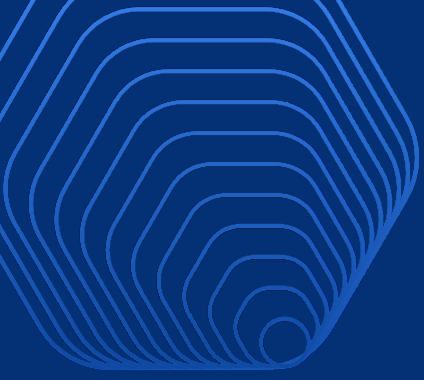


# Guide to Energy Markets

Q2 2026





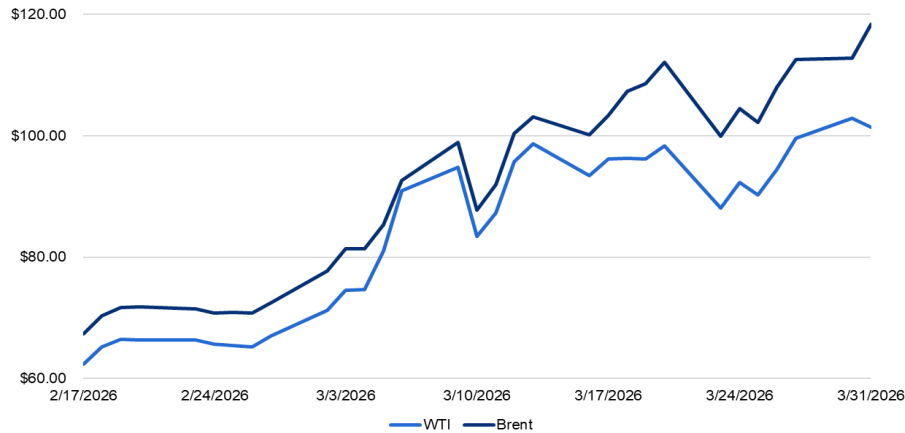
# Energy Markets Under Pressure

Dual shock. Affordability crisis. Markets repricing in real time.



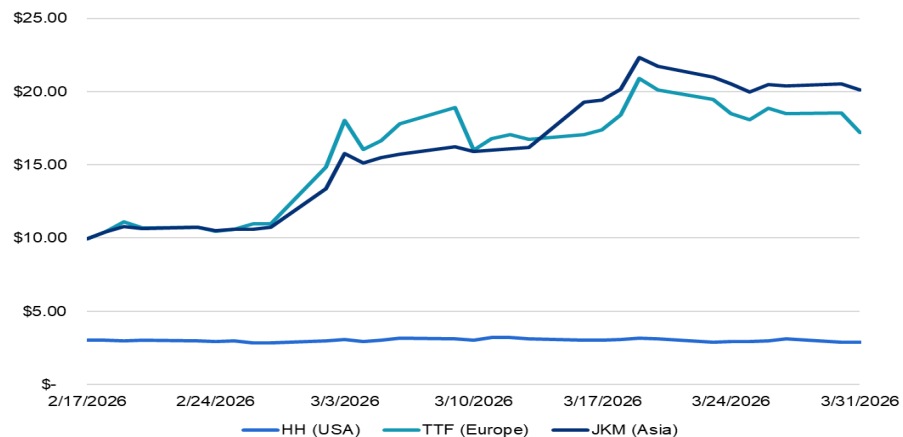
# One Conflict. Two Markets Disrupted Simultaneously.

## Crude Crosses \$100 as Hormuz Risk Mounts



Source: Bloomberg

## Natural Gas Prices Surge on Two Continents, U.S. Stable



Source: Bloomberg

## 20% of Global Oil via Strait of Hormuz

≈ 20 million barrels per day (bpd) transits the Strait; single largest oil chokepoint on earth.

Iran's ability to close it is not theoretical.

Brent crossed \$100, WTI followed.

Brent-WTI spread moved to widest levels in years.

## Natural Gas Market Was Already Tight

European natural gas storage entered 2026 below 5-year average.

New U.S. liquefied natural gas (LNG) export capacity coming online in 2026, but global demand growth outpaces new supply.

Natural gas prices spiked in Europe and Asia. U.S. prices stable.

American LNG is the world's most sought-after supply. Europe and Asia need U.S. LNG.

## Not a Single-Commodity Event

Prior Middle East conflicts disrupted oil.

This one disrupted oil and gas simultaneously.

Interconnection of LNG export infrastructure with Persian Gulf geography made gas market vulnerable in new ways.

# Two Chokepoints. 20 Million Barrels a Day at Risk.

## Strait of Hormuz

World's largest oil chokepoint.

≈ 20 million bpd, ≈ 20% of global oil supply.

Primary export route for Iraq, Kuwait, Saudi Arabia, UAE, Qatar, and Iran.

For the first time since 1973, geography itself is the risk factor. The U.S.'s secure supply positions them favorably relative to the rest of the world.

## Strait of El-Mandeb

Critical gateway to the Suez Canal.

≈ 4-6 million bpd: crucial for Europe-bound oil.

Already disrupted by Houthi attacks before Iran conflict began.

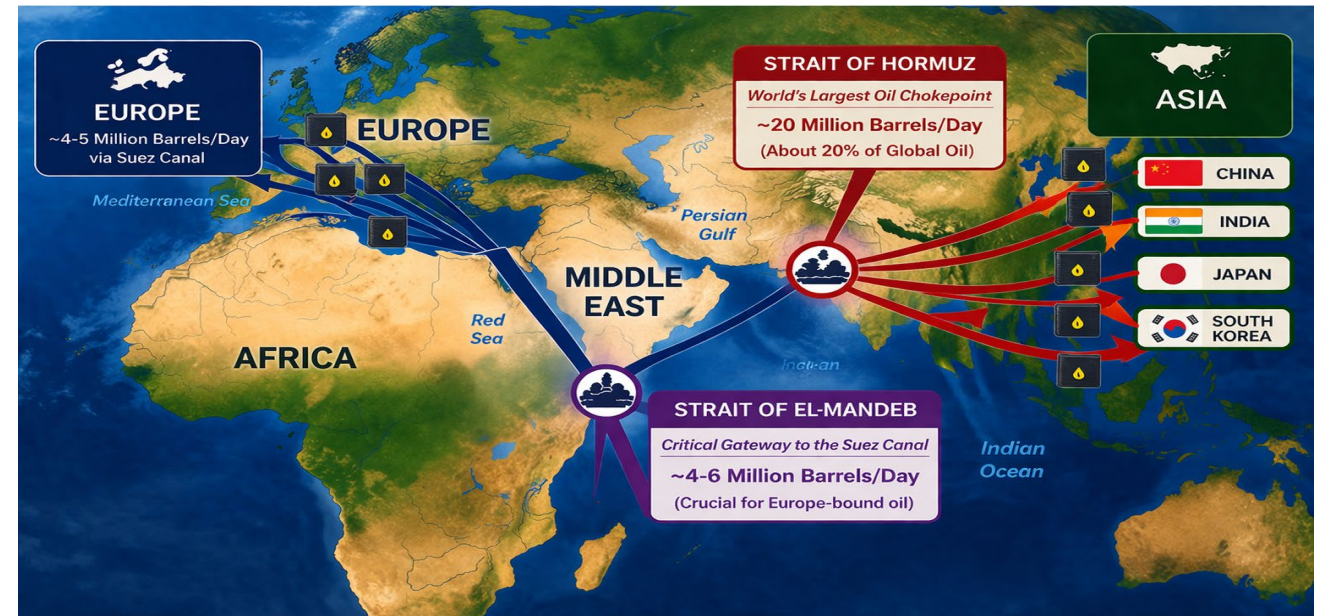
## Two Straits. No Easy Detour.

Hormuz closure stops Gulf exports. No exit, no oil.

El-Mandeb pressure forces Red Sea tankers around the Cape of Good Hope, adding weeks of transit to Europe.

Two chokepoints. Two different supply chains disrupted simultaneously.

## Global Oil Flows: Strait of Hormuz and Strait of El-Mandeb



# 10 Million Barrels Per Day Gone.

## The Scale of the Disruption

Iraq, Kuwait, Saudi Arabia, UAE, and Qatar: largest collective concentration of exportable oil on earth.

Combined offline production > 10 million bpd, ≈10% of global daily consumption.

No prior supply disruption in post-1973 era removed this volume simultaneously.

## This Is Not OPEC Managing Supply

Prior supply reductions from this region: managed, deliberate, signaled, reversible production cuts.

Today's disruption: driven by conflict and destructive of infrastructure.

Production does not resume until conflict resolves and infrastructure restored.

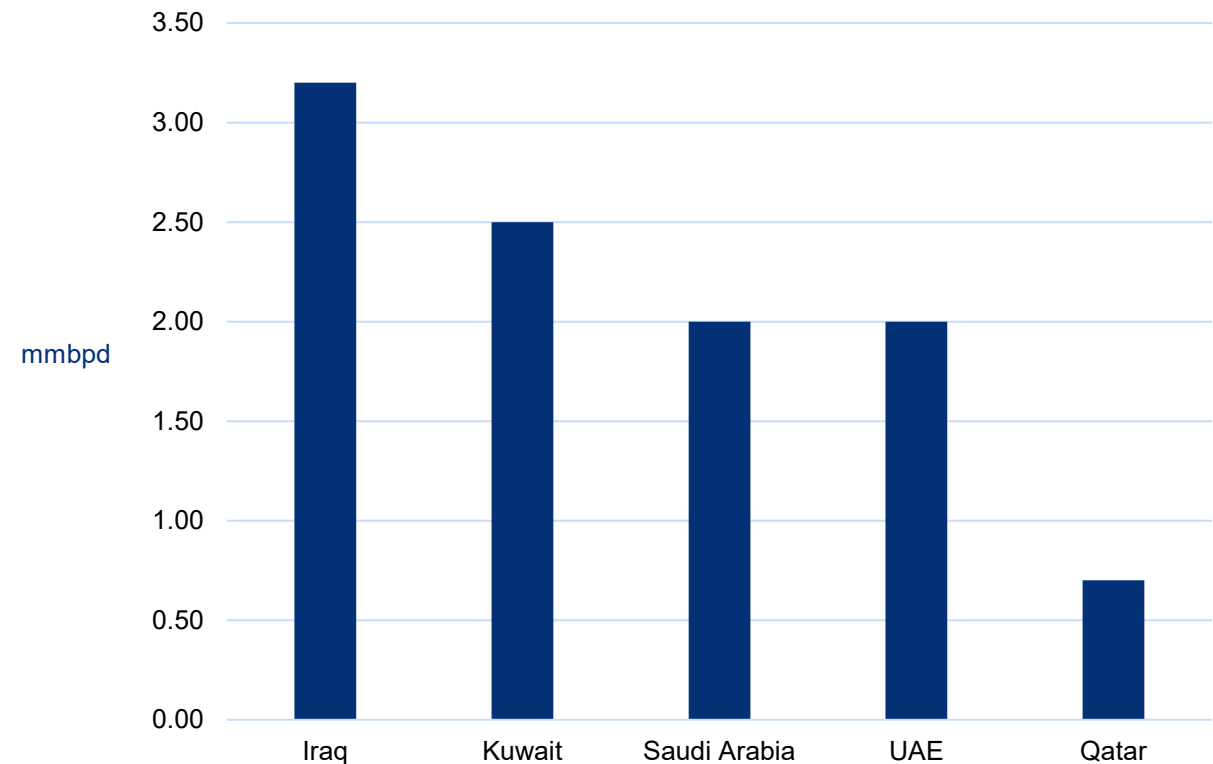
## The Strategic Petroleum Reserve (SPR) Math

Largest coordinated strategic reserve release in history: 400 million barrels.

Against 10 million bpd offline, it covers 40 days of the shortfall.

The clock is ticking.

## Offline Oil Production by Country (million bpd)



Source: Piper Sandler, Wolfe

# World's Largest LNG Facility. Mid-March: Before and After.

## What is Ras Laffan?

Single largest LNG production and export complex on earth.

Qatar supplies approximately 20% of global LNG.  
Most moves through this facility.

Customers include Japan, South Korea, the UK,  
and continental Europe.

## What the Imagery Shows

Mid-March attacks caused structural damage to processing infrastructure.

Attacks damaged core liquefaction tech that converts  
natural gas for export.

Damaged liquefaction capacity does not come back quickly.  
Takes years, not months.

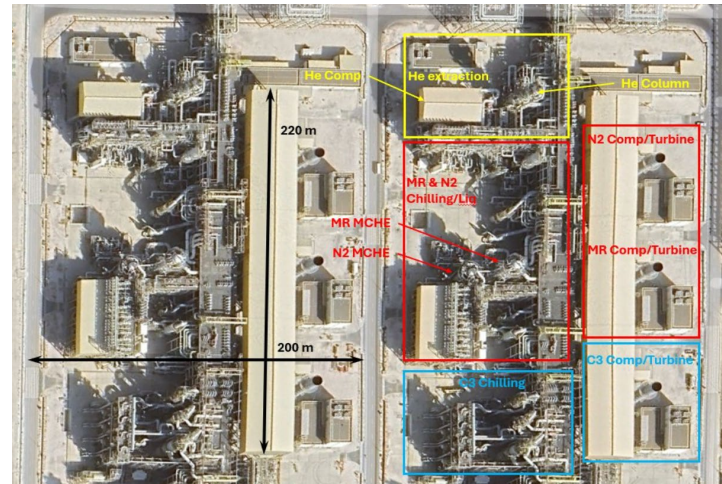
## The Market Implication

Strait closure or reopening: a structural LNG supply gap  
persists either way.

Current spreads reflect a full closure of the Strait.

If the Strait reopens, permanent damage to roughly 20% of  
Ras Laffan's capacity ensures the gap doesn't fully close.

Either way, a supply deficit remains.



Before attack

Ras Laffan Industrial City, Qatar

—Satellite Imagery

After attack



# How Long the Conflict Lasts Determines How Much Inventory Disappears.

## Math Is Simple. Uncertainty Is Not.

Pre-conflict. Global supply and demand roughly balanced: 106.3 vs. 105.0 mmbpd.

Shutdown creates 8.7 mmbpd daily shortfall.

If conflict persists, global Organisation for Economic Co-operation and Development (OECD) inventories could deplete in 9 months at current draw rates.

## The IEA Response Buys Time, But Does Not Solve the Problem.

400 million barrel coordinated release from International Energy Agency (IEA) member strategic reserves: largest in history, double the prior record.

Release does not resolve ongoing 10 mmbpd supply disruption. Just extends the runway.

Reserves need to be refilled when conflict resolves: a follow-on demand event.

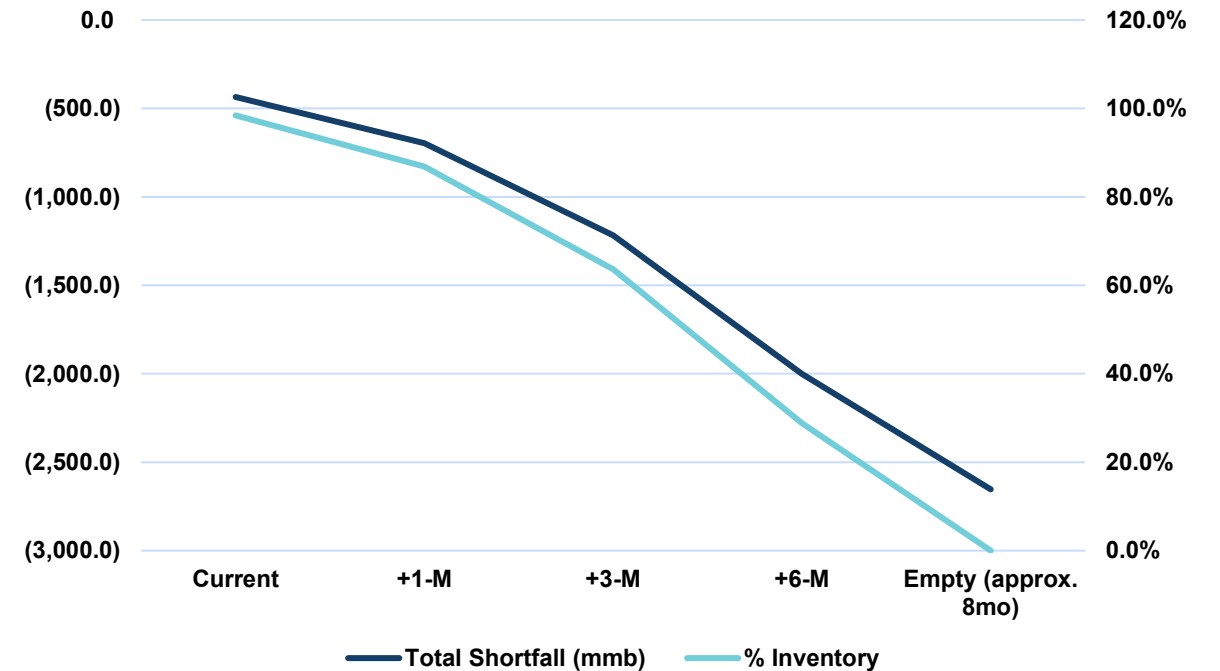
## The Market Implication

Near-term contracts reflect physical disruption.

Longer-dated contracts reflect the possibility of permanent infrastructure damage.

Structural not cyclical shift.

## OECD Inventories Could Deplete in 9 Months



As of 04/20/2026. Sources: DOE, Bloomberg, WoodMackenzie, Reuters, Wells Fargo

# Jones Act Waivers Don't Happen Unless Washington Is Worried.

## The Policy Response Is Real

Five mechanisms deployed or under consideration:  
1) sanctions relief, 2) SPR releases, 3) gasoline tax reduction, 4) E15 ethanol waiver, 5) Jones Act waiver.  
Each addresses a different part of the supply chain.

None increase production for a sustained period of time.

Cumulative signal: administration views energy affordability as a political and economic priority.

## The Effectiveness Is Uneven

Sanctions relief on Russia and Iran offers highest potential impact, if geopolitics permit.

SPR releases are moderate and short-term, but inventory must eventually be rebuilt.

E15 ethanol waivers and Jones Act modifications operate at the margin, easing regional imbalances but do not change global supply.

## What This Tells the Market

Governments are reacting to prices, not controlling them.

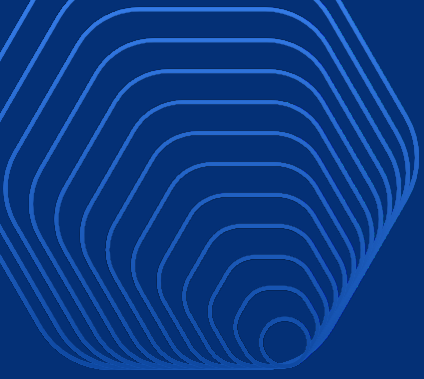
Tools to suppress energy prices without increasing supply are limited, temporary, and structurally constrained.

The market is aware of this. So are buyers of long-dated energy infrastructure.

## The Administration's Toolkit and Its Limits

Action	Effectiveness	Description
1 <b>Sanctions Relief: Russia &amp; Iran</b>	High	Allows sanctioned crude exports to reach global markets, increasing supply and lowering refinery costs.
2 <b>SPR Releases</b>	Moderate: Short-Term	Government sells crude from Strategic Petroleum Reserve, temporarily increasing supply and lowering refinery costs.
3 <b>Reduce Gasoline Tax</b>	Moderate Mechanical	Lowers state fuel taxes, reducing pump prices directly without increasing supply.
4 <b>E15 Ethanol Waiver</b>	Low-Moderate	Allows summer sale of 15% (vs. 10%) ethanol gasoline, increasing fuel supply and lowering blend costs.
5 <b>Jones Act Waiver</b>	Low	Allows foreign vessels to move fuel between U.S. ports, easing regional shortages but not increasing overall supply.

Source: Argus, Axios RBN, Reuters



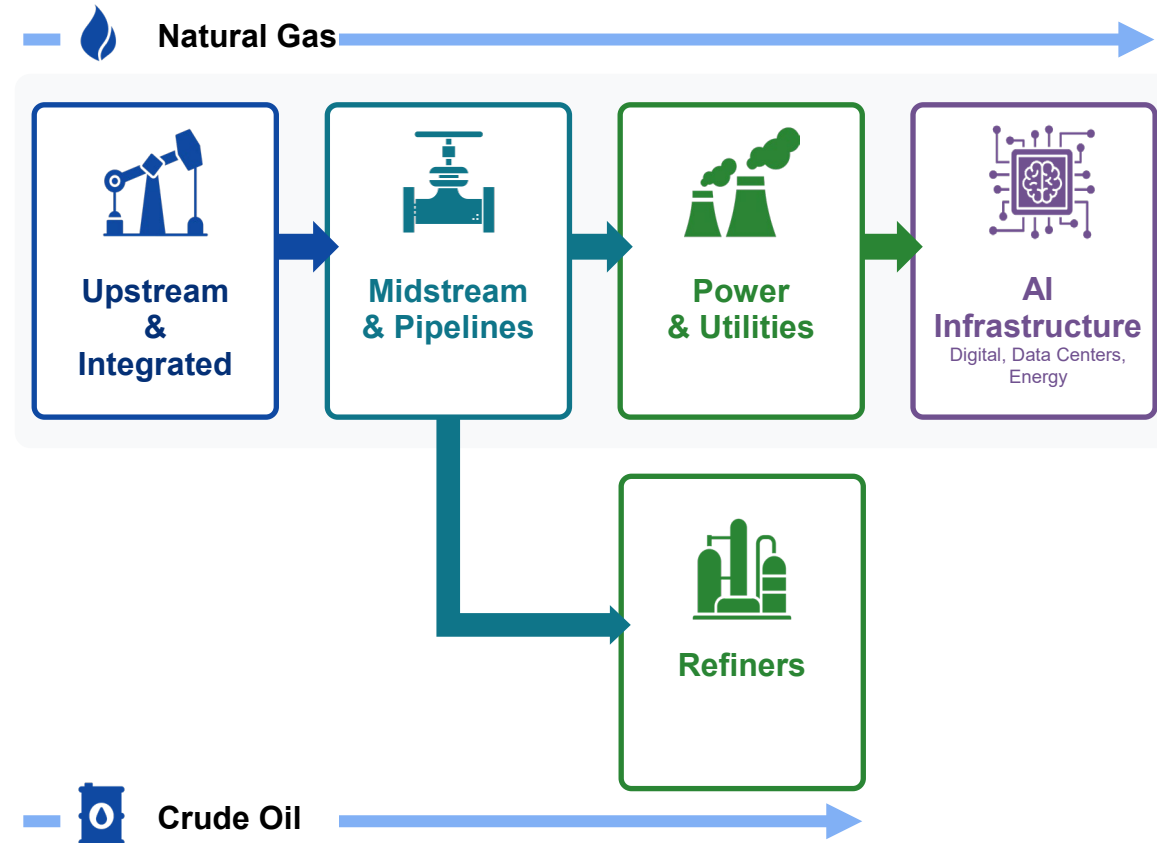
# Market Response

Impact on the Energy Value Chain: Segment by Segment.



# Shock Hit the Whole System. Opportunities Are Distributed Across It.

## The Energy Value Chain — From Wellhead to End User



## Five Segments. Five Different Exposures.

**Upstream producers** control the molecules. Their response to price determines future supply.

**Midstream operators** move and process those molecules. Their revenues are largely fee-based and contract-protected.

**Refiners** convert crude into usable products. Their margins depend on differentials and crack spreads.

**Utilities and power generators** deliver electrons. Their capital programs are driven by load growth, not commodity cycles.

**AI infrastructure**, at the end of the chain, was reshaping the system even before the conflict.

## Each Segment Responds to the Shock Differently

**Upstream cash flows:** rise with crude prices, but capital discipline limits incremental drilling.

**Midstream cash flows:** largely insulated from commodity price swings by contract structure.

**Refiners:** most directly tied to price dislocations.

**Utilities:** continue building regardless of what happens in the Persian Gulf.

**AI infrastructure:** remains a relentless demand driver.

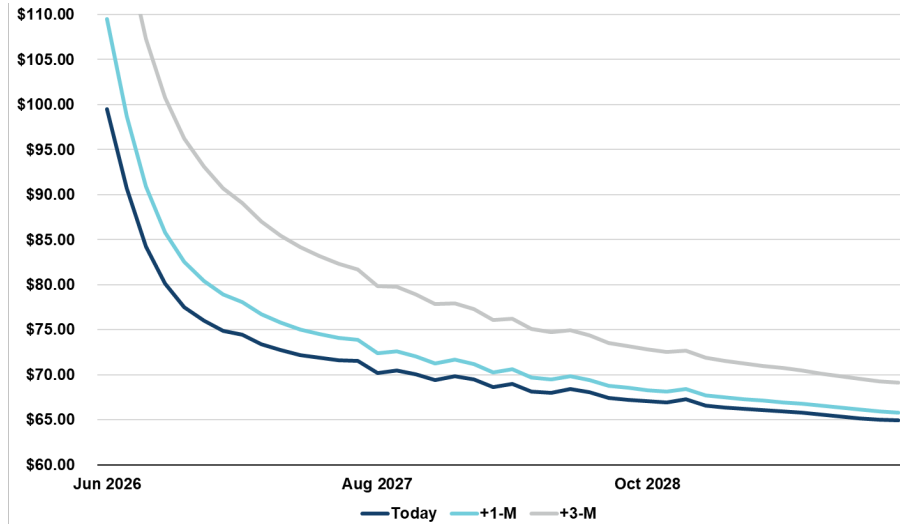
## Understand the Chain, Comprehend the Opportunity

What does the data show for each segment?

What is the impact for investors in each part of the chain?

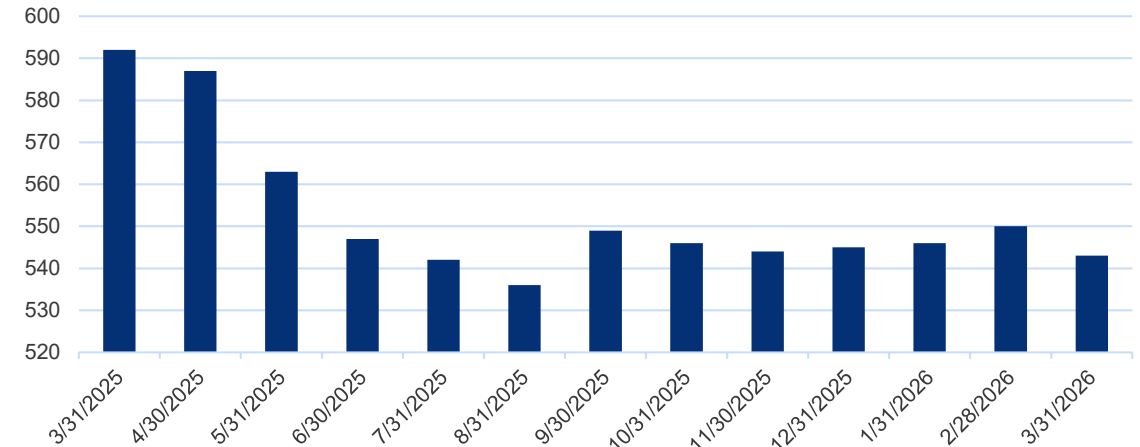
# Higher Prices Today + Lower Prices Tomorrow = Fewer Rigs

## Forward Curve Likely Moves Up in an Extended Conflict



As of 04/20/2026. Bloomberg

## Producers Prioritize Capital Return Over Expanding Rig Count



Source: Bloomberg

### The Producers Are Not Chasing the Price

Diamondback: \$70 oil is enough to justify more drilling. So far, they haven't.

Permian Resources: \$75 on the forward curve would accelerate activity. The forward curve hasn't reached that level.

The number that matters to a CEO is not on CNBC. It's on the forward curve. Right now, the curve is saying no.

### The Rig Count Tells the Story

U.S. rig count declined by 7 in March despite triple-digit oil prices.

Shale era's boom-and-bust reflex replaced by a returns-first philosophy.

Capital going to dividend increases and share buybacks, not rigs.

### What This Means for Supply

Production efficiency continues to improve: more output per rig than any time in the cycle.

Growth trajectory intentionally constrained.

A supply response to a short-term price spike is not coming. Different than pre-2020.

# Pipelines Keep Getting Paid. Cash Keeps Accumulating.

## Fee-Based Revenue Means the Conflict Is Largely Noise

Midstream operators charge tolls. Volume, not price, determines revenue.

The Iran conflict creates price volatility but does not reduce volumes moving through U.S. pipelines.

Structural insulation: midstream collects tolls while upstream and refining absorb price swings.

## The Capital Is Accumulating Faster Than It Can Be Deployed

Excess capital grows to ~\$33 billion by 2030 after all planned uses, including acquisitions and financing.

FCF growth is outpacing identified reinvestment needs, creating a sizable pool of deployable capital.

Positions the sector for increased returns to shareholders and/or incremental growth opportunities.

## Three Places That Capital Can Go

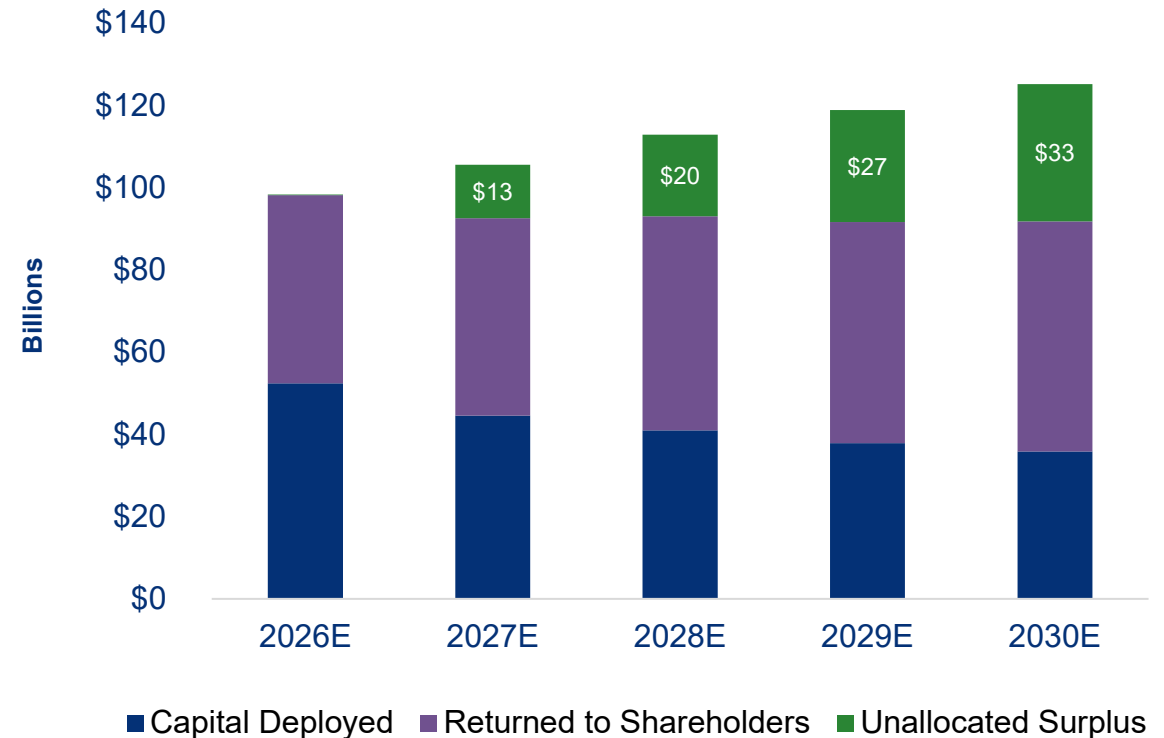
Increased distributions to unitholders and shareholders.

Share repurchases, which compress the float and increase per-unit economics.

Strategic acquisitions: buy infrastructure at the right price in a dislocated market.

The sector enters this period of volatility with optionality and opportunity.

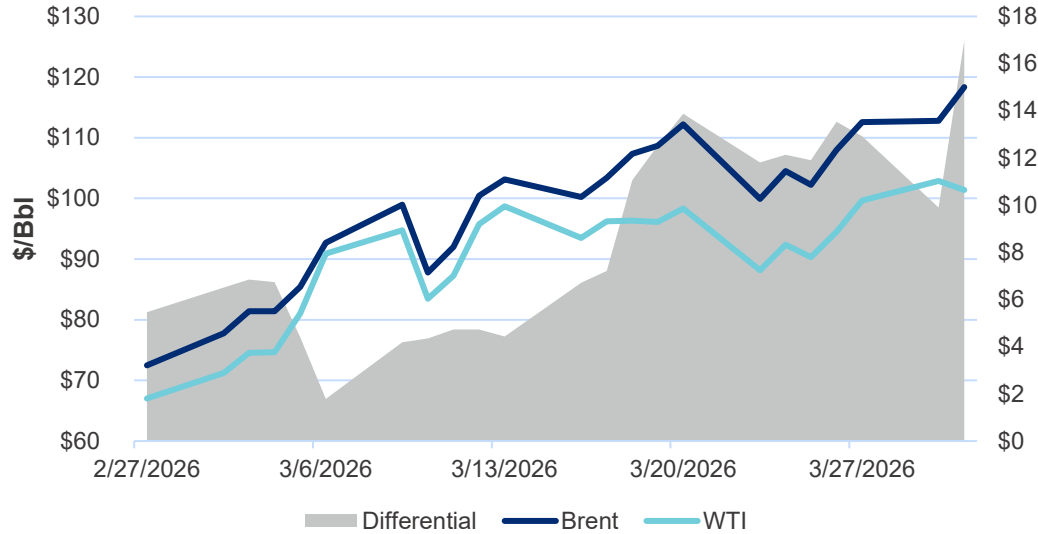
## \$130 Billion in Annual Cash Flow. Where Does It Go?



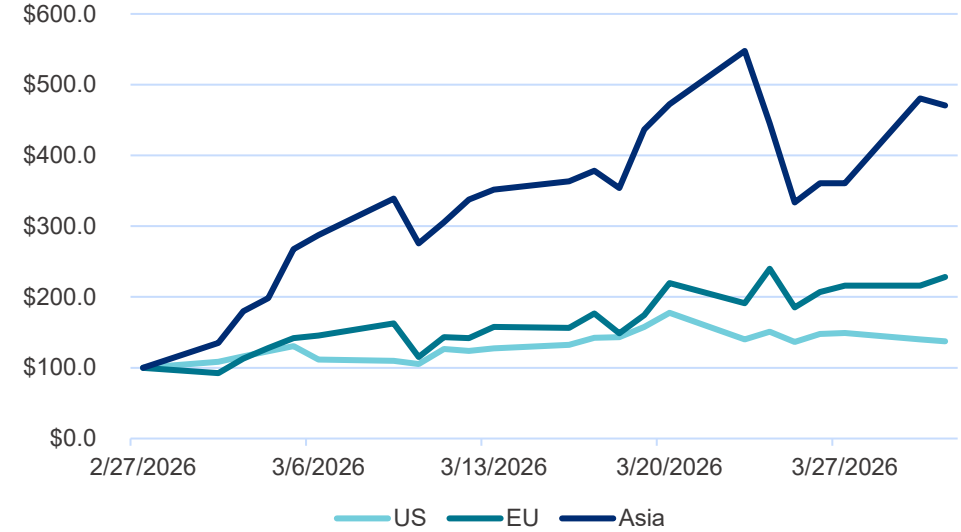
Source: Tortoise Capital Estimates

# The Conflict Created the Conditions That Expand Refiner Margins.

### Brent-WTI Spread Widens to \$12: 3x the Historical Norm



### Crack Spreads Surge Around the World



#### The Differential Is the Mechanism

U.S. refiners buy crude at WTI prices. They sell refined products at higher Brent-linked global prices.

When the Brent-WTI spread widens from \$4-5 historically to \$12, the cost advantage flows directly into margin.

Not a forecast: these are today's spreads.

#### Middle Distillates Are the Profit Center

U.S. crack spreads increased by over 50% by the March peak.

European cracks spreads doubled. Asia crack spreads up nearly 5x by late March.

Strait of Hormuz risk tightens global supply while U.S. refiners retain their structural cost advantages.

Higher producer prices + stable U.S. natural gas costs = outsized cash flow generation for U.S. refiners.

#### The Structural Backdrop Holds

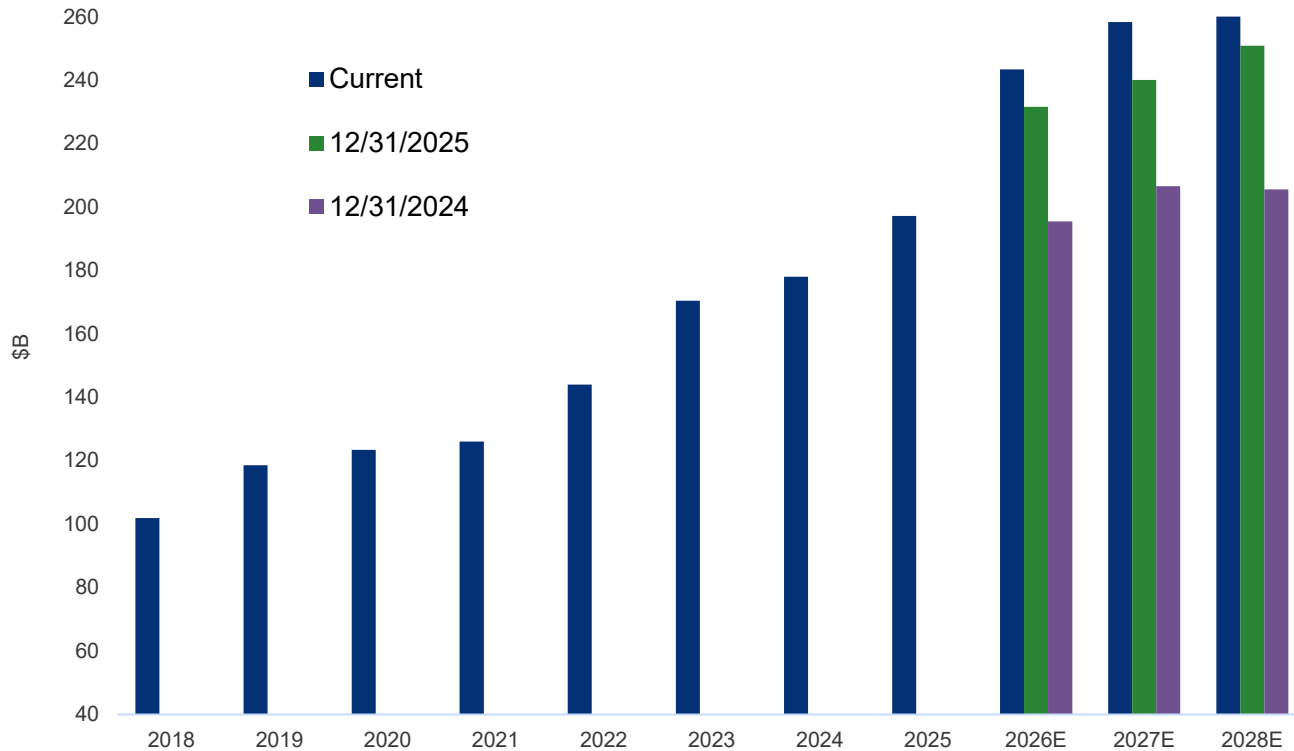
U.S. refinery capacity contracted by roughly 500,000 bpd since 2020.

Closed capacity does not reopen. No new refineries are under construction in the U.S.

The conflict didn't create the margin opportunity. It accelerated one already in place.

# Every Estimate Too Low. Every New Estimate Higher Than the Last.

## Utility Capex: Three Forecast Vintages. One Direction.



Bloomberg, Wolfe Research  
Projections on this page are shown for informational purposes only and no guarantee of future outcomes. Reflects TCA views and opinions as of date herein which are subject to change at any time based on market and other conditions.

## The Load Growth Is Real and It Predates the Conflict

U.S. electricity demand now growing after flat decades.

AI data centers, reshoring of energy-intensive manufacturing, and general electrification are compounding demand signals.

Utilities are responding with the largest sustained capex cycle in modern history.

## The Analysts Keep Being Wrong in the Same Direction

Capex estimates as of 12/31/2024: revised upward at 12/31/2025 and revised upward again in current consensus.

Three independent forecast vintages. Three successive increases.

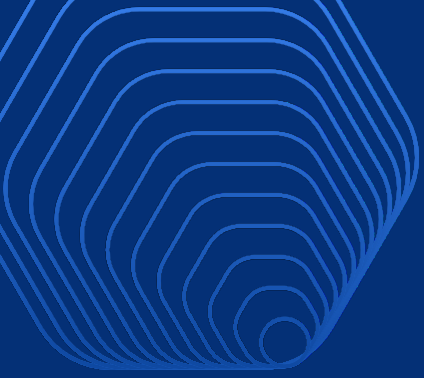
Consistent underestimates by analysts signal the strength of the demand, not a forecasting error.

## The Iran Conflict Highlights Strategic Importance of US Gas Supply

U.S. natural gas prices have remained stable since the beginning of the war.

Long-term investments in natural gas infrastructure provide U.S. utilities an added layer of energy security.

Electrification buildout was already the most durable capital story in the sector. The conflict made it more so.



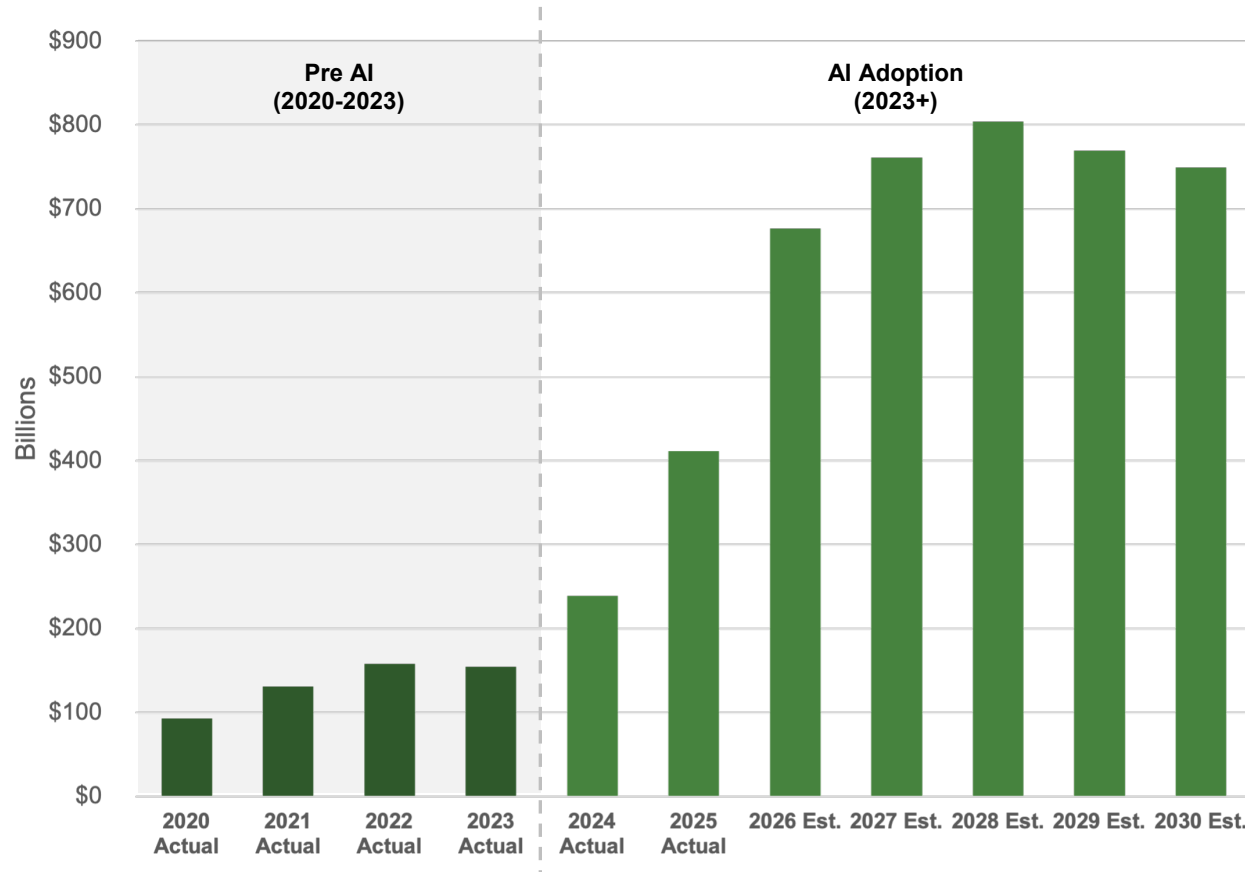
# The Longer View

Shock disrupted. Demand story was already written.



# Before the First Missile, the Demand Curve Was Already Climbing.

## Hyperscaler Capital Expenditure: Pre-AI Era vs. AI Adoption Era



As of 3/31/2026. Source: AMZN, Bloomberg, GOOG, META, MSFT, ORCL.  
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### The Inflection Point Was 2023

From 2020 to 2023, hyperscaler capex grew at a measured pace: roughly \$100 to \$150 billion annually.

The AI adoption era changed the trajectory entirely: 2024 marked the first year of vertical acceleration.

By 2027, consensus estimates place combined hyperscaler capex approaching \$800 billion annually.

### Every Dollar of That Capex Requires Energy Infrastructure

Data centers run on electricity, delivered continuously, at scale, with no tolerance for interruption.

Training a large language model is a one-time, compute-intensive process with electricity use equal to hundreds of thousands of homes.

Inference is the continuous use phase where models generate responses on demand across global data centers, with energy use scaling with query volume and increasing demand for new data center capacity.

### The Build Has Barely Started

The facilities currently under construction represent the first wave of a multi-decade infrastructure cycle.

Permitting, grid interconnection, and power are the binding constraints, not capital or demand.

# Full Suite of Investment Solutions

	Mutual Fund	Closed-End Fund	Active ETF	Passive ETF	SMA
Broad Energy			Tortoise Energy ETF (TNGY)		
Energy Infrastructure	Tortoise Energy Infrastructure and Total Return Fund (TORIX, TORTX, TORCX)			Tortoise MLP ETF (TMLP) Tortoise North American Pipeline ETF (TPYP)	Tortoise Strategic Energy Infrastructure Strategy Tortoise Select MLP Strategy
Electrification Infrastructure		Tortoise Energy Infrastructure Corp. (TYG)	Tortoise Nuclear Renaissance ETF (TNUK) Tortoise Electrification Infrastructure ETF (TPZ)		
Energy Adjacent			Tortoise AI Infrastructure ETF (TCAI)	Tortoise Global Water ETF (TBLU)	

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