21.1	21.8	23.1	23.1	22.4	22.9	23.2	23.3	23.3	23.6	23.4	23.7	24.0	24.3	24.6	1.3
Power	26.2	27.2	25.3	28.9	30.8	31.7	30.7	33.0	35.3	36.8	35.5	34.7	35.2	35.8	36.0	36.2	(0.6)
Net LNG Exports	(0.2)	0.3	1.7	2.8	4.8	6.4	9.7	10.5	11.9	11.9	15.5	18.3	19.9	22.7	24.0	24.0	12.1
Mexico Exports	2.9	3.8	4.2	4.6	5.1	5.4	5.9	5.7	6.1	6.4	6.6	6.6	6.6	6.6	6.6	6.6	0.2
Pipeline/Lease/Plant fuel	6.3	6.2	6.5	7.2	7.9	7.9	8.3	8.8	9.0	9.0	9.2	9.9	10.4	11.0	11.6	12.2	3.2

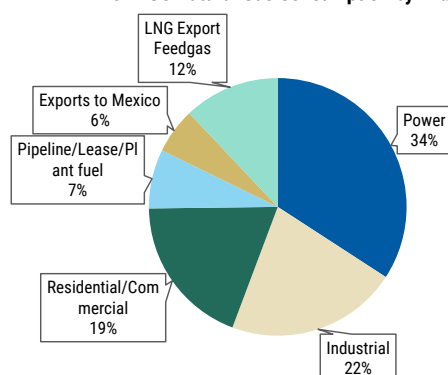
Source: EIA, Morgan Stanley Research estimates

Gas Demand in a Recession

Relative to many other Energy markets, US natural gas demand has less economic sensitivity. Looking at 2024 data, US natural gas consumption was split ~34% Power, ~22% Industrial, ~19% Residential & Commercial (mostly heating), and 25% from exports (LNG and Mexico) and pipeline fuel. Within these verticals, the most economically sensitive is industrial consumption. That said, declines during historical recessions have been fairly modest. While electricity sales can also show some economic sensitivity, gas consumption from the power sector actually rose y/y in both 2020 and 2019. Lastly, associated gas from oil drilling is now >30% of total supply, and growth could slow alongside softer crude prices. US oil rig counts have already started to fall in recent weeks, a tailwind for gas prices if the trend continues.

Exhibit 18: ~34% US natural gas consumption comes from the electric power sector, ~22% from industrial, ~19% from residential & commercial, ~12% from LNG exports, ~7% from lease/pipeline/plant fuel, and ~6% from Mexico exports.

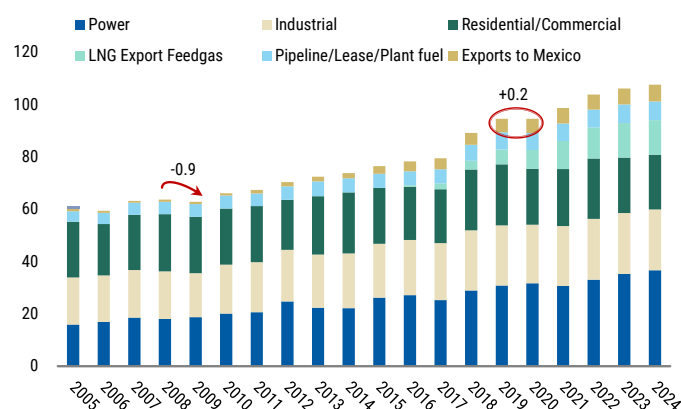
2024 US Natural Gas Consumption by End Use



Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 19: Over the last few decades, total natural gas demand (all end markets) has rarely declined. The last contraction was 2009, when it fell by 0.9 bcf/d y/y. In 2020, demand was actually up slightly y/y despite softer industrial consumption and a wave of LNG export curtailments.

US Natural Gas Consumption by End Use (bcf/d)

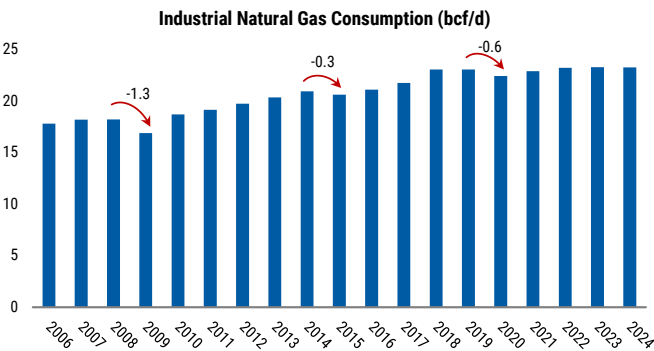


Source: S&P Global Commodity Insights, Morgan Stanley Research

Industrial

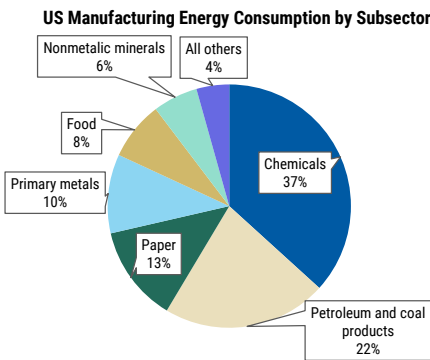
Industrial gas demand is the most economically sensitive end market. Looking back at the past few recessions, industrial demand declined by ~1.3 bcf/d in 2009, ~0.3 bcf/d in 2015 and ~0.6 bcf/d in 2020. This compares to total US gas consumption of >100 bcf/d currently.

Exhibit 20: Gas demand from the industrial sector is the most sensitive to economic downturns, which contracted ~1.3 bcf/d in 2009, ~0.3 bcf/d in 2015 and ~0.6 bcf/d in 2020.



Source: EIA, Morgan Stanley Research

Exhibit 21: Chemicals, petroleum and coal products, and paper combined consumed ~70% of total manufacturing energy use.



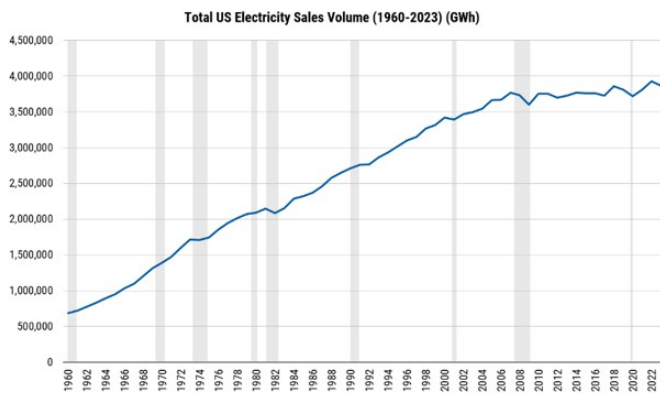
Source: EIA Manufacturing Energy Consumption Survey 2018, Morgan Stanley Research

Power

In prior recessions, there have been mixed impacts to power demand. Since 1960, power demand has fallen by just 0.2%, on average, during recessions, although this includes three recessions where demand was stable, or even increased, and five recessions where power demand declined. The GFC had the most pronounced impact on demand, with a 4.5% peak-to-trough decline, representative of the far-reaching economics impacts of the recession, which affected all three retail categories (Residential, Commercial, and Industrial). See more from our Utes and Clean Tech team [here](#).

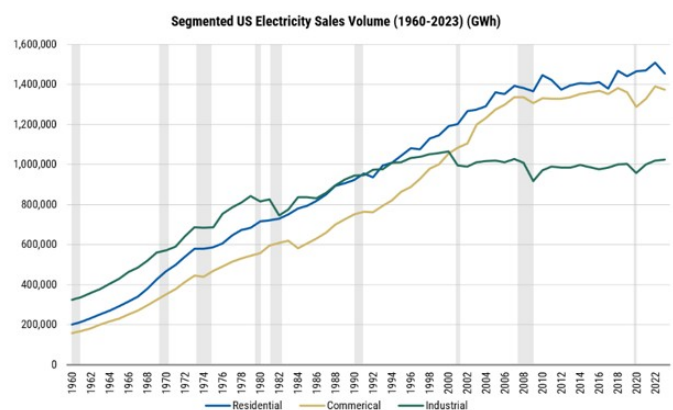
From a gas demand standpoint, consumption from the power sector actually rose y/y +0.9 bcf/d in 2020 and +0.6 bcf/d in 2009. That said, these figures are also impacted by price-driven fuel switching and weather.

Exhibit 22: US Historical Retail Electricity Sales have been relatively resilient and bounce back quickly after recessions.



Source: EIA, Morgan Stanley Research. *Not weather-normalized

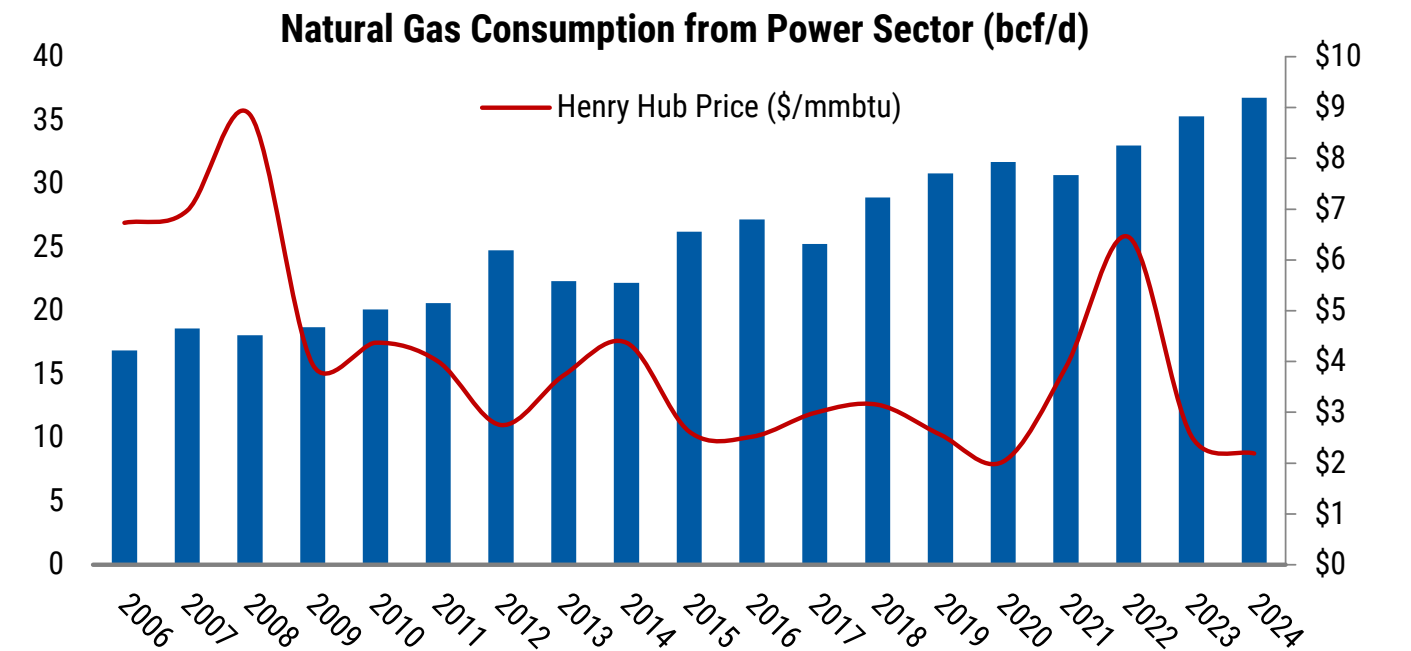
Exhibit 23: Industrial and Commercial retail electricity volumes tend to be affected the most during recessions.



Source: EIA, Morgan Stanley Research

Exhibit 24:

Gas demand from power sector has been mixed during recessions. Notably, it grew in 2009 and 2020, although this also reflects some fuel switching from lower Henry Hub prices.



Source: EIA, Morgan Stanley Research. *Not weather-normalized

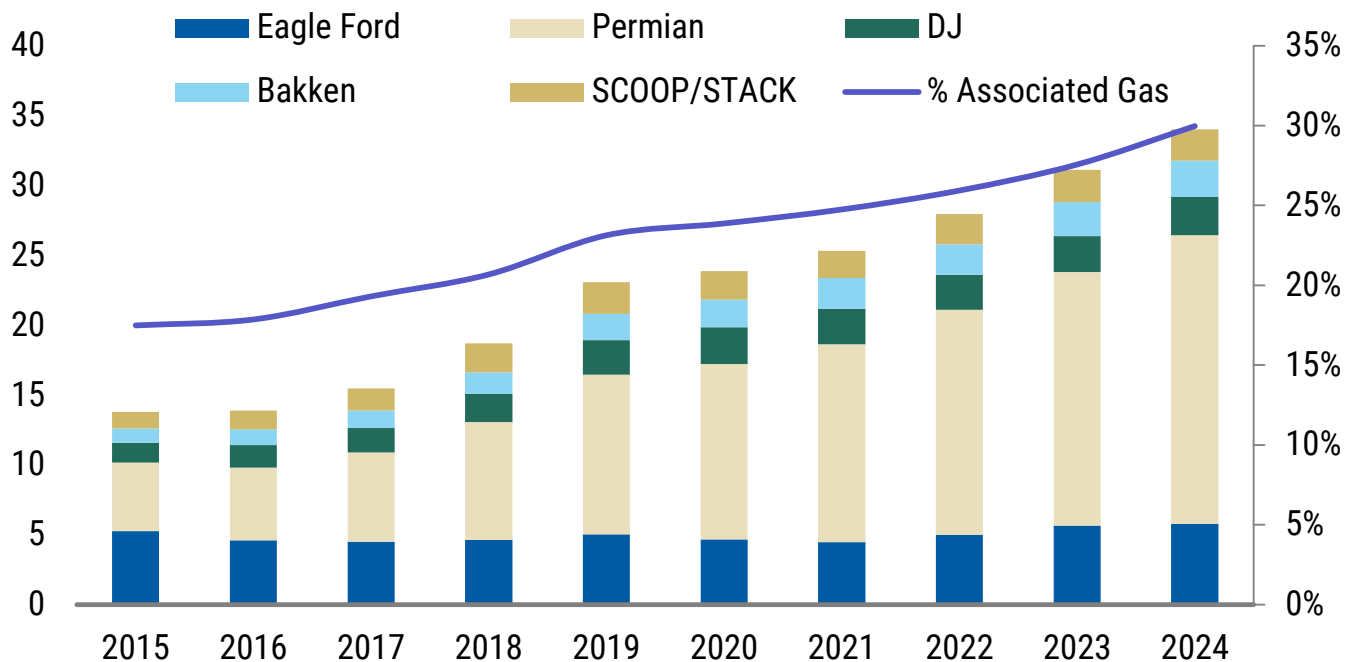
Associated Supply

Over the past decade, US natural gas production from oil-producing basins (associated gas) has been steadily increasing. The share of associated gas as a percentage of total domestic supply has increased from ~17% in 2015 to >30% currently. The economics of this production are driven by oil prices, rather than gas. Since oil markets tend to be very sensitive to global economic activity, any slowdown or recession can have a material impact on prices – reducing growth in associated supply and increasing the call on gas-directed drilling.

The median 2025 FCF breakeven sits at ~\$53/bbl for our oil E&P coverage. While oil E&Ps generally noted no activity changes yet, several small and mid-cap (SMID) producers indicated that they might consider cutting activity if prices stay below \$60 WTI (with more reductions at \$50-55 or below). Notably, **MTDR** is the first to announce activity cuts this week, dropping from 9 to 8 rigs by mid-year.

Exhibit 25: The share of associated gas of total dry gas supply has been increasing steadily, rising from ~17% in 2015 to ~30% currently.

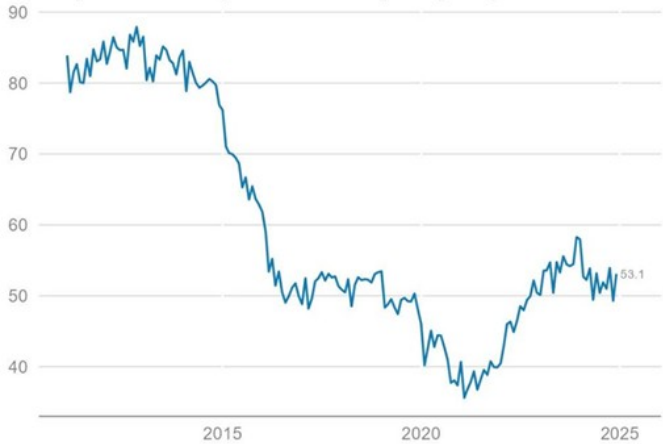
US Associated Gas Supply (bcf/d)



Source: EIA, S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 26: Median US shale wellhead breakevens sit in the mid \$50s WTI...

US Shale - median break-even oil price
WTI-equivalent, half-cycle break-even price (\$/bbl)



Note: calc requires minimum of 4 months of production data, so latest data point is for Nov 2024
Source: Rystad Energy, Morgan Stanley Research

Exhibit 27: ...That said, there is a wide range. More non-core and tier 2 drilling over the last few years has increased the marginal cost of supply more than the median. The 75th percentile US wellhead breakeven is in the \$60-65/bbl WTI range.

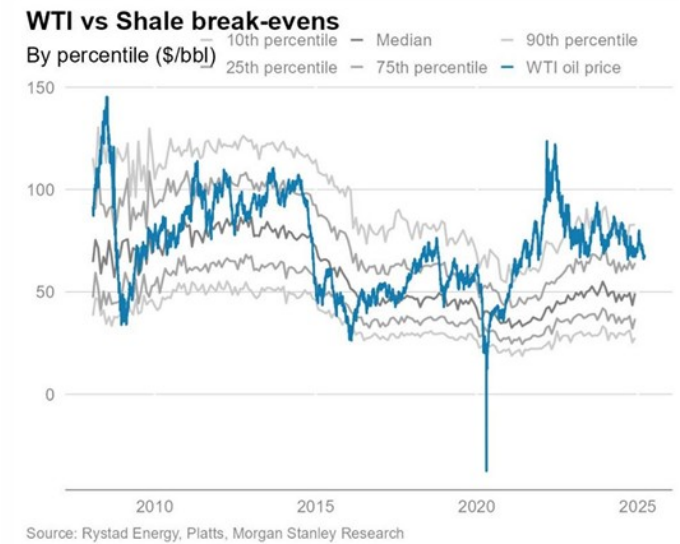
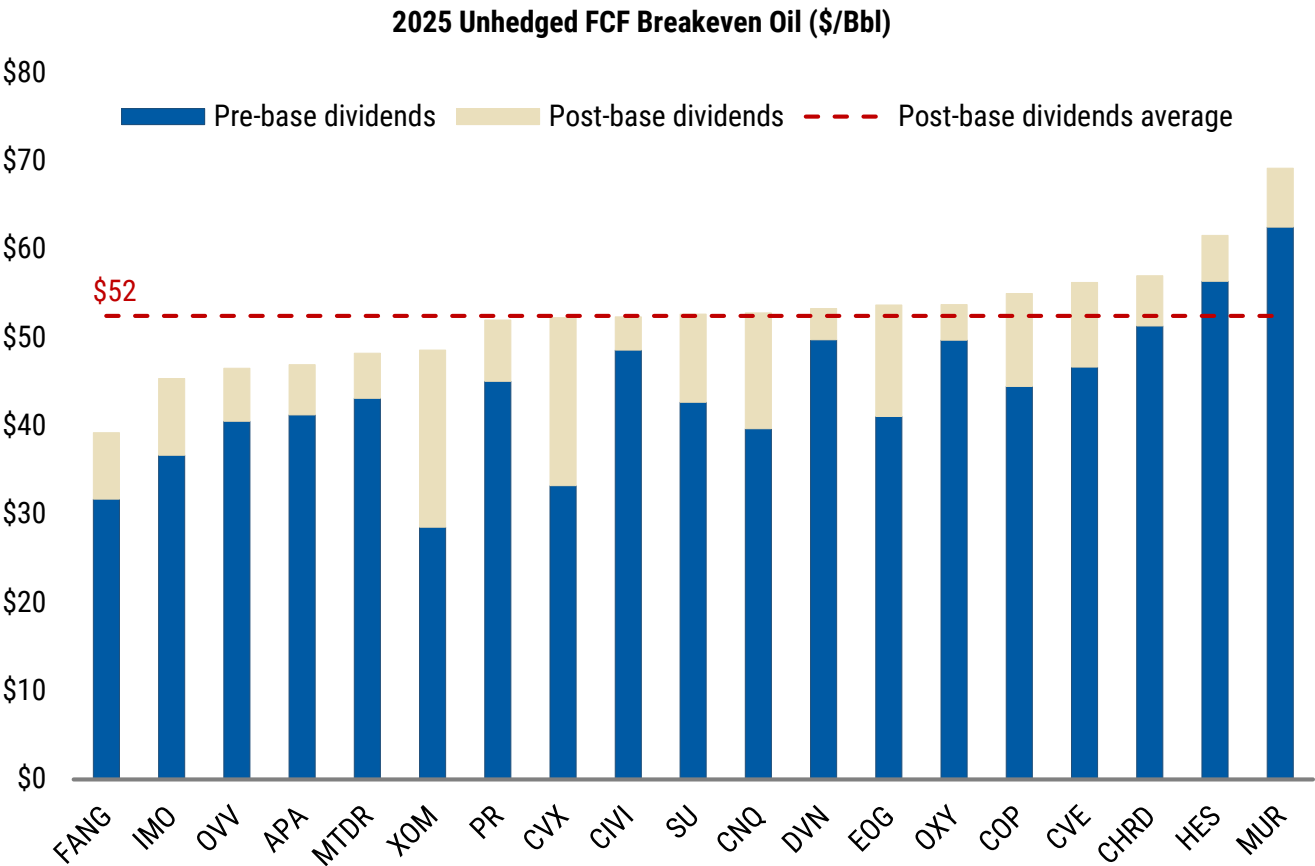


Exhibit 28:

At the producer level, the average 2025 FCF breakeven (oil price needed to cover cash costs, capex, and base dividends) is ~\$52/bbl WTI (\$53/bbl for US E&Ps).



Source: Morgan Stanley Research estimates. Note: excludes hedging impact, share repurchases and variable/special dividends.

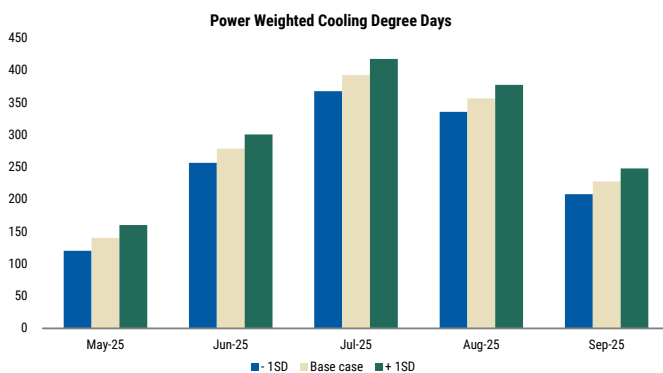
Summer Weather Sensitivities

Base case: We assume May-Sept PWCDDs (power weighted cooling degree days) of 1,397. This would result in end-October 2025 inventories of ~3.71 Tcf, 2% below the 5-year average of 3.782 Tcf.

Hotter Summer: We assume May-Sept PWCDDs of 1,505, approximately 1 SD hotter than the 10-year normal. Assuming no additional supply response or gas-to-coal switching, this would send end-March inventories to ~3.55 Tcf, 6% below the 5-year average.

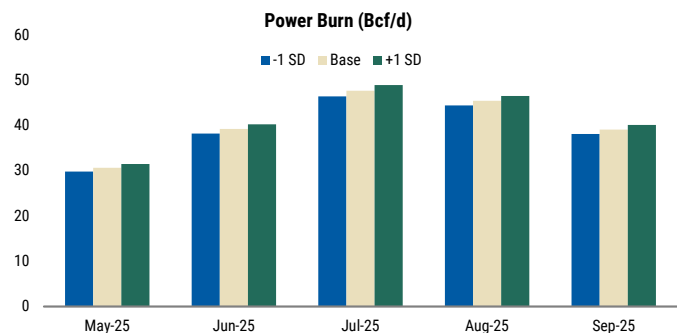
Milder Summer: We assume May-Sept PWCDDs of 1,289, approximately 1 SD cooler than the 10-year normal. This would result in end-March inventories of ~3.87 Tcf, 2% above the 5-year average.

Exhibit 29: Electricity demand is sensitive to summer weather...



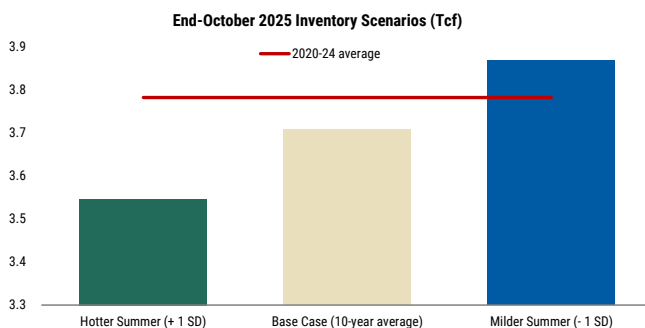
Source: NOAA, EIA, Morgan Stanley Research

Exhibit 30: ...a 1 standard deviation move in PWCDDs could drive a +/- ~1 bcf/d swing in average May-Sept power burn vs the 10-year normal (base case)



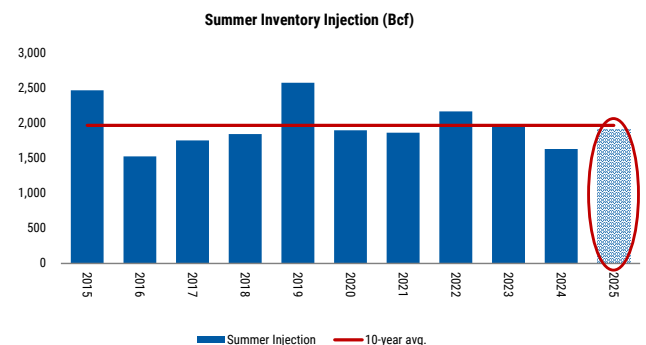
Source: EIA, Morgan Stanley Research estimates

Exhibit 31: Summer weather is a key variable for end-October '25 inventories.



Source: NOAA, EIA, Commodity Weather Group, Morgan Stanley Research estimates.

Exhibit 32: We estimate ~1.91 Tcf of injection heading into winter '25, 3% below the 10-year average.



Source: NOAA, EIA, Commodity Weather Group, Morgan Stanley Research estimates

Natural Gas S/D Trends

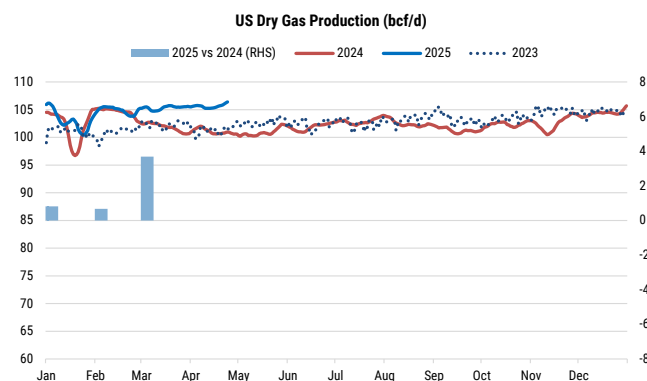
Supply Trends

Exhibit 33: US dry gas production has averaged ~105.7 bcf/d so far in April, up 0.3 bcf/d from March driven by the Haynesville, Eagle Ford and Marcellus.

Gas production (Bcf/d)	Feb '24 peak	March	April	April vs March	April vs Feb '24 peak
Marcellus	29.8	30.4	30.7	0.3	0.9
Permian	19.5	22.2	21.9	(0.2)	2.4
Other US	19.3	18.5	17.5	(1.0)	(1.8)
Haynesville	15.4	13.9	14.7	0.8	(0.7)
Eagle Ford	5.9	5.5	5.8	0.3	(0.1)
Utica	5.8	5.4	5.3	(0.0)	(0.4)
DJ Basin	2.7	2.8	2.9	0.1	0.2
Bakken	2.6	2.6	2.6	0.0	0.0
SCOOP/STACK	2.3	2.2	2.2	0.0	(0.0)
Offshore	1.9	1.9	2.0	0.1	0.0
Total	105.1	105.4	105.7	0.3	0.5

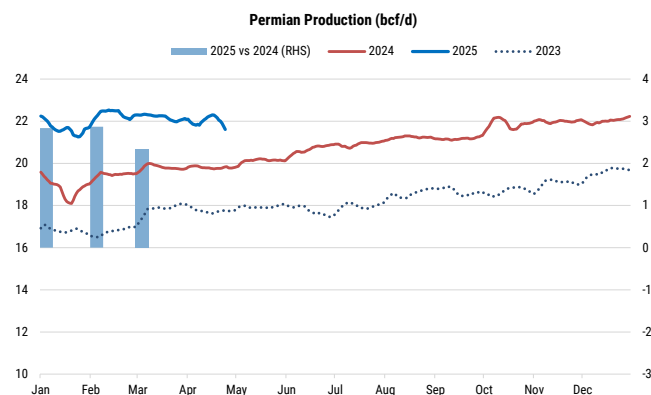
Source: S&P Global Commodity Insights, Morgan Stanley Research. February '24 peak is the average of the seven days beginning 2/6/2024.

Exhibit 34: Dry gas production is up 0.3 bcf/d in April so far relative to the March average, and is ~4.7 bcf/d higher than year-ago levels.



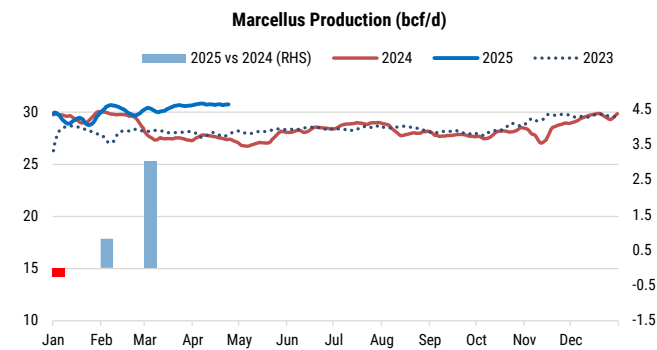
Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 35: Permian production has decreased by ~0.2 bcf/d in April relatively to the March average, and is +2.1 bcf/d vs this time last year.



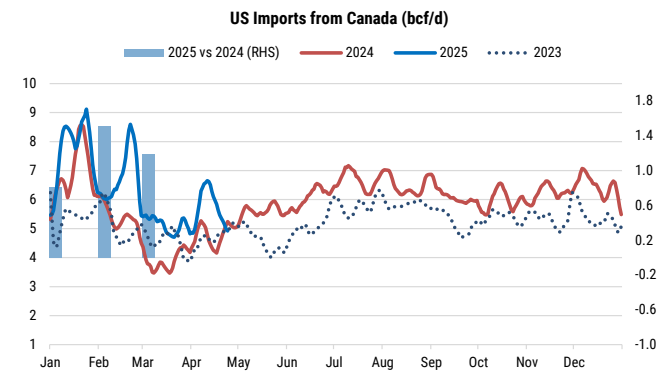
Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 36: Marcellus production is roughly flat MTD, +0.3 bcf/d vs March and is ~0.9 bcf/d above February '24 levels...



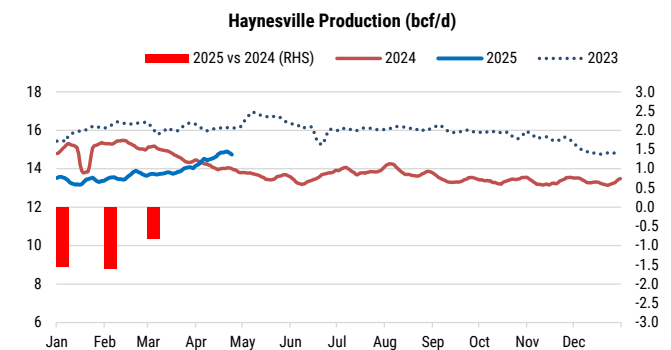
Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 38: Imports from Canada in April have averaged ~0.9 bcf/d higher y/y.



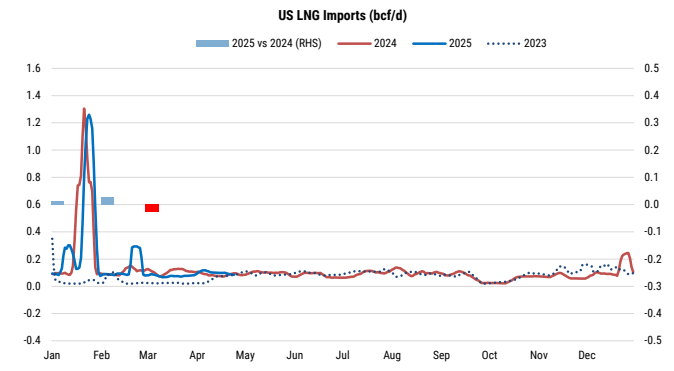
Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 37: ...Haynesville has risen by ~1.3 bcf/d YTD but is still down ~0.7 bcf/d vs February '24.



Source: S&P Global Commodity Insights, Morgan Stanley Research

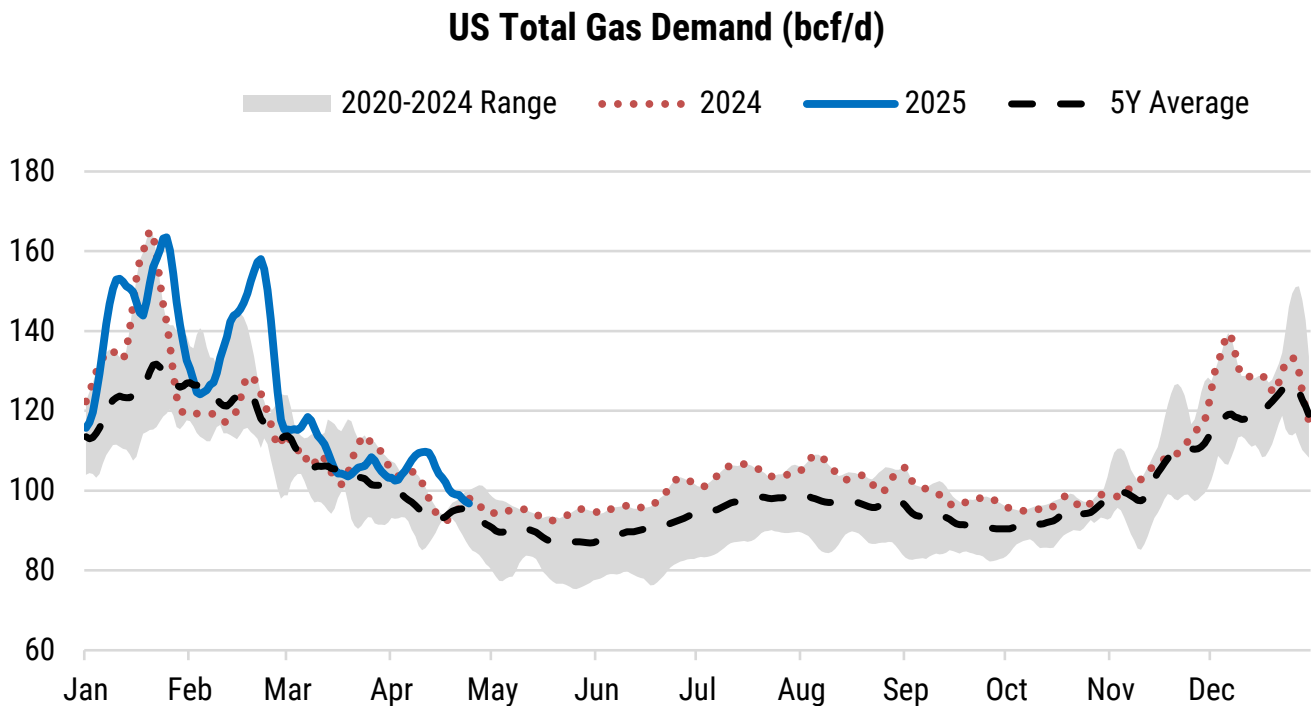
Exhibit 39: LNG imports in April are flatish y/y and are not a material driver of supply outside of the winter.



Source: S&P Global Commodity Insights, Morgan Stanley Research

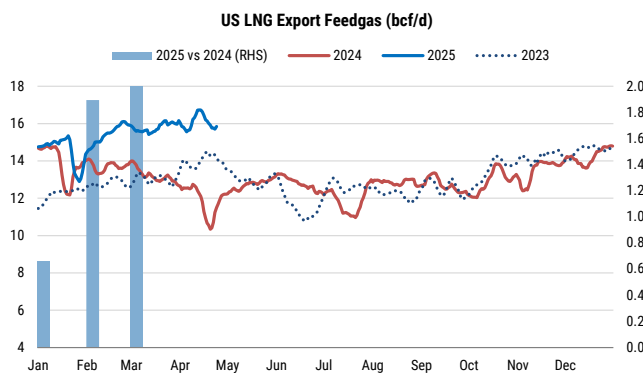
Demand Trends

Exhibit 40: Total natural gas demand averaged ~103 bcf/d in April, +6 bcf/d y/y and +9 bcf/d vs the 5-year average.



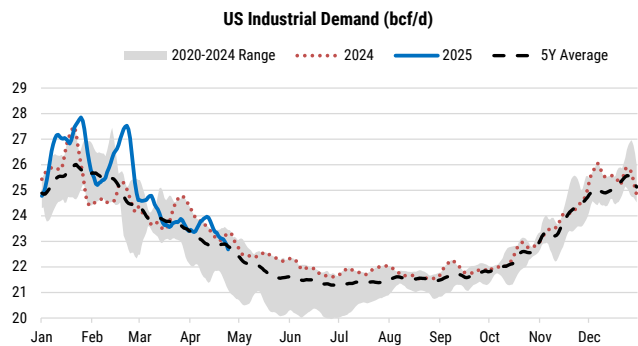
Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 41: US LNG feedgas demand has averaged ~16 bcf/d in April so far, the highest monthly levels on record driven by Plaquemines and Freeport.



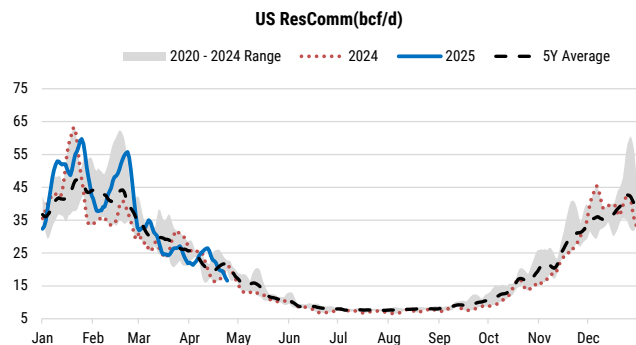
Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 42: Industrial demand averaged ~23 bcf/d in April, -0.6 bcf/d from March and roughly flat y/y.



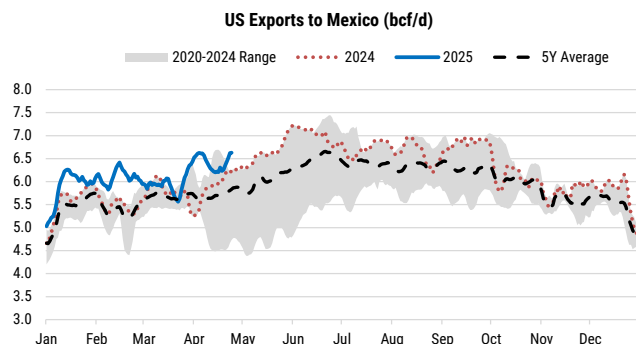
Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 43: Residential & Commercial demand has averaged ~22 bcf/d so far in April, +1.4 bcf/d (+7%) vs the five-year average and 2.3 bcf/d (12%) higher than the same period last year.



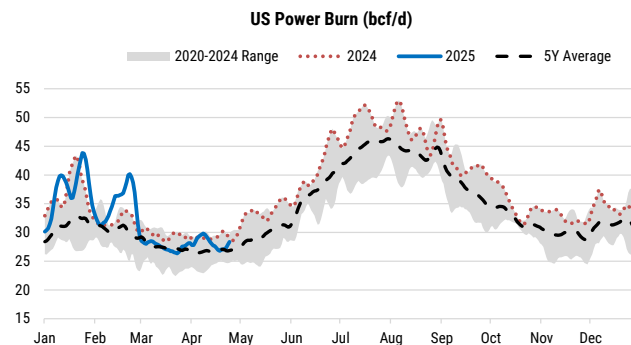
Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 45: Exports to Mexico in April are up ~0.5 bcf/d from March and +0.4 bcf/d y/y.



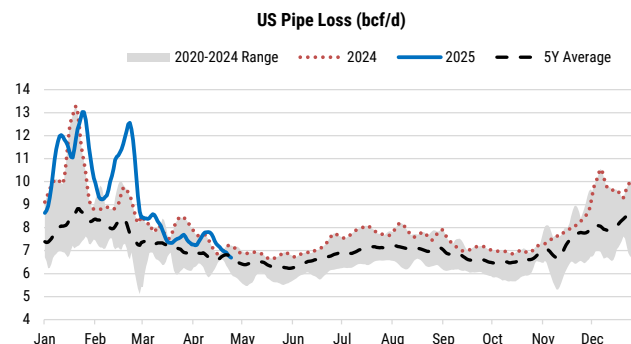
Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 44: Demand from the power sector in April has averaged ~28 bcf/d, +1.4 bcf/d (+5%) vs the five-year average and ~1.3 bcf/d (4%) lower than the same period last year.



Source: S&P Global Commodity Insights, Morgan Stanley Research

Exhibit 46: Pipe loss has averaged ~7 bcf/d in April, -0.5 bcf/d from March and ~0.1 bcf/d lower y/y.



Source: S&P Global Commodity Insights, Morgan Stanley Research

US Natural Gas S/D Balance

Exhibit 47: US natural gas annual supply/demand forecast

Bcf/d unless otherwise stated	Forecast										
SUPPLY	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Gross Production L48	82.3	93.3	102.8	101.9	104.6	109.9	115.2	115.6	120.4	123.6	128.4
YoY	2.1	11.0	9.5	-0.9	2.6	5.3	5.3	0.4	4.8	3.1	4.8
Other L48 Gas	20.0	21.1	21.4	20.5	19.8	20.1	21.2	24.0	26.1	25.6	25.9
YoY	-1.0	1.2	0.2	-0.9	-0.7	0.3	1.1	2.8	2.1	-0.5	0.3
CBM	2.7	2.7	2.5	2.3	2.1	2.0	1.9	1.8	1.7	1.6	1.6
YoY	-0.2	0.0	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Onshore L48 Shale	40.4	46.9	52.3	52.7	55.1	57.9	59.7	57.3	58.5	61.2	64.4
YoY	2.1	6.5	5.5	0.4	2.4	2.8	1.8	-2.4	1.3	2.6	3.2
Barnett	2.8	2.5	2.3	2.1	1.9	1.9	1.8	1.6	1.6	1.6	1.6
Fayetteville	1.7	1.4	1.2	1.1	1.0	1.0	0.9	0.8	0.8	0.8	0.8
Woodford	2.5	2.7	2.9	2.5	2.6	2.8	2.8	2.6	2.5	2.5	2.5
Haynesville	6.6	9.1	11.3	11.8	13.3	15.5	16.6	14.6	15.3	16.9	18.6
Marcellus	17.8	20.2	22.8	24.4	26.0	26.1	26.5	25.9	26.5	27.3	28.3
Eagle Ford	4.2	4.4	4.7	4.2	4.1	4.6	5.2	5.1	5.1	5.3	5.5
Utica	4.8	6.5	7.1	6.4	6.2	6.1	6.0	6.6	6.8	6.8	7.1
Onshore L48 Associated	16.3	19.9	23.8	24.3	25.4	27.7	30.3	30.7	32.3	33.5	34.9
YoY	1.6	3.6	3.9	0.5	1.1	2.3	2.6	0.4	1.6	1.2	1.4
Bakken	1.3	1.7	2.1	1.9	2.1	2.1	2.5	2.6	2.5	2.6	2.7
Permian	6.7	9.0	11.8	13.1	14.4	16.5	18.7	18.8	20.4	21.6	23.1
Denver Julesberg	3.9	4.3	4.7	4.8	4.6	4.4	4.5	4.7	5.0	5.0	5.0
Other L48 Associated	4.3	5.0	5.2	4.5	4.3	4.7	4.7	4.6	4.3	4.2	4.1
Offshore GOM	3.0	2.7	2.8	2.2	2.2	2.1	2.1	1.8	1.7	1.6	1.6
Balancing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry Production L48	74.9	84.3	92.9	92.4	94.5	99.3	103.6	103.2	106.6	109.1	113.4
YoY	2.2	9.4	8.6	-0.5	2.1	4.8	4.2	-0.4	3.4	2.5	4.2
NET IMPORTS											
Canada	5.6	5.4	4.7	4.4	5.1	5.6	5.2	5.8	6.1	6.0	6.0
YoY	-0.3	-0.2	-0.7	-0.3	0.7	0.5	-0.4	0.6	0.3	-0.1	0.0
Mexico	-4.2	-4.6	-5.1	-5.4	-5.9	-5.7	-6.1	-6.4	-6.6	-6.6	-6.6
YoY	-0.4	-0.4	-0.5	-0.3	-0.5	0.2	-0.4	-0.3	-0.2	-0.1	0.0
LNG	-1.7	-2.8	-4.8	-6.4	-9.7	-10.5	-11.9	-11.9	-15.5	-18.3	-19.9
YoY	-1.5	-1.0	-2.1	-1.6	-3.3	-0.8	-1.3	0.0	-3.6	-2.9	-1.6
Total Net Imports	-0.3	-2.0	-5.2	-7.5	-10.5	-10.6	-12.8	-12.5	-15.9	-19.0	-20.5
YoY	-2.2	-1.6	-3.3	-2.2	-3.0	-0.1	-2.2	0.4	-3.5	-3.0	-1.6
DEMAND											
Residential/Commercial	20.7	23.3	23.4	21.3	22.0	23.2	21.5	20.6	22.8	22.8	22.8
YoY	0.4	2.6	0.1	-2.0	0.6	1.2	-1.7	-0.9	2.2	0.0	0.1
Electric Power	25.3	28.9	30.8	31.7	30.7	33.0	35.3	36.8	35.5	34.7	35.2
YoY	-1.9	3.6	1.9	0.9	-1.0	2.3	2.3	1.5	-1.3	-0.8	0.5
Industrial Demand	21.8	23.1	23.1	22.4	22.9	23.2	23.3	23.3	23.6	23.4	23.7
YoY	0.6	1.3	0.0	-0.6	0.5	0.3	0.1	0.0	0.3	-0.2	0.2
Vehicle Demand	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1
YoY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lease Plant/Pipeline Fuel	6.3	7.0	7.8	7.8	8.2	8.6	8.8	8.9	9.1	9.7	10.3
YoY	0.2	0.7	0.7	0.0	0.4	0.4	0.2	0.1	0.2	0.6	0.6
Total Demand	74.2	82.4	85.2	83.4	83.9	88.2	89.1	89.6	91.1	90.7	92.1
YoY	-0.6	8.3	2.8	-1.8	0.5	4.3	0.8	0.6	1.5	-0.4	1.4
BALACING ITEM	(1.07)	(0.82)	(1.10)	(1.06)	(0.51)	(1.19)	(0.17)	(0.61)	(0.30)	(0.30)	(0.30)
STORAGE INJ/WTH (Bcf)											
End March Inventory	2,063	1,390	1,185	2,029	1,801	1,401	1,850	2,306	1,797	1,584	1,447
Winter Draw	1,950	2,426	2,051	1,733	2,127	2,264	1,719	1,503	2,141	2,124	1,954
End-October Inventory	3,816	3,236	3,762	3,929	3,665	3,569	3,809	3,938	3,707	3,401	3,518
Summer Injection	1,754	1,846	2,577	1,899	1,864	2,168	1,959	1,632	1,910	1,817	2,071
Prices (\$/MMBtu)											
Annual Avg Price	\$ 3.02	\$ 3.07	\$ 2.53	\$ 2.13	\$ 3.72	\$ 6.54	\$ 2.66	\$ 2.41	\$ 4.50	\$ 5.00	

Source: EIA, S&P Global Commodity Insights, Morgan Stanley Research estimates

Exhibit 48: US natural gas quarterly supply/demand forecast

Bcf/d unless otherwise stated	1022	2022	3022	4022	1023	2023	3023	4023	1024	2024	3024	4024	1025	2025	3025	4025	1026	2026	3026	4026	1027	2027	3027	4027
	Jan-22	Apr-22	Jul-22	Oct-22	Jan-23	Apr-23	Jul-23	Oct-23	Jan-24	Apr-24	Jul-24	Oct-24	Jan-25	Apr-25	Jul-25	Oct-25	Jan-26	Apr-26	Jul-26	Oct-26	Jan-27	Apr-27	Jul-27	Oct-27
Gross Production L48	105.5	109.3	111.4	112.2	113.5	114.7	115.6	116.9	115.7	114.5	115.6	116.7	118.4	120.6	121.1	121.6	120.9	123.3	124.5	125.6	126.6	127.8	129.0	130.0
YoY	5.2	5.1	6.1	3.8	8.0	5.4	4.2	4.7	2.2	-0.2	0.1	-0.2	2.8	6.1	5.5	4.9	2.4	2.8	3.4	4.0	5.7	4.5	4.5	4.5
Other L48 Gas	19.3	20.1	20.1	20.2	20.7	21.3	21.4	21.5	23.5	23.9	24.7	25.3	26.4	26.4	26.3	26.4	24.5	25.9	25.9	25.9	25.9	25.9	25.9	25.9
CBM	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5
Onshore L48 Shale	56.3	57.6	58.6	59.3	59.6	59.6	59.6	60.0	59.0	56.6	56.9	56.6	57.8	58.4	58.8	59.2	59.9	60.8	61.6	62.4	63.1	64.0	64.8	65.5
YoY	3.1	3.1	3.3	1.9	3.3	2.0	0.9	0.7	-0.5	-3.0	-2.7	-3.4	-1.3	1.8	1.9	2.5	2.1	2.3	2.9	3.2	3.2	3.2	3.1	3.1
Barnett	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Fayetteville	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Woodford	2.6	2.8	2.9	2.9	2.9	2.9	2.7	2.7	2.7	2.5	2.6	2.5	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Haynesville	14.5	15.2	15.7	16.4	16.7	16.8	16.6	16.2	15.8	14.4	14.3	14.1	14.9	15.1	15.3	15.7	16.3	16.7	17.2	17.6	18.1	18.5	18.8	19.1
Marcellus	26.2	26.0	26.3	26.1	26.0	26.2	26.4	27.3	26.6	25.5	26.0	25.6	26.1	26.6	26.6	26.7	26.9	27.1	27.4	27.7	27.9	28.1	28.4	28.7
Eagle Ford	4.2	4.6	4.7	4.8	5.0	5.2	5.2	5.3	5.2	5.1	5.1	5.0	5.1	5.1	5.1	5.2	5.2	5.2	5.3	5.4	5.4	5.5	5.5	5.6
Utica	6.1	6.0	6.2	6.2	6.2	6.0	6.0	5.9	6.5	6.5	6.5	6.8	6.8	6.8	6.8	6.7	6.8	6.8	6.8	6.8	6.9	7.0	7.1	7.2
Onshore L48 Associated	25.7	27.5	28.4	28.7	29.1	30.0	30.6	31.5	29.5	30.3	31.3	31.8	31.8	32.2	32.5	32.7	33.0	33.3	33.7	34.0	34.4	34.7	35.1	35.5
YoY	2.6	2.2	2.3	1.8	3.4	2.5	2.2	2.9	0.3	0.4	0.6	0.3	2.4	1.9	1.2	1.0	1.2	1.1	1.2	1.3	1.4	1.4	1.5	1.5
Bakken	2.0	2.0	2.2	2.1	2.2	2.4	2.6	2.7	2.5	2.7	2.7	2.6	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7
Permian	15.1	16.4	17.0	17.3	17.8	18.4	18.9	19.5	17.7	18.4	19.4	19.7	19.9	20.3	20.6	20.9	21.1	21.5	21.8	22.2	22.5	22.9	23.3	23.7
Denver-Julesburg	4.4	4.5	4.5	4.5	4.3	4.4	4.6	4.7	4.7	4.7	4.7	4.7	4.8	5.0	5.1	5.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Other L48 Associated	4.3	4.7	4.8	4.8	4.8	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.4	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.2	4.1	4.1	4.1
Offshore GOM	2.1	2.1	2.2	2.2	2.2	2.0	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.5	1.5
YoY	-0.3	-0.2	0.4	0.0	0.1	-0.2	-0.2	-0.2	-0.3	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Balancing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry Production L48	95.2	98.8	100.7	101.4	102.3	103.0	103.9	105.1	104.0	102.0	103.0	103.8	105.3	106.6	107.1	107.3	107.0	108.9	109.9	110.7	112.2	112.8	113.9	114.6
YoY	4.5	4.7	5.6	3.2	7.2	4.2	3.1	3.6	1.8	-1.0	-0.9	-1.2	1.3	4.6	4.1	3.5	1.7	2.2	2.8	3.4	5.2	3.9	4.0	3.9
NET IMPORTS																								
Canada	6.7	5.2	5.6	5.5	5.0	4.8	5.5	5.3	5.4	5.5	6.2	6.1	6.6	5.8	6.2	5.8	6.1	5.8	6.2	5.8	6.1	5.8	6.2	5.8
YoY	-2.5	-2.8	-2.7	-2.8	-1.7	-2.4	-0.1	-2.3	-0.7	-0.2	-0.2	-0.1	-0.2	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Mexico	-5.7	-6.0	-5.9	-5.3	-5.5	-6.2	-6.8	-6.0	-5.9	-6.7	-7.0	-6.0	-6.2	-6.8	-7.1	-6.2	-6.4	-6.8	-7.1	-6.2	-6.4	-6.8	-7.1	-6.2
YoY	-0.2	0.3	0.3	0.3	0.2	-0.2	-0.9	-0.7	-0.4	-0.4	-0.2	0.0	-0.3	-0.1	-0.1	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
LNG	-11.2	-10.8	-9.7	-10.3	-11.4	-11.7	-11.4	-12.9	-12.2	-11.3	-11.4	-12.6	-14.8	-15.5	-15.6	-15.9	-17.1	-18.1	-18.9	-19.2	-19.7	-19.4	-19.7	-20.8
YoY	-2.1	-1.0	-0.1	-0.2	-1.0	-1.7	-2.5	-0.9	-0.5	0.0	0.3	-0.3	-2.6	-3.3	-3.2	-3.3	-2.6	-2.5	-2.3	-2.3	-2.5	-2.3	-2.5	-2.5
Total Net Imports	-10.1	-11.6	-10.0	-10.1	-11.8	-13.2	-12.6	-13.7	-12.8	-12.4	-12.2	-12.5	-14.4	-16.5	-16.5	-16.8	-17.4	-19.1	-19.8	-19.8	-20.5	-20.6	-21.1	-20.8
YoY	-1.5	6.1	0.9	0.8	-1.7	-1.6	-2.7	-3.5	-0.9	0.7	0.5	1.1	-1.7	-4.1	-4.3	-3.8	-3.0	-2.6	-3.3	-3.3	-2.5	-1.3	-0.8	-1.5
DEMAND																								
Residential/Commercial	48.5	14.4	8.3	28.8	38.3	13.8	8.4	25.7	35.6	13.0	8.4	25.5	40.3	13.8	8.6	28.5	39.9	13.9	8.6	28.6	40.0	14.0	8.7	28.7
YoY	7.3	6.6	0.1	4.1	-10.2	-6.6	0.1	-3.0	-2.7	-0.8	0.0	-0.2	4.8	0.8	0.2	3.0	-0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Electric Power	30.5	30.8	42.4	30.8	30.7	33.3	44.7	32.5	32.6	34.7	46.1	33.6	32.8	32.7	44.1	32.4	31.2	32.0	43.1	32.3	31.3	32.7	44.3	32.2
YoY	4.0	1.6	4.6	1.7	6.1	2.5	6.3	1.7	1.9	1.4	1.4	1.1	0.2	-2.0	-1.2	-1.5	-0.7	-1.0	0.0	0.0	0.7	1.3	-0.2	
Industrial Demand	26.4	22.3	21.5	23.5	24.7	22.4	21.9	24.2	24.7	22.3	22.2	23.9	25.5	22.8	22.1	24.0	24.2	24.8	22.0	24.0	25.1	23.0	22.3	24.3
YoY	2.0	0.5	-0.1	-0.2	-1.7	0.0	0.4	0.7	0.0	0.0	0.0	0.2	-0.3	0.8	0.5	-0.1	0.1	-0.6	0.0	0.1	0.0	0.2	0.3	0.3
Vehicle Demand	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
YoY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lease Plant/Pipeline Fuel	9.5	8.0	8.3	8.8	9.3	8.3	8.6	9.0	9.4	8.4	8.7	9.0	9.5	8.3	9.1	9.5	10.2	9.2	9.5	10.0	10.7	9.8	10.1	10.5
YoY	0.8	0.3	0.5	0.4	-0.2	0.3	0.3	0.1	0.1	0.0	0.1	0.0	0.1	-0.1	0.4	0.5	0.7	1.0	0.4	0.5	0.6	0.5	0.6	0.6
Total Demand	115.1	75.8	80.7	92.1	103.1	78.0	83.7	91.5	102.4	78.6	85.4	92.1	108.2	77.7	84.0	94.5	106.3	78.1	83.4	95.0	107.2	79.7	85.7	95.8
YoY	14.2	3.0	4.9	6.0	-12.0	2.2	3.0	-0.6	-0.7	0.6	1.7	0.6	5.8	-0.8	-1.5	2.4	-1.9	0.4	-0.5	0.5	0.8	1.6	2.3	0.7
BALANCING ITEM	(2.4)	(0.8)	(0.8)	(1.6)	0.4	0.0	(0.9)	(0.2)	0.3	(1.4)	(0.4)	(1.0)	1.0	(0.8)	(0.4)	(1.0)	1.0	(0.8)	(0.4)	(1.0)	1.0	(0.8)	(0.4)	(1.0)
STORAGE INJ/WTH (Bcf)	(1,005.0)	323.8	282.7	(71.8)	(364.4)	361.5	201.9	(8.1)	(330.6)	292.8	150.7	(55.4)	(484.0)	351.3	188.4	(138.0)	(472.0)	330.3	191.3	(151.4)	(415.7)	359.1	216.9	(101.3)

Source: EIA, S&P Global Commodity Insights, Morgan Stanley Research estimates

Exhibit 49: US natural gas seasonal supply/demand forecast

Bcf/d unless otherwise stated		W 18-19	S 19	W 19-20	S 20	W 20-21	S 21	W 21-22	S 22	W 22-23	S 23e	W 23-24e	S 24e	W 24-25e	S 25e	W 25-26e	S 26e	W 26-27e	S 27e
SUPPLY																			
Gross Production L48		99.4	102.9	106.5	99.9	101.3	105.1	107.6	110.7	112.9	115.3	116.4	115.2	117.9	121.0	121.2	124.1	126.3	128.6
SoS		11.3	9.2	7.1	-3.0	-5.2	5.2	6.3	5.6	5.3	4.5	3.5	-0.1	1.5	5.8	3.3	3.2	5.1	4.5
Other L48 Gas		21.1	21.4	21.8	20.1	19.7	19.9	20.0	20.2	20.3	21.4	22.7	24.0	25.1	26.4	25.2	25.9	25.9	25.9
CBM		2.5	2.5	2.4	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.6
Onshore L48 Shale		50.6	52.3	54.0	52.0	53.5	55.1	56.8	58.2	59.5	59.5	59.5	56.6	57.4	58.7	59.7	61.3	62.9	64.5
SoS		6.6	5.3	3.4	-0.4	-0.5	3.2	3.3	3.1	2.7	1.3	0.0	-2.9	-2.1	2.0	2.2	2.7	3.2	3.2
Barnett		2.4	2.3	2.2	2.1	2.0	2.0	1.9	1.9	1.8	1.8	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Fayetteville		1.3	1.2	1.2	1.1	1.1	1.1	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Woodford		2.9	2.9	2.8	2.5	2.5	2.7	2.6	2.9	2.9	2.7	2.6	2.5	2.6	2.5	2.5	2.5	2.5	2.5
Haynesville		10.4	11.4	11.8	11.7	12.2	13.4	14.6	15.6	16.5	16.7	15.9	14.3	14.6	15.3	16.1	17.0	17.9	18.7
Marcellus		22.0	22.6	24.2	24.1	25.7	25.8	26.2	26.1	26.0	26.3	27.0	25.7	26.0	26.6	26.8	27.3	27.8	28.3
Eagle Ford		4.5	4.7	4.8	4.0	3.8	4.1	4.3	4.7	5.0	5.2	5.2	5.1	5.1	5.1	5.2	5.3	5.4	5.5
Utica		7.1	7.1	6.9	6.4	6.3	6.1	6.2	6.1	6.3	6.0	6.3	6.5	6.8	6.8	6.8	6.8	6.9	7.1
Onshore L48 Associated		22.2	23.9	25.5	23.7	23.7	25.9	26.5	28.1	28.9	30.4	30.4	30.9	31.9	32.4	32.9	33.5	34.3	35.0
SoS		4.2	3.8	3.4	-0.2	-1.9	2.2	2.8	2.2	2.3	2.3	1.5	0.5	1.5	1.5	1.1	1.1	1.3	1.5
Bakken		1.9	2.1	2.2	1.7	2.0	2.1	2.1	2.1	2.1	2.5	2.6	2.7	2.6	2.5	2.6	2.6	2.7	2.7
Permian		10.5	11.8	13.2	12.9	12.9	14.8	15.5	16.8	17.6	18.7	18.5	19.0	19.9	20.5	21.0	21.7	22.4	23.2
Denver Julesberg		4.6	4.7	5.1	4.7	4.6	4.6	4.5	4.5	4.4	4.5	4.7	4.7	5.0	5.1	5.0	5.0	5.0	5.0
Other Associated Shale		5.2	5.3	5.1	4.4	4.2	4.4	4.4	4.8	4.8	4.6	4.6	4.6	4.5	4.3	4.3	4.2	4.2	4.1
Offshore GOM		2.9	2.8	2.9	1.9	2.3	2.1	2.1	2.2	2.2	2.0	1.9	1.8	1.8	1.7	1.7	1.6	1.6	1.6
SoS		0.4	0.1	-0.1	-0.8	-0.6	0.1	-0.1	0.1	0.0	-0.2	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1
Balancing		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry Production L48		89.8	93.0	96.5	90.7	91.5	95.0	97.3	100.1	101.9	103.5	104.6	102.5	104.9	106.9	107.1	109.5	111.7	113.5
YoY		9.6	8.4	6.7	-2.2	-4.9	4.3	5.8	5.0	4.6	3.5	2.7	-1.0	0.3	4.4	2.2	2.6	4.6	3.9
NET IMPORTS																			
Canada		4.9	4.5	4.6	4.0	5.5	4.8	5.6	5.4	5.3	5.2	5.4	5.9	6.5	6.0	6.0	6.0	6.0	6.0
SoS		-0.9	-0.9	-0.3	-0.5	1.0	0.7	0.0	0.6	-0.3	-0.2	0.1	0.7	1.1	0.1	-0.5	0.0	0.0	0.0
Mexico		-4.7	-5.2	-5.2	-5.5	-5.4	-6.2	-5.5	-5.9	-5.4	-6.5	-5.9	-6.8	-6.0	-6.9	-6.2	-6.9	-6.2	-6.9
SoS		-0.4	-0.5	-0.4	-0.3	-0.3	-0.7	-0.1	0.3	0.1	-0.6	-0.5	-0.3	-0.2	-0.1	-0.2	0.0	0.0	0.0
LNG		-3.6	-4.8	-7.2	-5.0	-9.2	-9.7	-11.1	-10.2	-11.0	-11.7	-12.6	-11.5	-14.0	-15.5	-16.8	-18.6	-19.5	-19.6
SoS		-1.3	-2.1	-3.6	-0.2	-2.0	-4.7	-1.8	-0.5	0.1	-1.5	-1.6	0.2	-1.4	-4.1	-2.7	-3.1	-2.7	-1.0
Total Net Imports		-3.5	-5.5	-7.8	-6.5	-9.2	-11.1	-11.0	-10.7	-11.1	-13.0	-13.1	-12.4	-13.6	-16.4	-17.1	-19.5	-19.8	-20.5
SoS		-2.6	-3.5	-4.4	-0.9	-1.3	-4.6	-1.9	0.4	-0.1	-2.3	-2.0	0.6	-0.5	-4.1	-3.4	-3.1	-2.7	-1.0
DEMAND																			
Residential/Commercial		40.4	11.4	36.4	11.6	37.6	11.3	37.2	11.8	37.2	11.6	33.9	11.0	36.9	11.9	37.8	12.0	37.9	12.1
SoS		2.0	-0.6	-4.0	0.2	1.2	0.3	-0.4	0.6	0.1	0.3	-3.4	0.5	3.0	0.8	0.9	0.1	0.1	0.1
Electric Power		26.2	33.2	29.3	33.8	26.7	33.0	28.3	35.7	30.8	38.1	32.5	39.6	32.9	37.6	31.6	36.8	31.7	37.7
SoS		1.9	1.3	3.1	0.6	-2.6	-0.7	1.5	2.7	2.5	2.4	1.7	1.5	0.4	-2.0	-1.3	-0.8	0.0	0.0
Industrial Demand		25.0	21.6	24.6	21.0	24.4	21.8	25.1	22.0	24.5	22.2	24.8	22.2	25.2	22.5	24.8	22.5	24.9	22.7
SoS		0.6	-0.3	-0.4	-0.7	-0.2	0.8	0.8	0.2	-0.7	0.3	0.3	0.0	0.5	0.3	-0.4	0.0	0.1	0.3
Vehicle Demand		0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SoS		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lease Plant/Pipeline Fuel		8.0	7.4	8.5	7.3	8.4	7.8	9.0	8.2	9.3	8.4	9.3	8.5	9.4	8.7	10.0	9.4	10.5	9.9
SoS		0.8	0.6	0.5	0.0	-0.1	0.5	0.5	0.4	0.3	0.3	0.1	0.1	0.0	0.2	0.6	0.7	0.5	0.6
Total Demand		99.8	73.7	98.9	73.8	97.3	74.0	99.7	77.9	101.9	80.5	100.6	81.5	104.6	80.8	104.4	80.8	105.1	82.6
SoS		5.4	1.1	-0.8	0.1	-1.6	0.3	2.4	3.8	2.2	2.6	-1.3	1.0	3.9	-0.6	-0.2	0.0	0.7	1.8
BALANCING ITEM		(0.4)	(1.4)	(1.3)	(1.4)	0.5	(0.7)	(1.8)	(0.9)	(0.4)	(0.5)	0.3	(1.0)	0.3	(0.7)	0.3	(0.7)	0.3	(0.7)
STORAGE INJ/WTH (Bcf)		(2,051)	2,577	(1,733)	1,899	(2,127)	1,864	(2,264)	2,168	(1,719)	1,959	(1,503)	1,632	(2,141)	1,910	(2,124)	1,817	(1,954)	2,071
ENDING STORAGE (Bcf)		1,185	3,762	2,029	3,929	1,801	3,665	1,401	3,569	1,850	3,809	2,306	3,938	1,797	3,707	1,584	3,401	1,447	3,512

Price Forecast

Exhibit 50: We still expect Henry Hub to rise to >\$5 in 2H25 and average ~\$5 in 2026, ~24% above strip.

MS Henry Hub Average Price Forecast

	Base Case	Tail Risks		Forward Curve	Previous Forecast	Price Change
		Bear	Bull			
1Q24	\$ 2.10					
2Q24	\$ 2.32					
3Q24	\$ 2.23					
4Q24	\$ 2.98					
1Q25	\$ 3.87					
2Q25e	\$ 3.71	2.25	5.25	2.99	\$ 4.00	\$ (0.29)
3Q25e	\$ 5.00	3.50	6.50	3.41	\$ 5.00	\$ -
4Q25e	\$ 5.50	4.00	7.00	3.91	\$ 5.50	\$ -
2022	\$ 6.54					
2023	\$ 2.66					
2024	\$ 2.40					
2025e	\$ 4.50	3.50	6.50	3.82	\$ 4.50	\$ -
2026e	\$ 5.00	3.25	7.00	4.03	\$ 5.00	\$ -
LT	\$ 3.75	2.75	4.75	-	\$ 3.75	\$ -

Source: Bloomberg, Morgan Stanley Research estimates. 2Q25 forecast is the weighted average of QTD actuals and \$4 for the balance of the quarter.

Important note regarding economic sanctions. This research may reference jurisdiction(s) or person(s) which are the subject of sanctions administered or enforced by the U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC"), the United Kingdom, the European Union and/or by other countries and multi-national bodies. Any references in this report to jurisdictions, persons (individuals or entities), debt or equity instruments, or projects that may be covered by such sanctions are strictly incidental to general coverage of the relevant economic sector as germane to its overall financial outlook, and should not be read as recommending or advising as to any investment activities in relation to such jurisdictions, persons, instruments, or projects. Users of this report are solely responsible for ensuring that their investment activities are carried out in compliance with applicable sanctions.

Disclosure Section

The information and opinions in Morgan Stanley Research were prepared by Morgan Stanley & Co. LLC, and/or Morgan Stanley C.T.V.M. S.A., and/or Morgan Stanley Mexico, Casa de Bolsa, S.A. de C.V., and/or Morgan Stanley Canada Limited. As used in this disclosure section, "Morgan Stanley" includes Morgan Stanley & Co. LLC, Morgan Stanley C.T.V.M. S.A., Morgan Stanley Mexico, Casa de Bolsa, S.A. de C.V., Morgan Stanley Canada Limited and their affiliates as necessary.

For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/researchdisclosures, or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.

For valuation methodology and risks associated with any recommendation, rating or price target referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Vincent Andrews; David Arcaro, CFA; Robert S Kad; Devin McDermott; Andrew S Percoco.

Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflict/policies. A Portuguese version of the policy can be found at www.morganstanley.com.br

Important Regulatory Disclosures on Subject Companies

The analyst or strategist (or a household member) identified below owns the following securities (or related derivatives): Vincent Andrews - EQT Corp.(common or preferred stock).

As of March 31, 2025, Morgan Stanley beneficially owned 1% or more of a class of common equity securities of the following companies covered in Morgan Stanley Research: Antero Resources Corp, APA Corp, Chord Energy Corporation, CNX Resources Corp, ConocoPhillips, Constellation Energy Corporation, Coterra Energy Inc., Devon Energy Corp, Diamondback Energy Inc, EOG Resources Inc, EQT Corp., Expand Energy Corp, Hess Corp., Matador Resources Co, Murphy Oil Corporation, Northern Oil & Gas Inc., NRG Energy Inc, Occidental Petroleum Corp, Public Service Enterprise Group Inc, Range Resources Corp., Talen Energy Corp, Vistra Corp.

Within the last 12 months, Morgan Stanley managed or co-managed a public offering (or 144A offering) of securities of APA Corp, ConocoPhillips, Devon Energy Corp, Diamondback Energy Inc, Expand Energy Corp, Murphy Oil Corporation, NRG Energy Inc, Occidental Petroleum Corp, Permian Resources Corp, Public Service Enterprise Group Inc, Vistra Corp.

Within the last 12 months, Morgan Stanley has received compensation for investment banking services from APA Corp, CNX Resources Corp, ConocoPhillips, Constellation Energy Corporation, Devon Energy Corp, Diamondback Energy Inc, Expand Energy Corp, Murphy Oil Corporation, NRG Energy Inc, Permian Resources Corp, Public Service Enterprise Group Inc, Talen Energy Corp, Vistra Corp.

In the next 3 months, Morgan Stanley expects to receive or intends to seek compensation for investment banking services from Antero Resources Corp, APA Corp, Chord Energy Corporation, Civitas Resources Inc., CNX Resources Corp, Comstock Resources Inc., ConocoPhillips, Constellation Energy Corporation, Coterra Energy Inc., Devon Energy Corp, Diamondback Energy Inc, EOG Resources Inc, EQT Corp., Expand Energy Corp, Hess Corp., Murphy Oil Corporation, Northern Oil & Gas Inc., NRG Energy Inc, Occidental Petroleum Corp, Permian Resources Corp, Public Service Enterprise Group Inc, Range Resources Corp., Talen Energy Corp, Tourmaline Oil Corp., Vistra Corp.

Within the last 12 months, Morgan Stanley has received compensation for products and services other than investment banking services from APA Corp, Chord Energy Corporation, CNX Resources Corp, Comstock Resources Inc., ConocoPhillips, Constellation Energy Corporation, Coterra Energy Inc., Devon Energy Corp, EOG Resources Inc, EQT Corp., Expand Energy Corp, Hess Corp., Murphy Oil Corporation, Northern Oil & Gas Inc., NRG Energy Inc, Occidental Petroleum Corp, Ovintiv Inc, Permian Resources Corp, Public Service Enterprise Group Inc, Range Resources Corp., Talen Energy Corp, Tourmaline Oil Corp., Vistra Corp.

Within the last 12 months, Morgan Stanley has provided or is providing investment banking services to, or has an investment banking client relationship with, the following company: Antero Resources Corp, APA Corp, Chord Energy Corporation, Civitas Resources Inc., CNX Resources Corp, Comstock Resources Inc., ConocoPhillips, Constellation Energy Corporation, Coterra Energy Inc., Devon Energy Corp, Diamondback Energy Inc, EOG Resources Inc, EQT Corp., Expand Energy Corp, Hess Corp., Murphy Oil Corporation, Northern Oil & Gas Inc., NRG Energy Inc, Occidental Petroleum Corp, Permian Resources Corp, Public Service Enterprise Group Inc, Range Resources Corp., Talen Energy Corp, Tourmaline Oil Corp., Vistra Corp.

Within the last 12 months, Morgan Stanley has either provided or is providing non-investment banking, securities-related services to and/or in the past has entered into an agreement to provide services or has a client relationship with the following company: Antero Resources Corp, APA Corp, Chord Energy Corporation, CNX Resources Corp, Comstock Resources Inc., ConocoPhillips, Constellation Energy Corporation, Coterra Energy Inc., Devon Energy Corp, EOG Resources Inc, EQT Corp., Expand Energy Corp, Hess Corp., Murphy Oil Corporation, Northern Oil & Gas Inc., NRG Energy Inc, Occidental Petroleum Corp, Ovintiv Inc, Permian Resources Corp, Public Service Enterprise Group Inc, Range Resources Corp., Talen Energy Corp, Tourmaline Oil Corp., Vistra Corp.

An employee, director or consultant of Morgan Stanley is a director of Occidental Petroleum Corp. This person is not a research analyst or a member of a research analyst's household.

Morgan Stanley & Co. LLC makes a market in the securities of Antero Resources Corp, APA Corp, Chord Energy Corporation, Civitas Resources Inc., CNX Resources Corp, Comstock Resources Inc., ConocoPhillips, Coterra Energy Inc., Devon Energy Corp, Diamondback Energy Inc, EOG Resources Inc, EQT Corp., Expand Energy Corp, Hess Corp., Matador Resources Co, Murphy Oil Corporation, Northern Oil & Gas Inc., NRG Energy Inc, Occidental Petroleum Corp, Ovintiv Inc, Public Service Enterprise Group Inc, Range Resources Corp.

The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues. Equity Research analysts' or strategists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report. Morgan Stanley trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of the debt research report.

Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution

(as of March 31, 2025)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm.

For disclosure purposes only (in accordance with FINRA requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

Stock Rating Category	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1516	40%	387	46%	26%	694	40%
Equal-weight/Hold	1682	44%	380	45%	23%	805	47%
Not-Rated/Hold	3	0%	0	0%	0%	0	0%
Underweight/Sell	598	16%	81	10%	14%	227	13%
Total	3,799		848			1726	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below. Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Important Disclosures for Morgan Stanley Smith Barney LLC Customers

Important disclosures regarding the relationship between the companies that are the subject of Morgan Stanley Research and Morgan Stanley Smith Barney LLC or Morgan Stanley or any of their affiliates, are available on the Morgan Stanley Wealth Management disclosure website at www.morganstanley.com/online/researchdisclosures. For Morgan Stanley specific disclosures, you may refer to www.morganstanley.com/researchdisclosures.

Each Morgan Stanley research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval is conducted by the same person who reviews the research report on behalf of Morgan Stanley. This could create a conflict of interest.

Other Important Disclosures

Morgan Stanley Research policy is to update research reports as and when the Research Analyst and Research Management deem appropriate, based on developments with the issuer, the sector, or the market that may have a material impact on the research views or opinions stated therein. In addition, certain Research publications are intended to be updated on a regular periodic basis (weekly/monthly/quarterly/annual) and will ordinarily be updated with that frequency, unless the Research Analyst and Research Management determine that a different publication schedule is appropriate based on current conditions.

Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Matrix at <http://www.morganstanley.com/matrix>.

Morgan Stanley Research is provided to our clients through our proprietary research portal on Matrix and also distributed electronically by Morgan Stanley to clients. Certain, but not all, Morgan Stanley Research products are also made available to clients through third-party vendors or redistributed to clients through alternate electronic means as a convenience. For access to all available Morgan Stanley Research, please contact your sales representative or go to Matrix at <http://www.morganstanley.com/matrix>.

Any access and/or use of Morgan Stanley Research is subject to Morgan Stanley's Terms of Use (<http://www.morganstanley.com/terms.html>). By accessing and/or using Morgan Stanley Research, you are indicating that you have read and agree to be bound by our Terms of Use (<http://www.morganstanley.com/terms.html>). In addition you consent to Morgan Stanley processing your personal data and using cookies in accordance with our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html), including for the purposes of setting your preferences and to collect readership data so that we can deliver better and more personalized service and products to you. To find out more information about how Morgan Stanley processes personal data, how we use cookies and how to reject cookies see our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html).

If you do not agree to our Terms of Use and/or if you do not wish to provide your consent to Morgan Stanley processing your personal data or using cookies please do not access our research. Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the circumstances and objectives of those who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them. Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The value of and income from your investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

The fixed income research analysts, strategists or economists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

The "Important Regulatory Disclosures on Subject Companies" section in Morgan Stanley Research lists all companies mentioned where Morgan Stanley owns 1% or more of a class of common equity securities of the companies. For all other companies mentioned in Morgan Stanley Research, Morgan Stanley may have an investment of less than 1% in securities/instruments or derivatives of securities/instruments of companies and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Derivatives may be issued by Morgan Stanley or associated persons.

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley Research personnel may participate in company events such as site visits and are generally prohibited from accepting payment by the company of associated expenses unless pre-approved by authorized members of Research management.

Morgan Stanley may make investment decisions that are inconsistent with the recommendations or views in this report.

To our readers based in Taiwan or trading in Taiwan securities/instruments: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited ("MSTL"). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Any non-customer reader within the scope of Article 7-1 of the Taiwan Stock Exchange Recommendation Regulations accessing and/or receiving Morgan Stanley Research is not permitted to provide Morgan Stanley Research to any third party (including but not limited to related parties, affiliated companies and any other third parties) or engage in any activities regarding Morgan Stanley Research which may create or give the appearance of creating a conflict of interest. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

Morgan Stanley is not incorporated under PRC law and the research in relation to this report is conducted outside the PRC. Morgan Stanley Research does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors shall have the relevant qualifications to invest in such securities and shall be responsible for obtaining all relevant approvals, licenses, verifications and/or registrations from the relevant governmental authorities themselves. Neither this report nor any part of it is intended as, or shall constitute, provision of any consultancy or advisory service of securities investment as defined under PRC law. Such information is provided for your reference only.

Morgan Stanley Research is disseminated in Brazil by Morgan Stanley C.T.V.M. S.A. located at Av. Brigadeiro Faria Lima, 3600, 6th floor, São Paulo - SP, Brazil; and is regulated by the Comissão de Valores Mobiliários; in Mexico by Morgan Stanley México, Casa de Bolsa, S.A. de C.V. which is regulated by Comisión Nacional Bancaria y de Valores. Paseo de los Tamarindos 90, Torre 1, Col. Bosques de las Lomas Floor 29, 05120 Mexico City; in Japan by Morgan Stanley MUFG Securities Co., Ltd. and, for Commodities related research reports only, Morgan Stanley Capital Group Japan Co., Ltd; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents) and by Morgan Stanley Bank Asia Limited; in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and by Morgan Stanley Bank Asia Limited, Singapore Branch (Registration number T14FC0118); in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105); Stock Broker (SEBI Stock Broker Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at Altimus, Level 39 & 40, Pandurang Budhkar Marg, Worli, Mumbai 400018, India;

Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: tejarshi.hardas@morganstanley.com; Grievance officer details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com; in Canada by Morgan Stanley Canada Limited; in Germany and the European Economic Area where required by Morgan Stanley Europe S.E., authorised and regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin) under the reference number 149169; in the US by Morgan Stanley & Co. LLC, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, disseminates in the UK research that it has prepared, and research which has been prepared by any of its affiliates, only to persons who (i) are investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Order"); (ii) are persons who are high net worth entities falling within Article 49(2)(a) to (d) of the Order; or (iii) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000, as amended) may otherwise lawfully be communicated or caused to be communicated. RMB Morgan Stanley Proprietary Limited is a member of the JSE Limited and A2X (Pty) Ltd. RMB Morgan Stanley Proprietary Limited is a joint venture owned equally by Morgan Stanley International Holdings Inc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited. The information in Morgan Stanley Research is being disseminated by Morgan Stanley Saudi Arabia, regulated by the Capital Market Authority in the Kingdom of Saudi Arabia, and is directed at Sophisticated investors only.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA) or by Morgan Stanley & Co. International plc (ADGM Branch), regulated by the Financial Services Regulatory Authority Abu Dhabi (the FSRA), and is directed at Professional Clients only, as defined by the DFSA or the FSRA, respectively. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria of a Professional Client. A distribution of the different MS Research ratings or recommendations, in percentage terms for Investments in each sector covered, is available upon request from your sales representative.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided exclusively to persons based on their risk and income preferences by the authorized firms. Comments and recommendations stated here are general in nature. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages relating to such data. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Indicators and trackers referenced in Morgan Stanley Research may not be used as, or treated as, a benchmark under Regulation EU 2016/1011, or any other similar framework.

The issuers and/or fixed income products recommended or discussed in certain fixed income research reports may not be continuously followed. Accordingly, investors should regard those fixed income research reports as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or individual fixed income products. Morgan Stanley may hold, from time to time, material financial and commercial interests regarding the company subject to the Research report.

Registration granted by SEBI and certification from the National Institute of Securities Markets (NISM) in no way guarantee performance of the intermediary or provide any assurance of returns to investors. Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

INDUSTRY COVERAGE: Exploration & Production

COMPANY (TICKER)	RATING (AS OF)	PRICE* (04/24/2025)
Devin McDermott		
Antero Resources Corp (AR.N)	O (04/17/2024)	\$34.54
APA Corp (APA.O)	U (04/15/2024)	\$16.26
Chord Energy Corporation (CHRD.O)	E (01/10/2025)	\$94.75
Civitas Resources Inc. (CIVI.N)	O (01/10/2025)	\$29.43
CNX Resources Corp (CNX.N)	U (01/10/2025)	\$29.06
Comstock Resources Inc. (CRK.N)	E (01/10/2025)	\$18.36
ConocoPhillips (COP.N)	O (12/16/2024)	\$91.80
Coterra Energy Inc. (CTRA.N)	E (04/30/2020)	\$25.46
Devon Energy Corp (DVN.N)	O (12/11/2023)	\$31.47
Diamondback Energy Inc (FANG.O)	O (12/11/2020)	\$136.16
EOG Resources Inc (EOG.N)	E (12/11/2023)	\$113.46
EQT Corp. (EQT.N)	O (11/18/2021)	\$48.82
Expand Energy Corp (EXE.O)	O (01/10/2025)	\$104.40
Hess Corp. (HES.N)	++	\$132.38
Matador Resources Co (MTDR.N)	E (01/10/2025)	\$40.75
Murphy Oil Corporation (MUR.N)	U (01/22/2025)	\$20.83
Northern Oil & Gas Inc. (NOG.N)	E (01/05/2024)	\$23.75
Occidental Petroleum Corp (OXY.N)	O (12/11/2023)	\$40.37
Ovintiv Inc (OVV.N)	O (03/26/2025)	\$34.53

Permian Resources Corp (PR.N)	O (01/10/2025)	\$12.20
Range Resources Corp. (RRC.N)	E (03/26/2025)	\$33.86
Tourmaline Oil Corp. (TOU.TO)	E (01/10/2025)	C\$62.59

Stock Ratings are subject to change. Please see latest research for each company.

* Historical prices are not split adjusted.

© 2025 Morgan Stanley