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Navigating The Storm

RJ Energy Banking Oil & Gas Outlook

**August 2026
Hyatt Hill Country
San Antonio, TX**

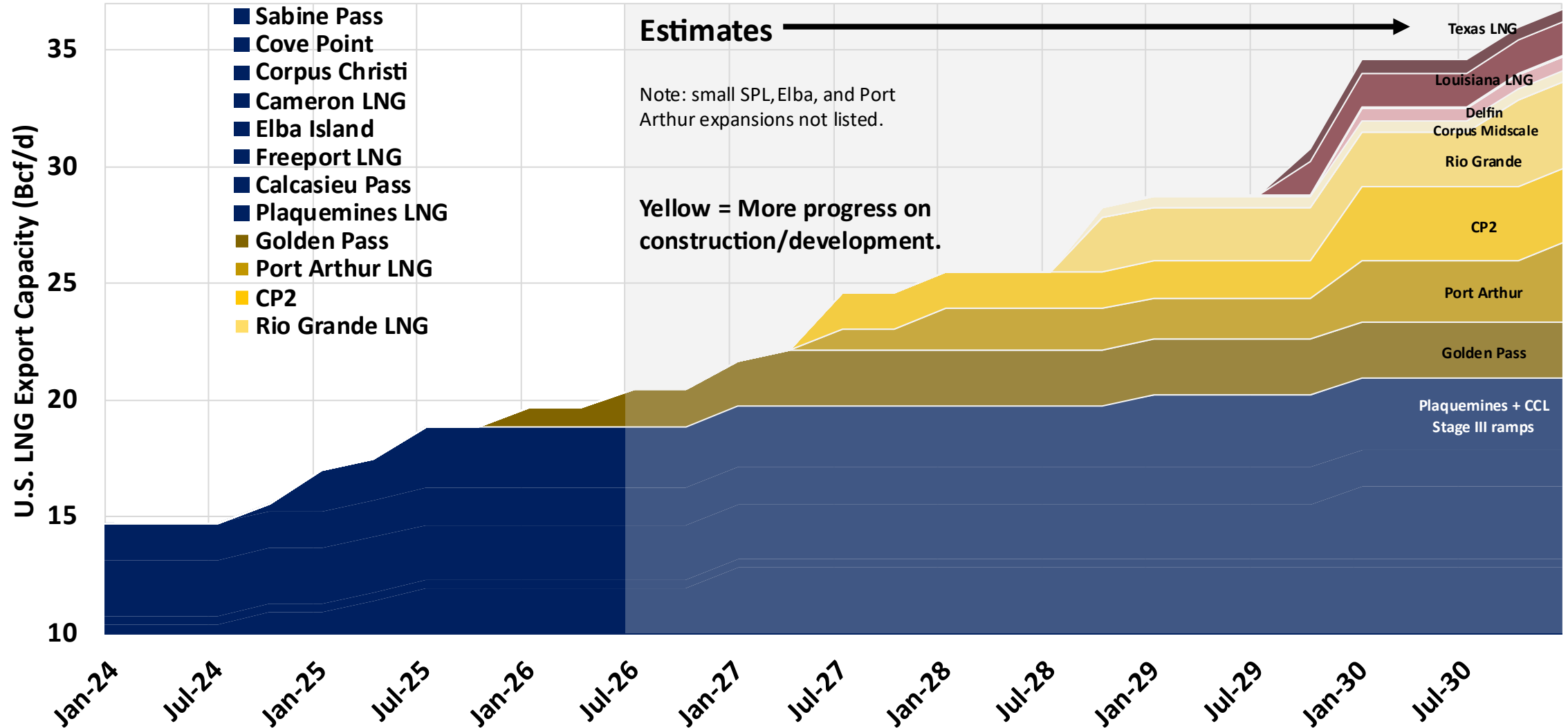
Raymond James Energy Banking
713-278-5239

RAYMOND JAMES

Why Are US Nat. Gas Prices So Low?

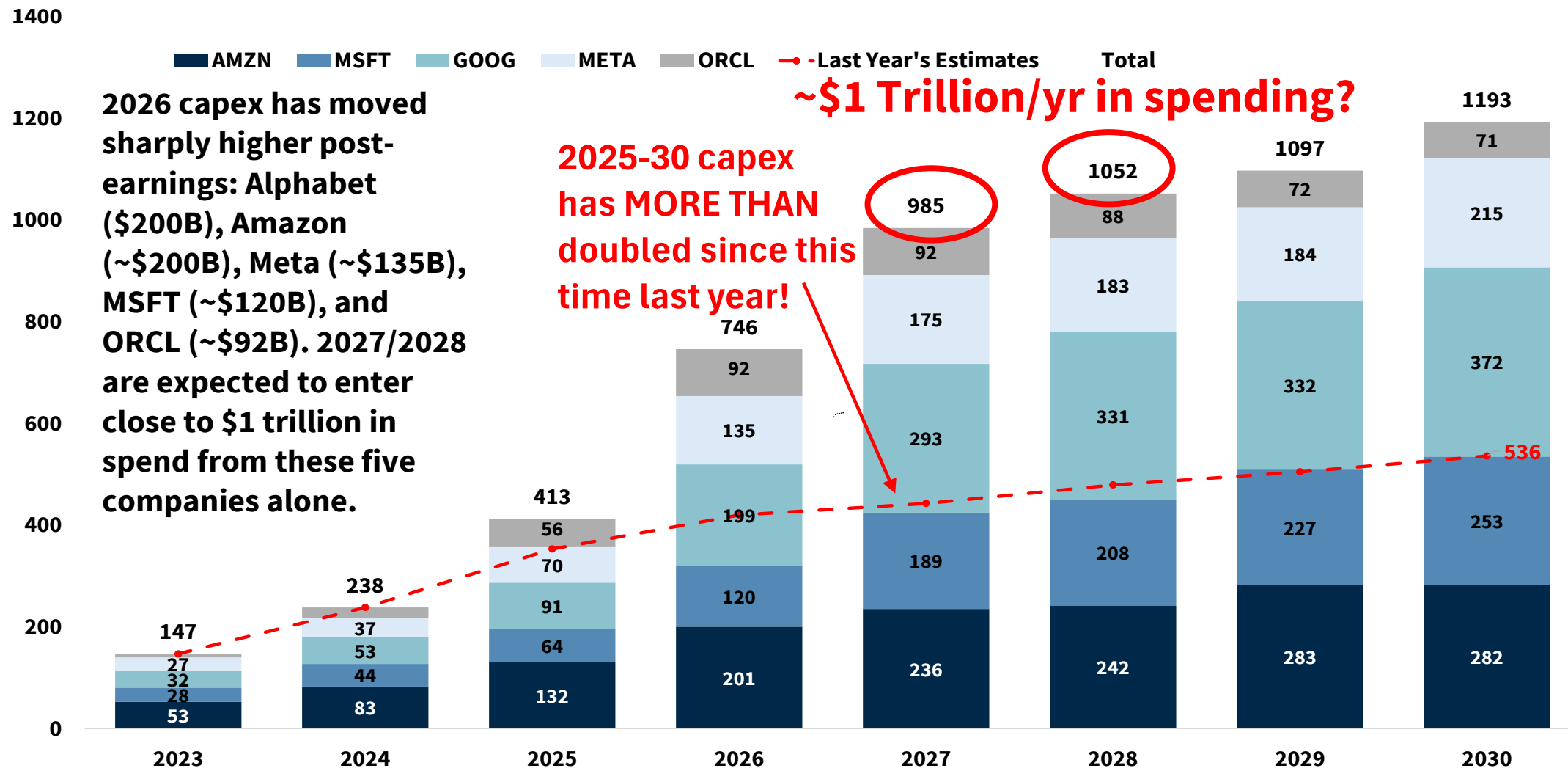
- US nat. gas prices always seem to underperform – why?
- US gas demand outlook is fantastic (up ~20+% by '30)
- LNG related gas growth should add ~15 bcf/d by 2030
- AI related gas power growth hyped to add another 10 - 15 bcf/d by 2030 – but....**this is very back-end loaded**
- **The problem is there is ALOT of US gas @~\$3.00/mcf**
- Look for gas prices to suffer thru 2027 – maybe beyond

U.S. LNG Capacity Up ~15 Bcf/d by YE'29?



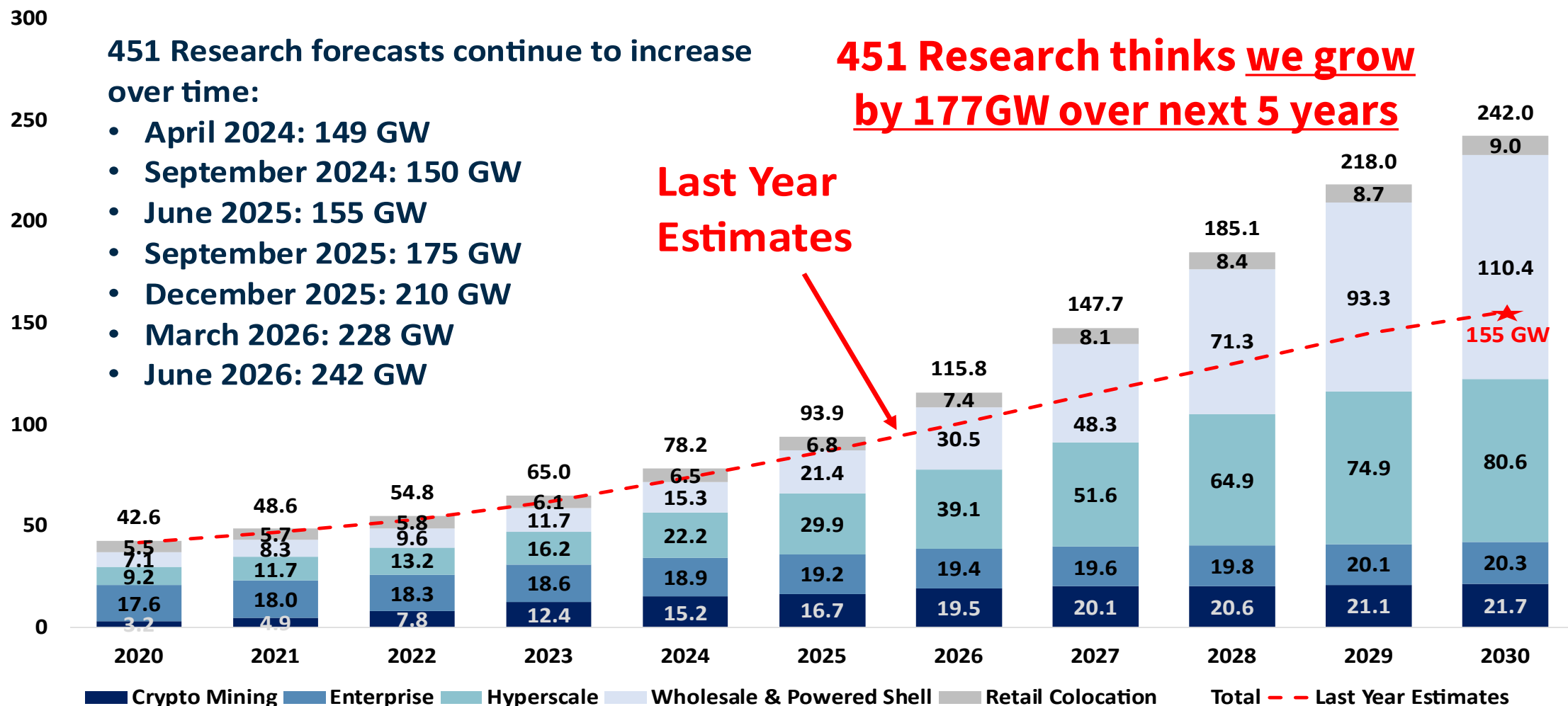
How Much Will AI Related Gas Power Growth Really Matter and When Will It Hit?

AI Capex Is Getting Ridiculous

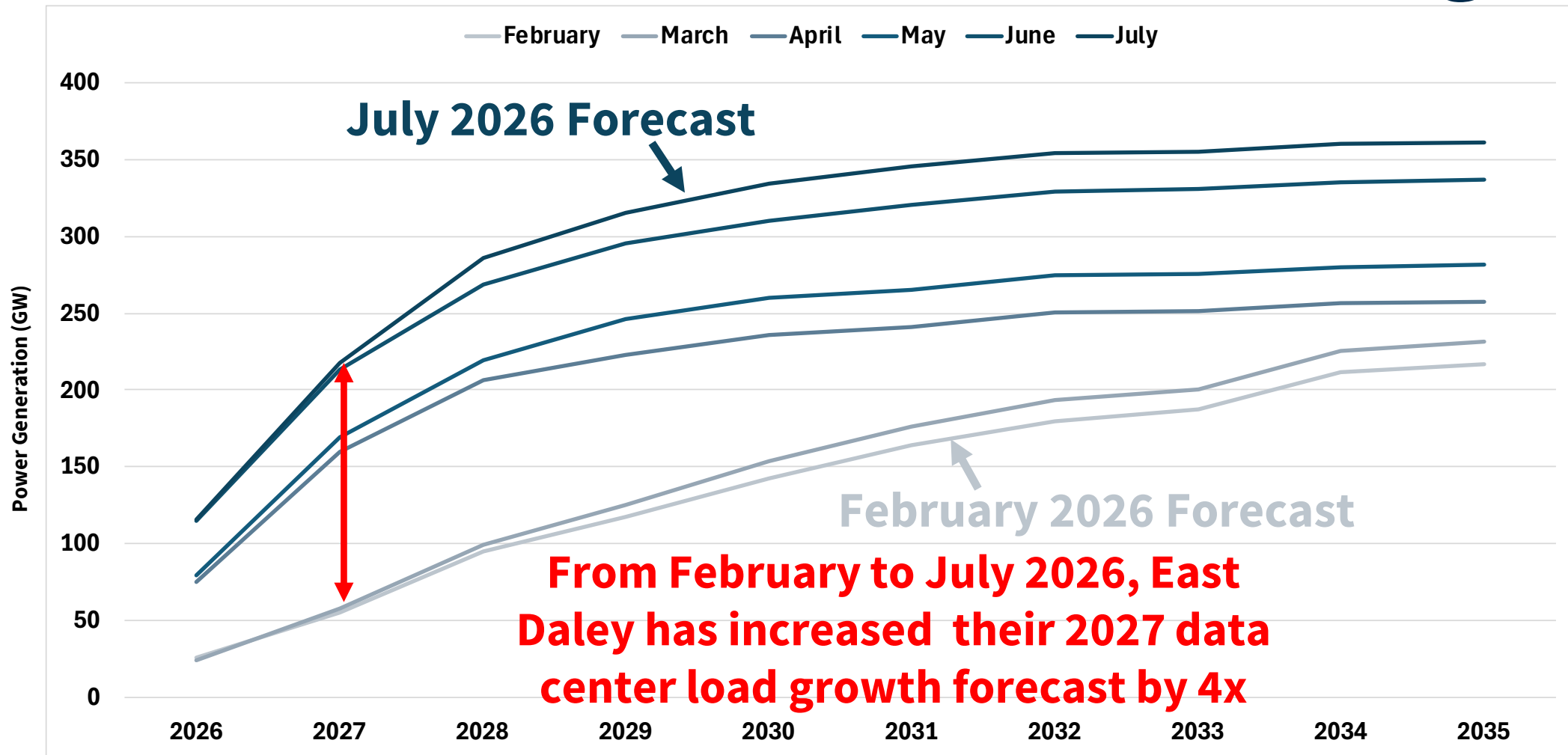


“451” US AI Power Demand Est. Up Huge

451 Data suggests a Robust **20.6% 2023-30 CAGR** (vs. **12.5% est. growth last year**)

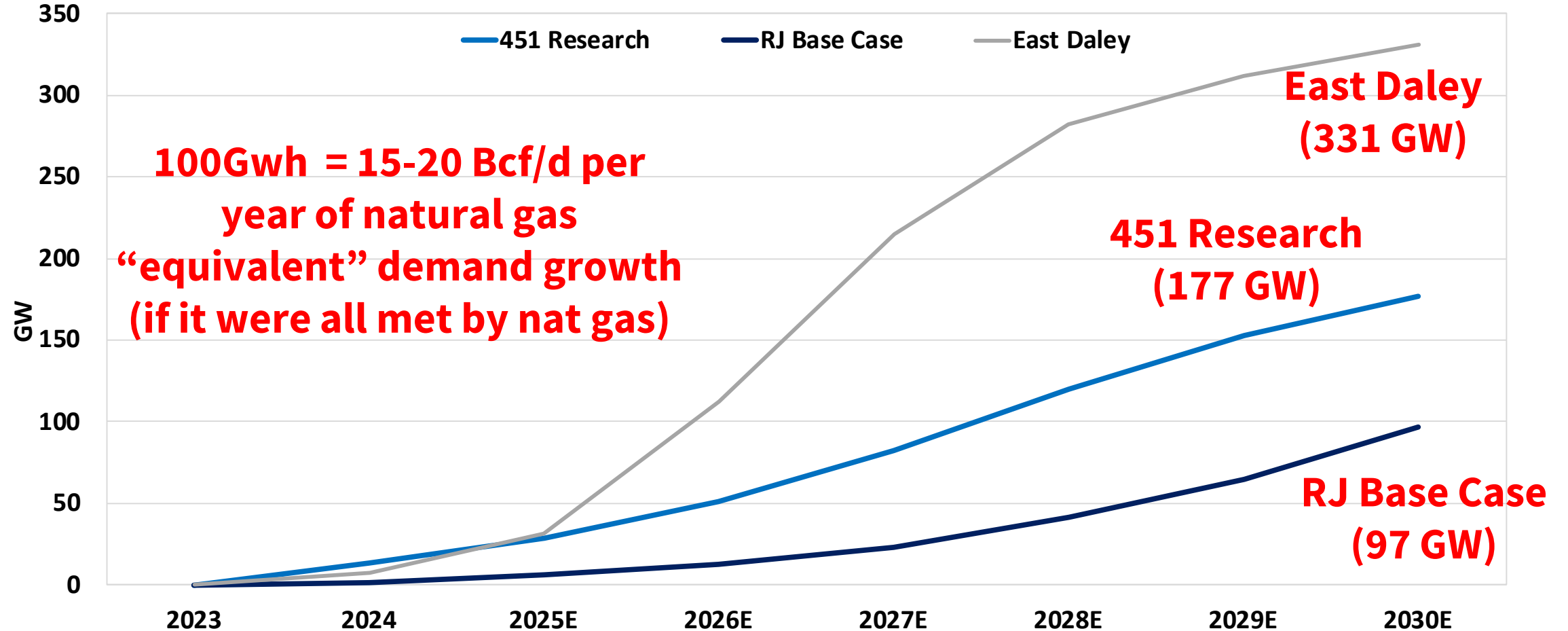


Data Center Forecasts Keep Moving Up



Comparing RJ Forecast vs. Project Trackers

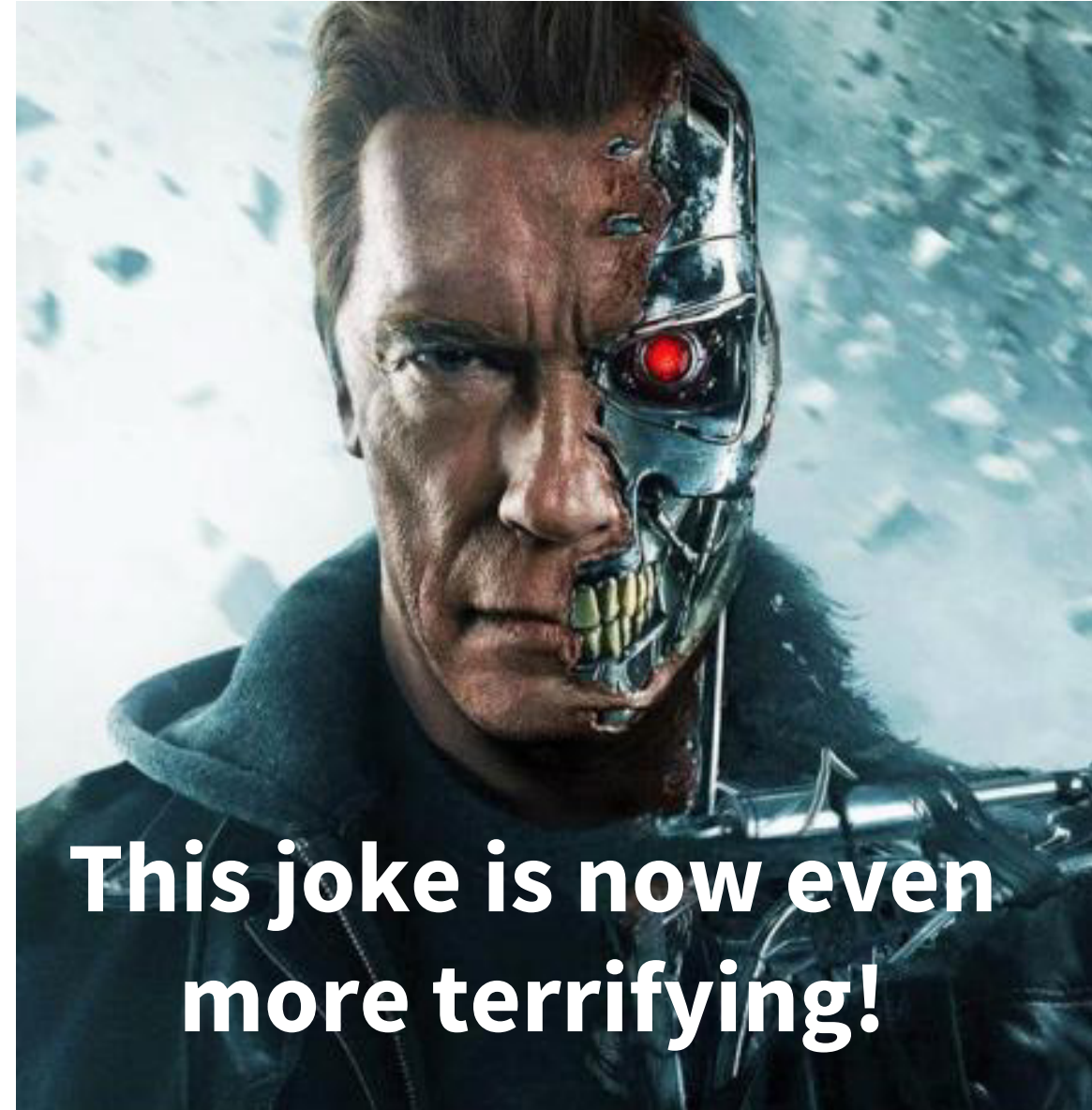
Expected Cumulative Annual Datacenter Power Demand Growth Forecasts



300GW Before Skynet?

“Skynet is not a thing, a place, or a machine. It’s a system – a consciousness spread through every machine connected to the internet.”

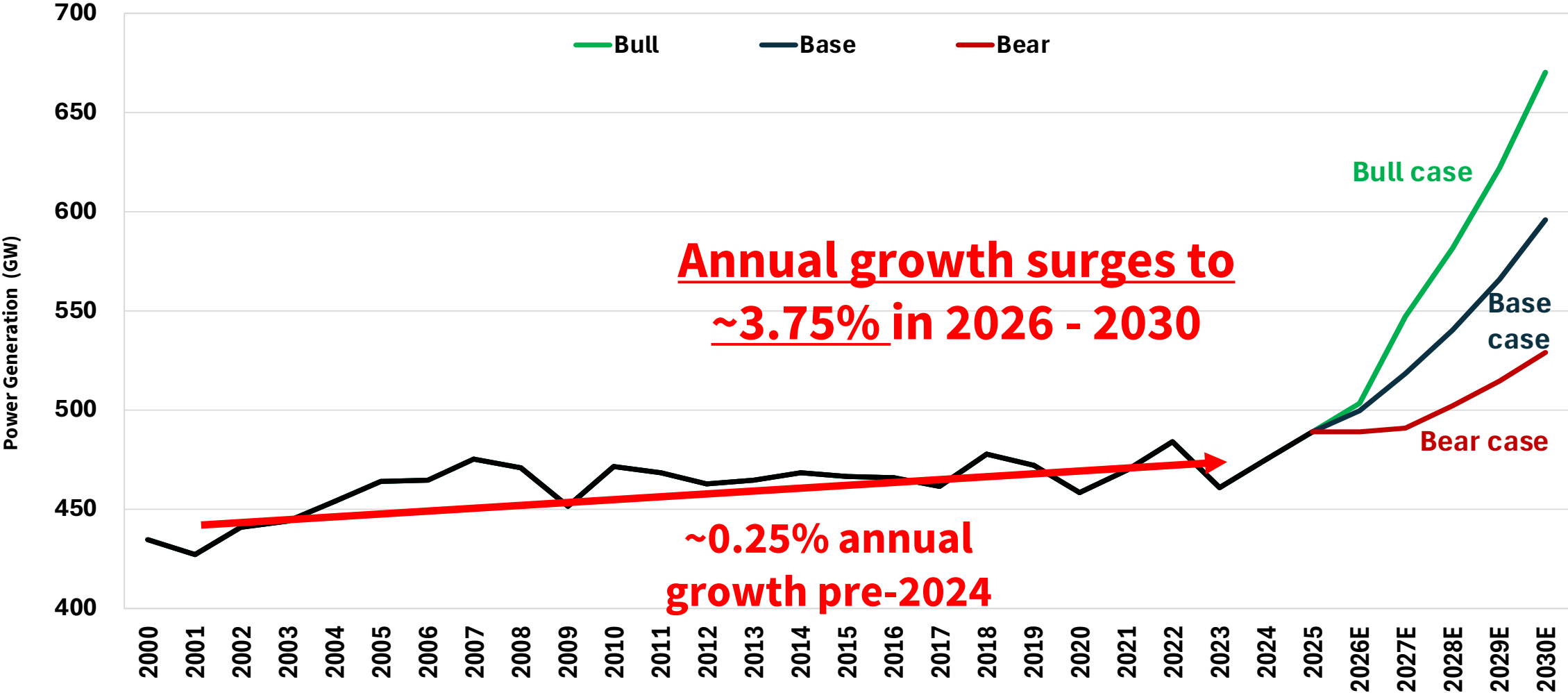
- John Connor



This joke is now even more terrifying!

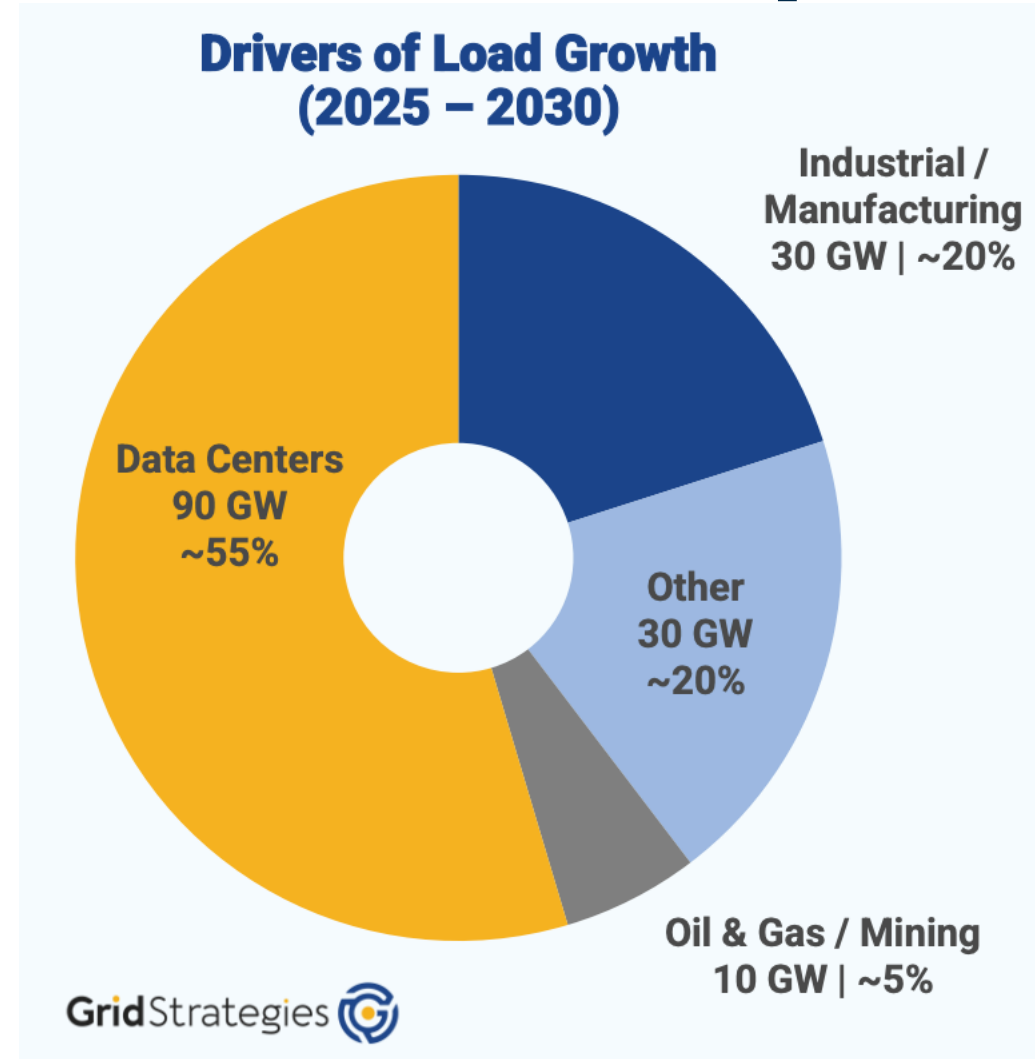
Put the RJ Forecast In Perspective.....

Total U.S. Power Generation Yearly Average (GW)



Could “Other” Power Growth Surprise?

**GridStrategies
thinks AI is only
55% of future U.S.
electric peak load
growth by 2030???**



Source: Grid Strategies

Why Are We Lower Than Other Forecasts?

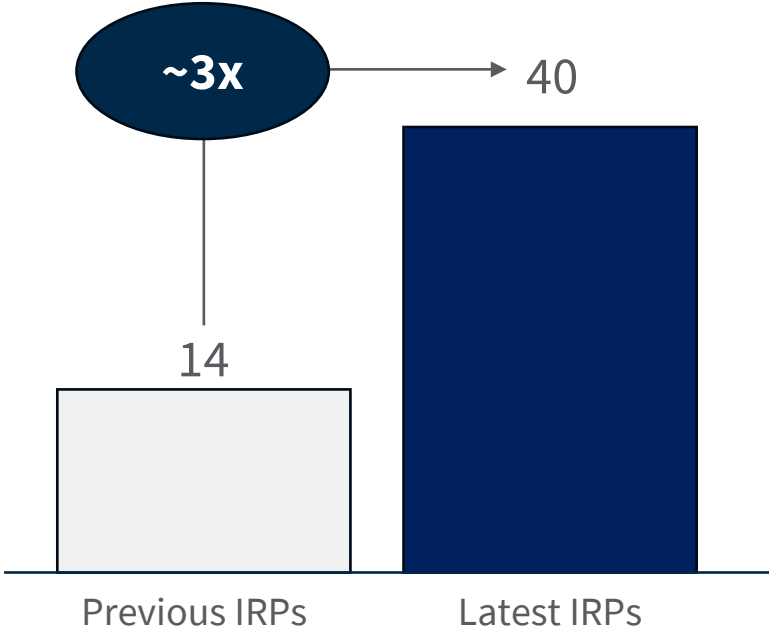
- “Announced projects” does not equal real load growth
- Bottlenecks emerging – EPC, labor, equipment, regs
- Datacenter location? **NIMBY backlash?** Load ramp?
- Nameplate is not energized capacity, and energized capacity is not full utilization – ramp matters
- Should we worry about AI monetization?

How Will US Power Growth Translate To Gas Demand Growth?

What Are Impediments To Gas Gen Growth?

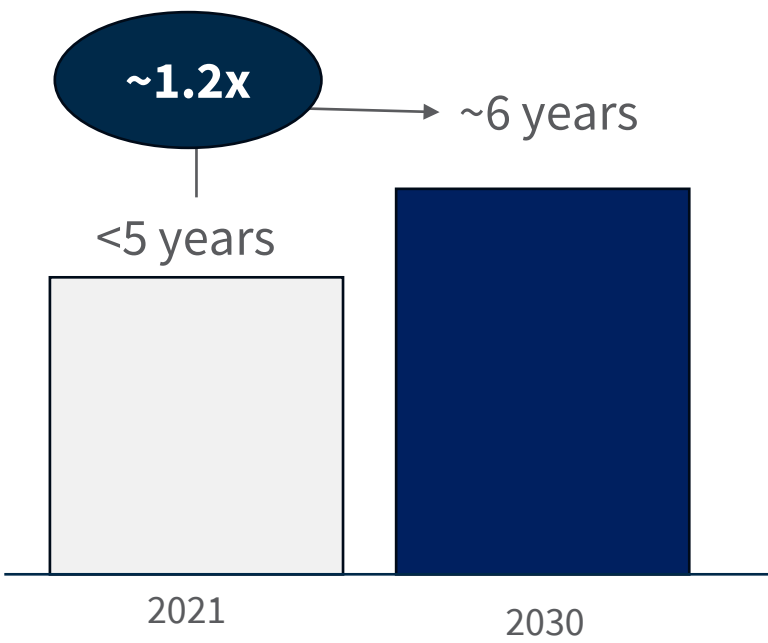
Rising Demand

10-YR New Nat Gas Generation Growth in IRPs (GW)



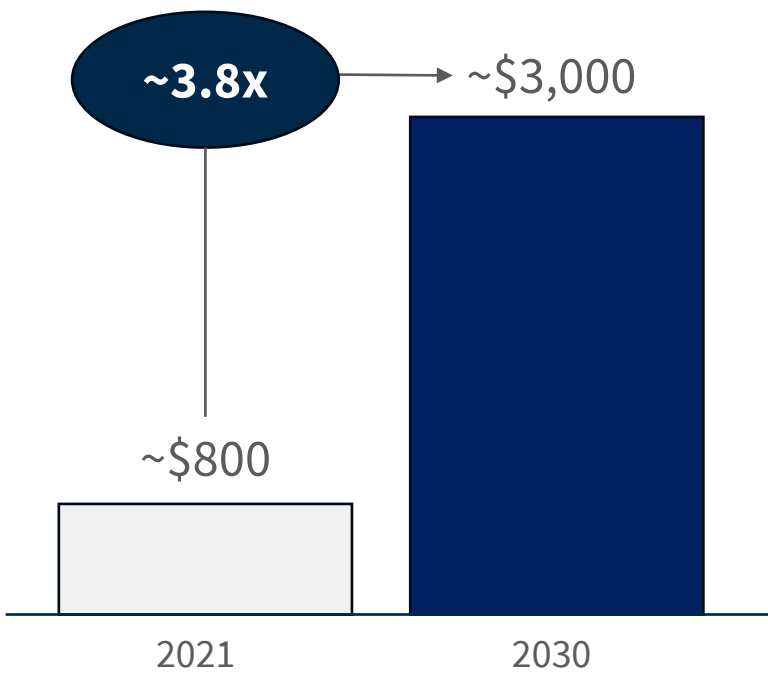
Longer Build Times

New Nat Gas Combined Cycle Build Time (Yrs)



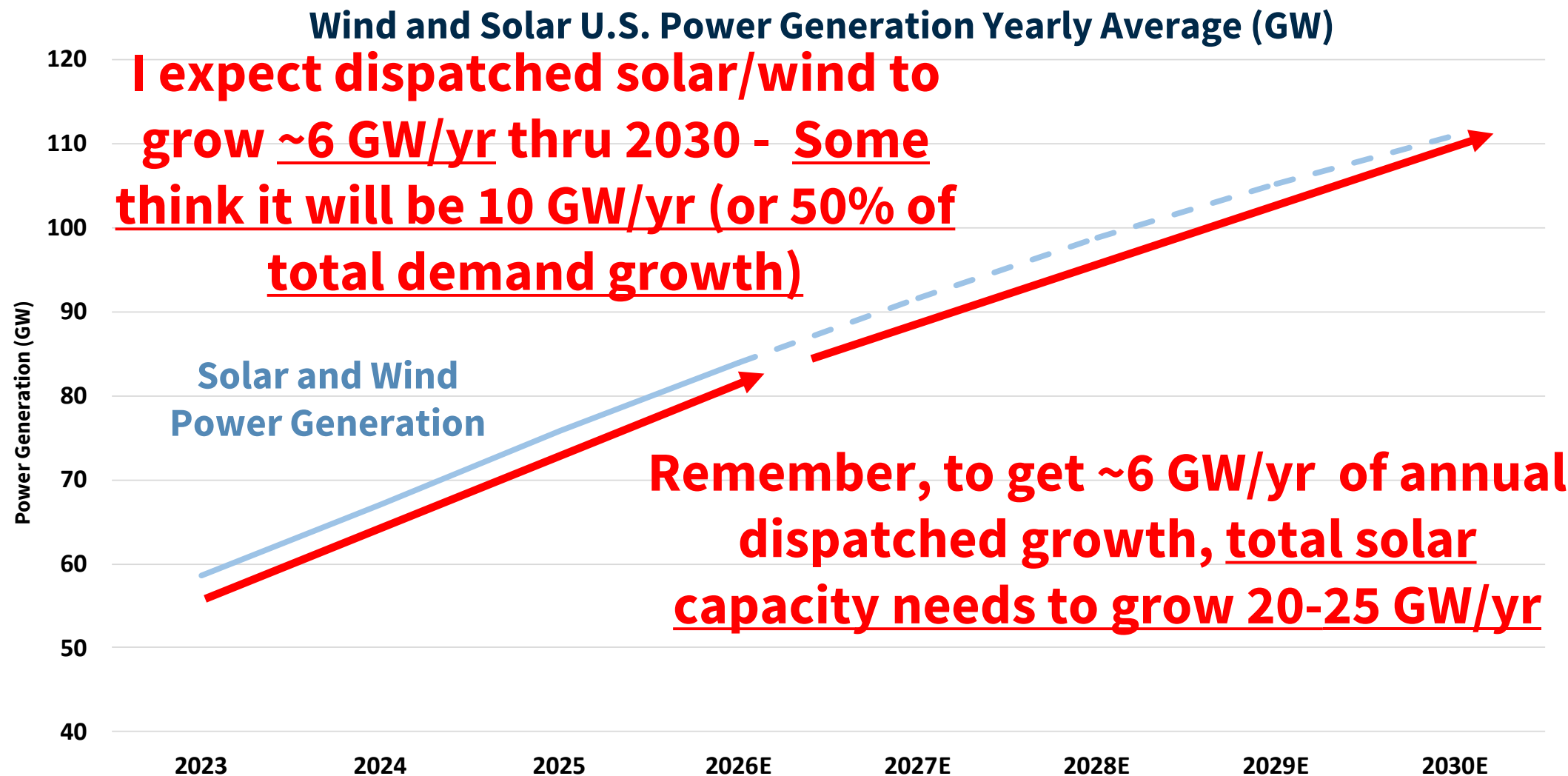
Higher Capex

New Nat Gas Combined Cycle CAPEX (\$/kW)



Source: NextEra IR

Solar Competes...Growth Strong Thru '30

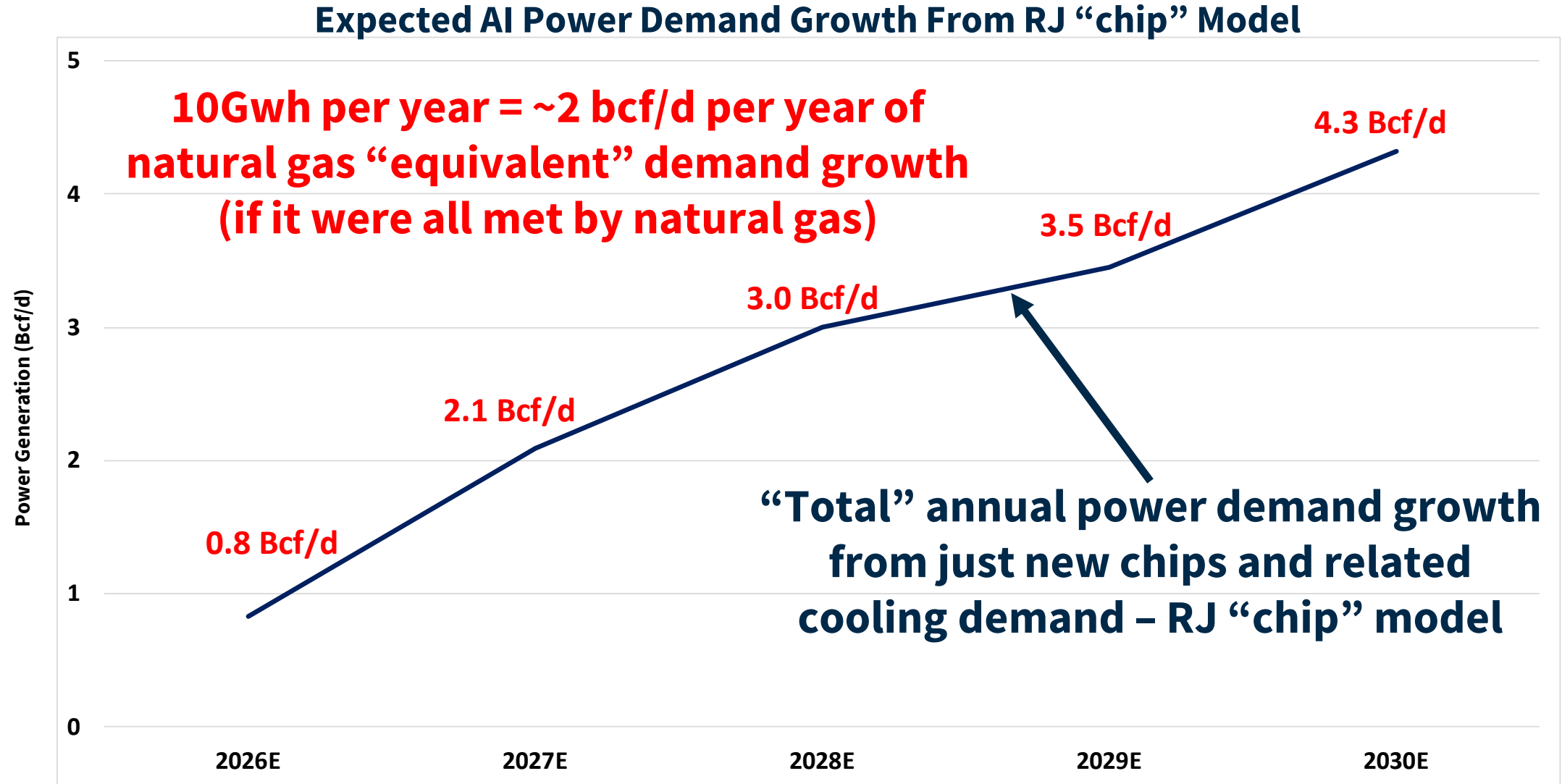


Where Will Power Come From Next ~5 yr?

- '26 -'30 total power growth ~100 (GW)
- Coal falls ~6 (GW)
- Solar/wind grows ~30 (GW)
- Very modest Nuclear growth until AFTER 2030
- **Thus, gas-fired power needs to grow ~75 (GW) of generation next ~5 yrs**

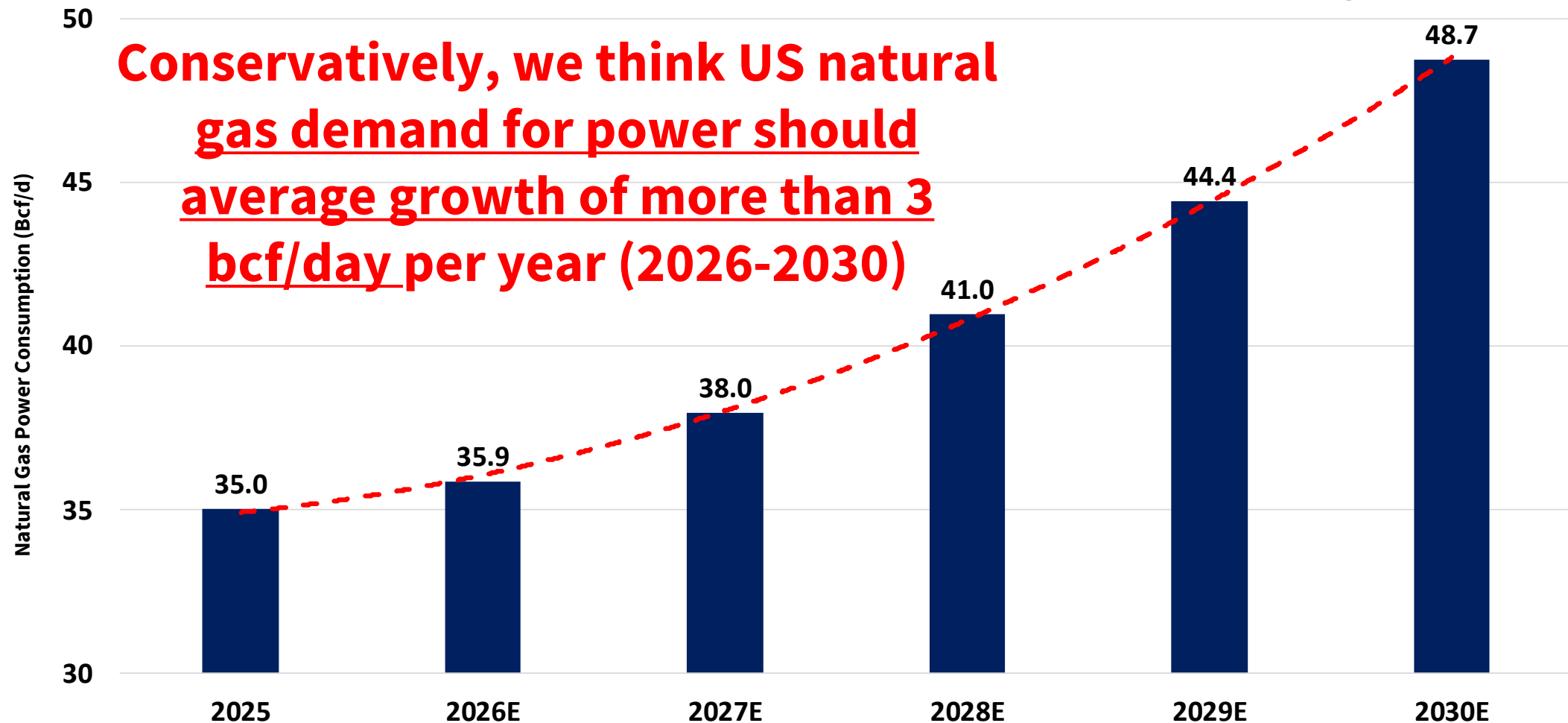
What Does That Mean For Gas **Demand Growth?**

RJ AI Model Has Gas Power Accelerate to '30



AI Gas Power Grows ~15 Bcf/d by '30?

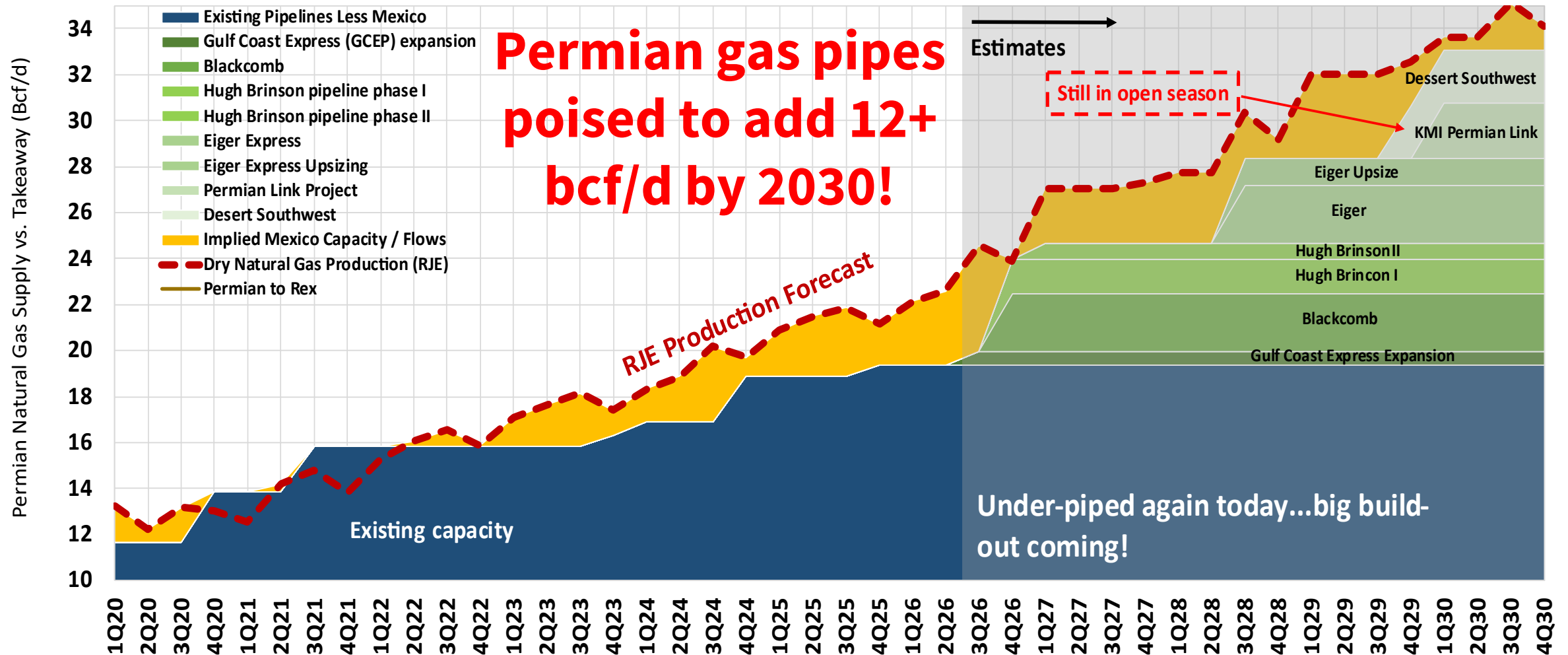
U.S. Natural Gas Deliveries to Electric Power Consumers Yearly Average (Bcf/d)



**The Problem Is That The U.S.
Has A HUGE Amount Of Gas
Supply Potential – At Relatively
Low Prices**

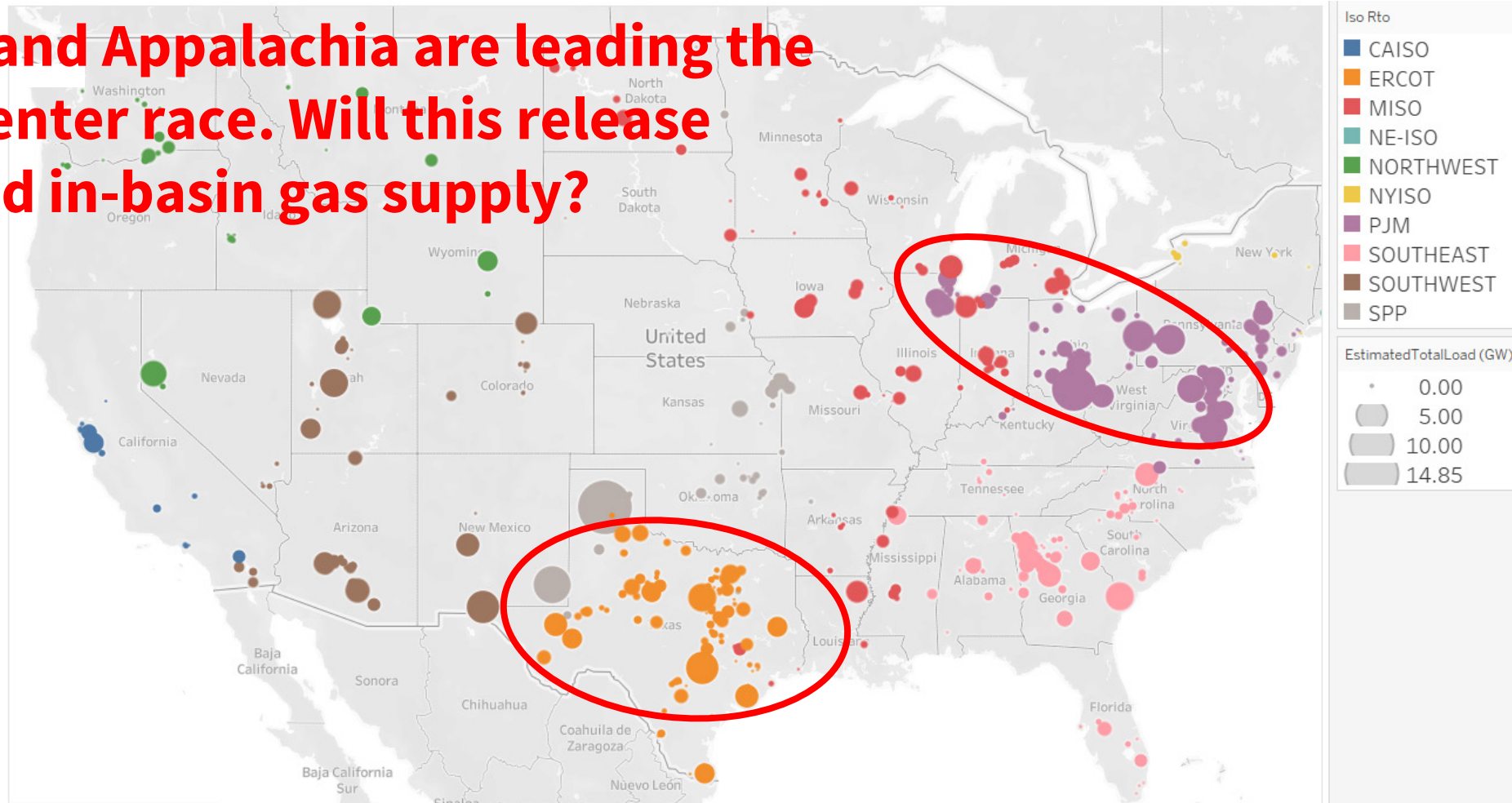
4.5 Bcf/d Of Permian Relief In Late-'26?

Permian Dry Gas Pipeline Takeaway (Bcf/d)



Will AI Buildout Release More Trapped Gas?

Texas and Appalachia are leading the data center race. Will this release trapped in-basin gas supply?



So, Where Will We Find 30 Bcf/d Next 5 yrs?

- New Permian pipes add ~12 bcf/d
- In-basin Permian AI releases ~3 bcf/d of “trapped” gas
- Appalachia in-basin AI & pipe adds = ~5+ bcf/d
- “Other” gassy areas add ~5 bcf/d (Eagleford, Midcon)?
- Haynesville “swing producer” adds at least ~5 bcf/d
- **Total 5yr US gas supply growth = ~30bcf/d @sub \$3.50**

Are Natural Gas Futures Right This Time?

Henry Hub Natural Gas Futures Pricing (\$/MMcf)

1) The market expects U.S. gas fundamentals loosen modestly into YE26 before rebalancing in late-2027.



Will Weather Become More Important?

**What If We Are Entering A Major Cooling
Period? See This Contrarian:**

<https://www.hackettadvisors.com/>

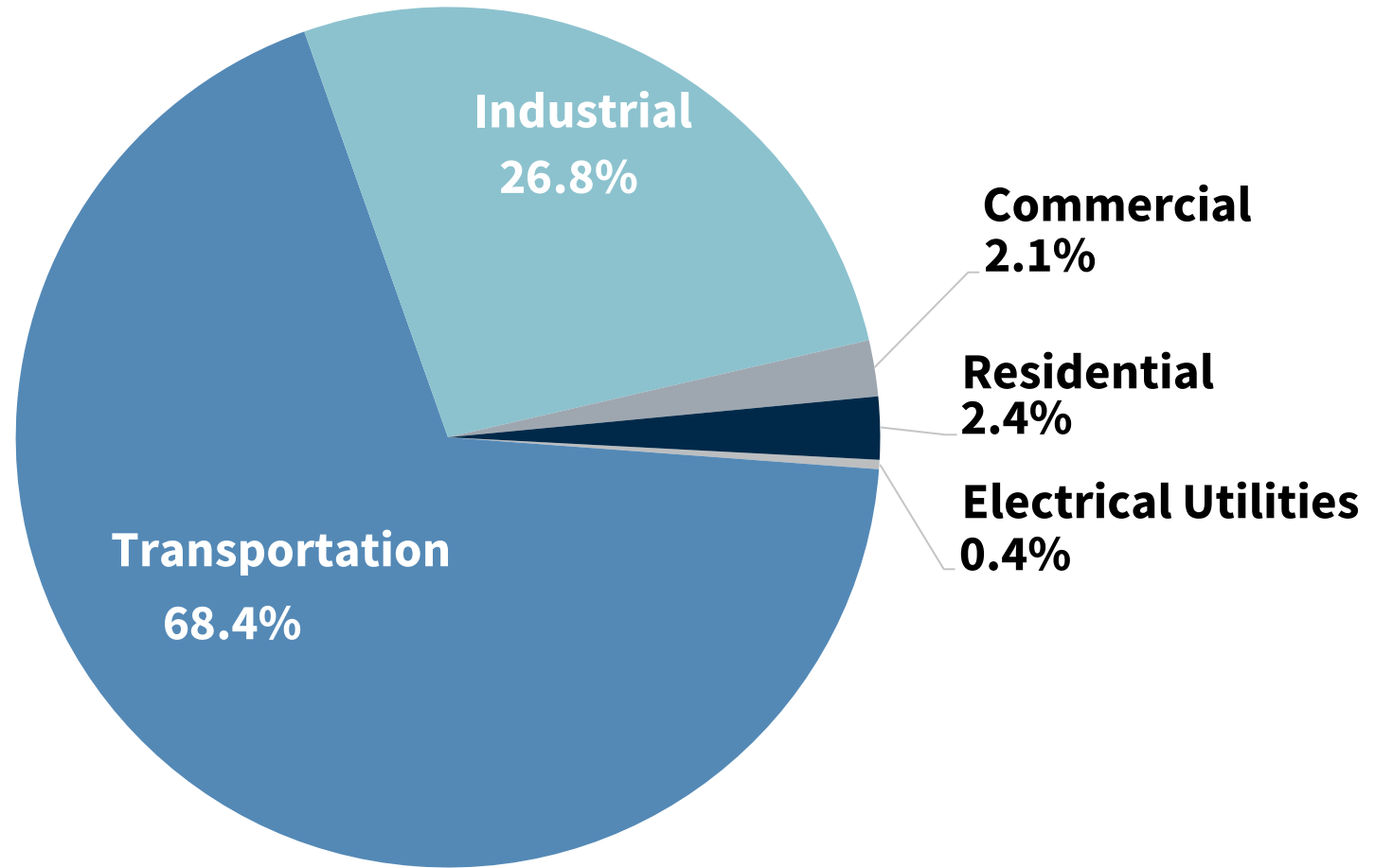
Why Is The Market Seemingly Missing The Massive Imbalance In Global Oil Supply/Demand?

Why Should This Be A BIG Deal For Oil?

- Oil usually reacts to small imbalances in supply/demand
- **This is the biggest supply interruption of the past 70 yrs**
- Oil is lifeblood of global transportation & petrochem. – without it, the global economy chokes
- Diesel and jet fuel shortages seem imminent
- Right now, Hormuz solution highly uncertain
- It will take YEARS (& higher prices) to refill inventories

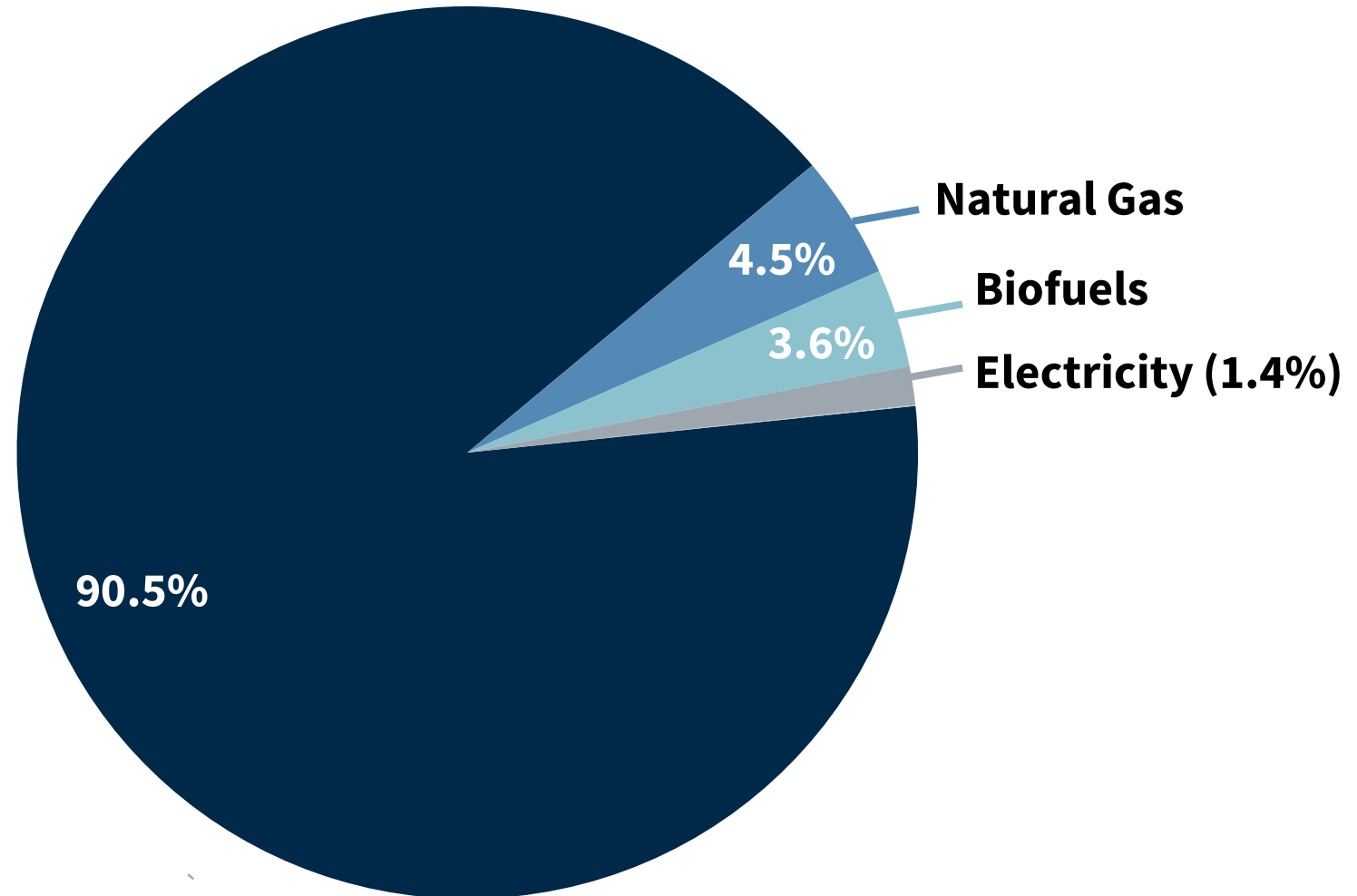
So, Why Do We Need Oil?

% of Total Crude End Use by Sector



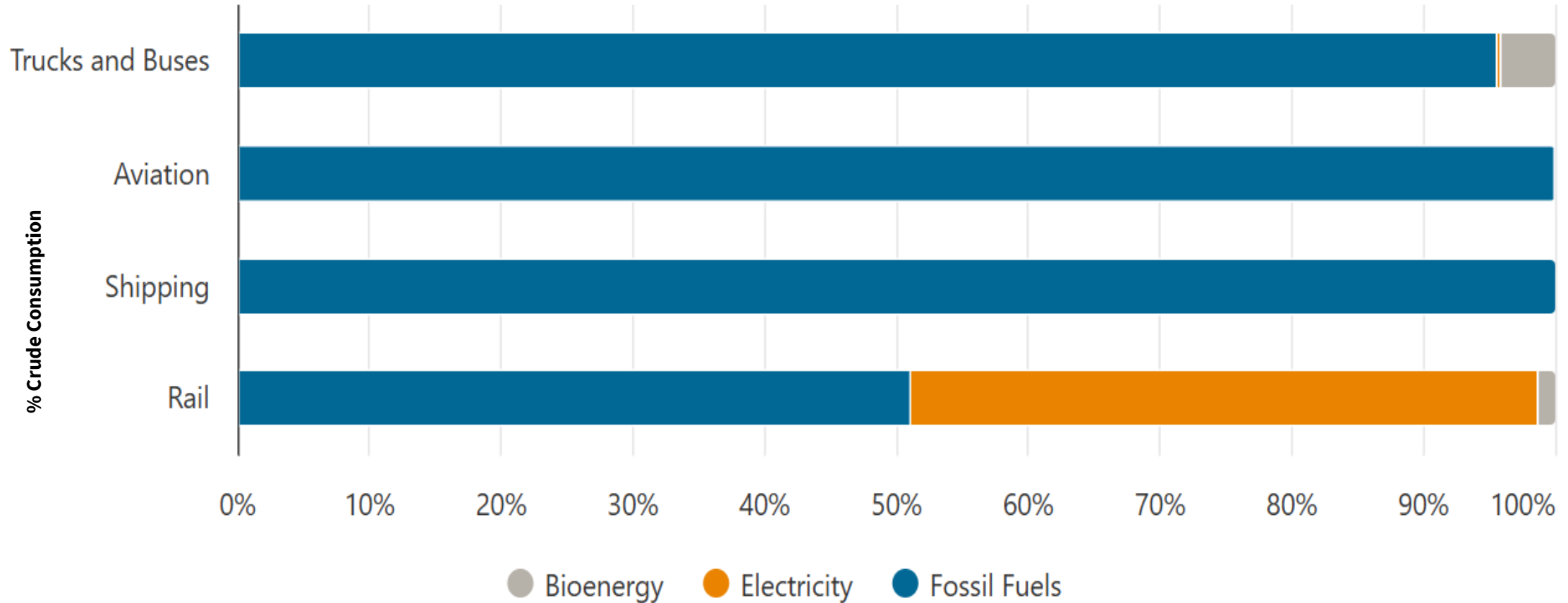
Oil Provides 90% Of Global Transportation

% of Total Energy Consumption in Transportation by Fuel



Without Oil, Stuff & People Don't Move

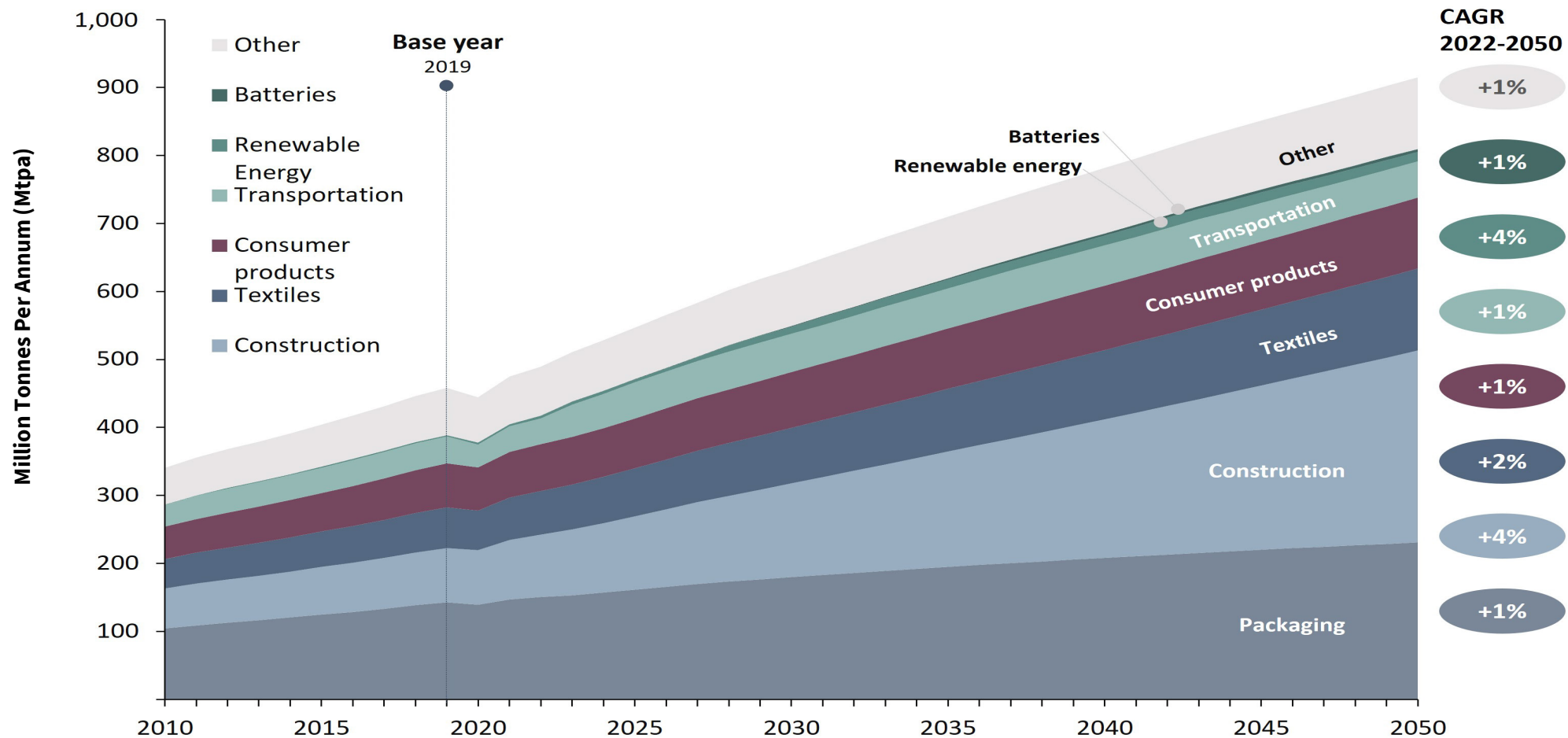
World Fuel Use by Transport Mode



Bar chart showing world fuel use by transport mode in 2022. This includes passenger and freight transport.

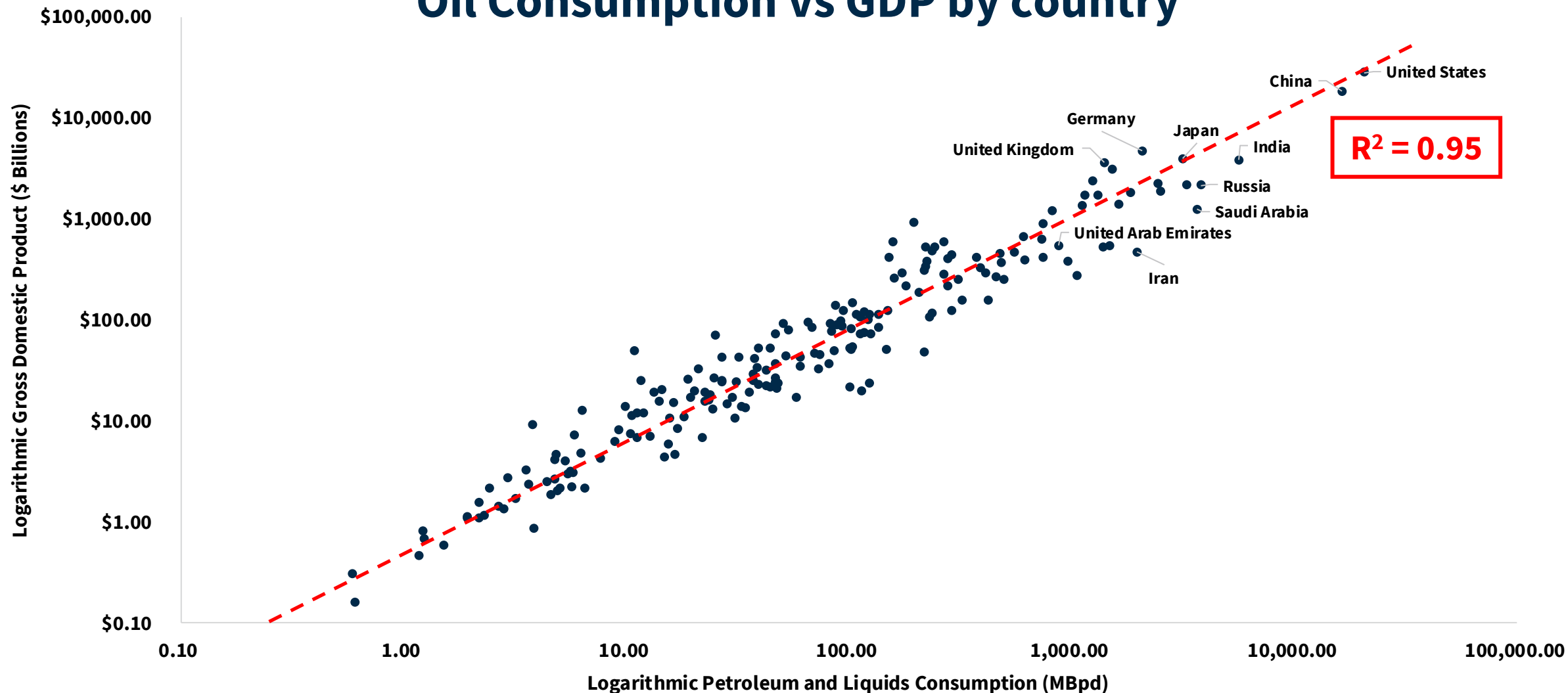
Petrochem Feeds Global Economic GDP

Petrochemical Demand by Sector, 2010 - 2050



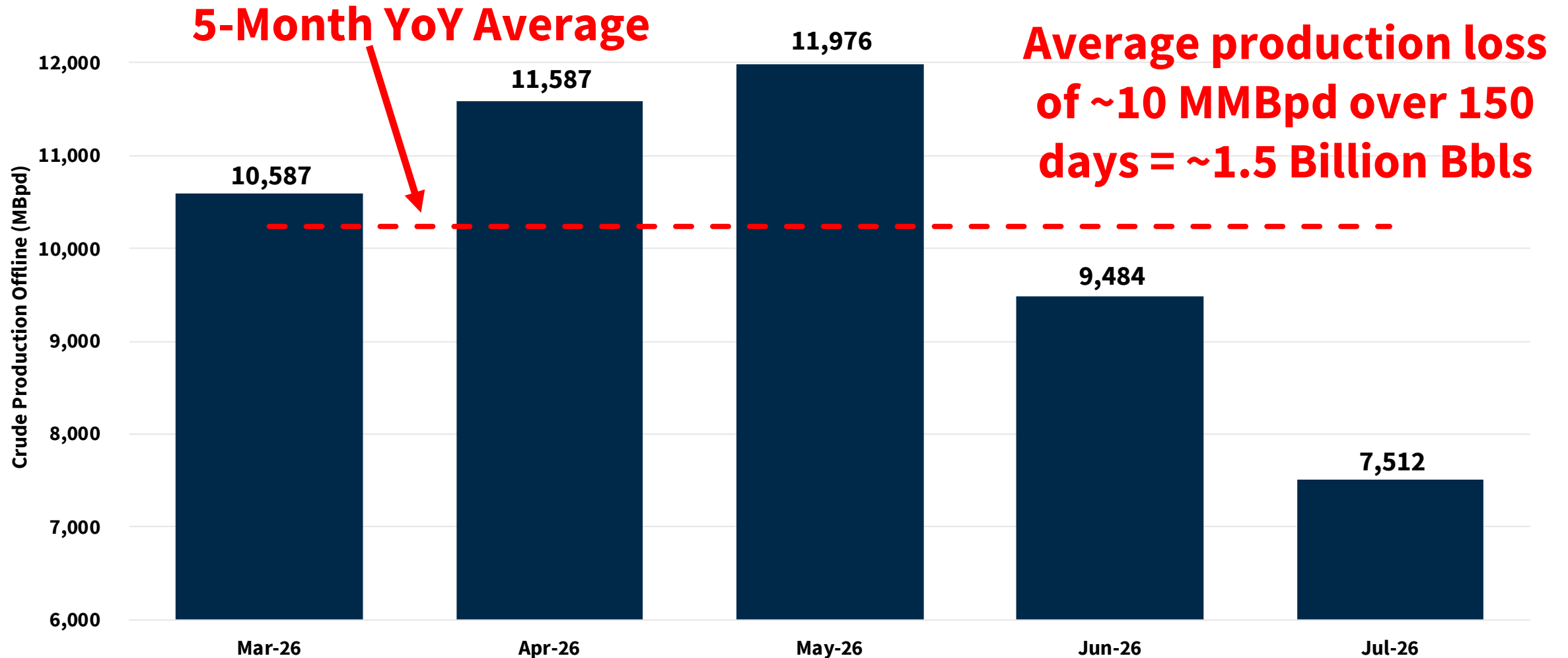
How Important Is Oil To An Economy?

Oil Consumption vs GDP by country



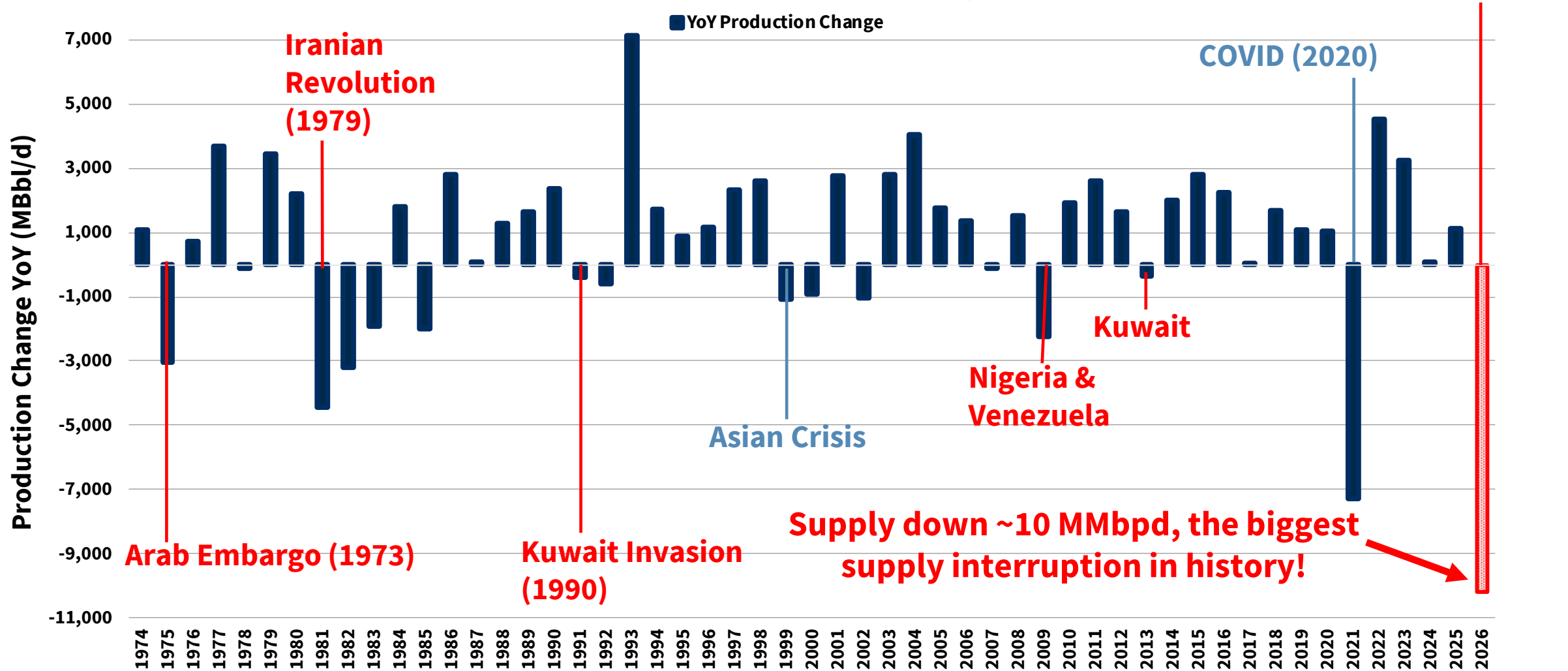
~1.5 Billion Bbls Lost Since March 1, 2026

ME YoY Supply Outages Since The Start of Iran Conflict (Production MBpd)



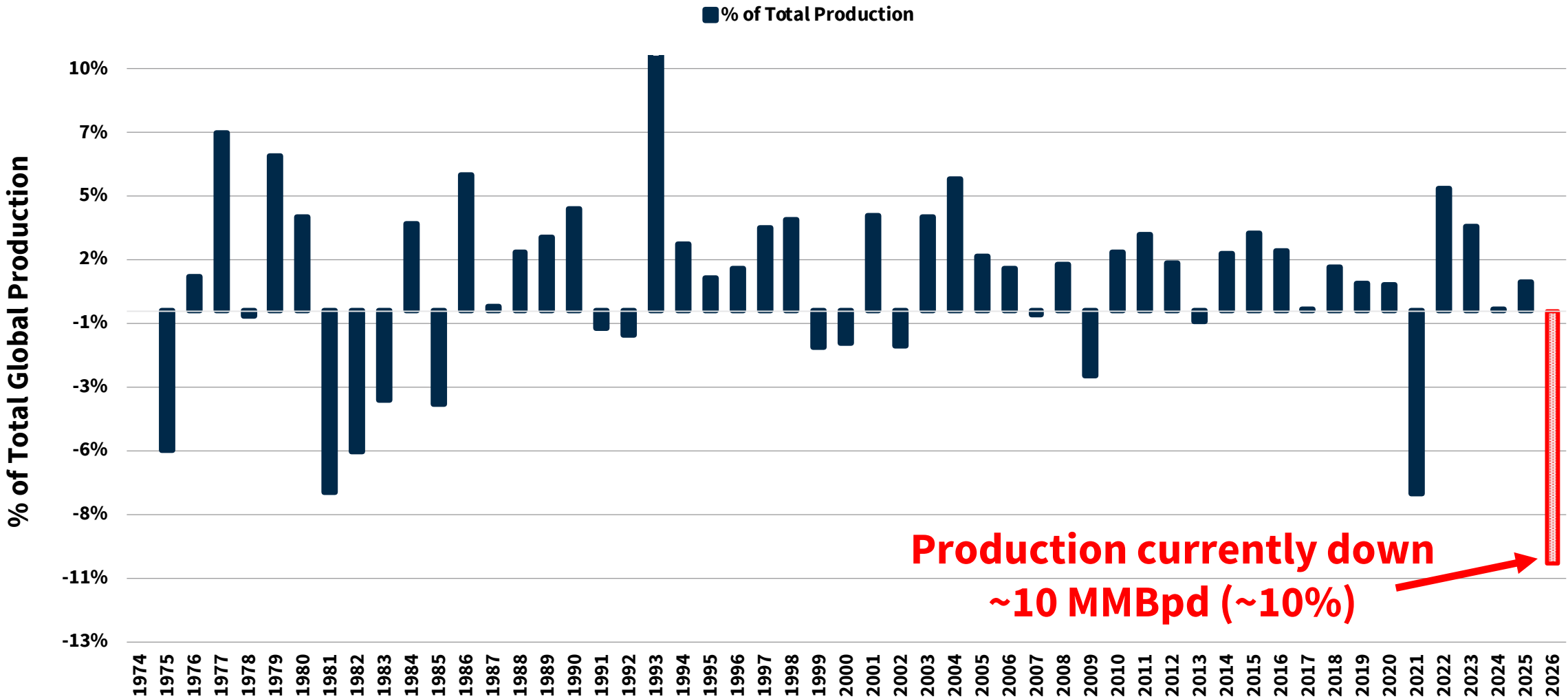
Bigger Than Any Other Oil Supply Hit!

Historical Global Crude Production Change YoY (MBbl/d)



Also, This Is Biggest % Decline in 80 yrs

Historical Global Crude Production Change YoY (% of Total Production)

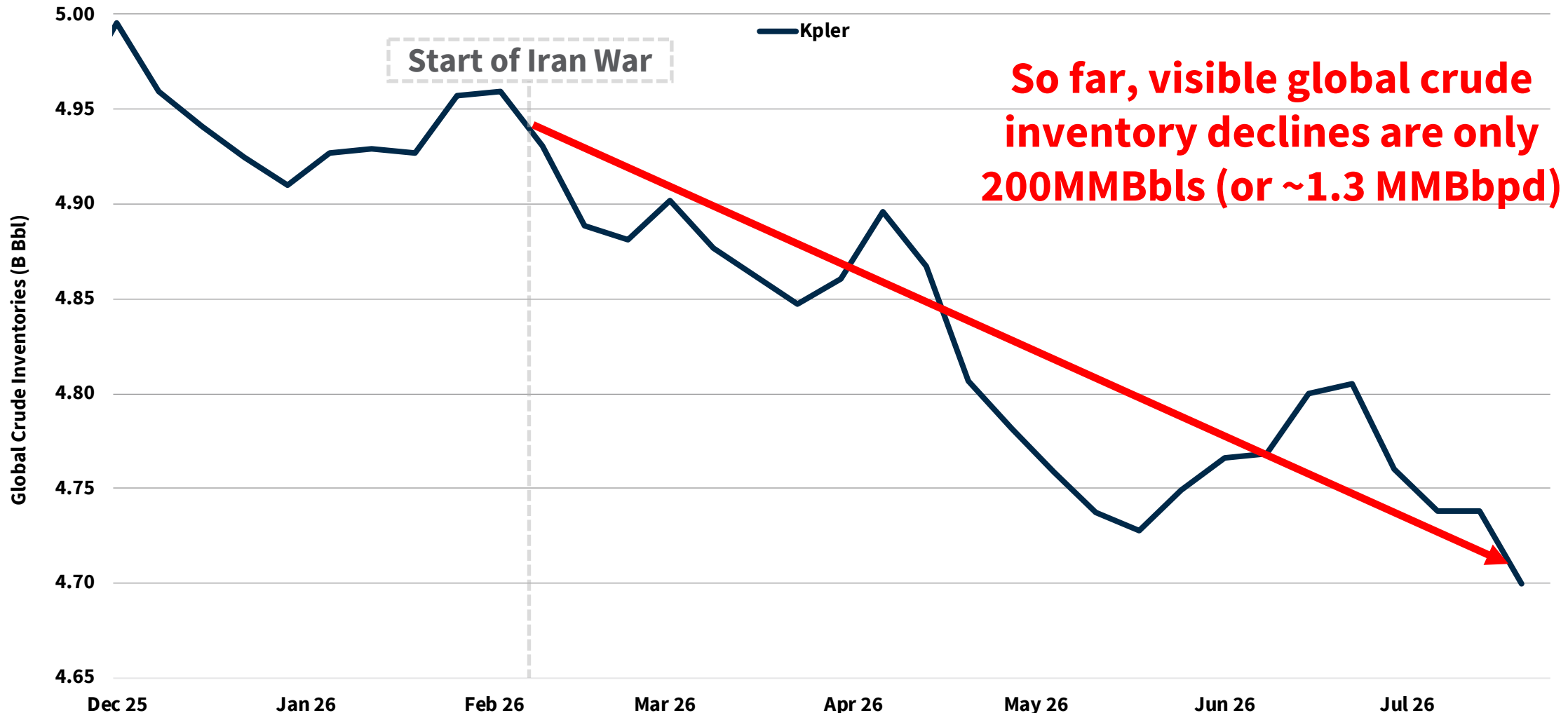


Production currently down
~10 MMBpd (~10%)

Source: IEA, Kpler and Raymond James estimates.

But, **Visible** Crude Inv. Barely Down??

Crude Only Inventories Including On-Land, On-the-Water, & above ground SPR's

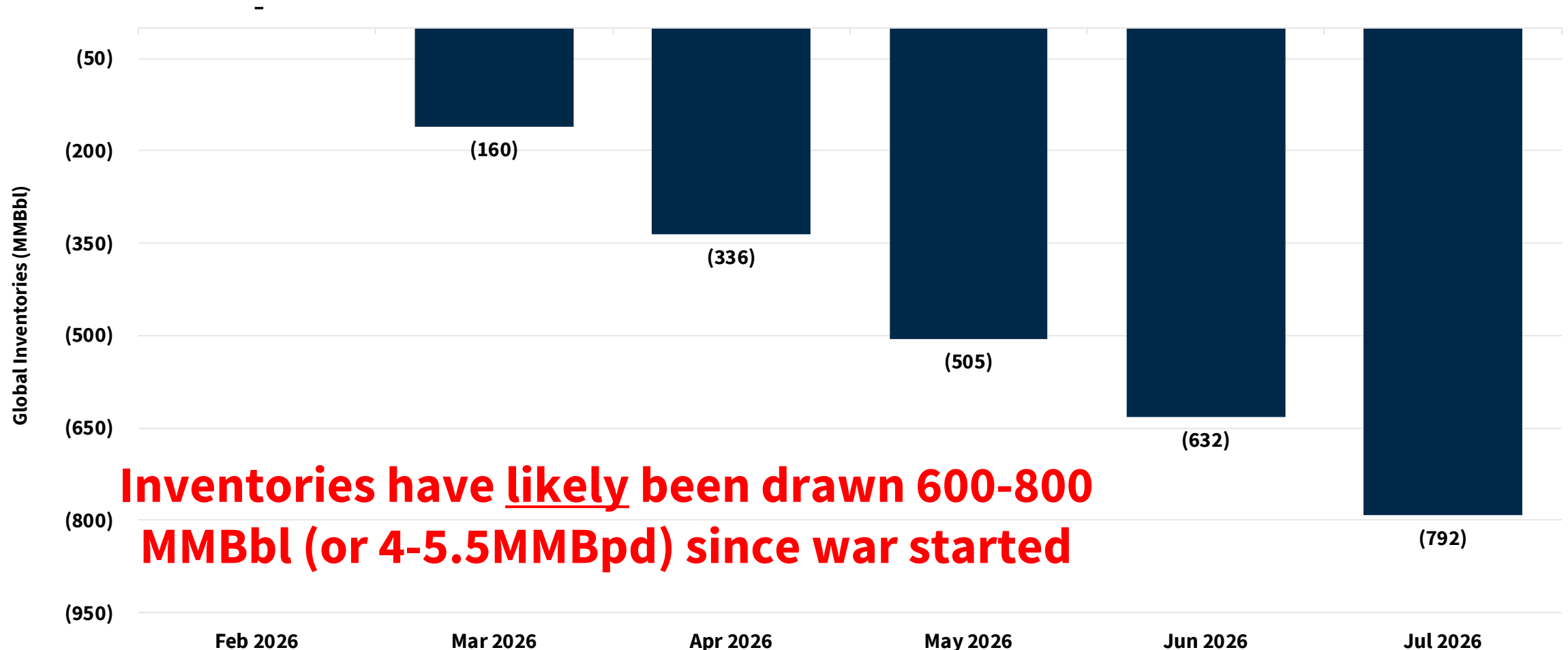


Question: Why Are Oil Inv. Not Down More?

- **Demand destruction?**
- **Invisible inventories (underground & products)?**
- **Is this a permanent or temporary disconnect?**
- **SPR releases impact and future timing?**
- **Is China the new OPEC?**
- **Something else?**
- **Is there still a “day of reckoning” to come? When?**

I Think Inv. Really Down 600-800 MMbbls

Estimated Global Oil & Product Drawdowns Since The Beginning of Iran Conflict



Inventories have likely been drawn 600-800 MMbbl (or 4-5.5MMBpd) since war started

Where Has 10 MMBpd Lost Supply Gone?

- Start by subtracting ~2.0 MMBpd pre-war oversupply
- Plus ~1.0 MMBpd supply surge from non-ME supply
- Less ~2.0 MMBpd lower demand (vs pre-war model)
- **This leaves ~5 MMBpd of crude and products draws**
- **800 MMBbls is still the largest drawdown in 70 years!**
- *Note: These are estimates because visibility is very limited in product & underground oil inventory #'s*

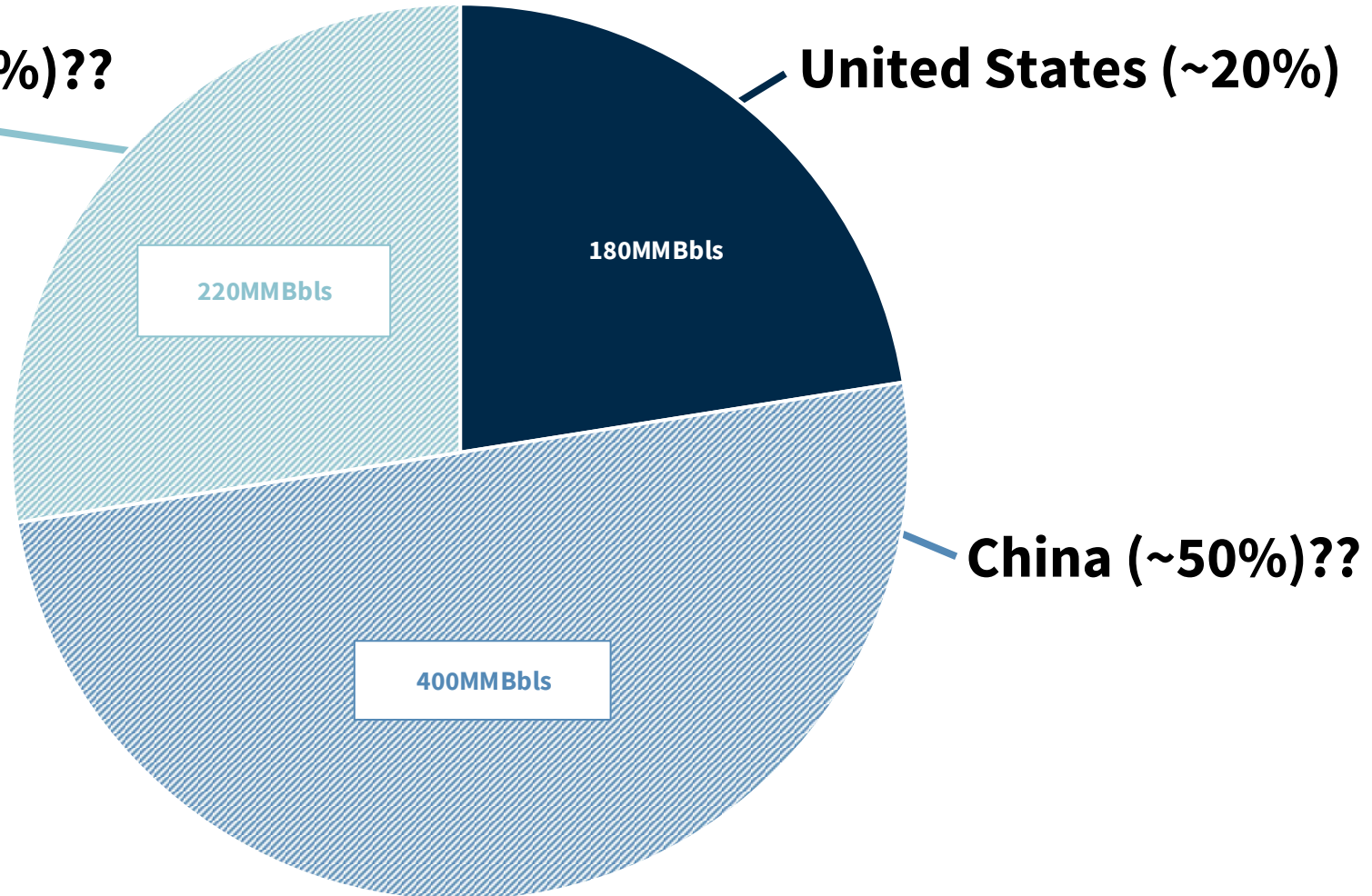
Where Were The ~5 MMBpd Of Drawdowns

Estimated Global Crude and Product Inventories (Commercial Crude, SPR & Products - MMBbbls)

Rest of the World (~30%)??

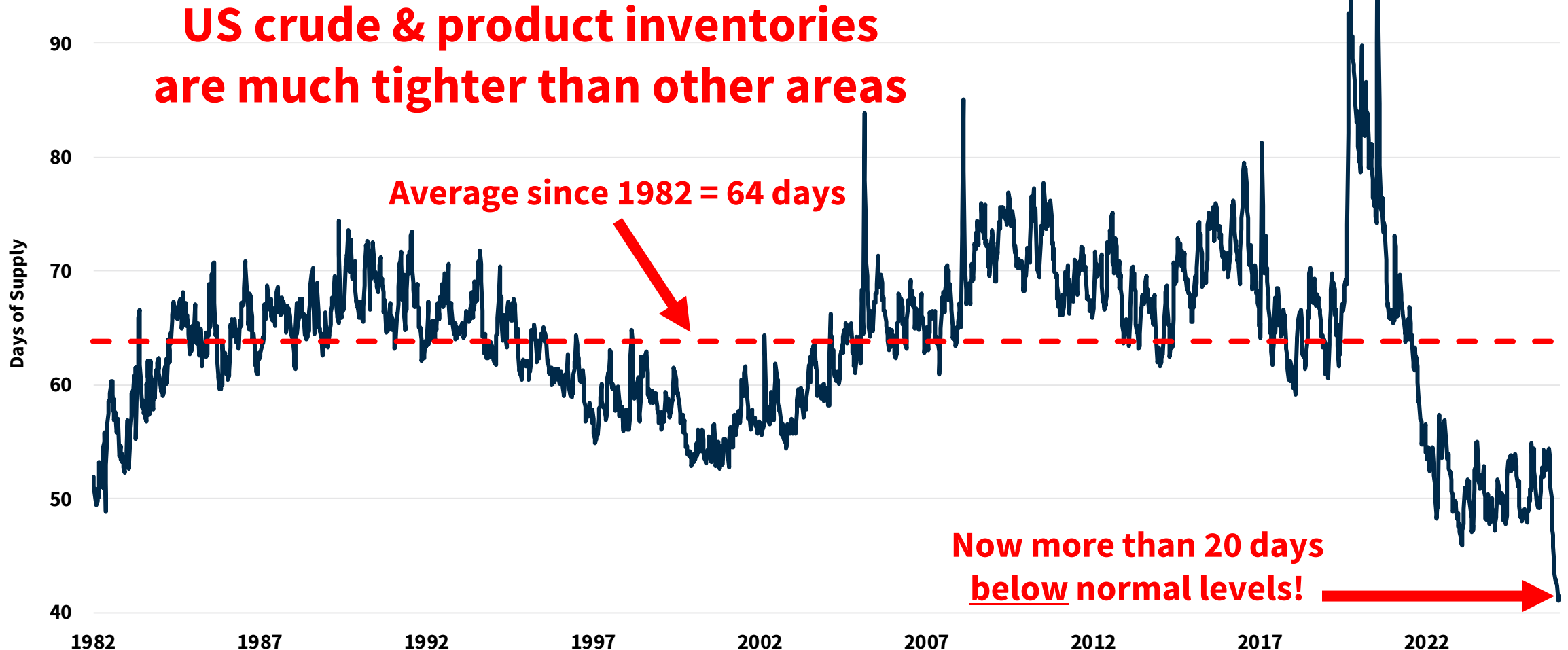
United States (~20%)

Although visible inventories indicate only ~200 MMBbbls of global crude draws, the math says more than half of total global crude and product inventory draws have LIKELY been absorbed by China



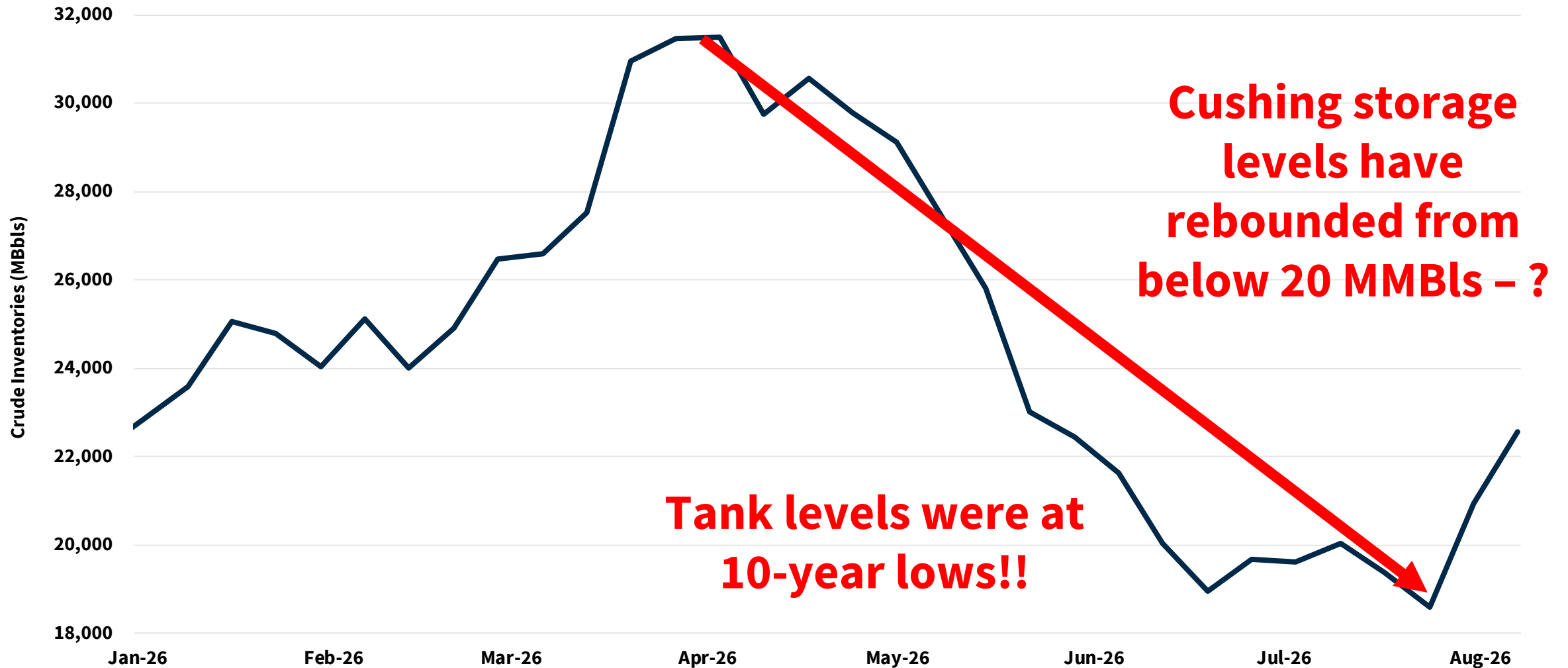
US Crude Days-Supply Now At 45yr Low

U.S. Crude Days of Supply (Commercial & SPR)



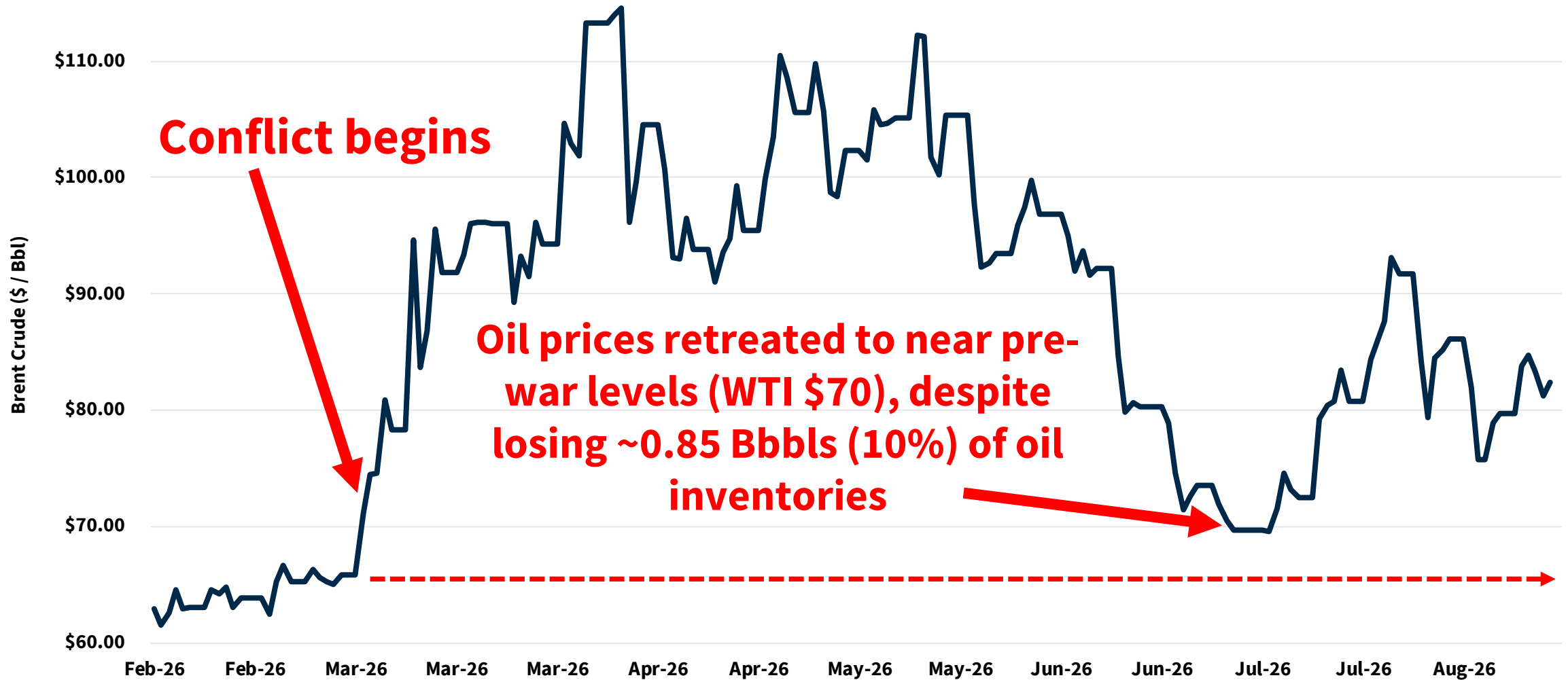
Did We Find The Cushing Floor?

Cushing Crude Inventory Levels (MMBbls)



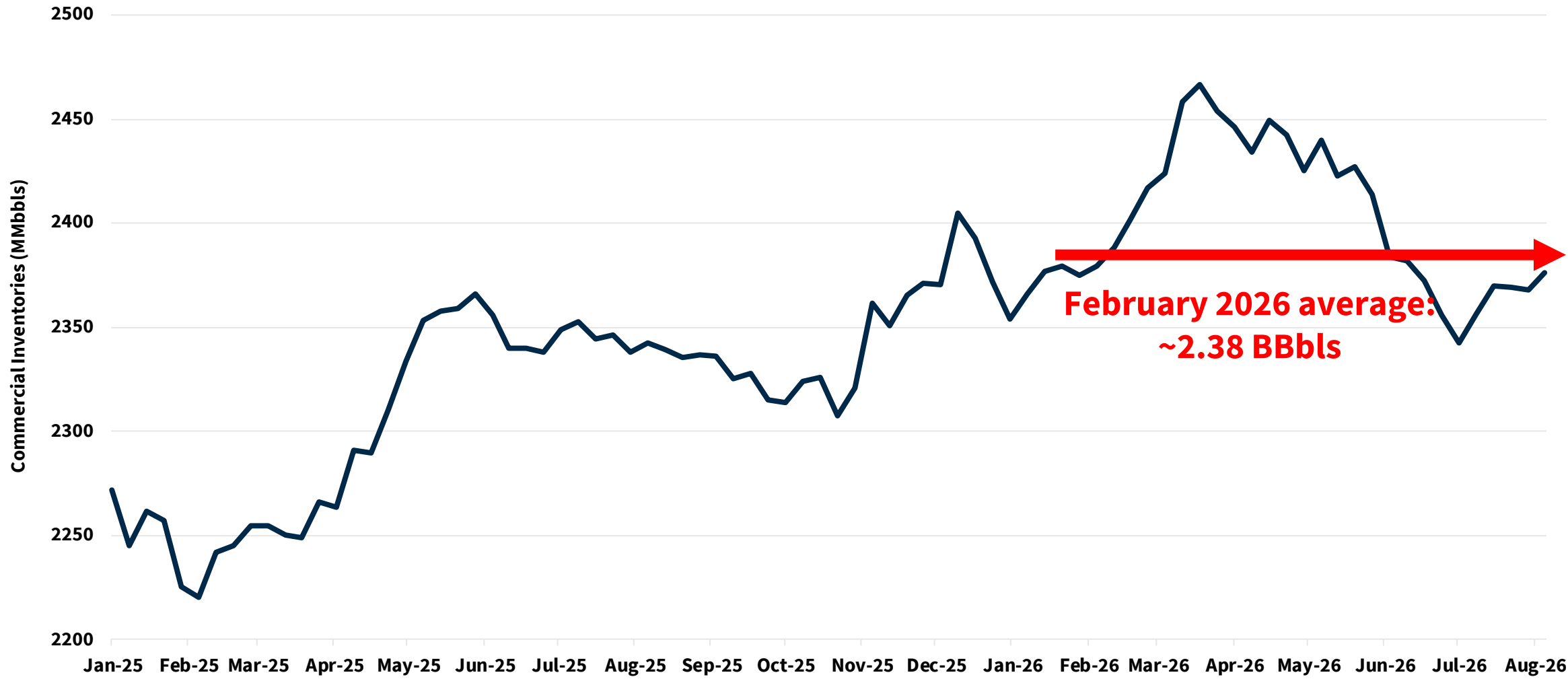
So, Why Are Prices Saying “No Problem”?

WTI Oil Prices Since Beginning of Iran Conflict



Because **Commercial** Inv. Are Just Fine

Global Above Ground Commercial Inventories (Non-SPR)



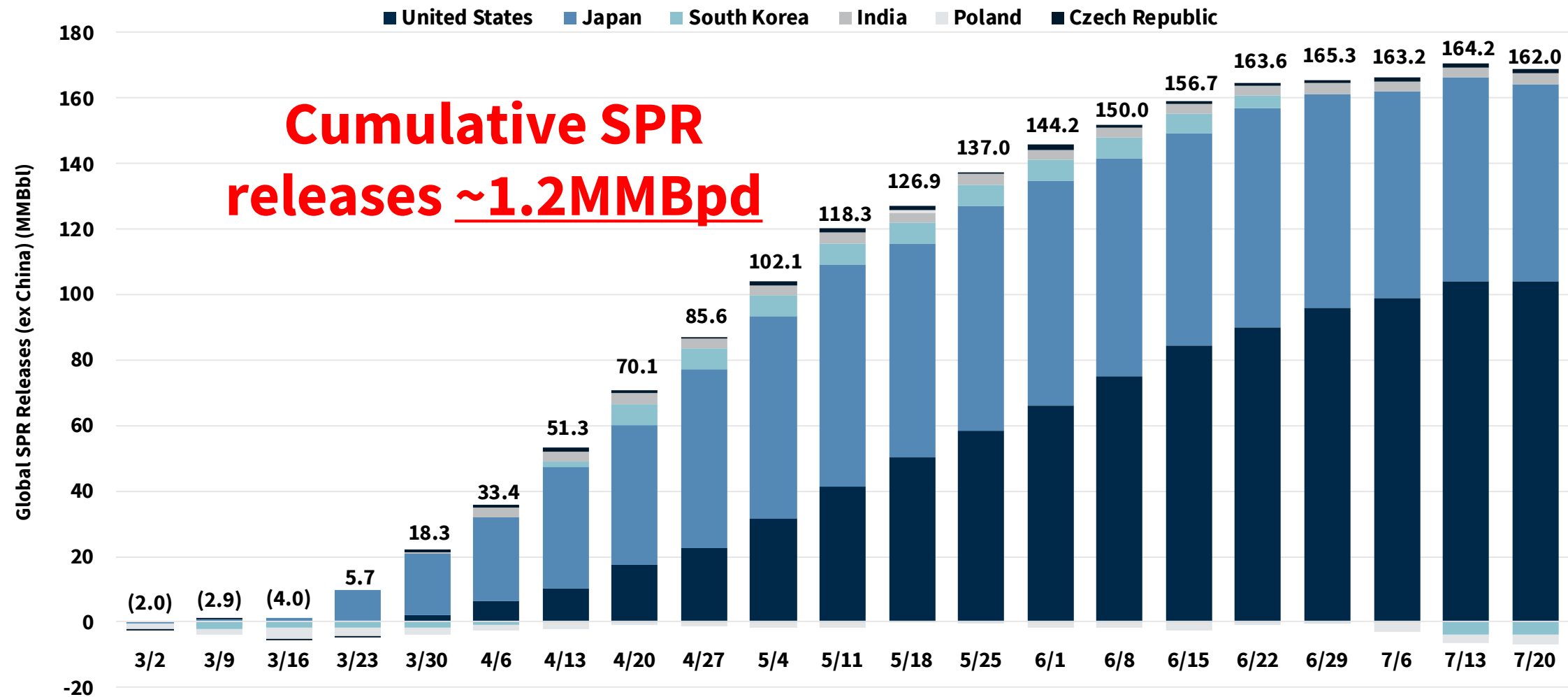
Source: Kpler.

Why Are Commercial Oil Inv. Not Falling?

1. **Buffers worked? There has been a temporary short-term crude supply surge from non-traditional sources (SPR, Russia, etc)**
2. **Demand for crude is down as global refinery outages & reductions have exploded (note: this is NOT price driven consumer demand destruction)**

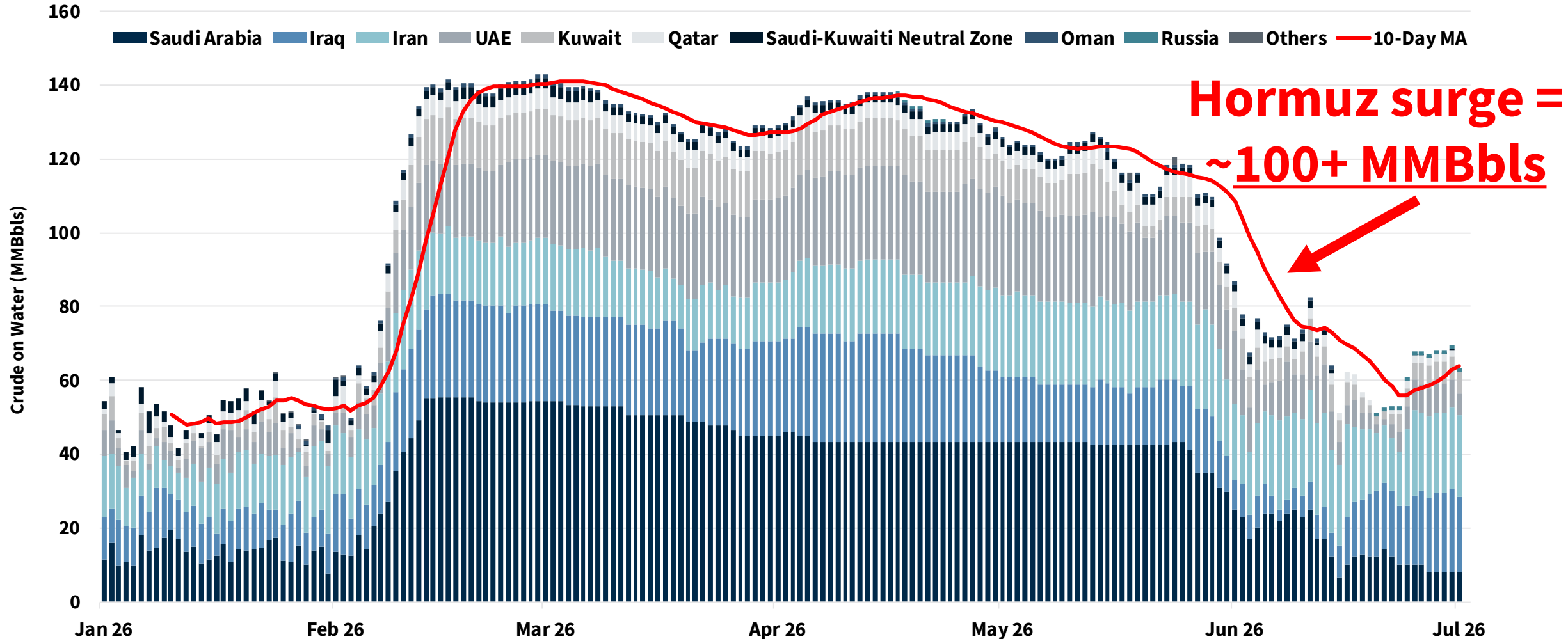
Oil Supply Surge Starts With SPR Releases

Cumulative SPR Releases (ex China)



Then, 100+ MMBbl Slug From Hormuz Hits

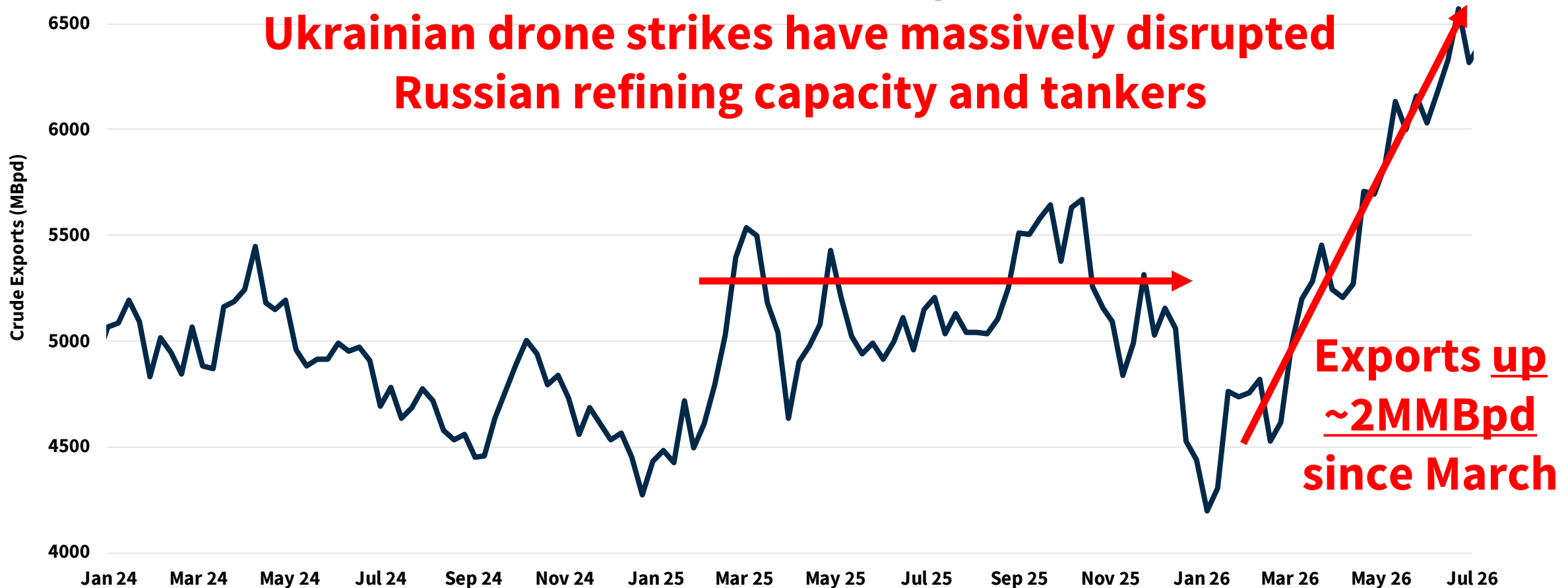
Mideast Gulf Daily Crude-on-Water (MMBbls)



Russian Oil Surged As Refineries Damaged

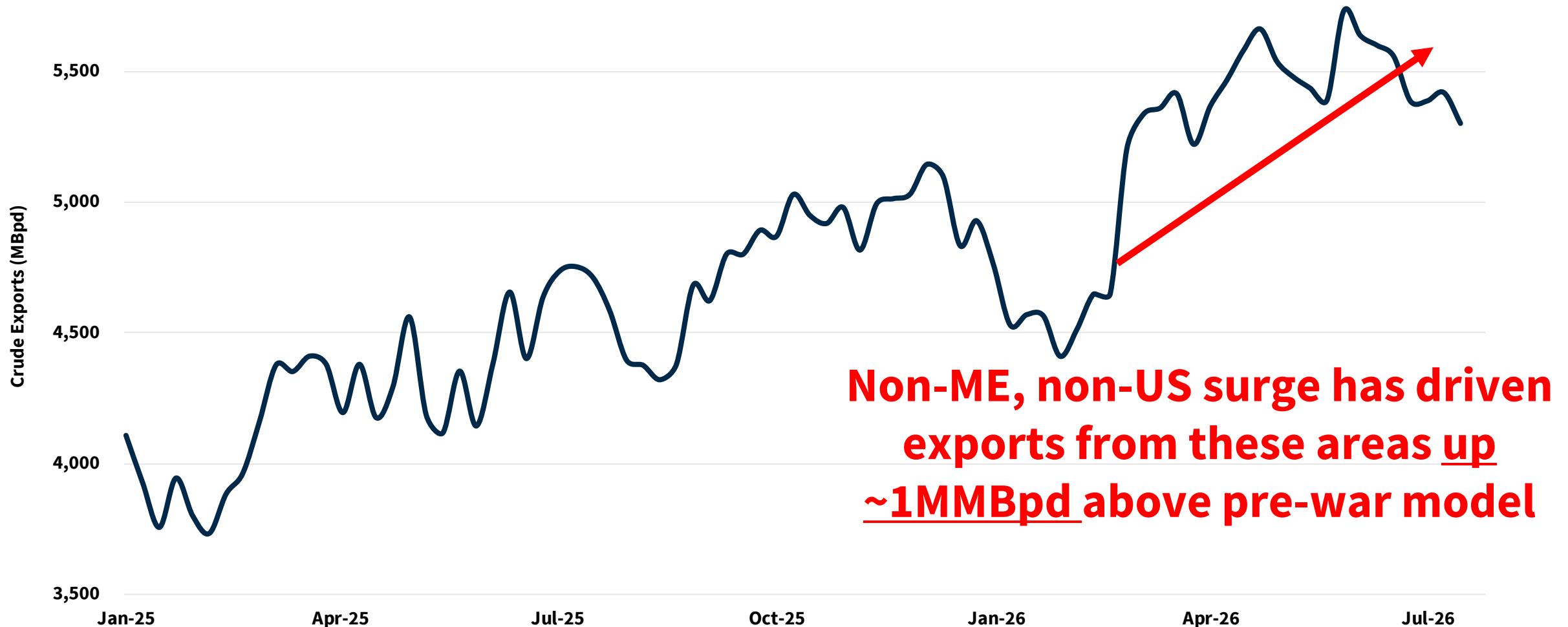
1-Month Moving Average Russian Exports of Crude Oil (MBpd)

Russian Crude exports have surged up ~2MMBpd as Ukrainian drone strikes have massively disrupted Russian refining capacity and tankers



And Non-ME Surge Showing Up In Exports

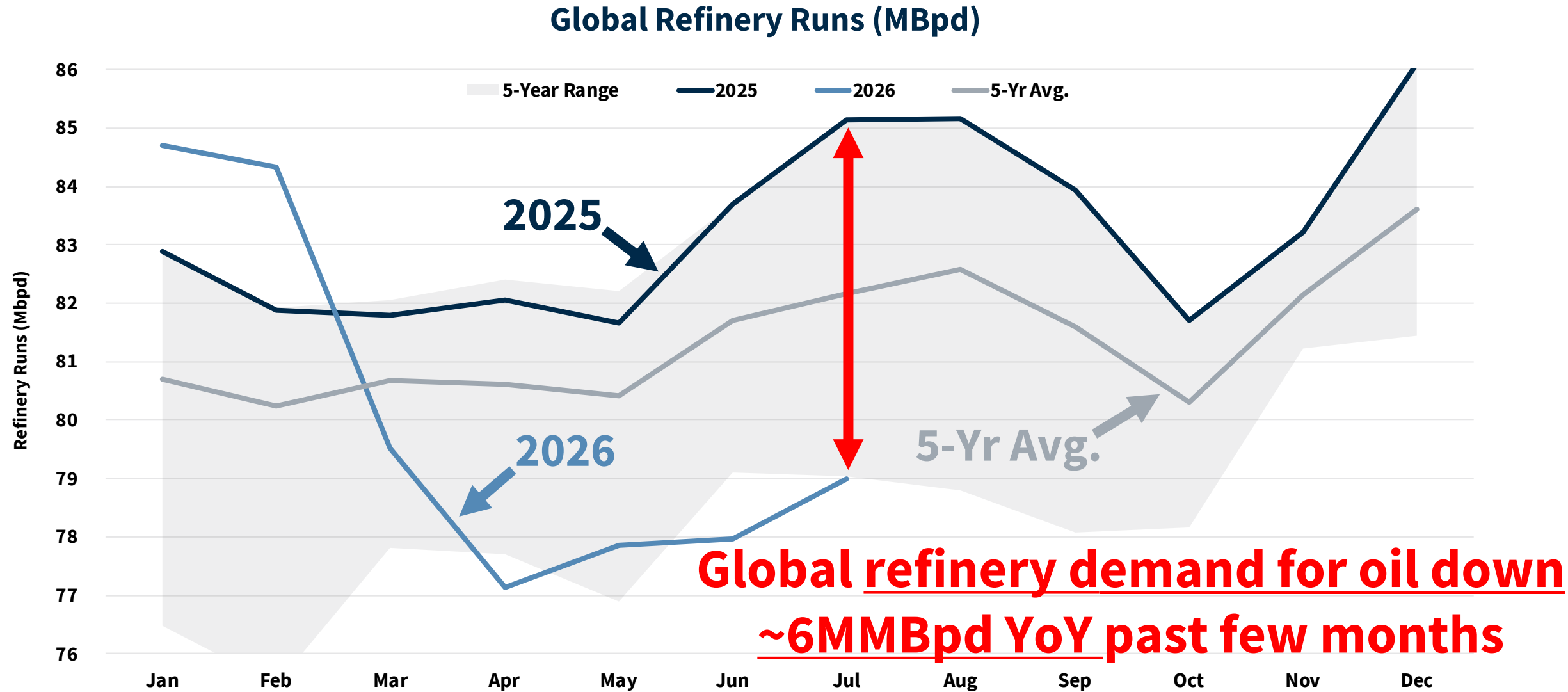
1-Month Moving Average Non-Russia, Non-ME, Non-U.S. Crude Exports (MBpd)



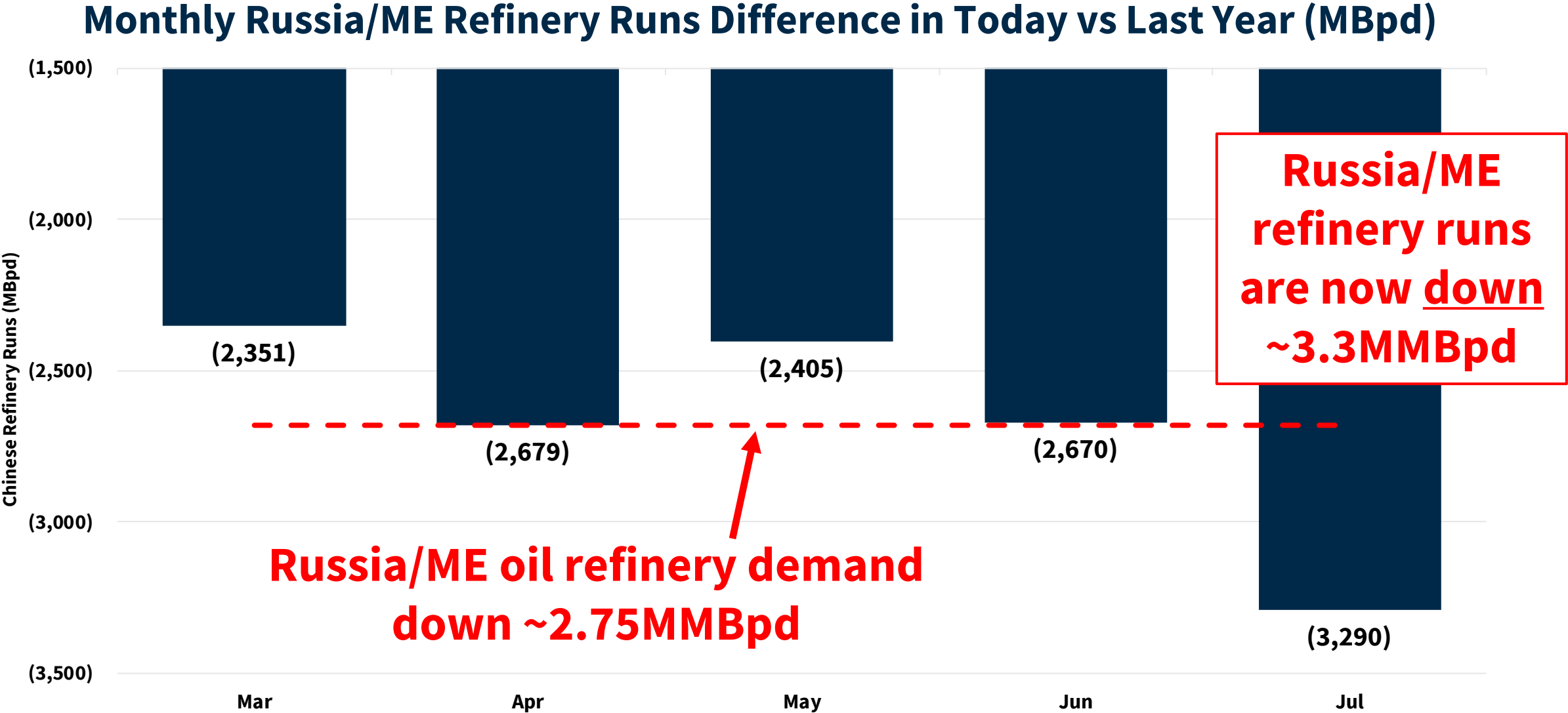
Refinery Closures = Lower Crude Demand

- Remember, **refinery runs drive oil demand**
- And, YoY **refinery runs are currently DOWN ~6+MMBpd**
- Refinery losses big from China, Middle East, & Russia
- Importantly, product demand is healthy while crude demand is depressed due to unplanned refinery outages
- **Ironically, there is a product shortage & crude surplus**

YoY Refinery Runs Down Huge In June/July

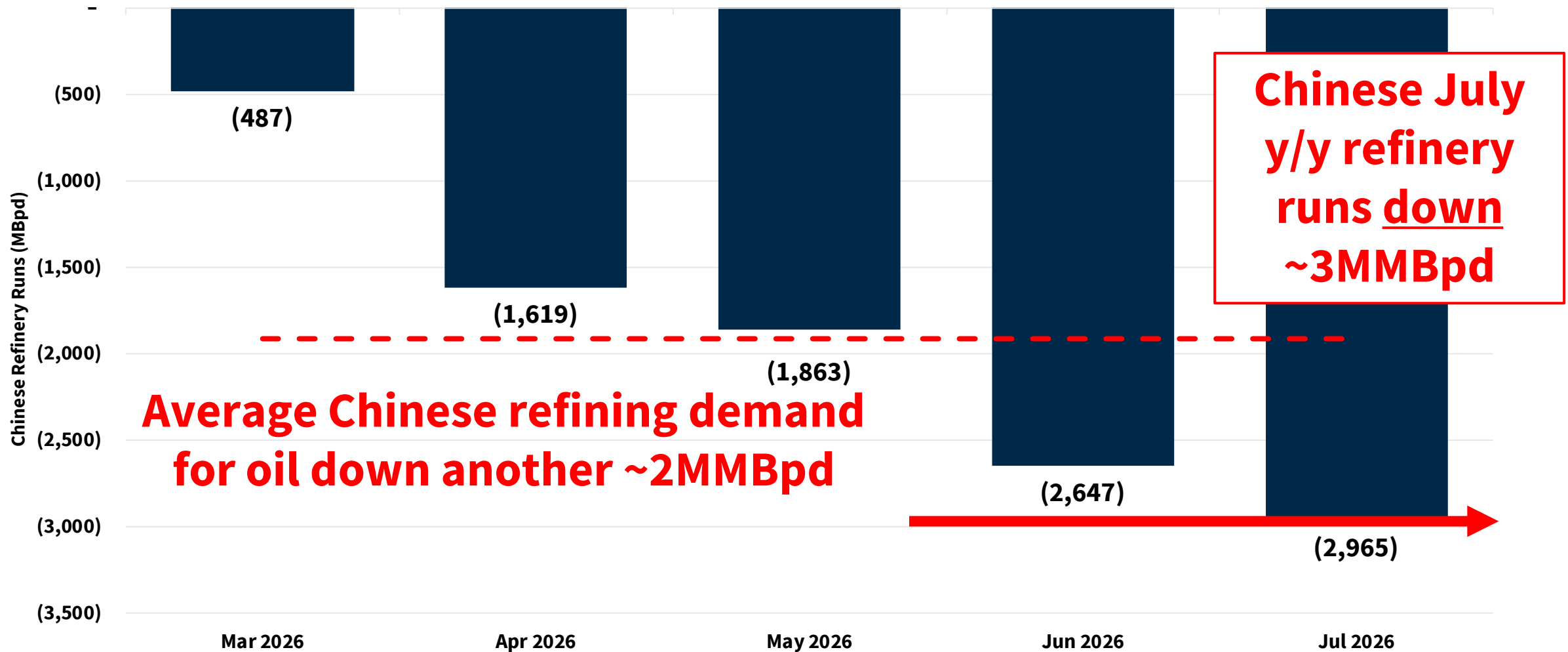


Total Russia/ME Runs Down ~3+ MMBpd

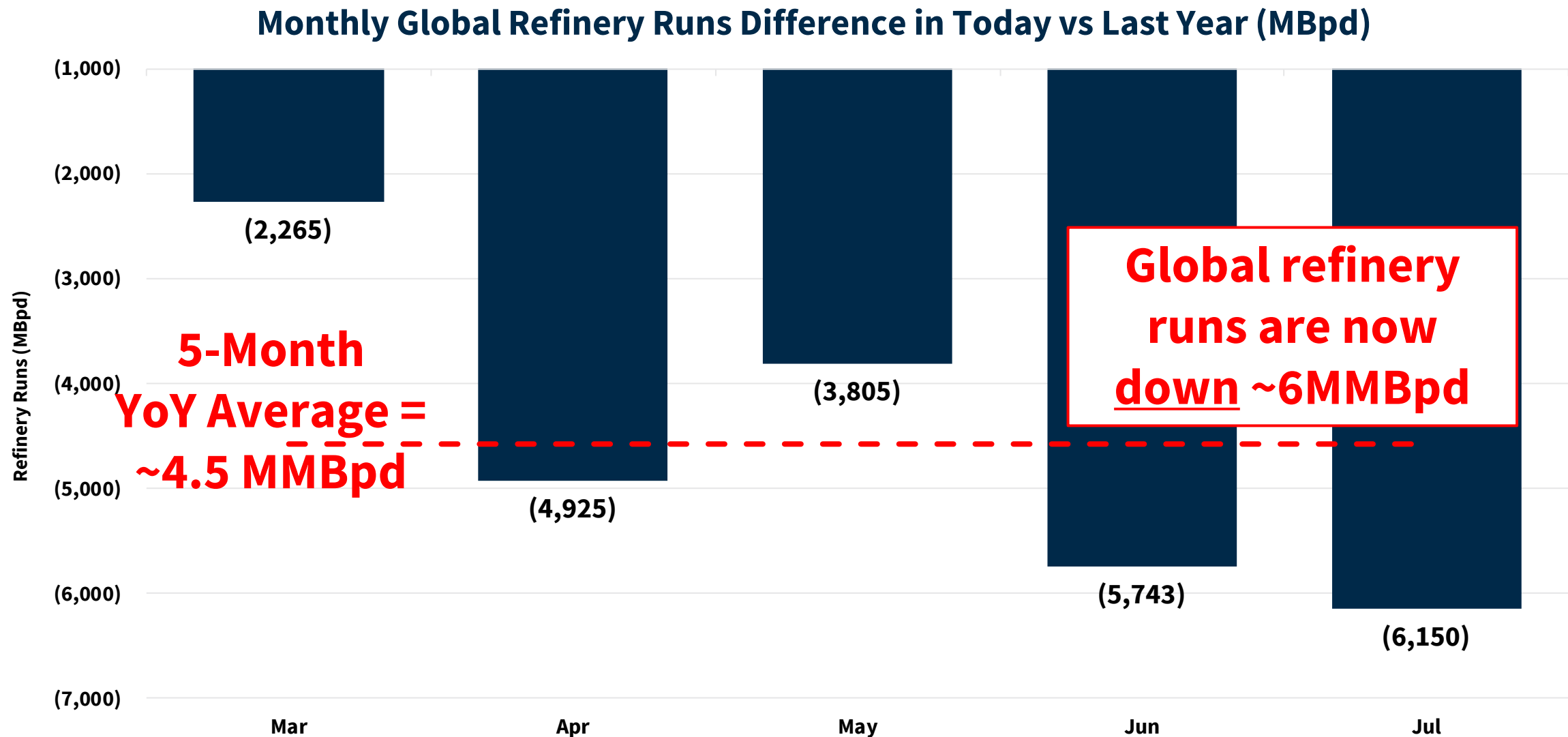


China Has Also Cut Runs ~3 MMBpd

Monthly Chinese Refinery Runs Difference in Today vs Last Year (MBpd)



Refinery Runs Down More Than Crude Loss



Rehash- Why Are Crude Prices Not Up?

- **System shortage 4-5 MMBpd vs ~10 MMBpd in outages**
- **Refinery runs in June/July were DOWN ~6+MMBpd just as temporary crude surge flooded the crude market.**
- **Thus, June/July oil supply actually exceeded demand**
- **So, 5 MMBpd shortfall showing up in products vs crude**
- **Importantly, oil problem has NOT been solved – it is only showing up in product prices vs crude prices, so far.....**

The Growing Problem Is Very Visible!

Oil **Products** On-Water Inventories (MMBbl)



Surging Refining Margins Show Bottleneck

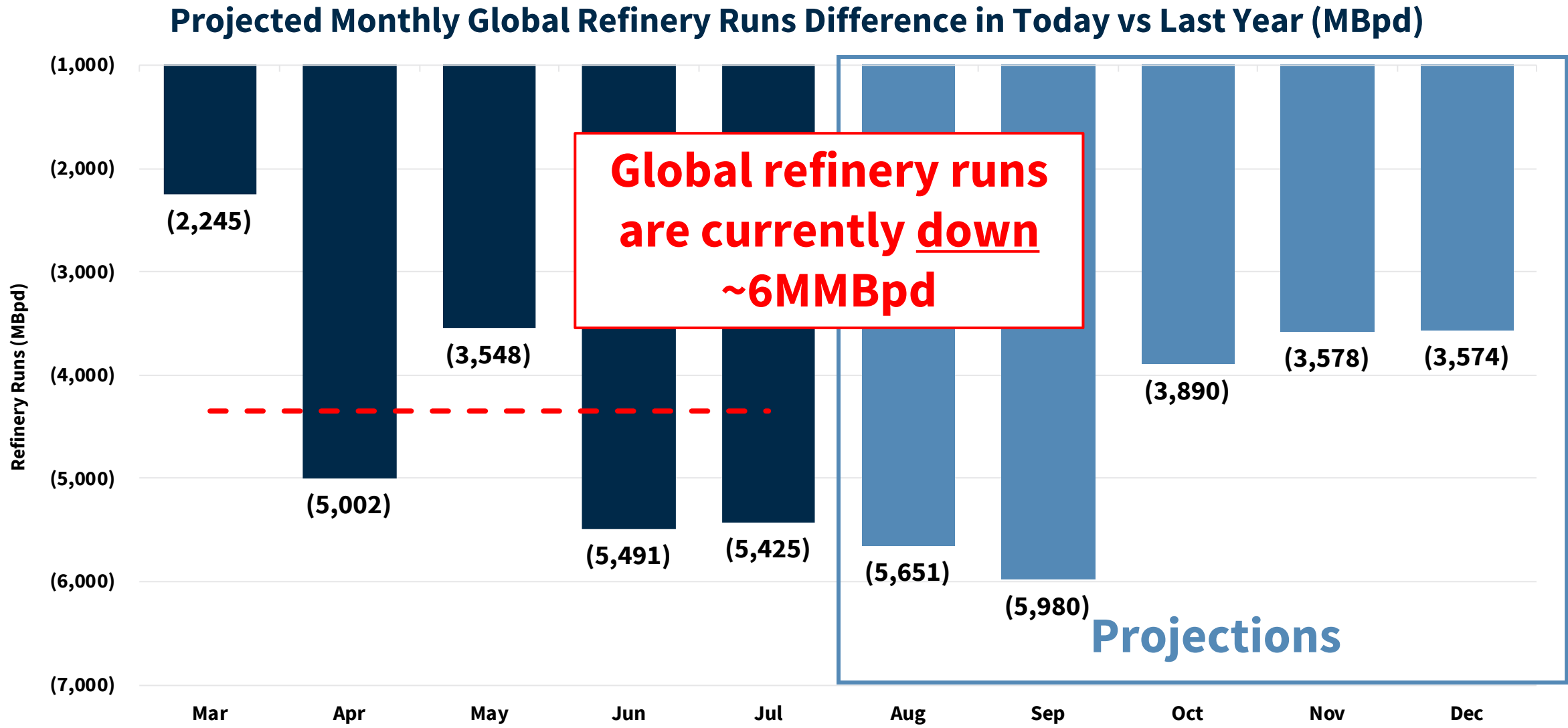
WTI 1 Month 3-2-1 Crack Spread (\$/Bbl)



Question: When will the refining problem be fixed & what will that mean for cracks and oil prices?

Is China all that matters?

Kpler Now Expects Future Refinery Issues



Important: Is China Coming Back???

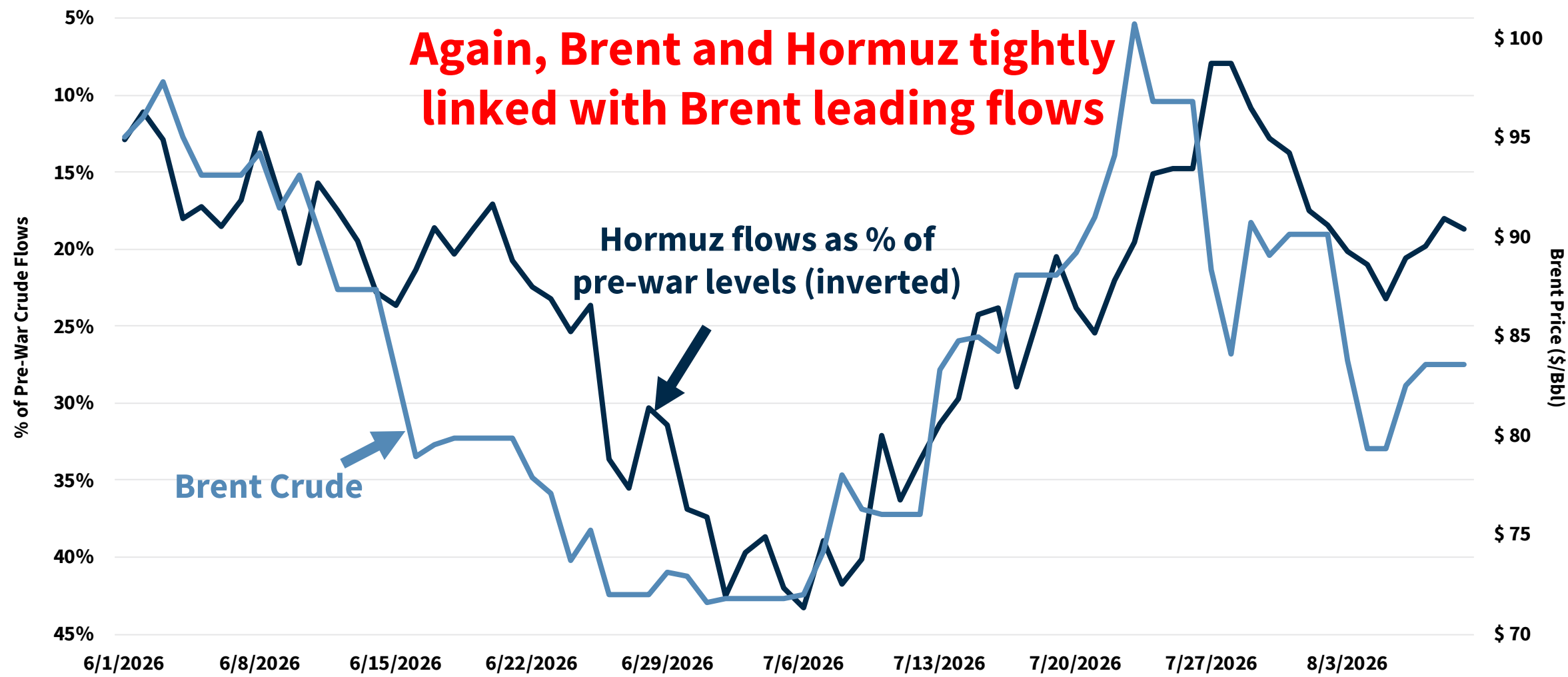
10 Day Moving Average Chinese Imports (MBpd)



It now looks like Chinese oil imports are UP ~2MMBpd over the past few weeks but is this just temporary as Hormuz surge is digested?

Are Hormuz Flows All That Matter?

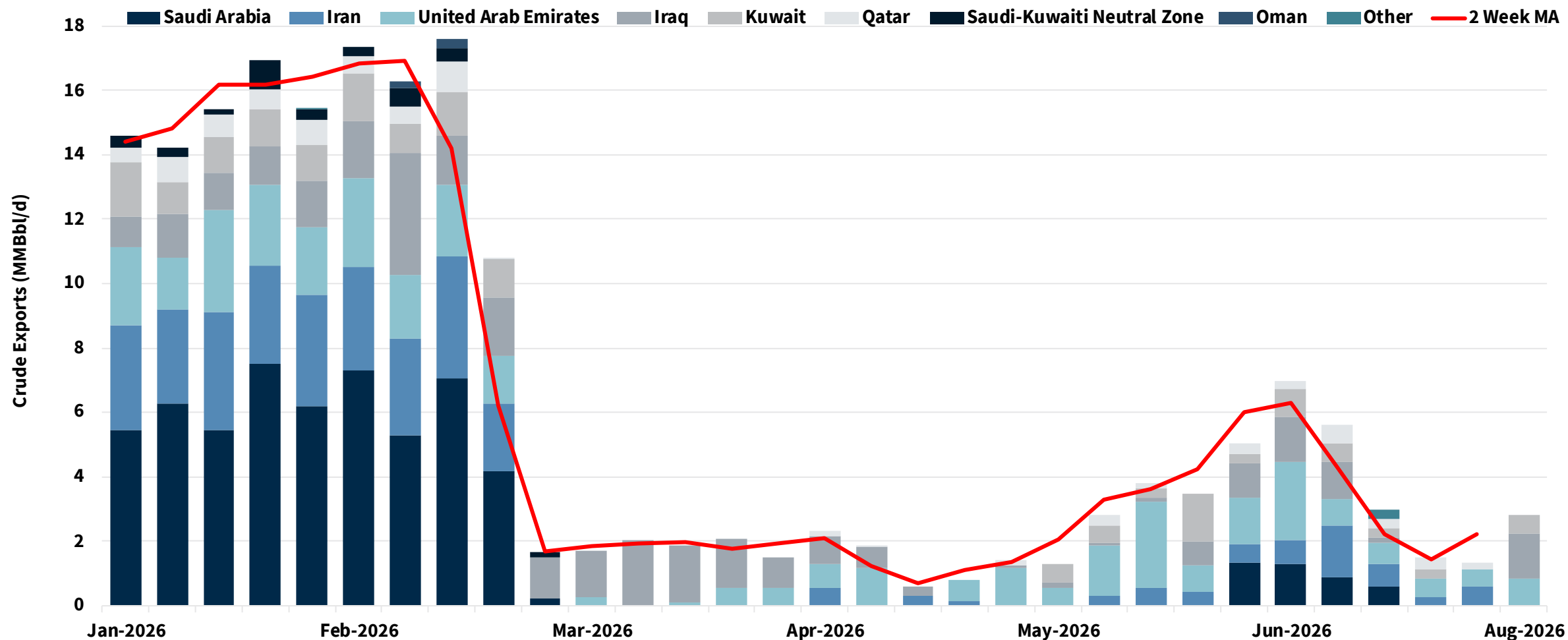
Brent Crude Price vs. Mideast Gulf Exports (Inverted)



First, Let's Level-set The Oil Supply Situation In The Middle East

Hormuz Oil Flows Now ~19% of Pre-war

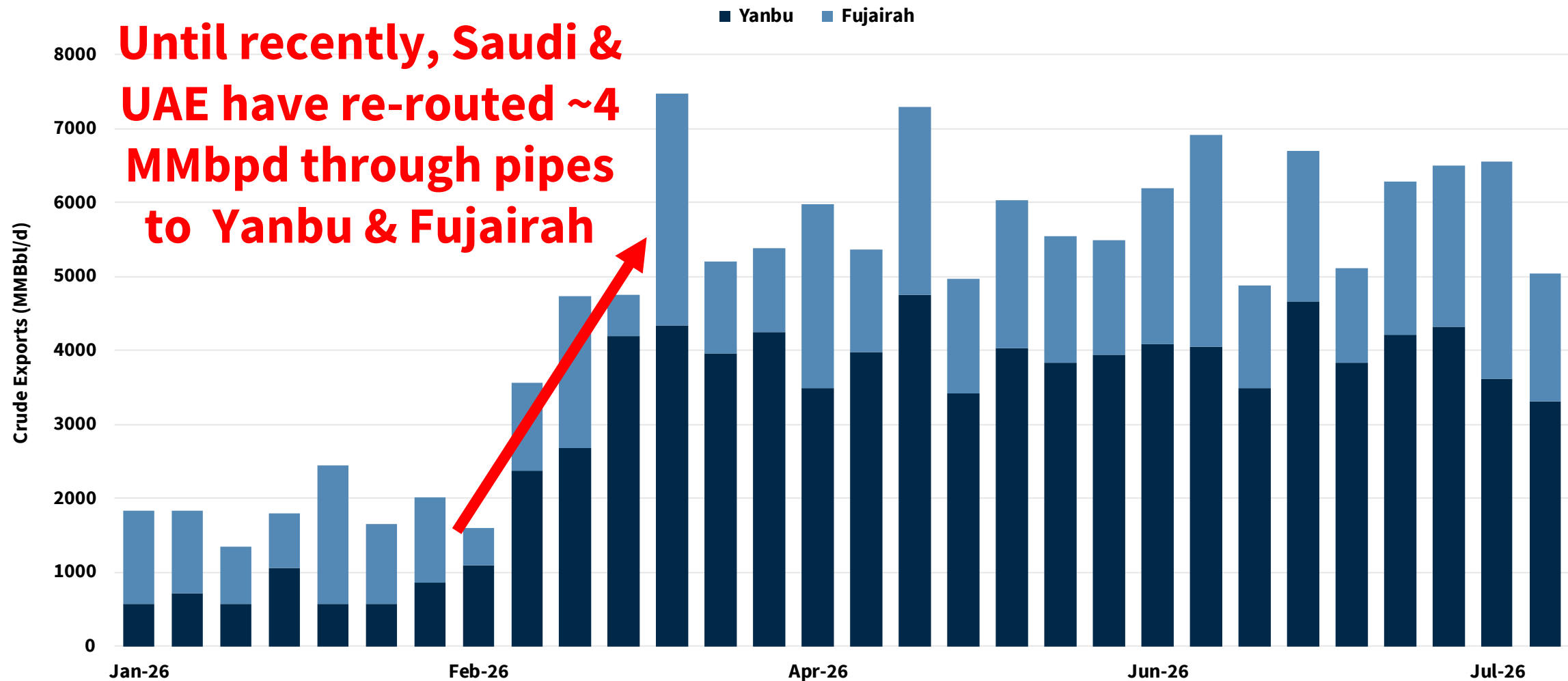
Strait of Hormuz Weekly Crude Exports (MMBbl/d)



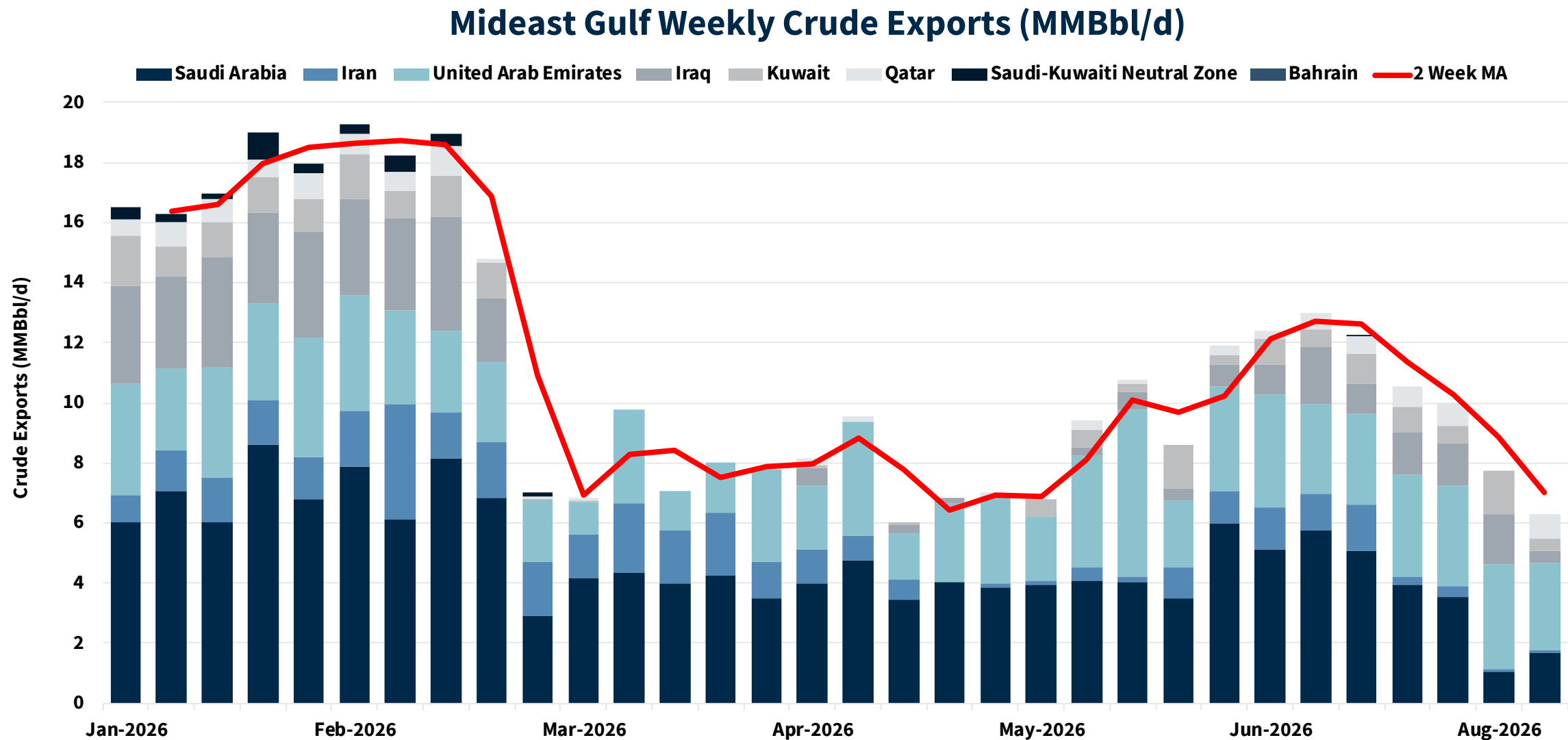
Source: Kpler.

But, ~4MMBpd Of Hormuz Re-routed

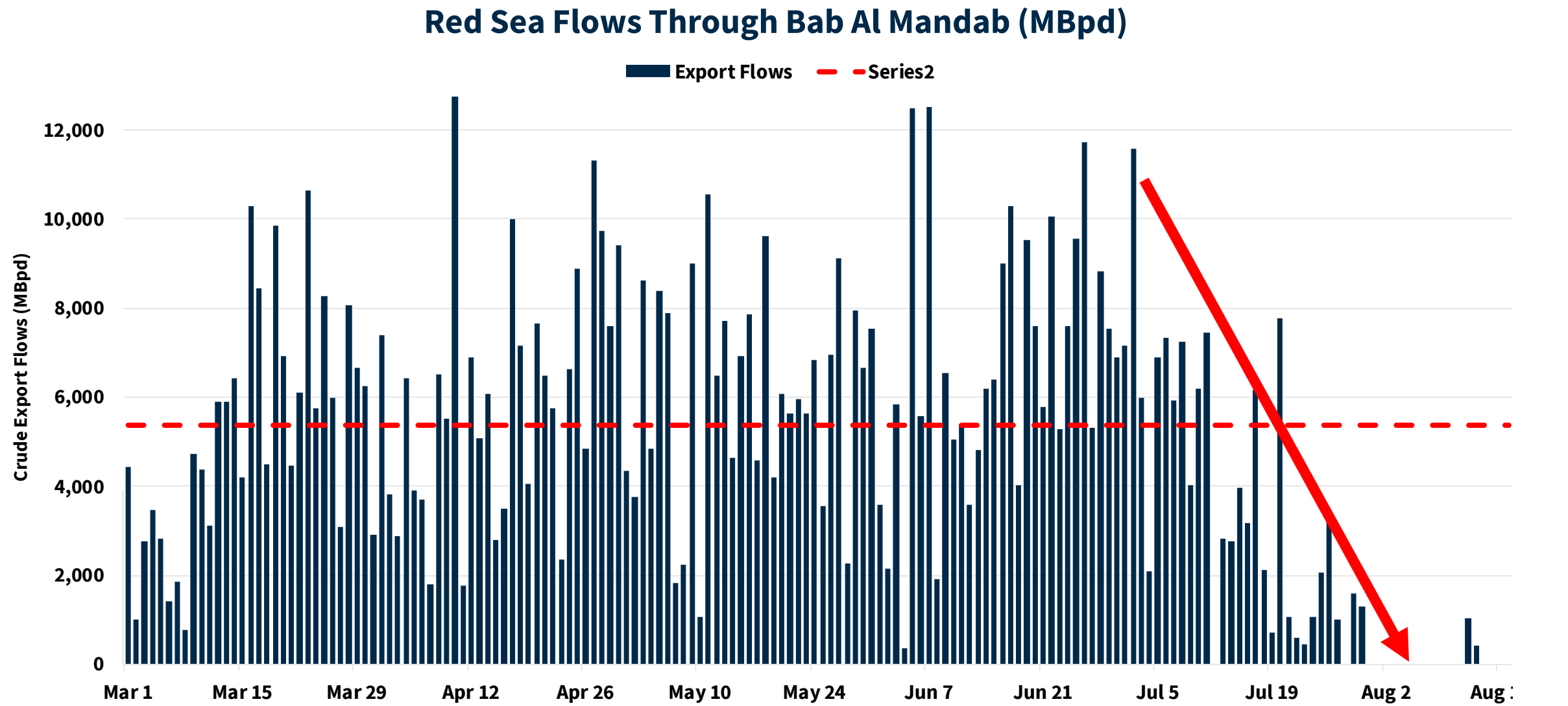
Daily Crude Exports From Yanbu & Fujairah (MMBbl/d)



Total ME Flows Now Down ~8 MMBpd



Are Bab Al Mandab Flows Now At Risk?

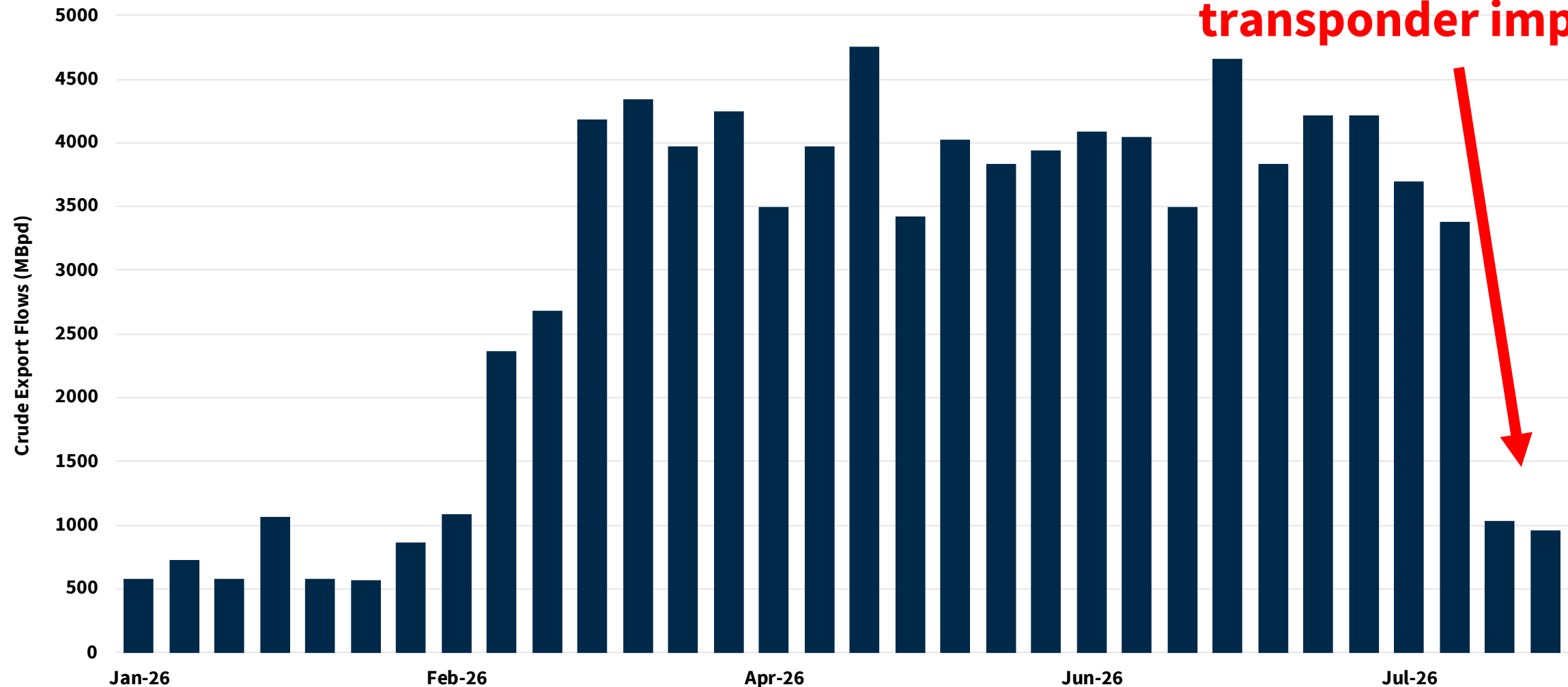


Source: Kpler.

And, Yanbu Loadings Have Collapsed?

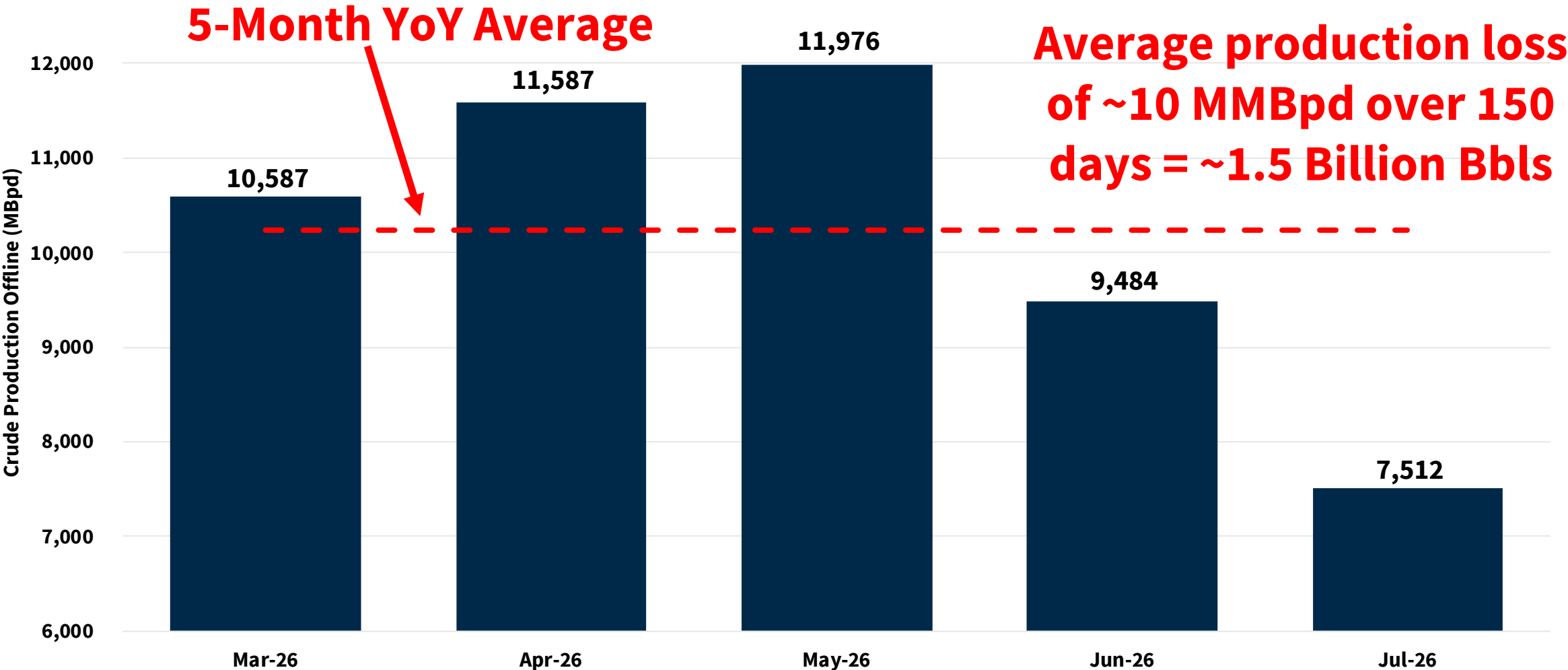
Yanbu (Saudi Red Sea) Loadings (MBpd)

Real reduction or just
transponder impact?



Baseline: ME Supply Avg. Down ~10MMbpd

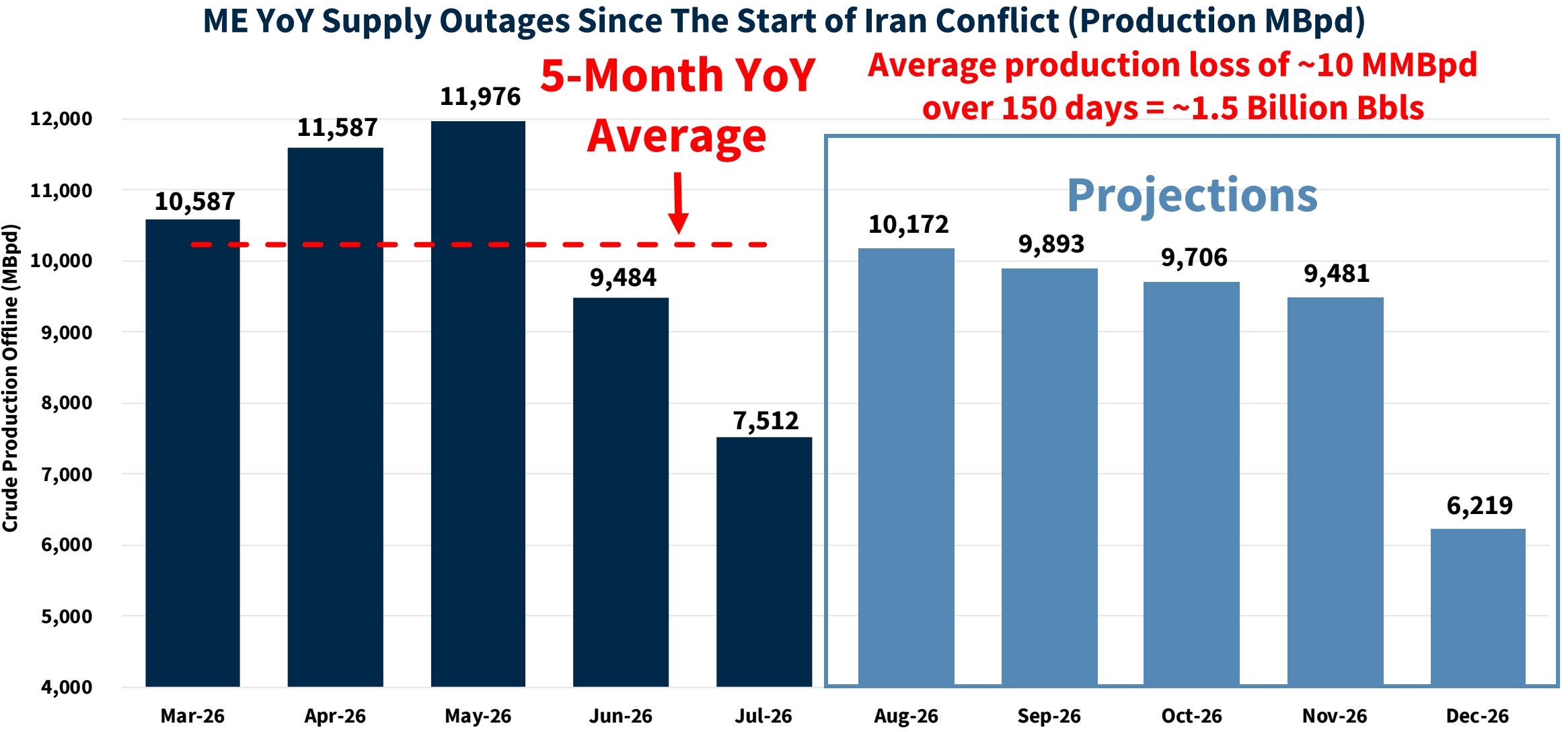
ME YoY Supply Outages Since The Start of Iran Conflict (Production MBpd)



How And When Will Supply Issue Be Fixed?

- **How will Hormuz & Bab al Mandab (BAM) play out?**
- **Magnitude of ME supply interruptions - for how long?**
- **What are the Hormuz workarounds and when?**
- **Russian supply outlook?**
- **Non OPEC supply outlook? US? Venezuela? Others?**
- **What is the future for OPEC?**
- **Are we headed toward a supply glut?**

Kpler Now Expects ME Outages To Continue



Where Am I Wrong?...

Why Is Partial L/T Re-opening More Likely?

- **Who controls Iran?: Pezeshkian vs Vahidi vs Paydari**
- **IRGC has weapons, is patient, doesn't care about people**
- **IRGC missiles/drones can still inflict big damage**
- **Iran now controls Hormuz and it will be VERY difficult and costly (troops, time, & money) to change that.**
- **Iran has a much stronger negotiating position vs U.S.**
- **History: 1) no capitulations & 2) drawn out negotiations**

How About The Timing Of A FULL Re-open?

- If Iran wins, I doubt we ever get to a “FULL” re-open
- **Iran likely slows permanent throughput by 50-80%**
- Thus, ME flows likely reduced by 3-8 MMBpd for 2 yrs
- The threat of ongoing attacks triggers L/T oil re-rating
- **Workarounds will emerge over the next 2 years, reducing impact of this power grab**

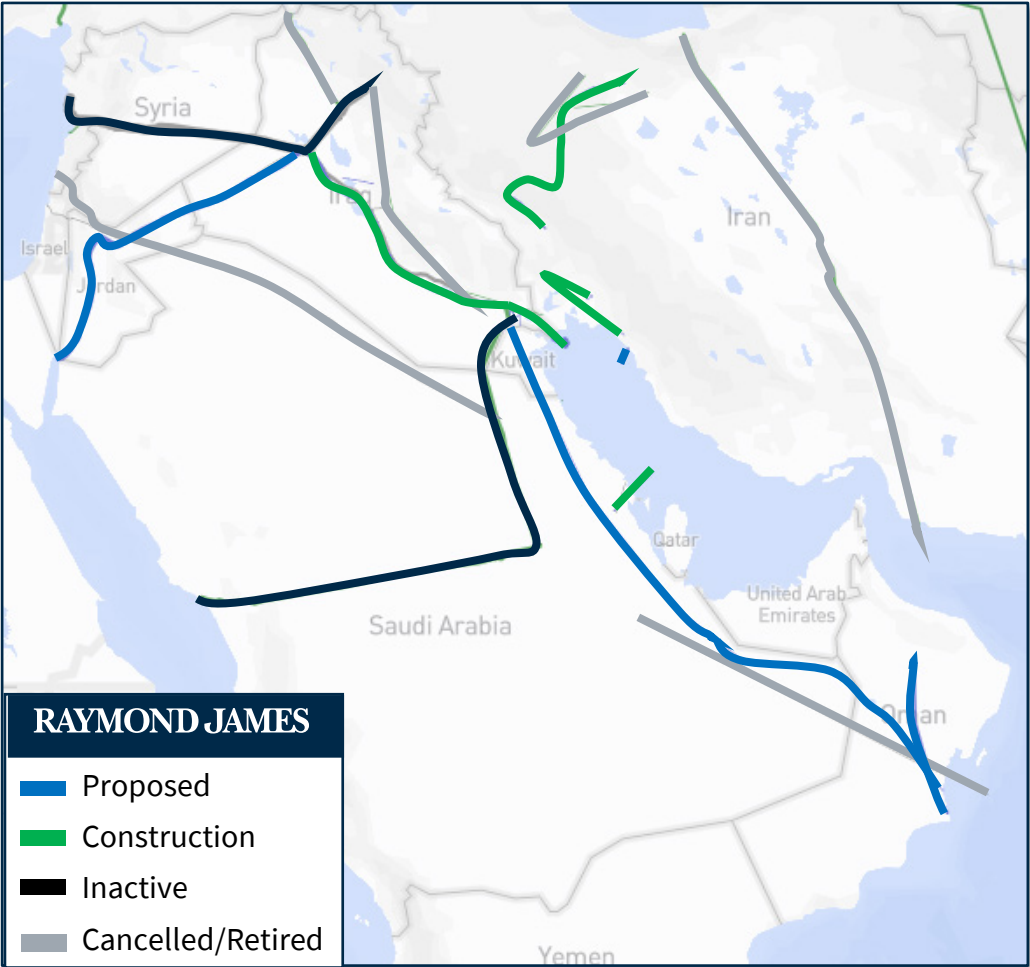
When Are Hormuz Workarounds Available?

Potential Pipeline Outlets For The Middle East

Operating



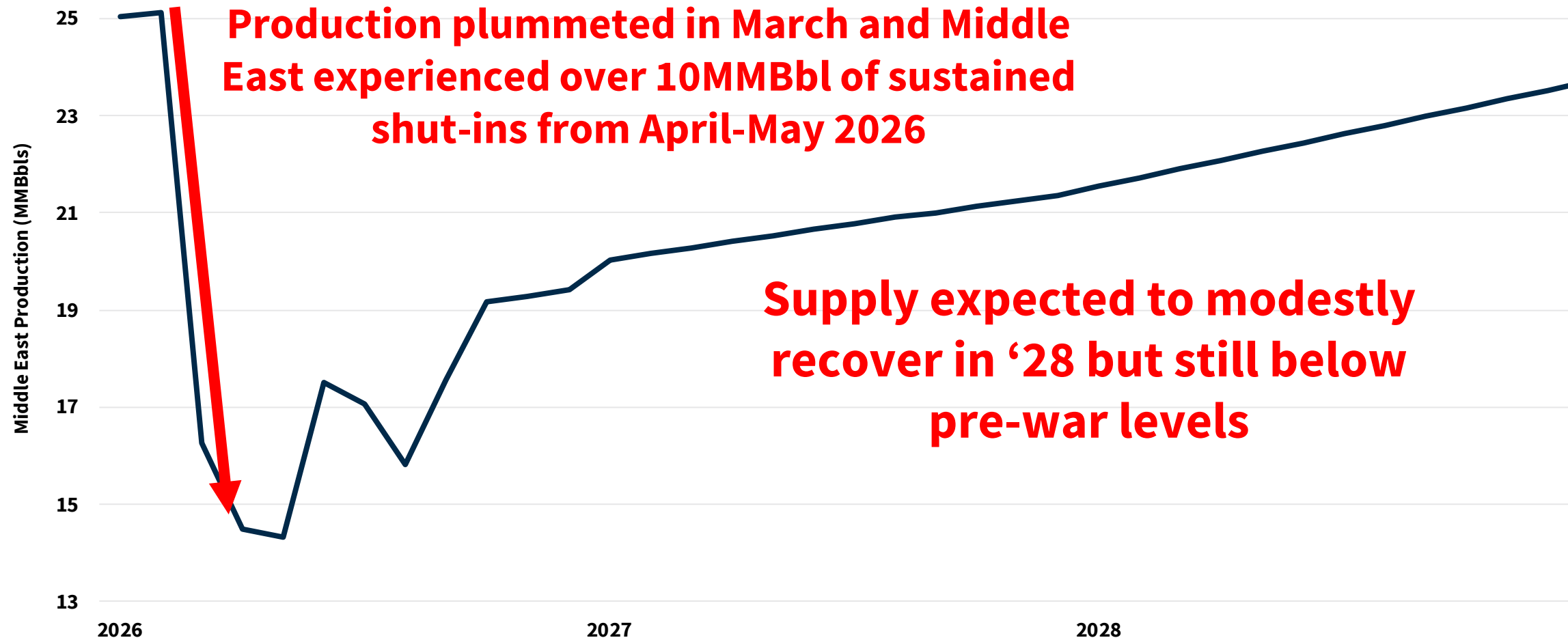
Proposed / Under Construction



Source: Global Energy Monitor.

What Am I Assuming For Future ME Supply?

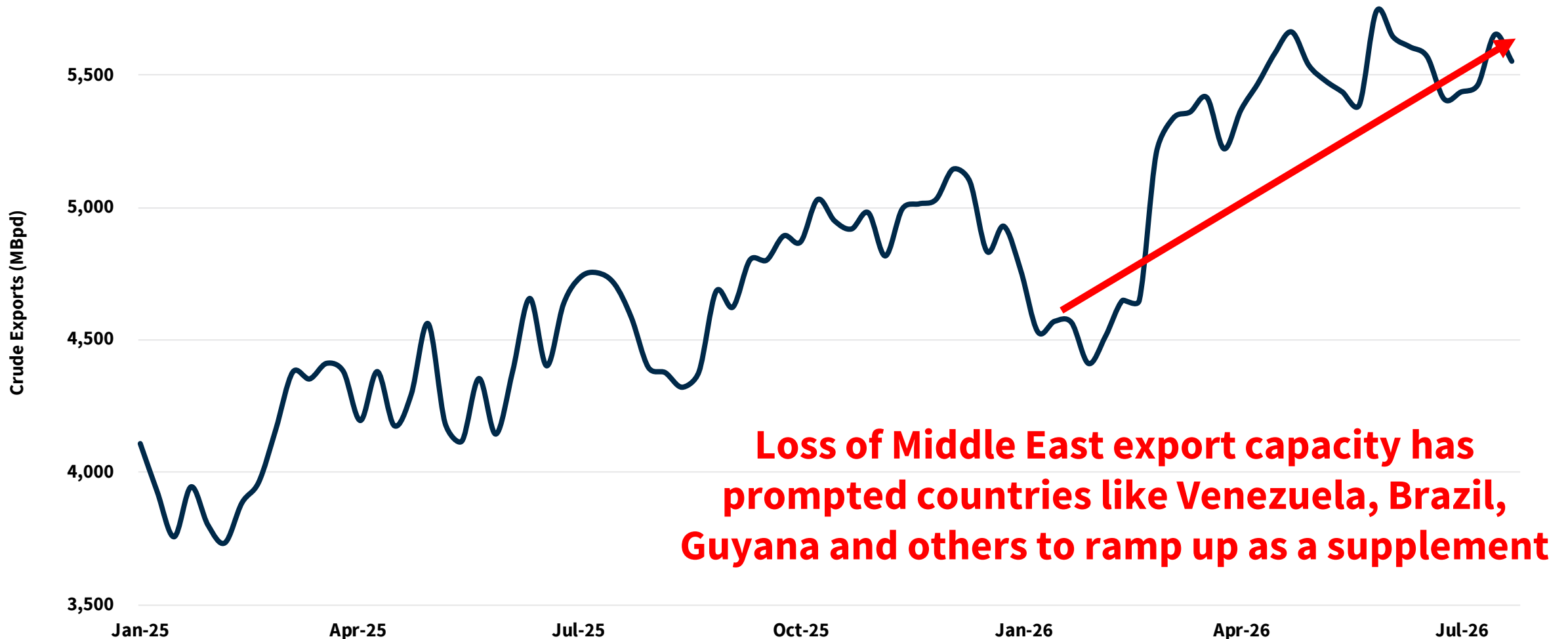
Estimated Oil Production From The Middle East



Source: IEA, Kpler and Raymond James estimates.

How Much Can Other Non ME Areas Grow?

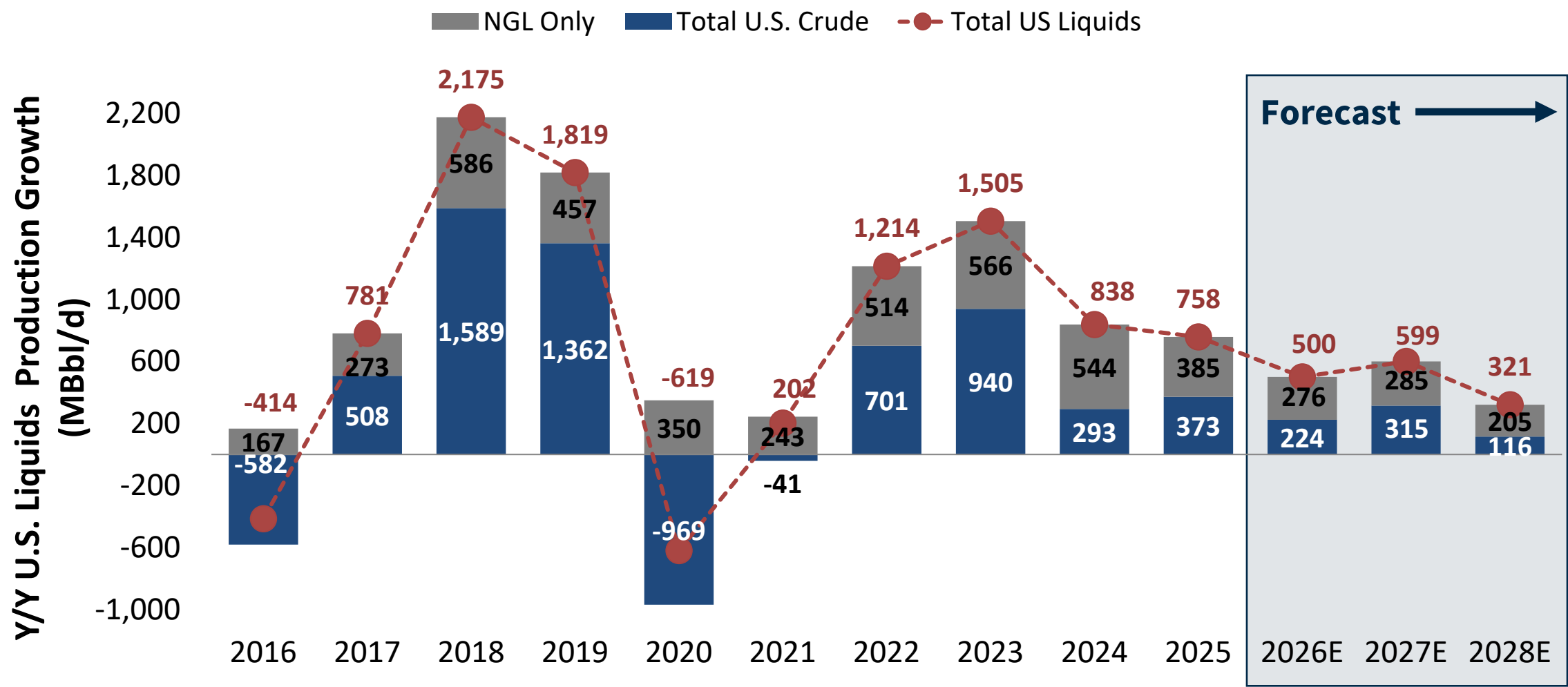
1-Month Average Crude Exports From Non-ME, Non-US producers (MBpd)



Loss of Middle East export capacity has prompted countries like Venezuela, Brazil, Guyana and others to ramp up as a supplement

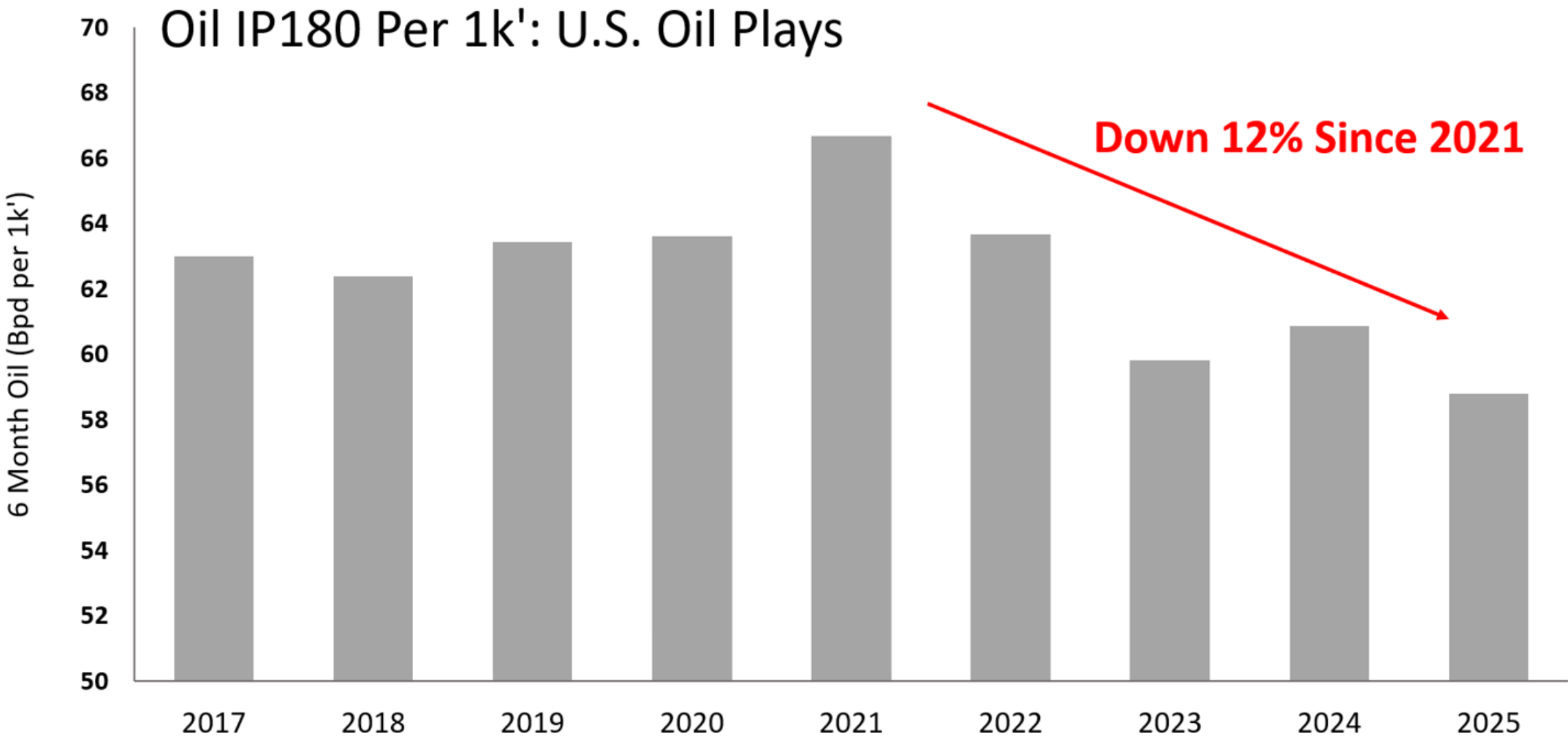
US Crude Growth ~.25MBpd Thru 2028

Supply From US Producers



Source: EIA, Enverus, Raymond James research.

Lower Quality Rock Hurting



Source: Enverus, Raymond James research.

Where Is Non-ME Growth Thru 2030?

Est. 1 yr. Supply Growth in Non-U.S., Non-OPEC Countries (MBpd)

Country	Current Prod.	Est. 2027 Growth	Est. 2030 Prod.
Guyana	900	200	1,500
Brazil	4,500	150	4,750
Canada	6,400	150	7,000
Non-Russia CIS	2,750	0	2,750
Argentina	1,050	100	1,500
Colombia	740	0	750
China	4,470	30	4,750
Russia	10,000	-50	10,000
Mexico	1,790	-150	1,500
“Other” Declines	11,000	0	10,500
TOTAL Non-U.S., Non-OPEC	43,600	400	45,000

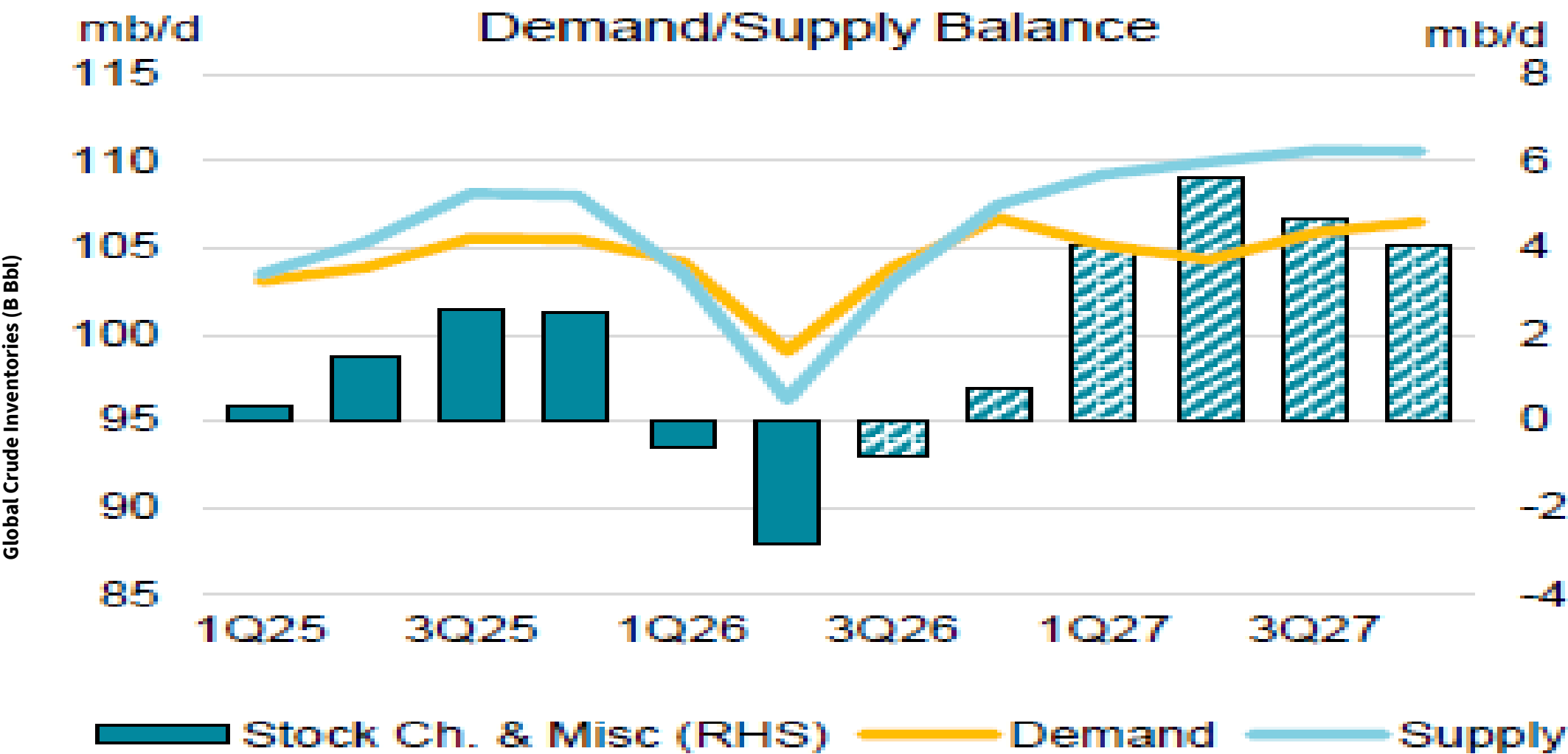
Big adds

Where Could We Be Wrong On Oil Equation?

- Obviously, ME situation very dynamic & unpredictable
 - Could this get worse – damage to other ME infrastructure
 - Will Iranian and Ukrainian success embolden others to disrupt flows?
- What is our confidence in oil supply/demand data?
 - Are the lost supply numbers right (or is more getting out)?
 - Is there more true price driven demand destruction?
 - Are Chinese import numbers and satellite data accurate?
- What will China do? – start refineries/imports or draw?
- Will products (refiners) capture price over crude?

Question: What Does This All Mean For Oil Balances In 2027 And Beyond?

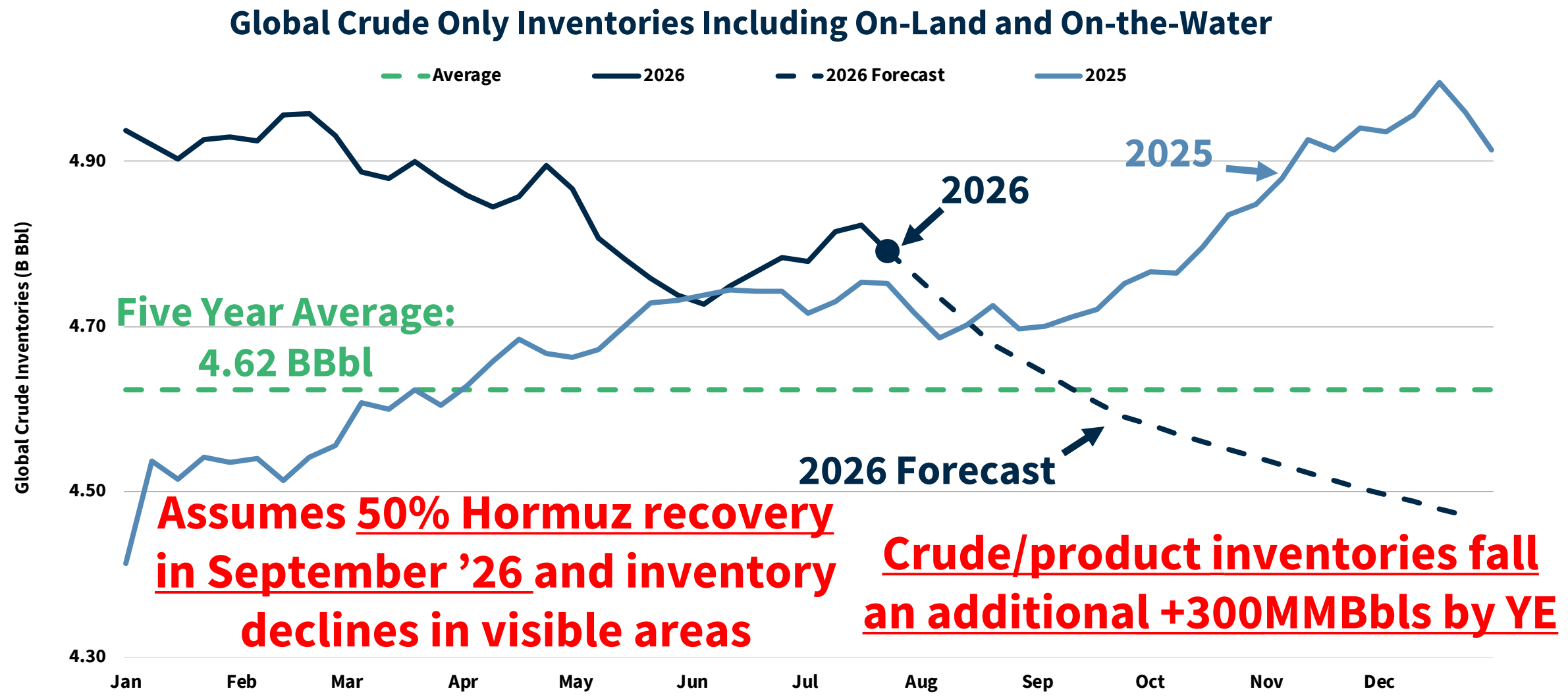
Both IEA & EIA Showing Big Builds



My Model: Partial Re-opening Sep 1, 2026

- First, market discounting full YE re-open (**very unlikely**)
- My **optimistic** “base case” has partial re-open Sep 1, '26
- ME “shut-ins” rebound to ~5 MMBpd by Oct
- *At current oil strip prices (YE26 WTI = ~\$75/bbl).....*
- YE26 inventories fall to ~1.3 Billion bbls below “normal”
- **Oil/product prices must rise to induce less demand**

My Base: Hormuz Flow Up 50% In Sep '26



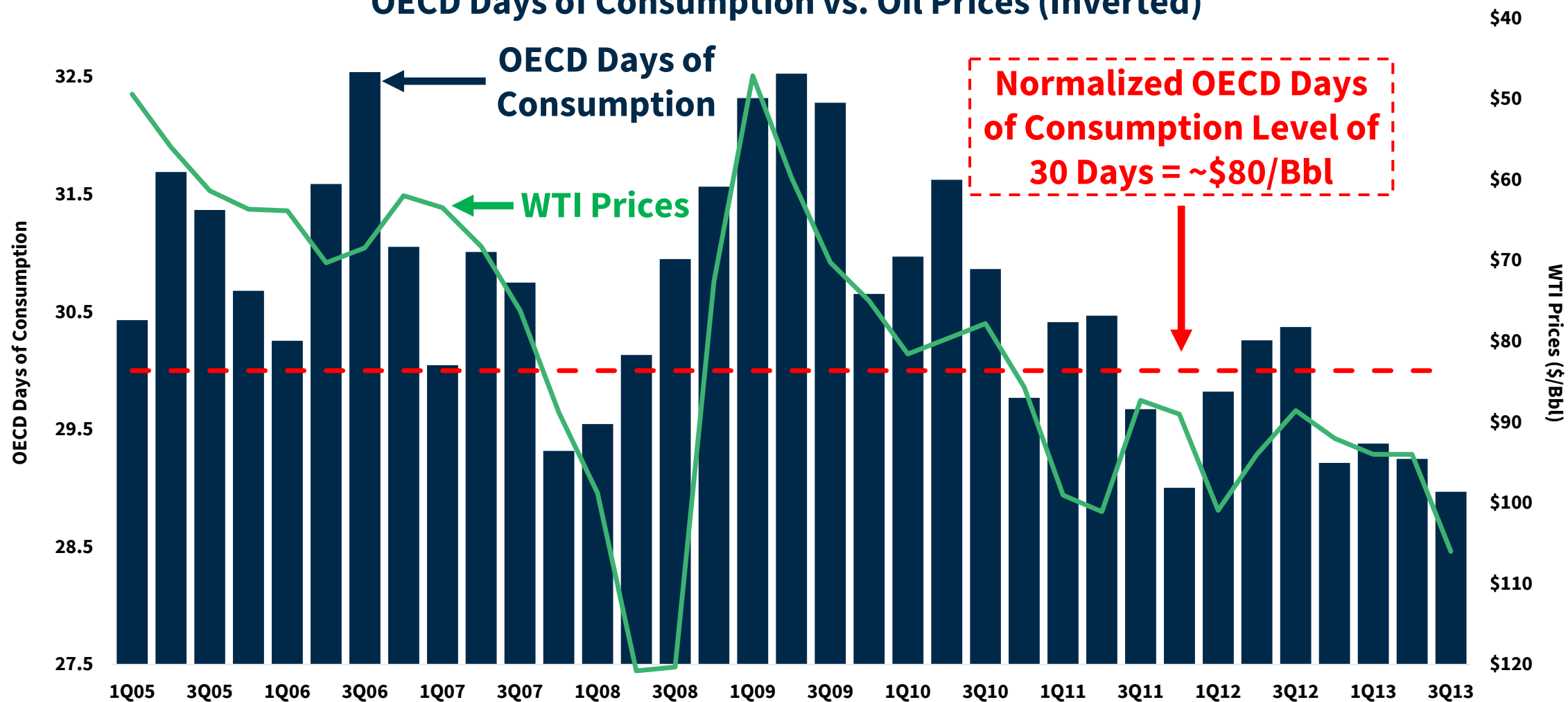
Source: Kpler and Raymond James estimates.

What Will Drive Oil Prices?

- Inventories matter & **commercial inv. matter most**
- Historically, it is VERY hard to drive oil demand down
- Inflation adjusted prices are the best place to start
- This time, **refining margins REALLY matter**
- If 6MMBpd of oil/products remain off-line, we will need to **eventually** reduce oil demand by over 5%
- System constraints should show in next few months

Inventories Drive Prices (2005-2013)

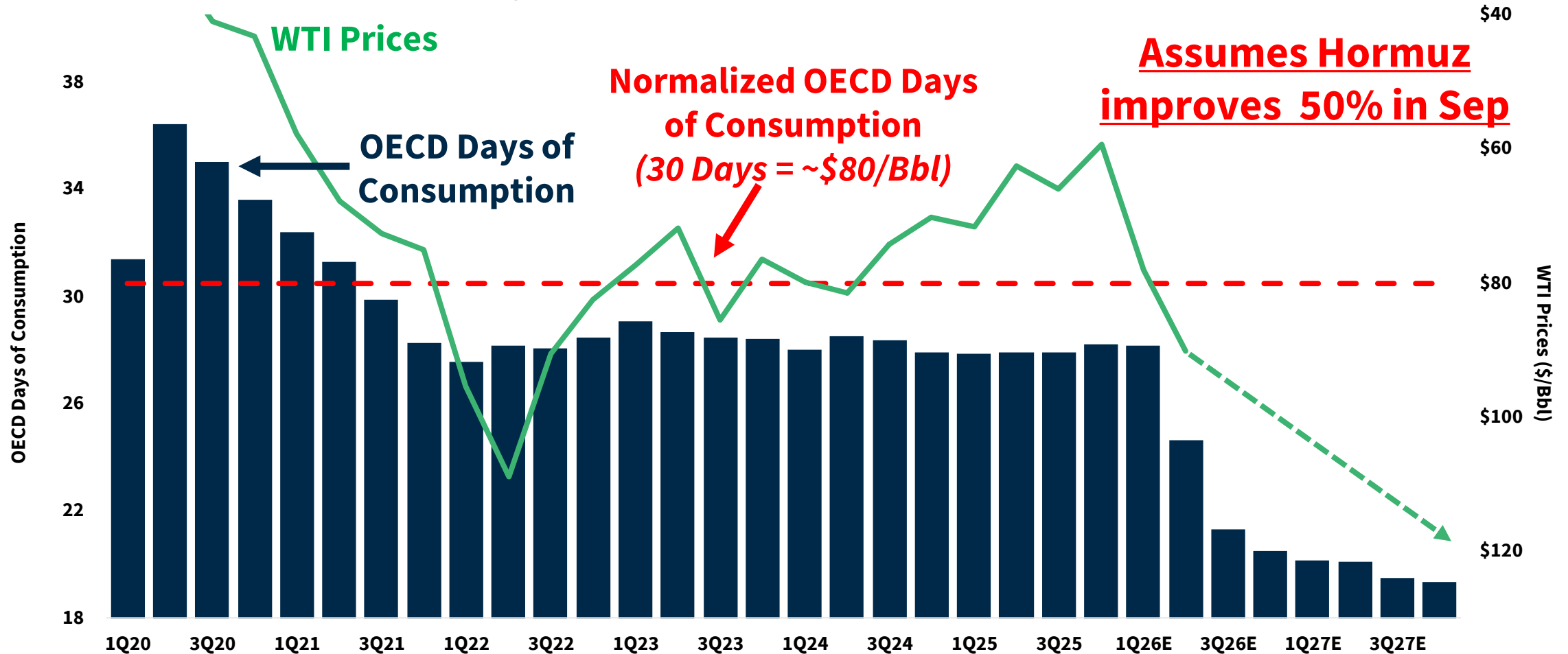
OECD Days of Consumption vs. Oil Prices (Inverted)



Source: IEA and FactSet.
Note: Assumes one-half of expected global inventory build goes to OECD inventories.

Prolonged Outages Will Magnify Concern

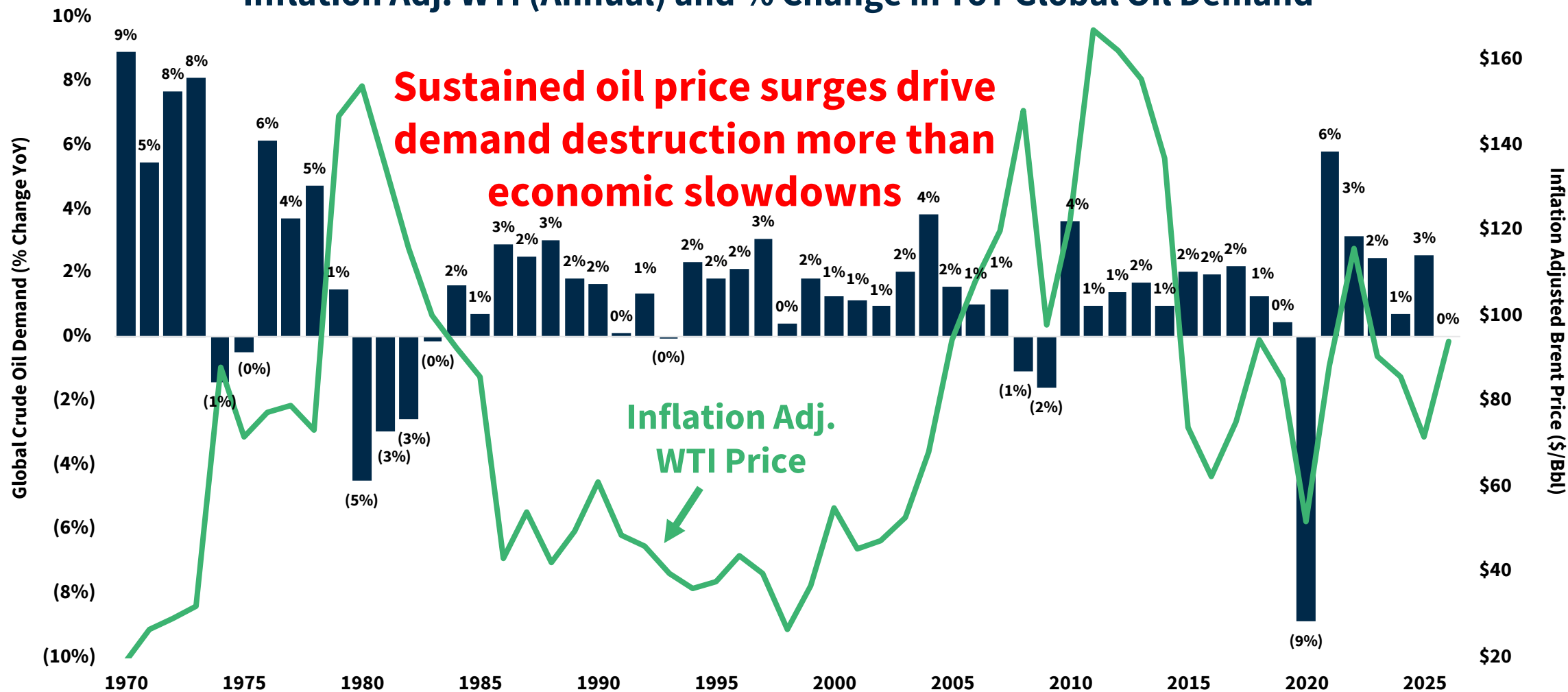
OECD Days of Consumption vs. Oil Prices (Inverted)



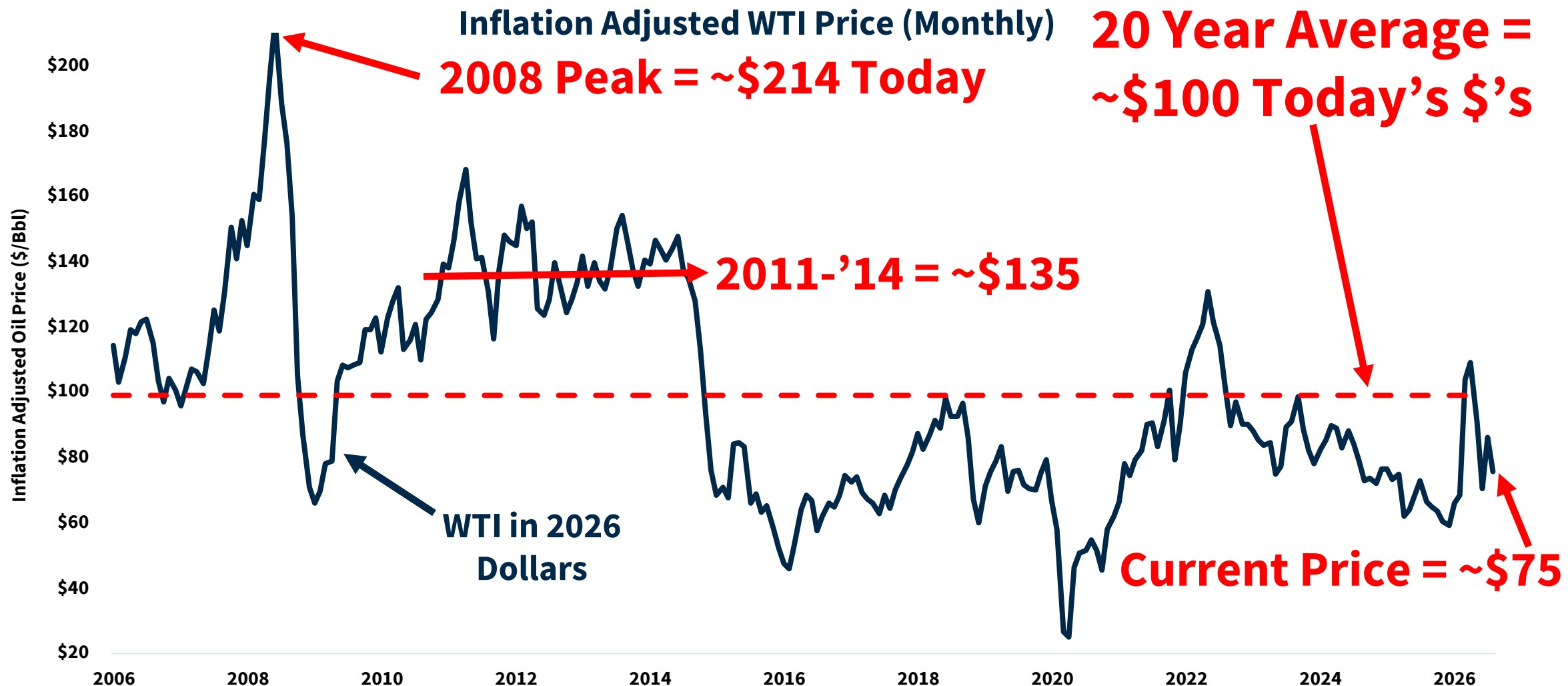
Source: IEA, FactSet and Raymond James estimates.
Note: Assumes one-half of expected global inventory draw goes to OECD inventories. Forecast assumes \$80/Bbl+ oil prices.

What Oil Price Squeezes Demand?

Inflation Adj. WTI (Annual) and % Change in YoY Global Oil Demand

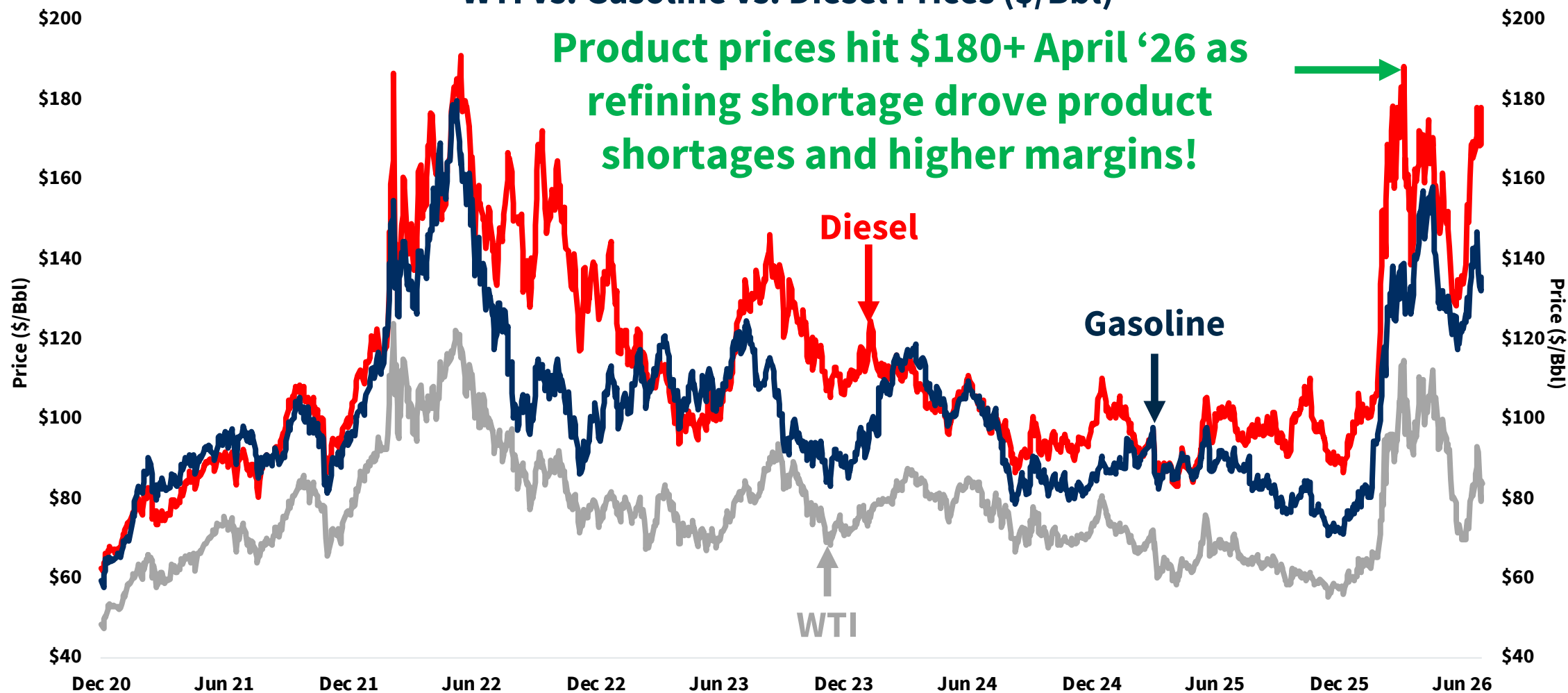


Current Prices Are NOT Killing Demand



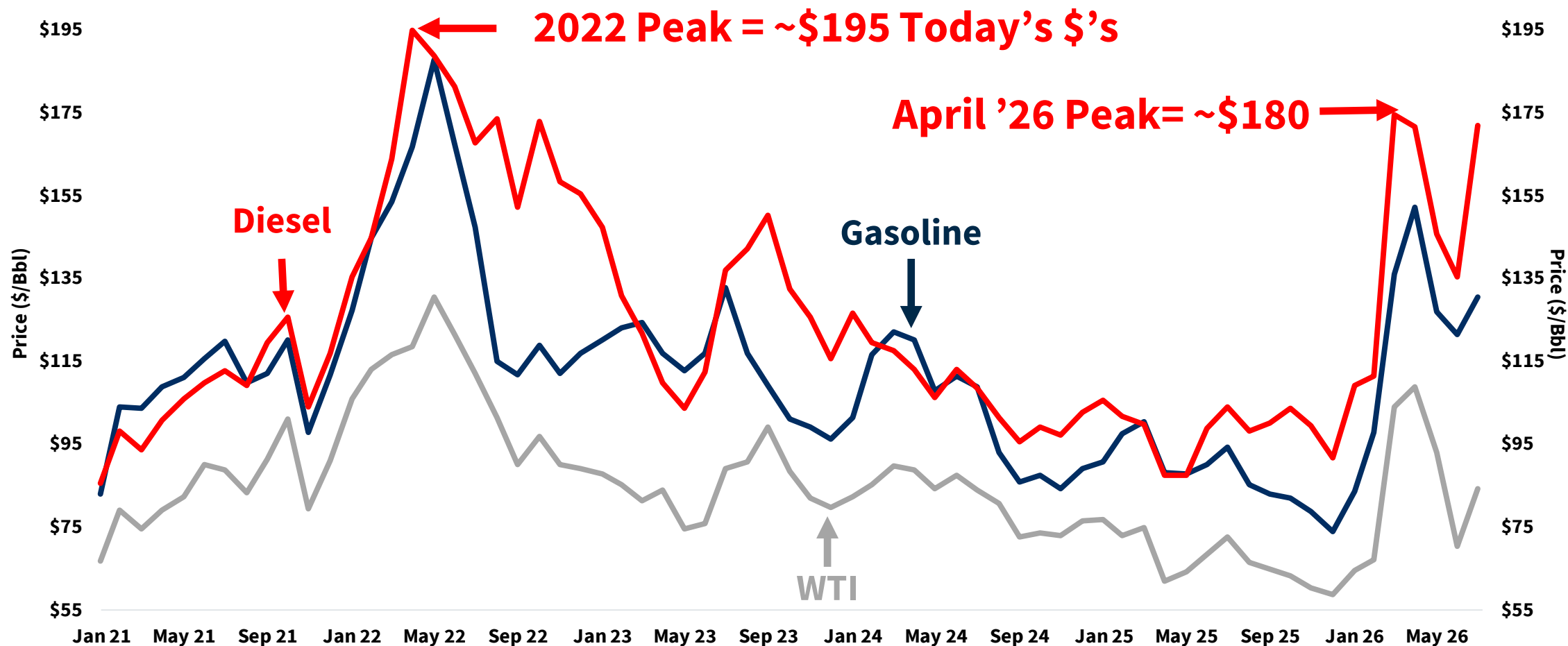
But People Consume Products, Not Oil

WTI vs. Gasoline vs. Diesel Prices (\$/Bbl)

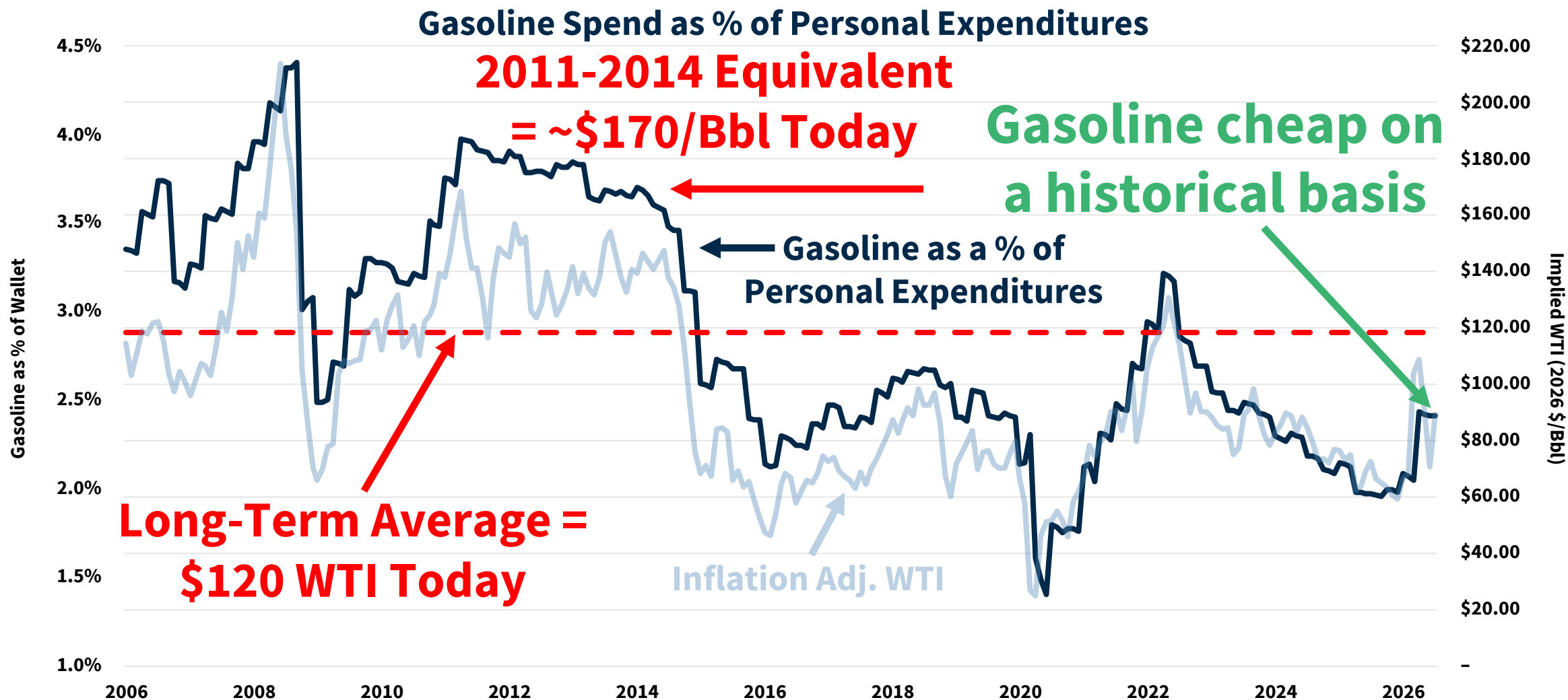


Inflation Adjusted Products Are The Key

Inflation-Adjusted Monthly WTI vs. Gasoline vs. Diesel Prices (\$/Bbl)



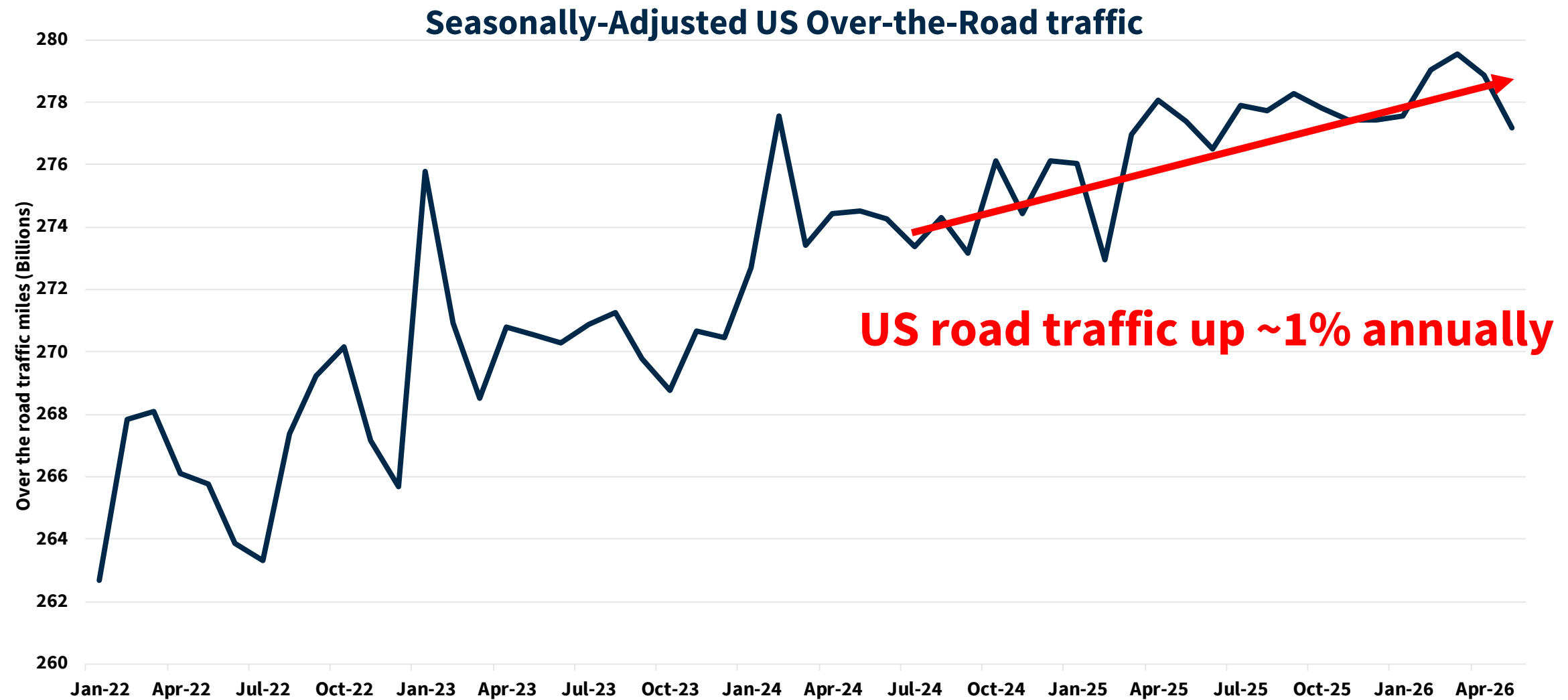
So Far, Gas as % of “Wallet” Still Low



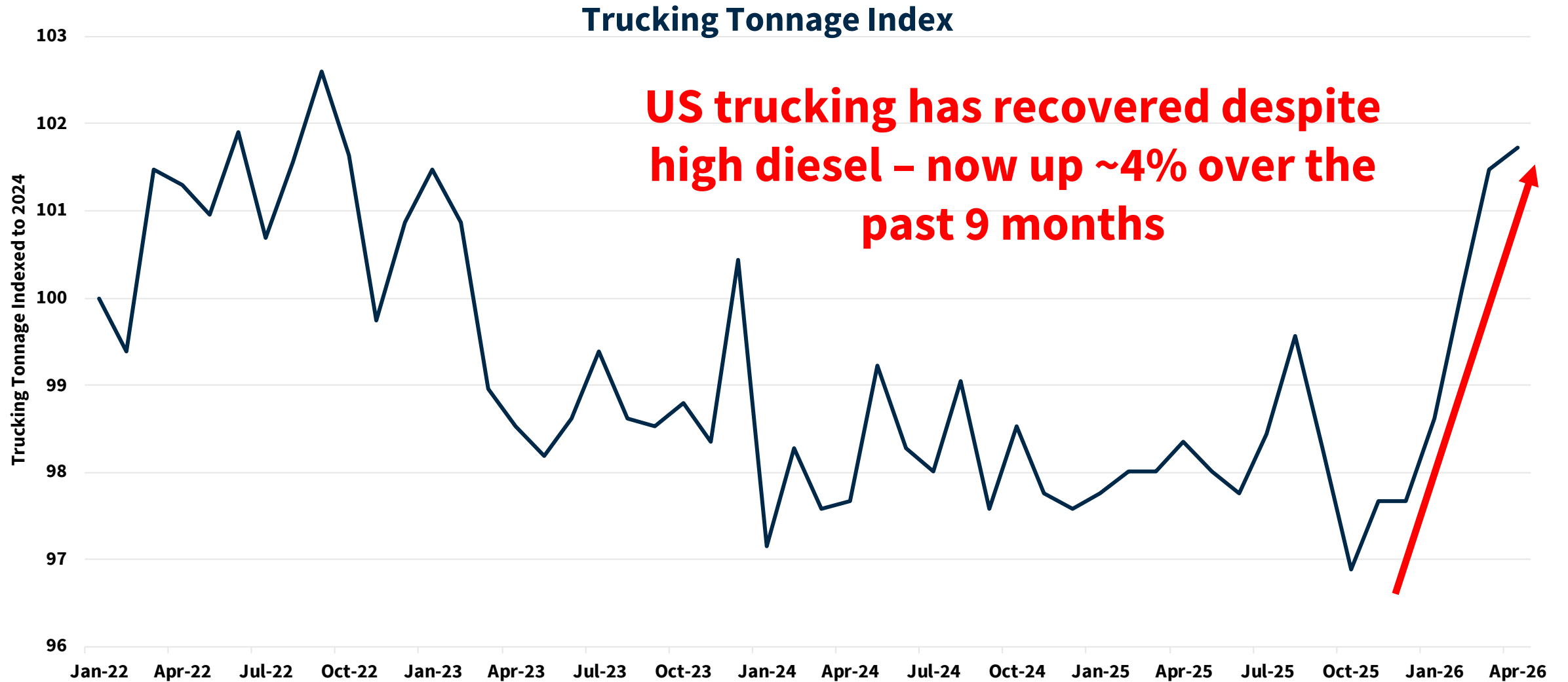
Are Prices High Enough Yet?

- So far, minimal evidence of price driven demand loss
- China and parts of Asia down modestly (gvt. driven)
- So far, overall global demand is still growing
- Global over-the-road traffic remains healthy
- **Petrochem is strong (driven by a strong economy)**
- Airline activity is very healthy

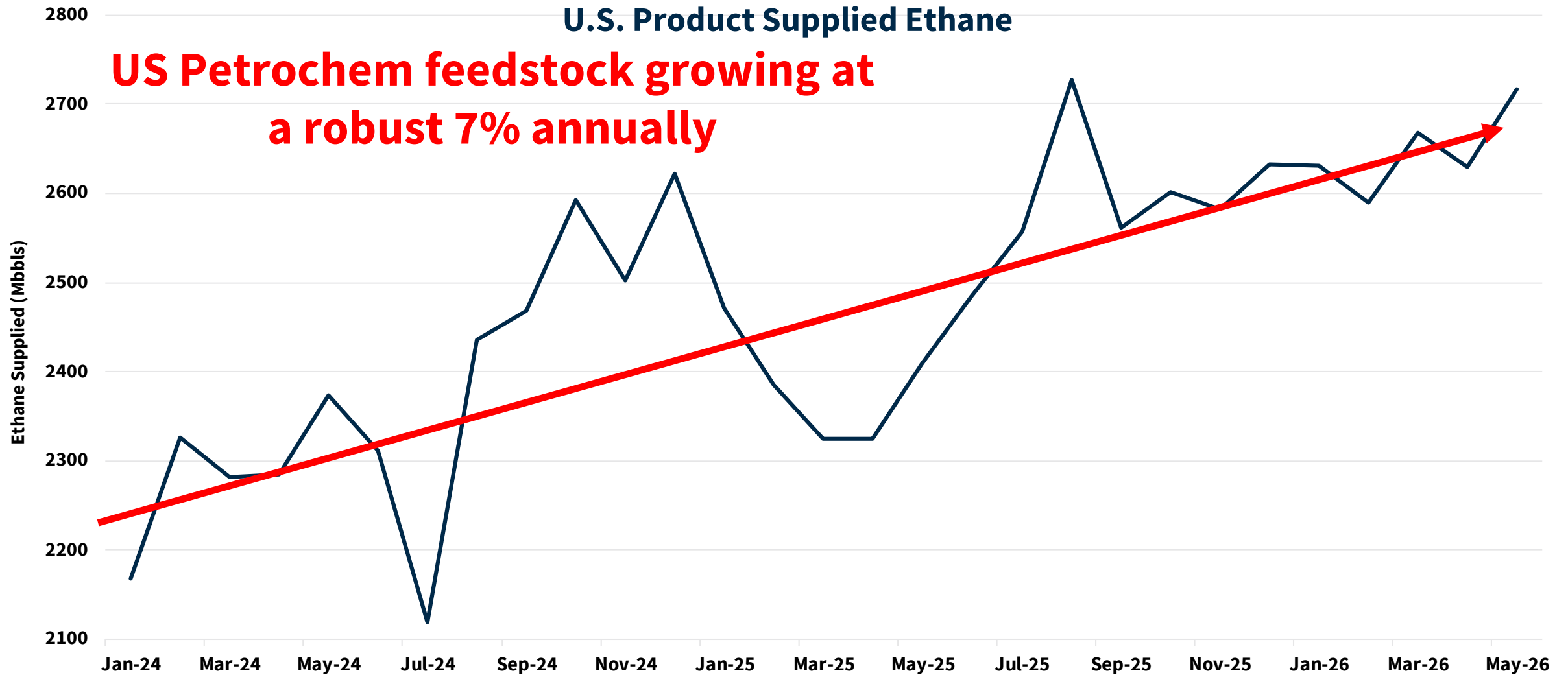
US Road Traffic Still Posting Steady Growth



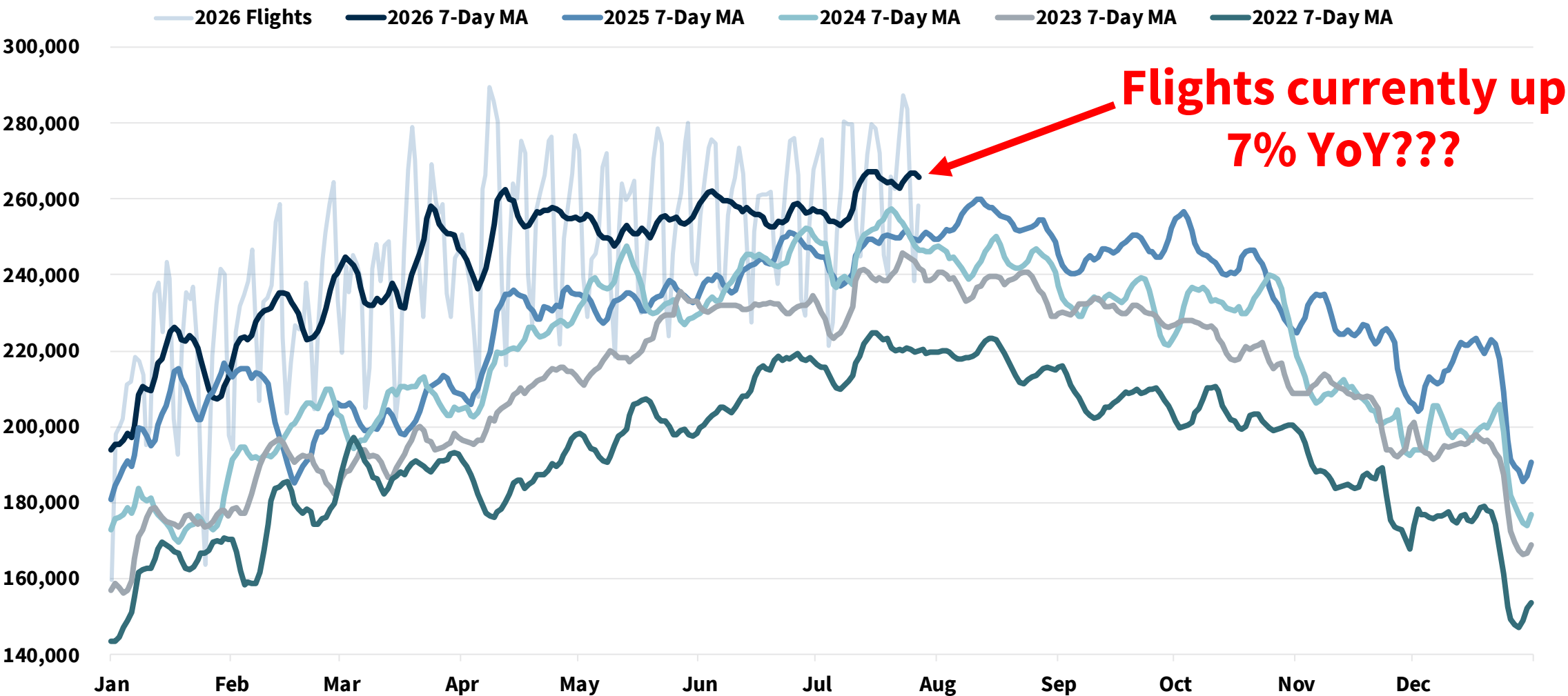
US Trucking Up Big Over The Past 9 Months



US Petrochem Still VERY Healthy



Are Jet Fuel Prices Killing Airlines? Really?



Source: Flightradar24.

So What Is The “Right” Price to Balance?

- That depends on **1) how long are Hormuz/BAM closed?**
- And **2) will the bottleneck be in crude or refining?**
- Keep in mind, product prices matter more than crude
- My Base case: Hormuz partially re-opens starting Sep 1 – **Brent spikes well above \$100 but settles at ~\$90-\$110/Bbl thru YE-2027**
- I assume Chinese refiners re-enter in full and refining outages do not increase over time

Conclusion & Takeaways

- **Don't lose sight of the “big picture” for oil**
 - The world still runs on oil & this is the largest oil supply interruption in history
 - With new warfare methods, supply interruptions get worse
 - Where will longer term oil supply growth originate
 - Will this be a refinery shortage or crude supply shortage – it matters
- **US natural gas demand explodes but so does supply**
 - Power demand for gas huge later this decade – LNG also on track for big growth
 - Where will we get 30 bcf/day? That is a lot of infrastructure. Who wins?
 - Will datacenters unlock trapped gas in Permian and Marcellus?
 - It seems like US can get all the gas it needs at sub-\$3.50

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