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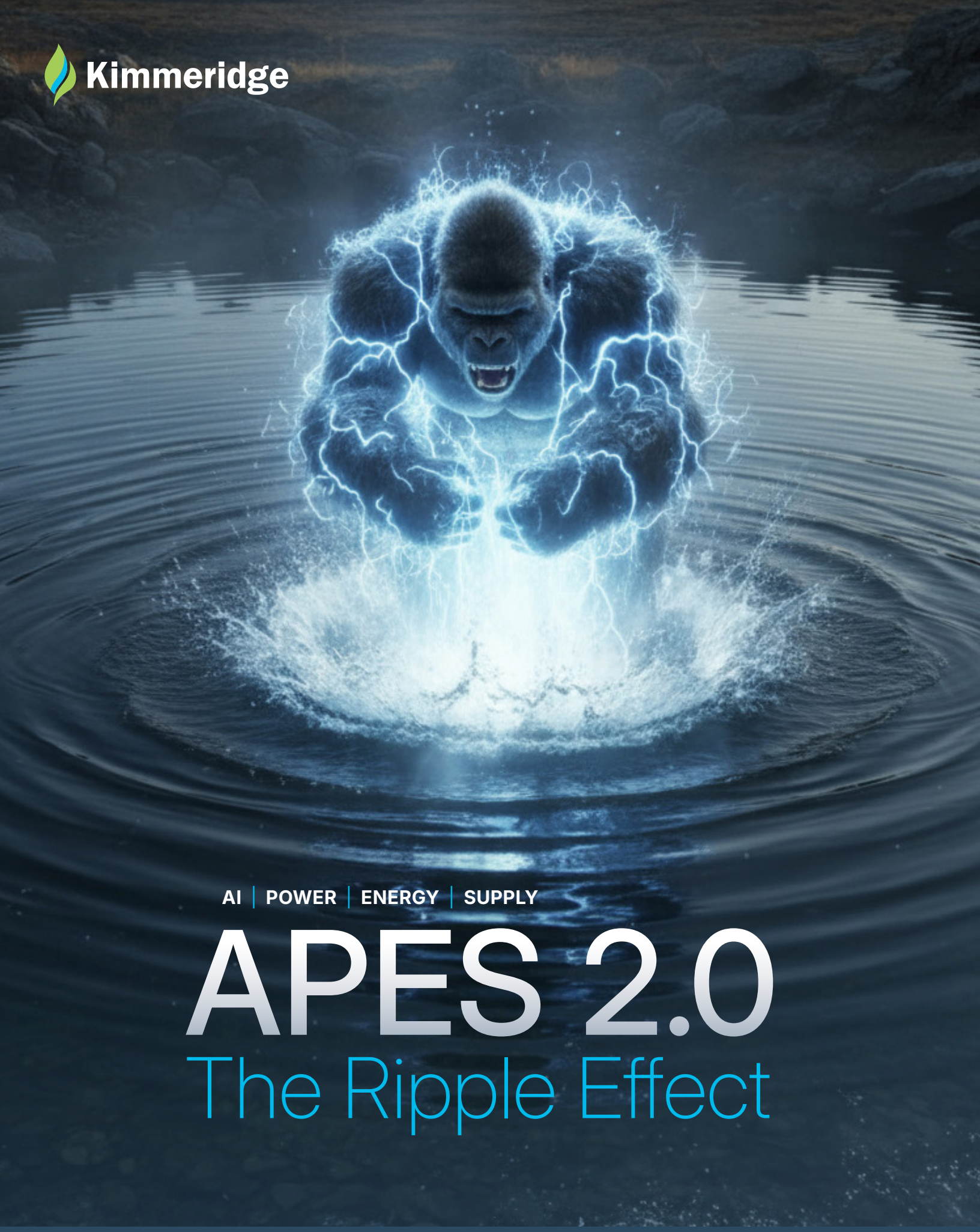

AI | POWER | ENERGY | SUPPLY

APES 2.0

The Ripple Effect

Kimmeridge

The market is in the midst of a transformation, driven by the 'electron for labor' trade, as AI becomes ever more prevalent in daily life. This revolution promises to have profound effects on labor markets, inflation, foreign policy and global trade.

While the ultimate macroeconomic impacts are challenging to foresee, what is abundantly clear is that the AI transformation requires power, and the options for delivering it are limited, at least in the near term.

With the reacceleration in gas consumption for power needs, as well as a wave of new LNG exports, demand for gas is growing materially. This further supports the now-consensus view that US gas is a growth market.

The question for investors is now that the AI race is on, what are the ripple effects for energy markets and how should investors position to benefit most?

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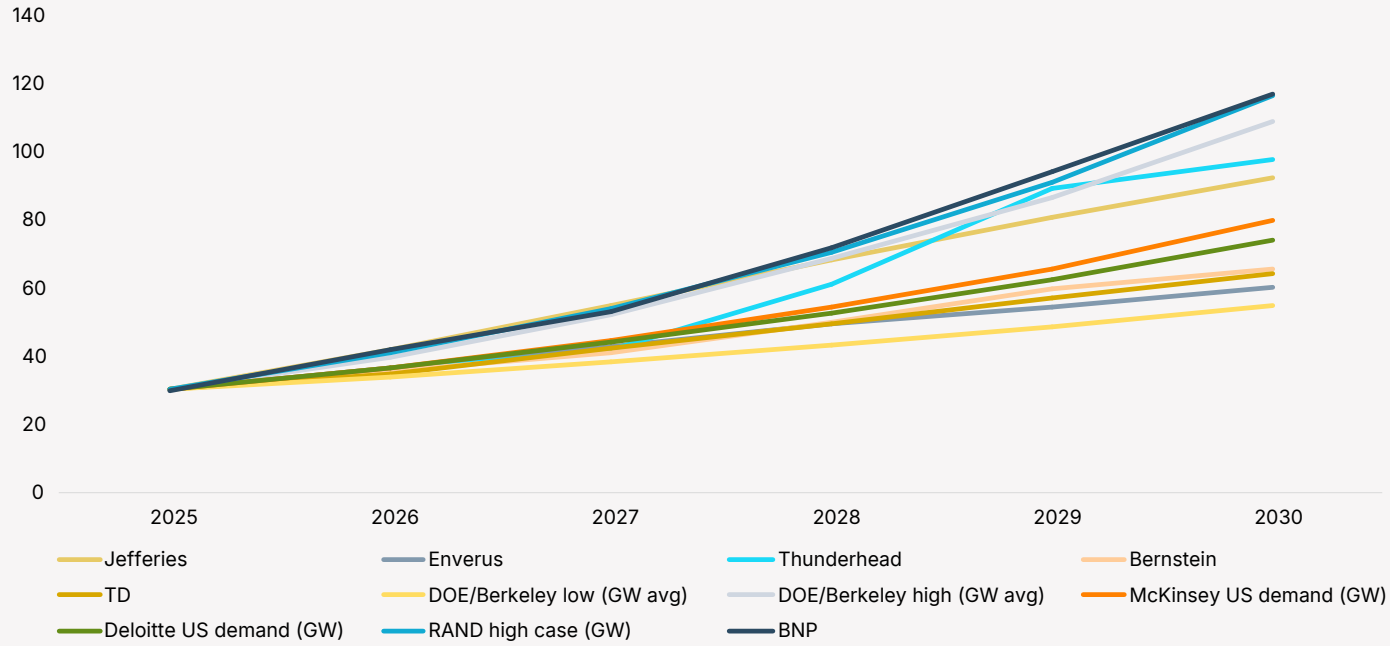
AI Power Forecasts: The Great Unknown

In March 2025 when we published *Evolution of the APES: AI, Power, and Energy Supply* we, in collaboration with a third-party data center market expert, conducted an extensive analysis to model this megatrend with the highest possible accuracy. Leveraging our in-house data science capabilities and energy market expertise, we developed a bottom-up, regional US power supply and demand model through 2030. We concluded that *"many power system operators are underestimating the scale of upcoming load growth. While constraints—primarily access to power—will limit expansion, our base case projects 55 gigawatts (GW) of incremental wholesale, cloud and AI data center demand by 2030. Including other base load growth, total projected demand reaches ~1,000 TWh, equivalent to adding Japan's entire electricity consumption to the US grid within six years."*

Since our initial publication, a collection of additional forecasts have emerged based on announced data center builds, compute requirements or power supply chain order books. These collectively predict power demand rising by an incremental 50 GW (low end) to 120 GW (high end) by 2032. Concurrently, our own internal estimates have been revised up and now sit squarely in the middle of consensus estimates ***(Figure 1)***.

Figure 1: Forecasted Power Demand from AI (GW)



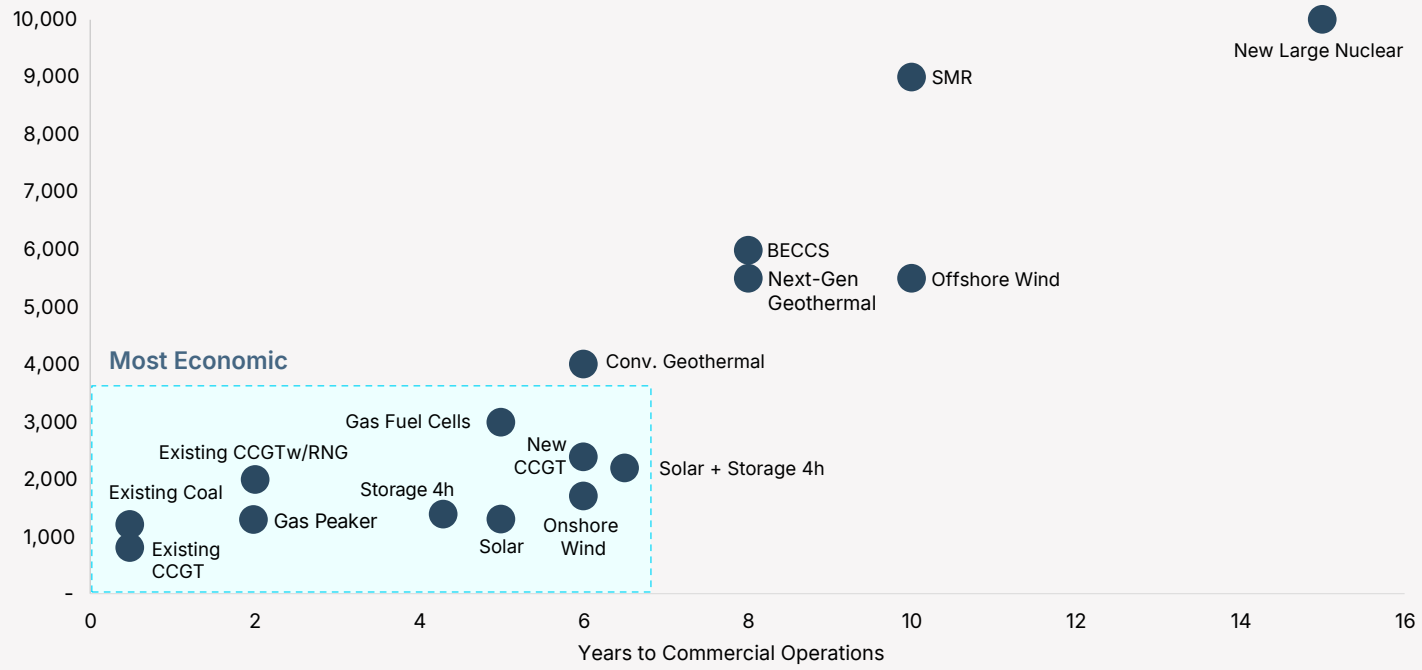
Source: Jefferies, Enversus, Thunderhead Research, Bernsten, TD, DOE, McKinsey, Deloitte and RAND.

Today, when we look at AI-related power demand growth, we believe that by 2032, the US market is going to need ~90 GW of incremental power. This accounts for a combination of training of large language models (LLMs) and achieving "inference," the use of these trained LLMs, which will be more local.

Gas Is the Foundation for AI-Driven Power Demand

When looking at how to supply this power to the AI race, we continue to believe that gas-fired power generation is the lowest-cost, most deliverable option ***(Figure 2)***.

Figure 2: Capital Cost ($/kW)



Source: Kimmeridge internal analysis.

This is not to suggest that other solutions, such as solar plus batteries, will not be material contributors or that nuclear power doesn't have a role to play. However, deliveries of large-scale nuclear solutions are at least 10 years out, at which point a significant amount of LLM training is expected to have been completed. Gas-fired power generation is a more immediate solution.

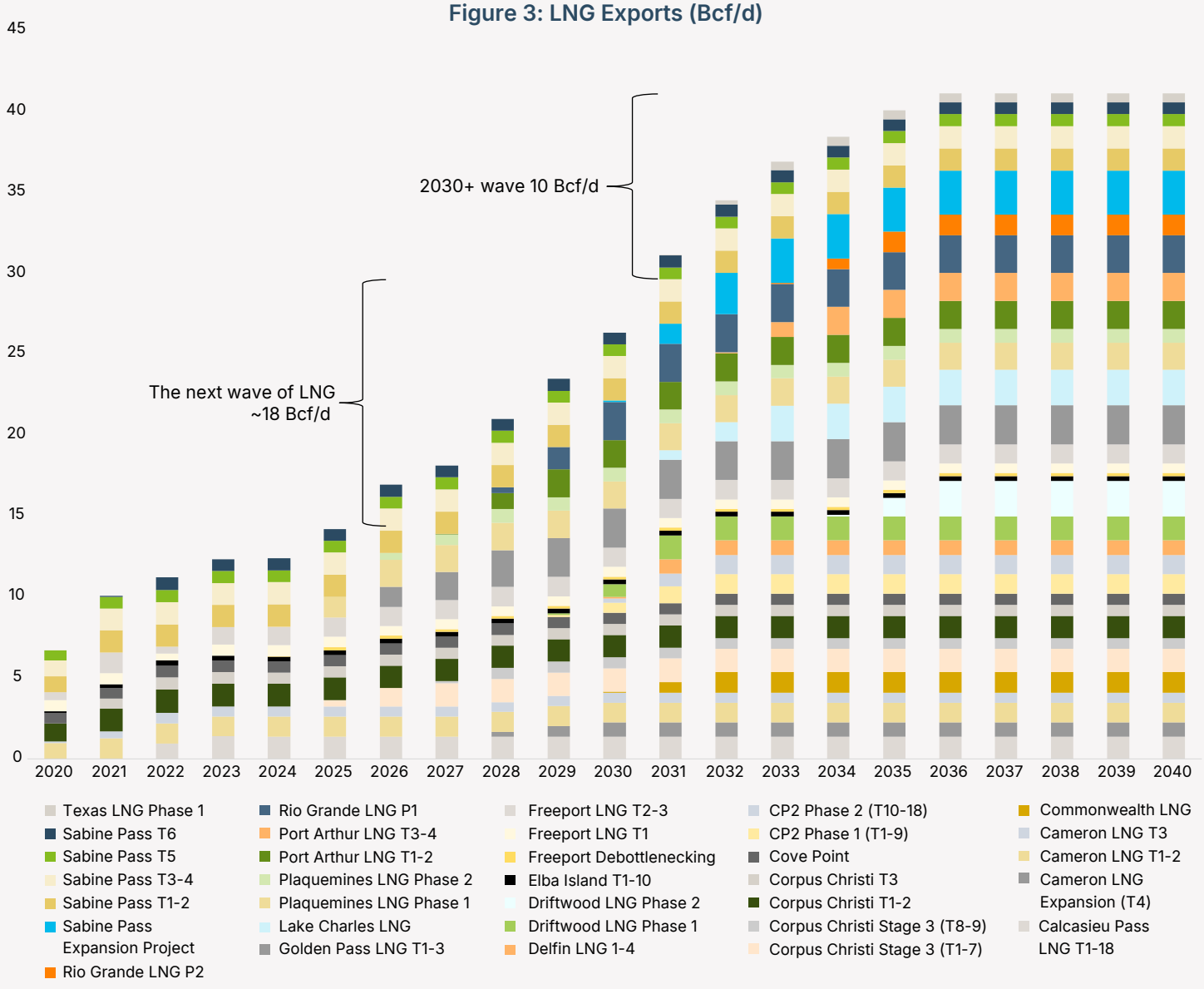
Consequently, we see a disproportionate amount of this power demand being met with gas. To put the scale of this in context:

- Of the forecasted 90 GWs, we believe that ~75% of this will be sourced by gas-fired power generation.
- This, in turn, would drive an additional 11-12 billion cubic feet per day (Bcf/d) of incremental gas demand.
- The US currently produces ~108 Bcf/d. An additional 11-12 Bcf/d implies ~10% growth in gas production, driven purely by power generation.

The Second Leg of US Gas Demand

Alongside power demand, the US gas market has a clear second—and significant—pillar of growth with liquefied natural gas (LNG). Over the next five years, we have "locked and loaded" ~18 Bcf/d of incremental demand ***(Figure 3)*** from projects that have made Final Investment Decision (FID) or are fully permitted.

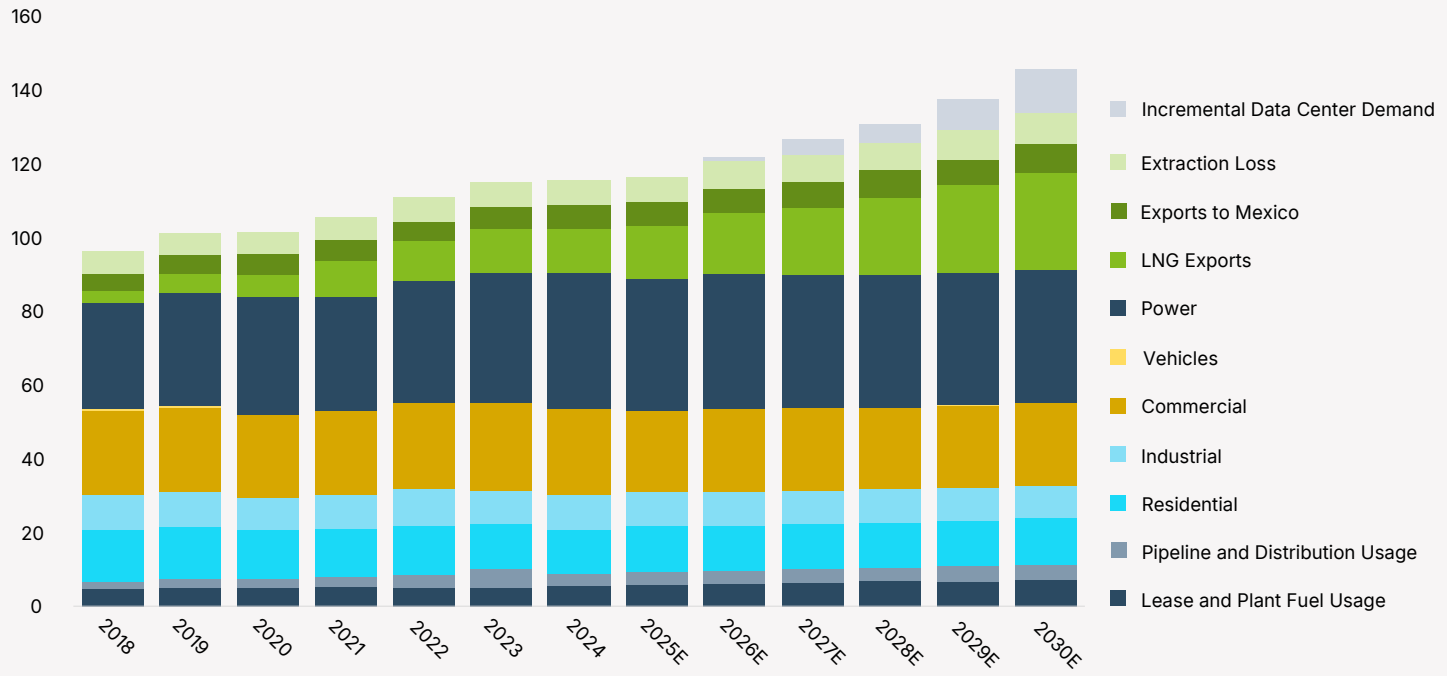
Figure 3: LNG Exports (Bcf/d)



Source: Company filings.

Combined, AI and LNG gas demand will add ~30 Bcf/d of overall demand need ***(Figure 4)***, representing an approximately 4.5% compound annual growth rate (CAGR) from today's levels. Of this, ~70% is highly visible, driven by projects under construction.

Figure 4: Combined US Gas Consumption (Bcf/d)



Source: Kimmeridge internal analysis.

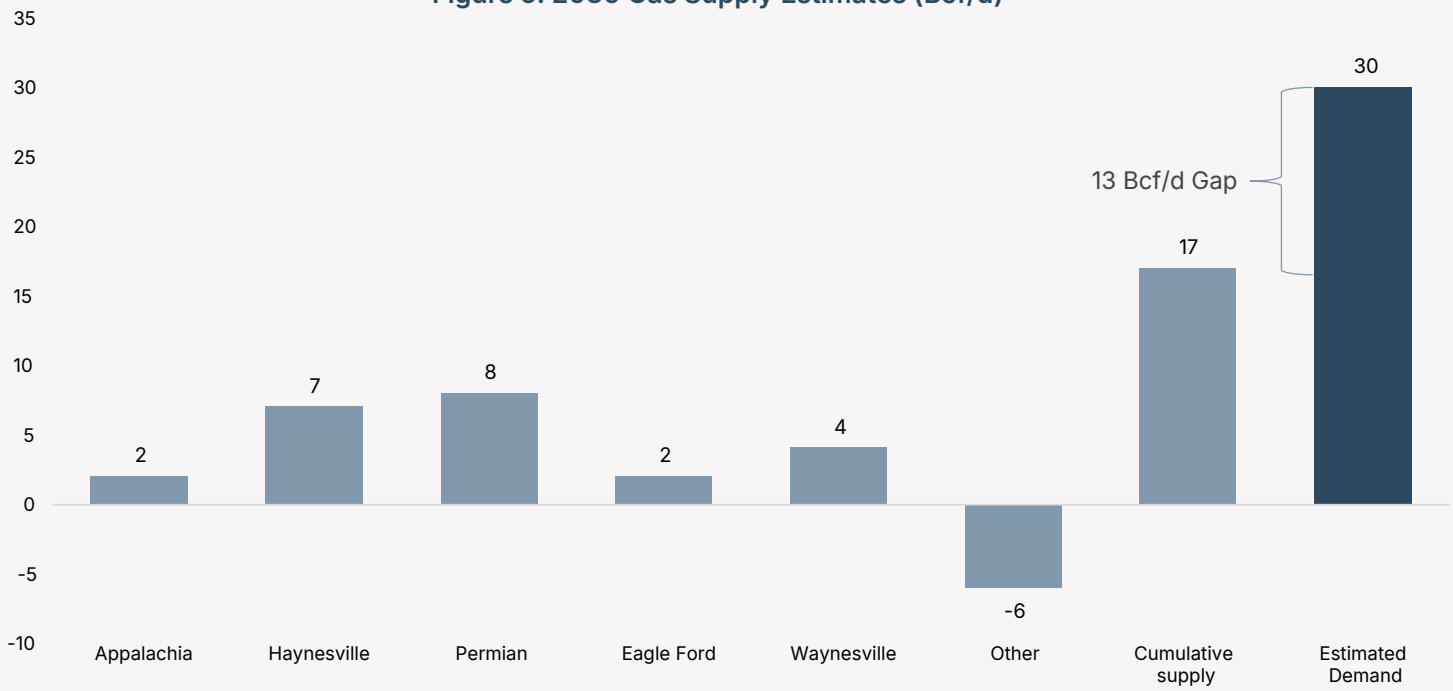
Where is the Gas Going to Come From?

At Kimmeridge, we believe the US has abundant gas resources, can supply this gas, and critically, can continue to deliver supply for 20+ years. Looking at US gas resources, consensus is broadly in alignment that of this incremental supply, ~7 Bcf/d will come from the Haynesville, ~8 Bcf/d from Permian associated gas, with the Eagle Ford and Western Haynesville (Waynesville) providing additional supply.

We also anticipate growth in Appalachian gas, though it has been—and will likely remain—constrained by infrastructure limitations and largely consumed locally by Virginia's "Data Center Alley."

Aggregating all the above leaves a 13 Bcf/d supply "gap" over the next five years that will require gas supply from other US basins to meet demand ***(Figure 5)***.

Figure 5: 2030 Gas Supply Estimates (Bcf/d)



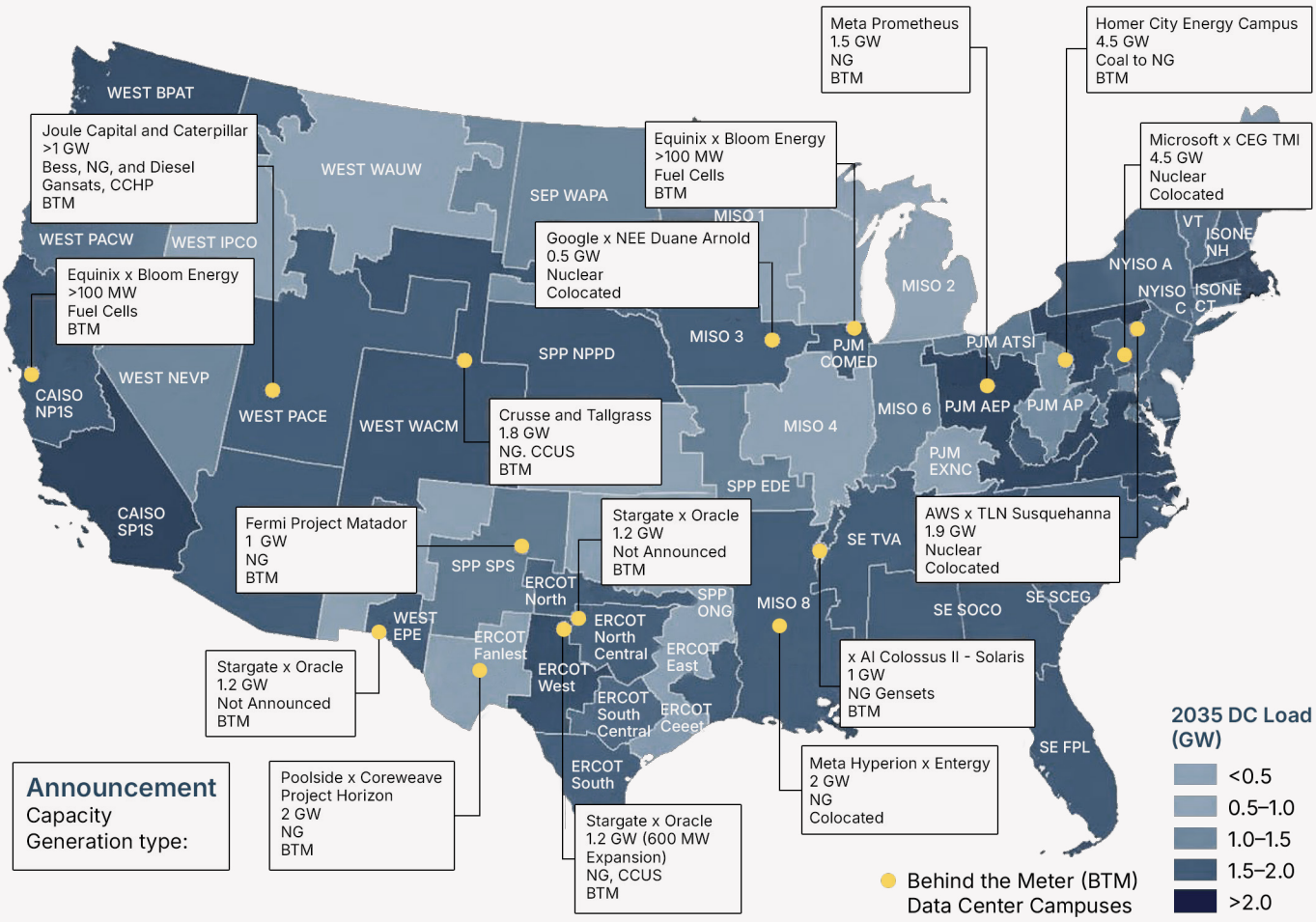
Source: Kimmeridge and Whitewater estimates.

Location, Location, Location

It should be noted that this demand growth will not be evenly spread across the country. Until recently, the Northeast, around Pennsylvania, Virginia and Appalachia ***(Figure 6)***, is where we've seen the most data center build-outs.

As we move forward, we expect growth in these build-outs to move toward the gas supply. We're seeing growth in Louisiana, Texas and across the south of the country. For now, West Coast mountain regions remain behind in terms of build-outs.

Figure 6: Diverging AI Infrastructure Needs: +1GW Training vs. In-City Inference



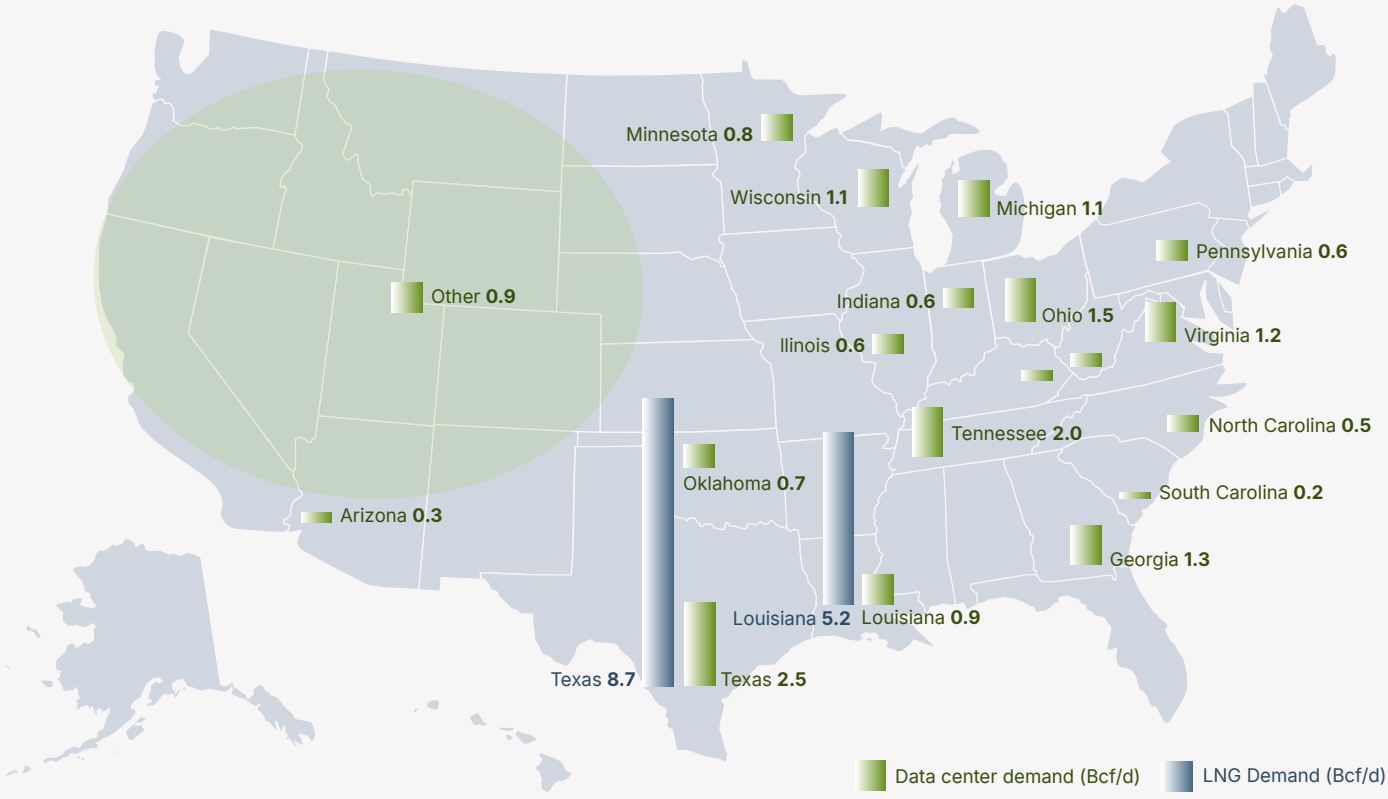
Source: Enverus.

When combining demand for data centers and LNG, it highlights the materiality of Texas, Louisiana and the net gas flows to the Gulf Coast ***(Figure 7)***.

Specifically, we continue to believe the hubs of Aqua Dulce (Texas), Houston Ship Channel (Texas), Henry Hub (Louisiana) and Gillis (Louisiana) will all see material increases in liquidity and flows.

The relative pricing of these hubs and the availability of low-nitrogen gas (particularly from South Texas) is creating opportunities for gas trading platforms to extract incremental margin, as low-nitrogen gas is better suited for US LNG facilities.

Figure 7: Power Growth Drives Gas Demand South and East



Source: BNP Paribas, Jefferies, and Kimmeridge internal analysis.

The Ripple Effect and the Consumer: Rising Power Prices

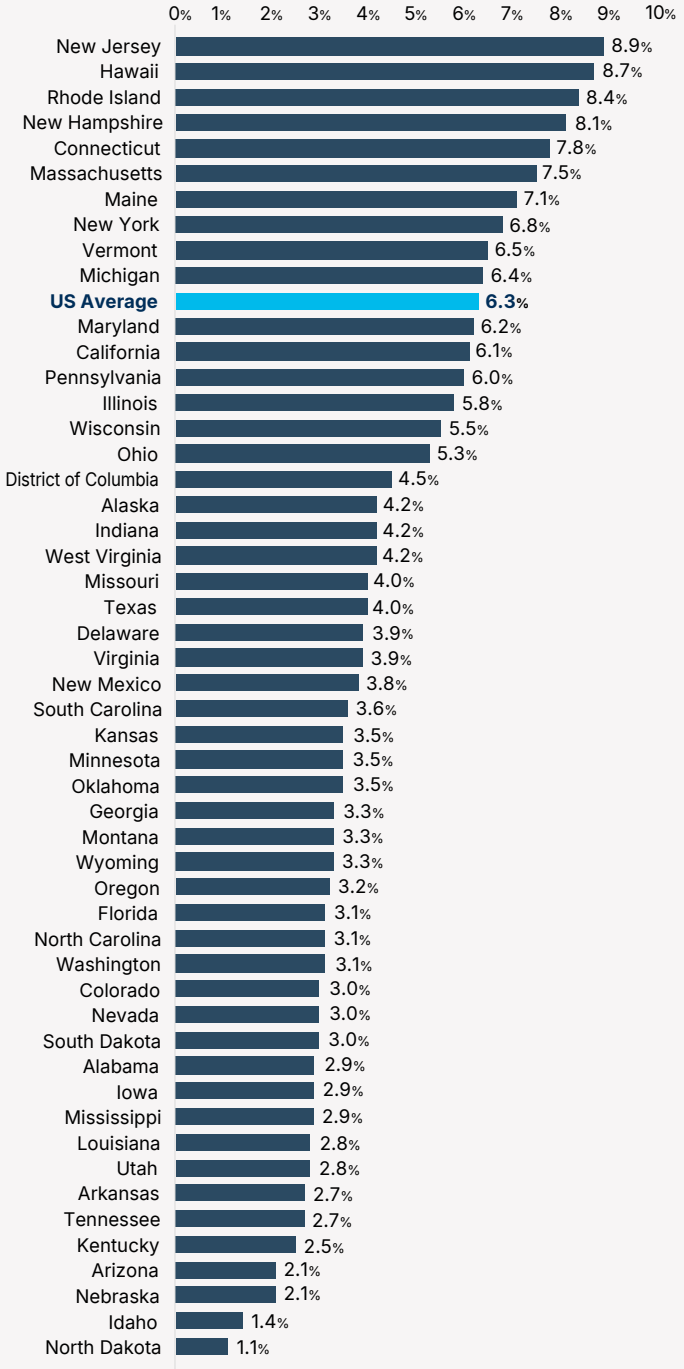
While these trends are net positive for the gas industry, the key risk is to the consumer in terms of power prices. Over the last two to three years we have seen power prices rise across the US in almost every state ***(Figure 8)***, driven by a confluence of factors including underinvestment in new generation, limited investment in transmission, and an over-reliance on intermittent supply sources. Irrespective of the cause, one thing is clear: on the margin, the consumer will increasingly be competing with data centers for power.

Addressing this will be a major focus for the Trump administration, as the build-out in data centers and their associated power needs will require a holistic solution that balances the following:

- Data centers require 99.999% reliability.
- Consumers resist paying for new generation and grid upgrades to support data centers.
- Utilities seek to grow earnings through asset base investment while keeping customer bills low.

Entergy's partnership with Meta at the Hyperion complex in Louisiana offers a practical blueprint for managing large data center load growth: the two parties are sharing capital investment costs, helping support new infrastructure without passing incremental rate increases on to retail customers.

Figure 8: Year-Over-Year % Change in US Power Prices



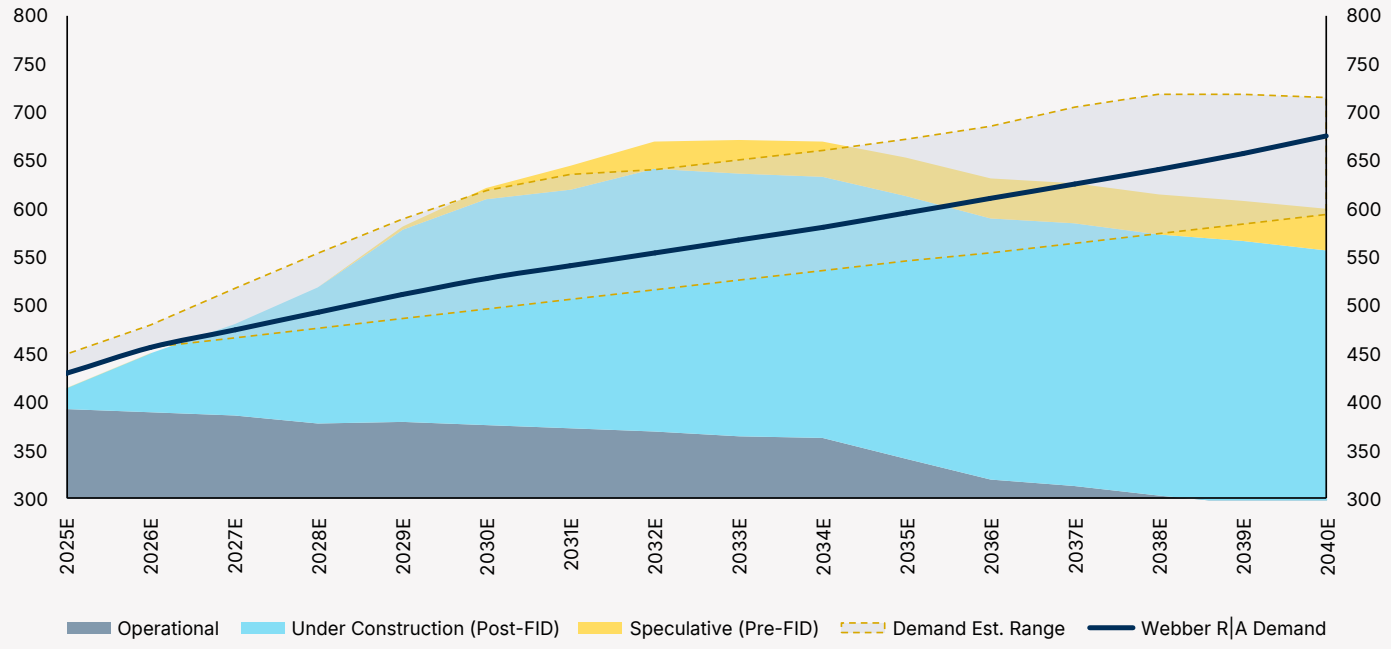
Source: Electricchoice.com

Rising Power Prices, Rising US Gas Prices but Falling LNG Prices?

While consensus is directionally bullish on power prices and domestic gas prices, they remain bearish on near-term LNG pricing. This is driven by a view that the LNG market will be oversupplied as projects come online from 2027–2031 ***(Figure 9)***.

We would agree that it is undeniable that the LNG market is entering a phase of tremendous supply growth. From the Gulf Coast alone, there is 18 Bcf/d (or 130 Mtpa) of incremental projects that are coming into market. At the same time, Qatar continues to grow, as does Canada, leading to almost 200 Mtpa of aggregate growth.

Figure 9: Global LNG Supply/Demand Balance (Mtpa)

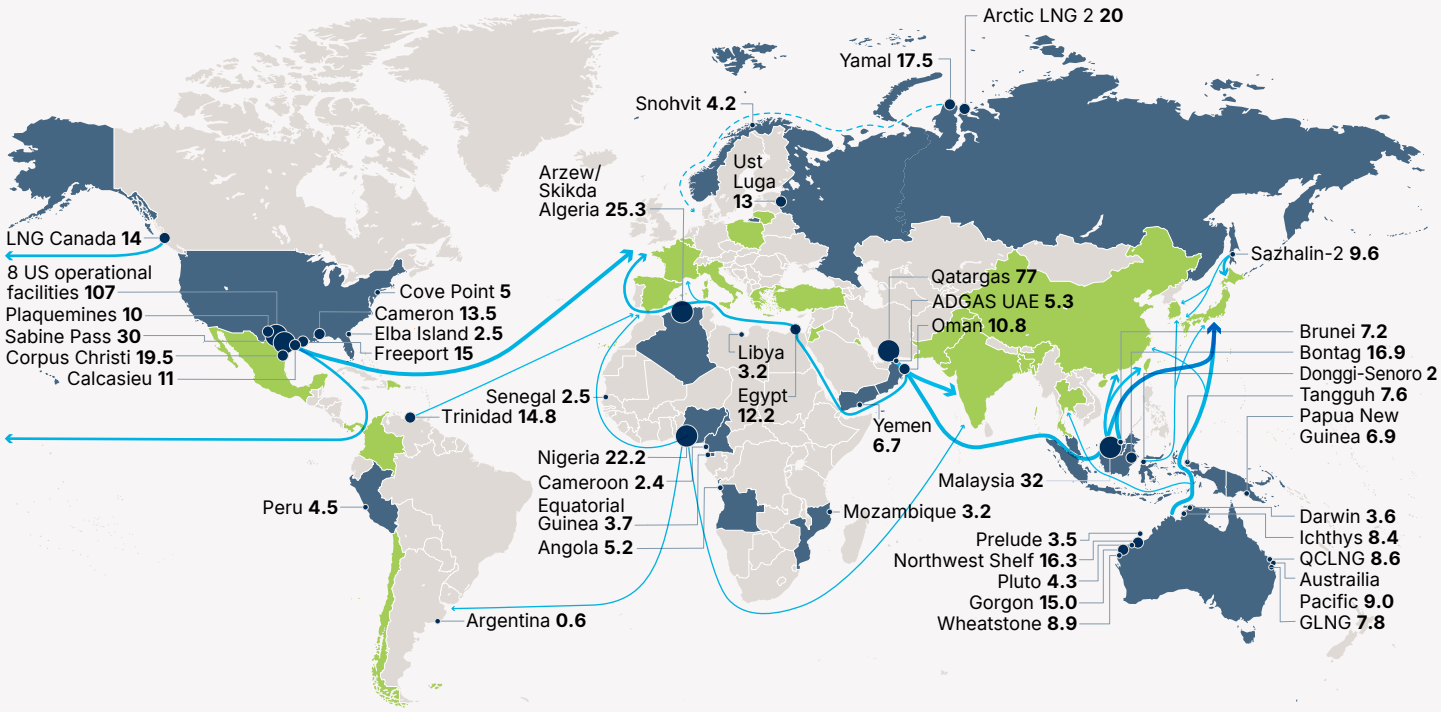


Source: Webber Research.

At the same time, we are seeing fundamental shifts in LNG flows, with Russian gas to Europe being diverted to China and US LNG that used to go to China now going to Europe ***(Figure 10)***.

This has raised additional concerns over what happens if Russian gas returns to Europe, complicating the outlook for the next 5 to 10 years.

Figure 10: Mapping the Global LNG System: Liquefaction Capacity and Import Flows



Source: Incorrys.

However, while consensus is near-term bearish, we are more constructive and believe there are a number of factors that are underestimated by the market and which will ultimately lead to a more bullish outlook.

Map Key

Liquification Plants, Mtpa

● >20 ● 10–20 • <10

LNG Markets

Major Importer Major Exporter

Major LNG Flow (MT)

0.5–5 5.1–10 >10

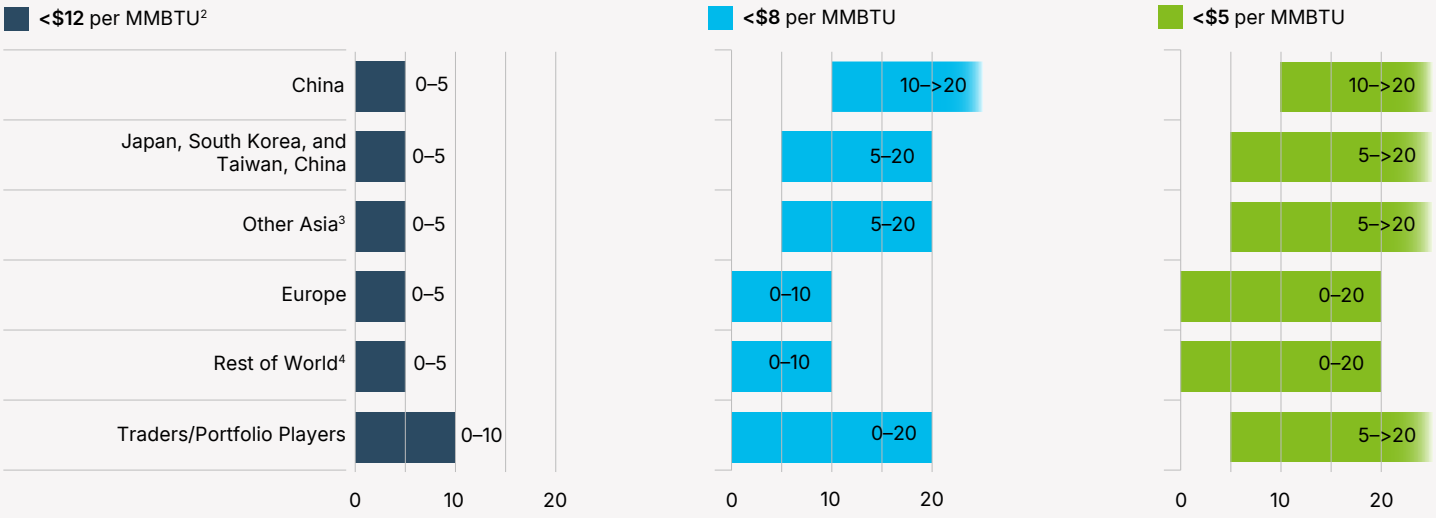
MT = million tonnes

First, we continue to believe that supply gets delayed. We saw this recently with the announcement by Energy Transfer that their Lake Charles LNG project would be shelved, and the expectation that further projects may be at risk (Delfin, Texas LNG). It's also conceivable that Woodside's higher-cost Louisiana LNG project is scaled back, given a new CEO who doesn't want to place the total equity risk on the balance sheet. Rising project costs are affecting the appetite of new equity capital.

Second, we continue to anticipate a high degree of elasticity to softer pricing ($8–9/mcf). A recent survey of LNG Buyers by Recent McKinsey ***(Figure 11)*** suggests that there could be up to an incremental 100 Mtpa of demand, if gas prices fall from $12/mcf to around $8/mcf and accelerating thereafter. This increase is driven by multiple factors: firstly by coal-to-gas substitution in Japan, Korea and China, which becomes more economically palatable at lower price; secondly by expanded uses of gas such as for transportation, in markets like India, where natural gas prices are highly competitive against diesel; and thirdly stimulating expected demand growth in other emerging demand centres like Pakistan, Morocco, Egypt and Vietnam that are going to have an increasingly material role in the market.

Figure 11: Liquefied Natural Gas Buyers—Especially in Asia—Expect Softening Prices to Stimulate Significant Latent Demand

Additional liquefied natural gas (LNG) demand expected, by LNG price threshold,[1] million tons per annum

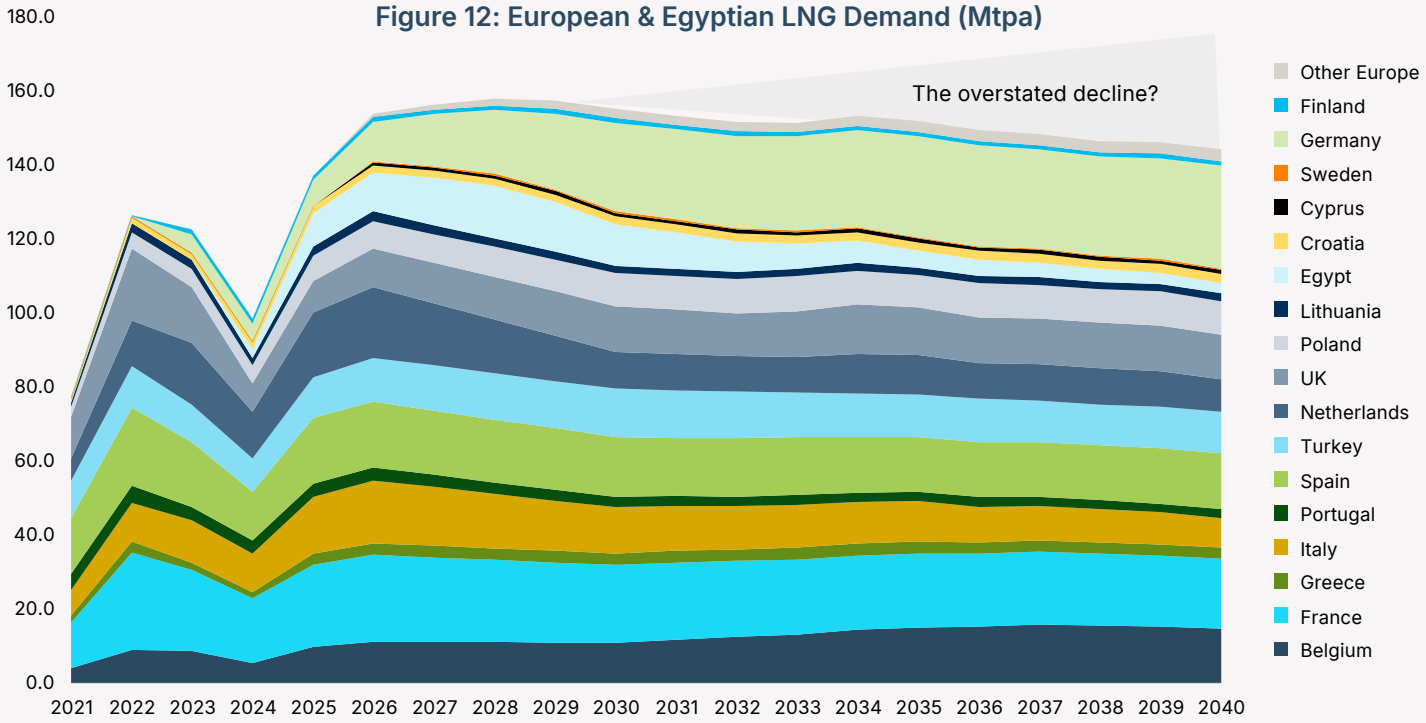


[1] Question: How much additional LNG demand could be unlocked in your region with major investments if prices fell?
[2] Million British thermal units.
[3] Australia, Bangladesh, Cambodia, India, Indonesia, Malaysia, New Zealand, Pakistan, Philippines, Singapore, Thailand, and Vietnam.
[4] Brazil, Qatar, US, and other importing or producing countries in Africa, Middle East and Latin America.
Source: McKinsey Energy Solutions LNG Buyers Survey 2025 (conducted in July 2025 with 41 participants).

Source: McKinsey & Company.

Third is the recent resurgence in demand from OECD areas (Europe, Japan and Korea), which consensus sees as declining ***(Figure 12)***. These nations are recently seeing a resurgence in power demand driven by AI, underlining that the age of AI is truly global—and ties into the global gas market.

Figure 12: European & Egyptian LNG Demand (Mtpa)



Source: Poten Forecasts.

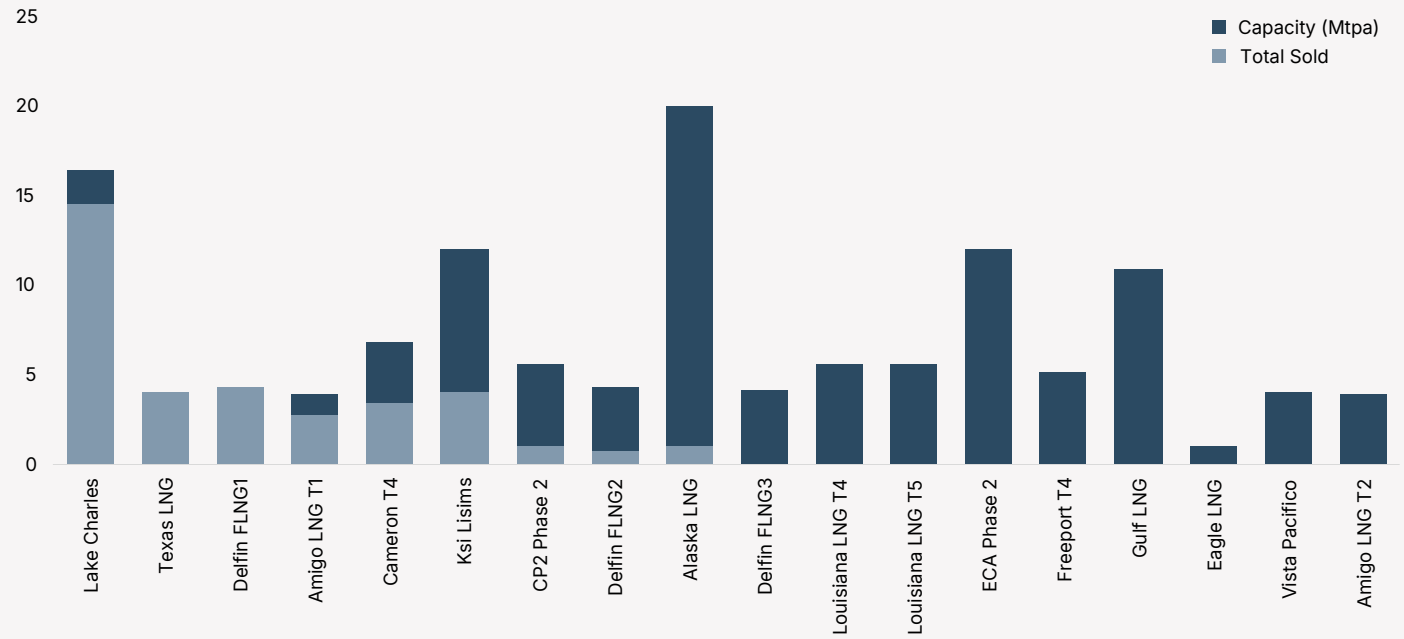
Taken together, these dynamics are leading to a deeper and more liquid global gas market where Henry Hub-priced gas delivered to Asia and Europe, JKM (the LNG benchmark price for Northeast Asia) and TTF (the LNG benchmark price for Europe) pricing all trade on top of each other. To frame this simplistically, we expect JKM to trade at an approximately $5/mcf premium to Henry Hub, with TTF trading at an approximately $4.5/mcf premium.

Today, this is represented on the forward curve, suggesting we already have a functional global gas market.

As alluded to above, the other tailwind for LNG pricing is the increasing marginal cost of supply. Early LNG facilities had been economic, with liquefaction fees of $2.00/mcf, but from 2015–2020, these rose to $2.25–2.35/mcf. Today's LNG builds have been closer to $2.35–2.55/mcf with new stick builds (i.e., constructed on-site versus a modular build) closer to $2.75/mcf, and there is potential for that to rise.

Coupled with higher power prices, off-takers are becoming more cautious on being overly long on capacity ***(Figure 13)***, and we anticipate this will lead to an air pocket in US supply from 2030+. This suggests that those who can add capacity will enjoy a "going concern" premium on that capacity.

Figure 13: Proposed LNG Facilities and Contracted Capacity (Mtpa)



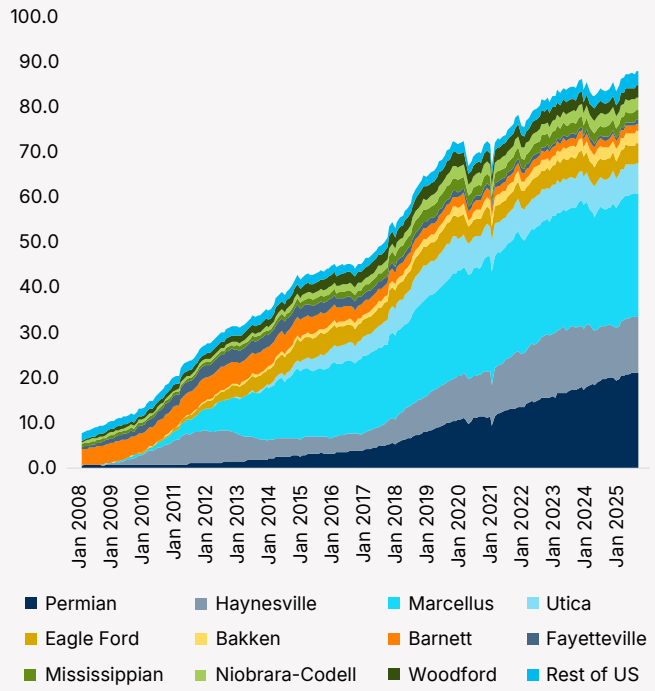
Source: Poten.

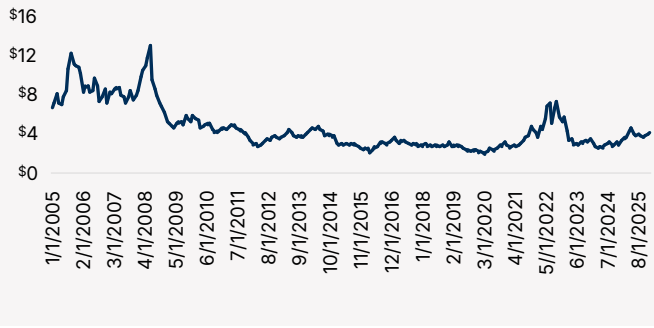
A Cautionary Tale for the Picks-and-Shovels Believers

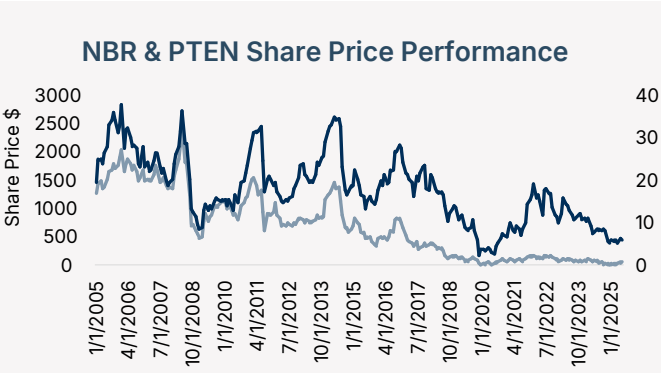
While the simplistic approach to the "AI, power and the ripple effect" narrative is to invest in picks and shovels, there is a cautionary tale from the shale revolution that investors may want to heed.

In 2005, shale gas production was zero. Today, shale gas production is ~90 Bcf/d. It has undeniably been one of the most transformational growth sectors. In 2005, natural gas prices were $8/mcf to $16/mcf if you adjust for inflation. Today, they are $4/mcf. Indeed, natural gas has been one of the most deflationary commodities in America. The obvious investment thesis along the picks-and-shovels theme would have the companies focused on drilling equipment, given the increase in footage and growth in shale wells, especially with two dominant players in Patterson and Nabors. Share price performance of those two companies since 2005? Down 90%. Why? Rig rates surged as natural gas producers rapidly added supply. The resulting oversupply pushed gas prices lower, triggering a wave of efficiency gains across both drilling and production. As operators improved well productivity and reduced costs, the industry was left with a structural overhang of rigs that persisted for more than a decade. A similar dynamic could emerge in AI: as new power capacity comes online, the combination of rapid build-out and accelerating efficiency gains may ultimately lead to periods of oversupply ***(Figure 14)***.

Figure 14







Source: EIA, Bloomberg and Kimmeridge.

What does that mean in today's AI race? This dynamic suggests that the biggest risk to AI investment is today's elevated power prices incentivizing significant capex spending toward adding power capacity, only for this capacity to come online when training of LLMs has peaked, which is likely the next 18 months.

Assuming this is the case, it raises the question of how much of AI is training vs. inference? Inference-based data centers are smaller, located near consumers (as low latency is a priority), and use less power versus their training counterparts.

As training tops out, what are you doing with those data centers and the associated power assets? Can they be repurposed? Can they be used for cloud storage? How does "Jevons' paradox" play out?[1] And more importantly, will we see efficiency improvements in energy consumption during periods of power oversupply that create a deflationary cycle as power prices trade down to the actual cash cost? This would create a windfall for consumers but hurt infrastructure investors that don't have long-term contracts underpinning these power assets.

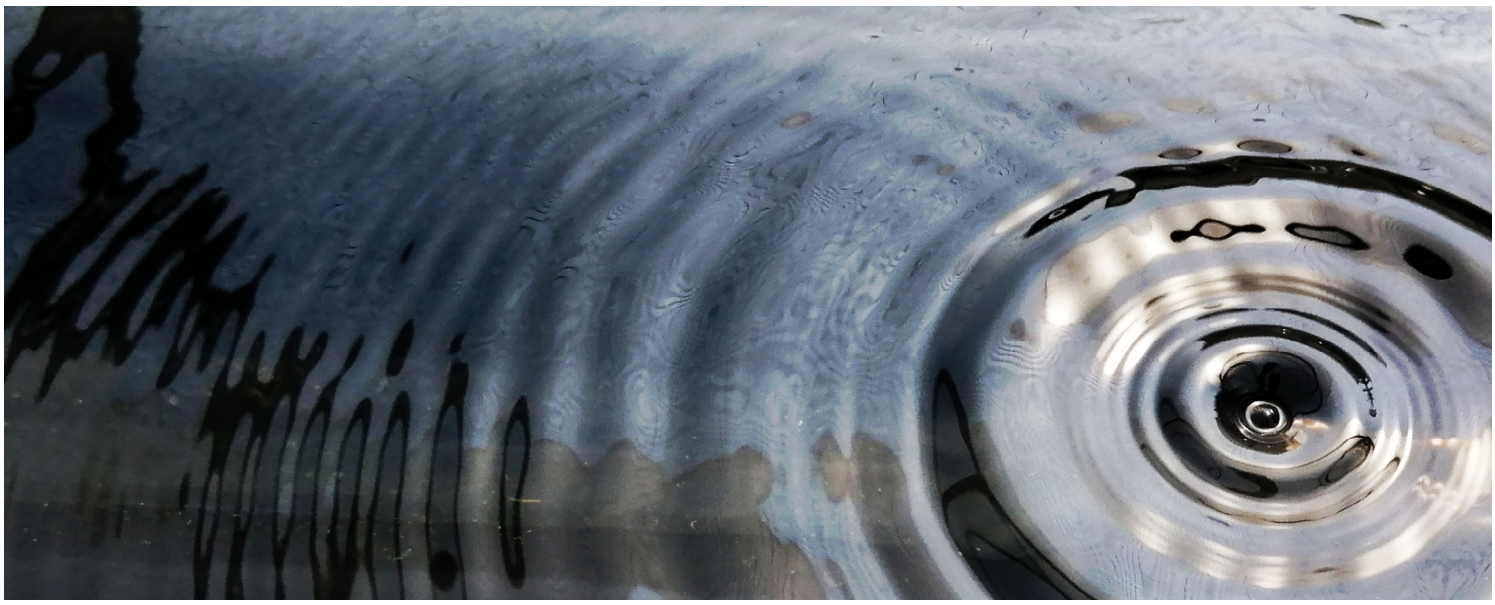
[1] The Jevons Paradox is an economic principle that observes how improvements in resource efficiency often lead to higher overall consumption of that resource, rather than a reduction.

Opportunities for Kimmeridge in the Ripple

For Kimmeridge, our philosophy remains unchanged. Identify high-quality front-end-of-the-cost curve assets, and create differentiated access to them. We then optimize those assets by building best-in-class teams and by running them better with a strategic vision.

As the ripples from AI investment expand, we see specific opportunities in overlooked gas markets, further integration of gas to power, and opportunities in infrastructure, both domestically and to the north, in Canada.

At Kimmeridge, we remain focused on being part of the solution by expanding our footprint in the Eagle Ford, the Haynesville, and, critically, deep gas opportunities where we believe our High Pressure, High Temperature (HPHT) drilling expertise is unmatched. Over the longer term, we see deep oil and gas shale plays as the next frontier of innovation. Kimmeridge and its portfolio companies have drilled some of the industry's most prolific unconventional wells beyond 13,000 feet, and we believe significant untapped resources remain at these depths. As demonstrated in the Eagle Ford, Austin Chalk, and Waynesville, high-quality operational execution in these environments can unlock differentiated results.



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