

U.S. State Department – International Visitor Leadership Program Energy – U.S. Approaches



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September 30, 2026
Washington DC**



Presentation Outline



- **About the Energy Policy Research Foundation (EPRINC.org)**
- **Energy Security: a Taxonomy with Examples**
- **Geopolitical Considerations:**
 - **Hormuz**
 - **Ukrainian Impairment of Russian Hydrocarbon Production & Exports; Sanctions Policy and is there a better way: Something to Learn from Hormuz?**
 - **European Russian Hydrocarbon Avoidance – Progress Report**
- **U.S. Energy Markets Overview:**
 - **Natural Gas**
 - **Petroleum**
 - **Electricity**

About the Energy Policy Research Foundation



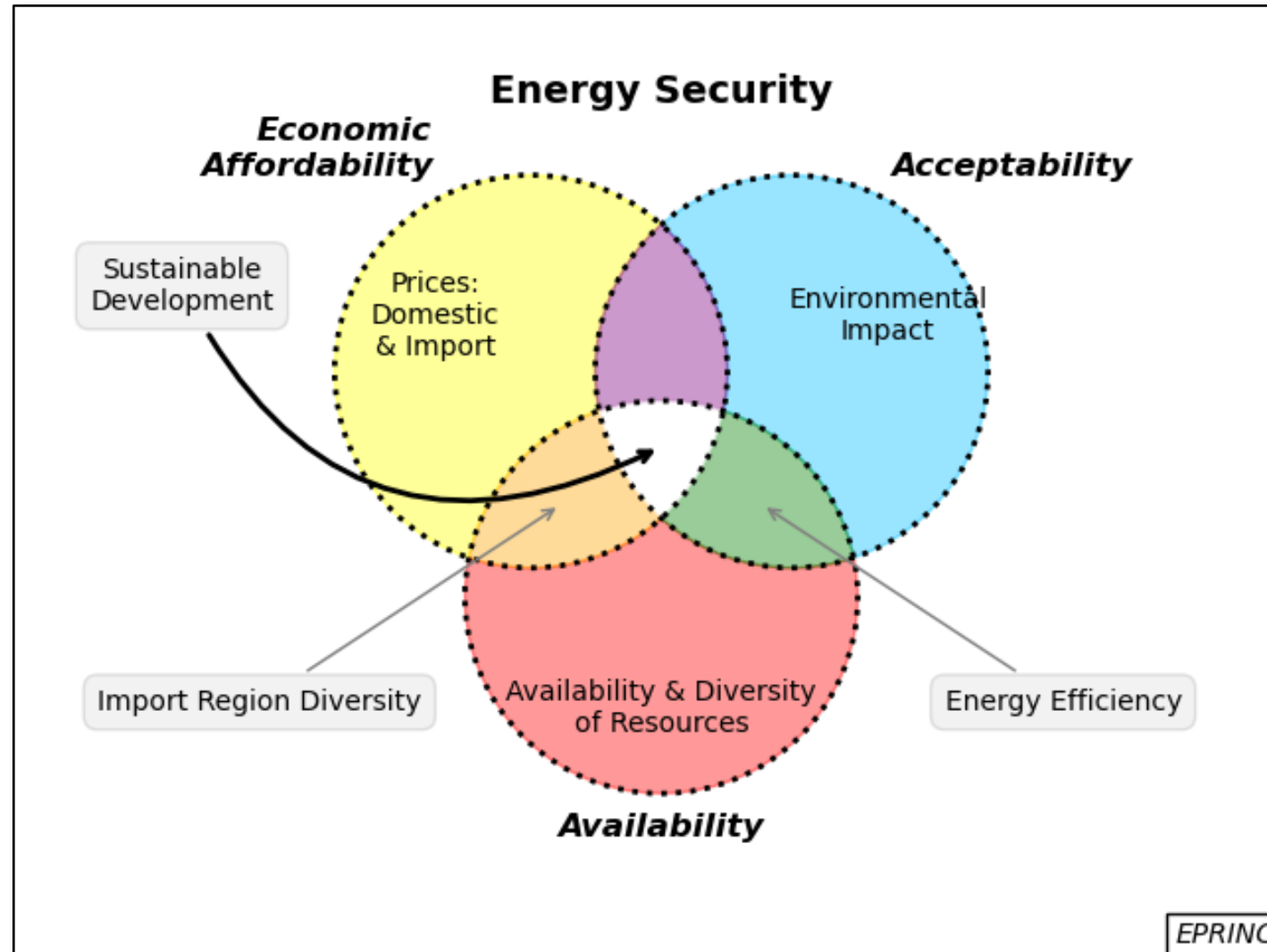
- Est. 1944
- Washington D.C.
- Analysis of natural gas, transportation fuel, energy transitions, electrification issues
- Strategic partnerships with domestic and international think tanks (especially in Japan: IEEJ, JOGMEC, METI)
- Non-partisan and not-for-profit.
- www.eprinc.org



Energy Security

A Taxonomy with Examples

Energy Security – a Visualization

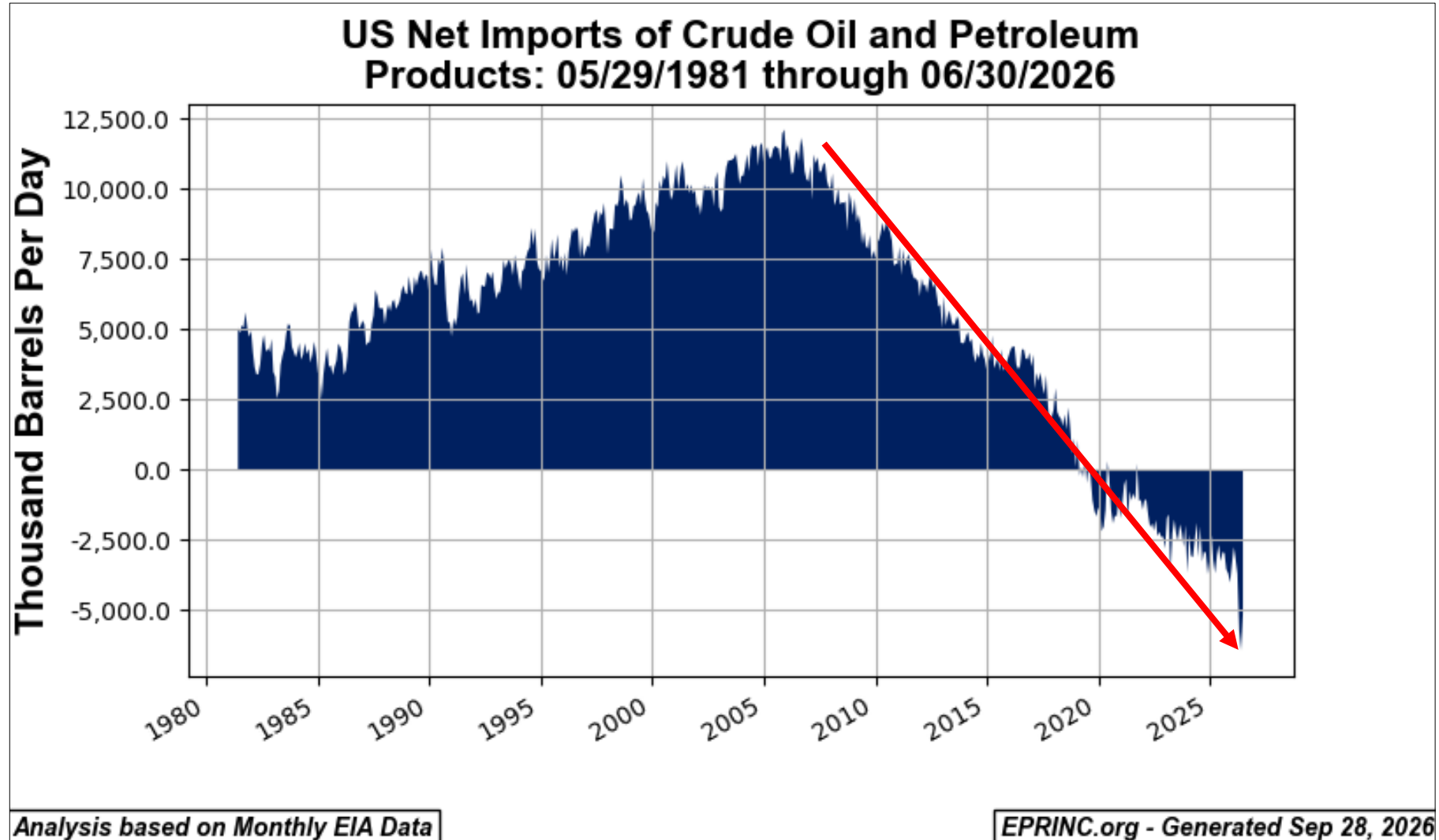


Source: Sai, Furubayashi, Nakata, and others

Legacy Energy Security: Policies

- **IEA – Emergency response is one of its critical predicates. Established during periods of sharp oil supply shocks, it makes requirements of its member countries to hold stocks equivalent to at least 90 days of net oil imports.**
- **U.S. – Since the 1950s, oil import dependency/vulnerability has been a recurring theme in U.S. energy security discussions. A lot of regulatory measures have been enacted including the cumbersome 1959 Mandatory Oil Import Quota Program that sought to restrict imports to 12.2% of domestic production.**

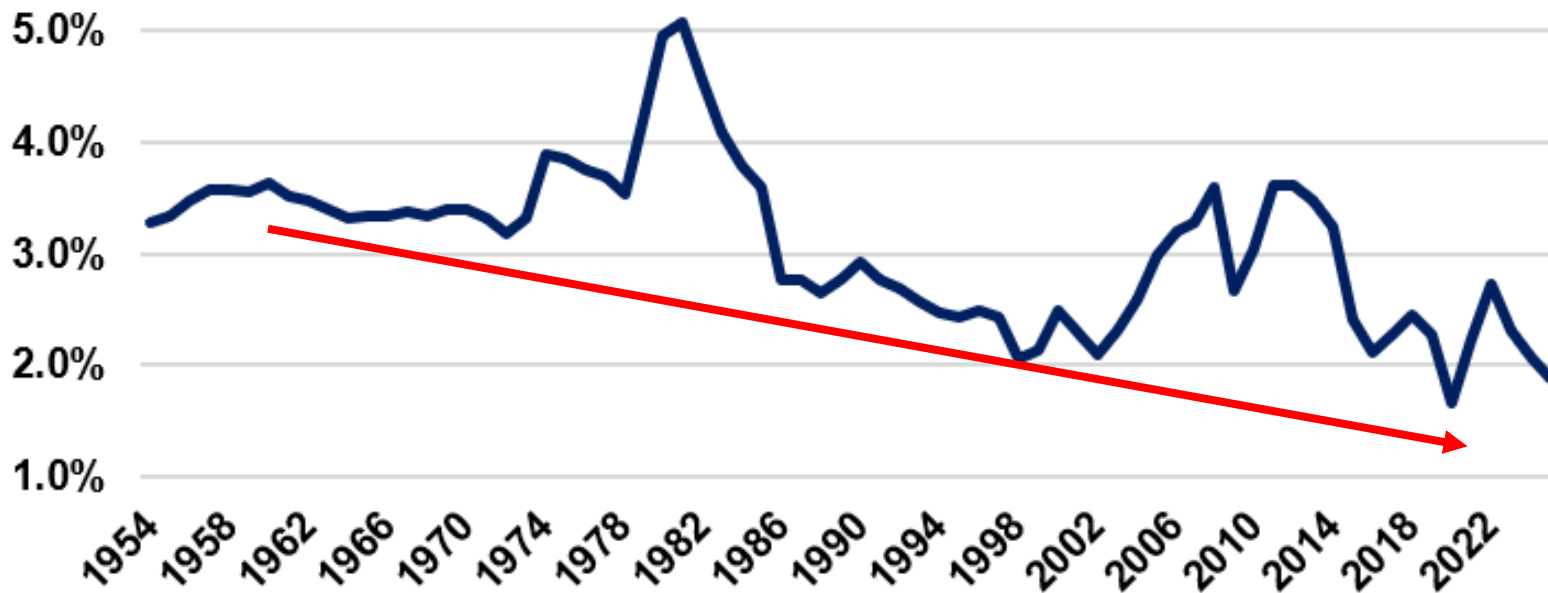
Legacy Notions of Energy Security: Import Dependence



Notions of Energy Security: Affordability

Consumer Expenditures on Motor Fuel as a Percentage of Disposable Income

1954-2025



Analysis Based on Annual BEA Data

EPRINC.org

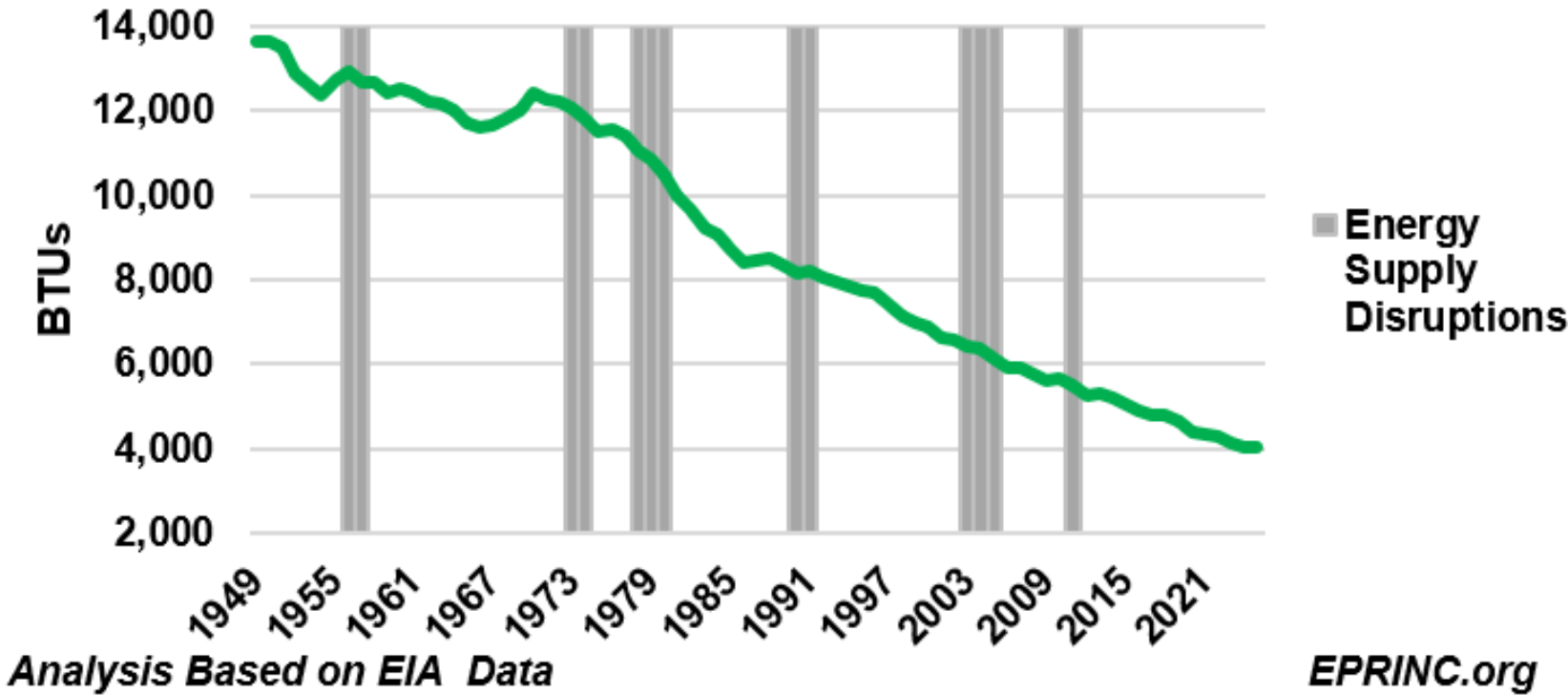
**Long-term trajectory is
downward.**

**But the spikes along
the way have led to
policy interventions.**

U.S. Energy Security as Measured by Acceptability/Efficiency

U.S. Energy Consumption (BTUs) per Dollar of GDP (2017 dollars)

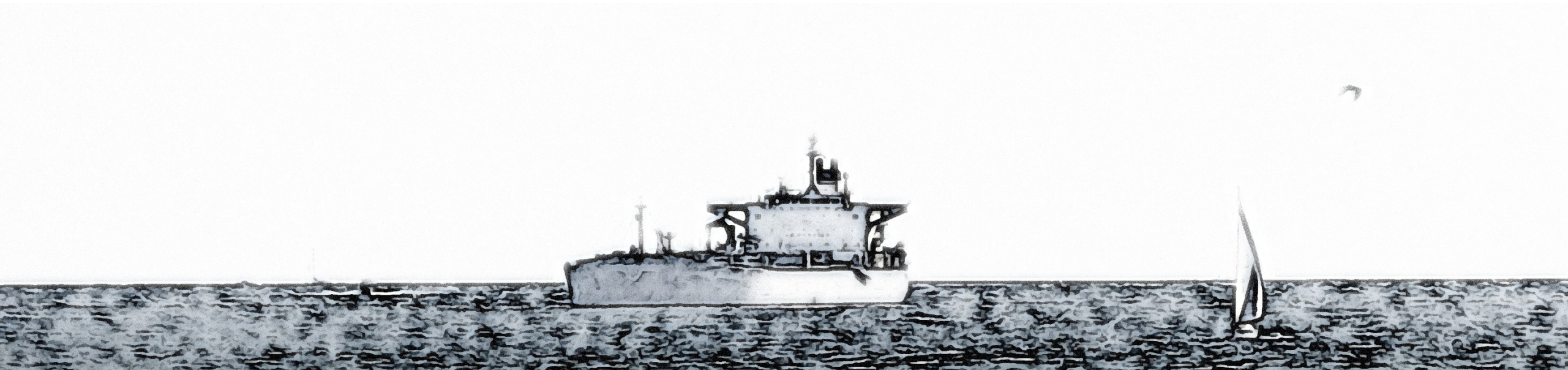
1949 - 2025



Key Global Energy Supply Disruptions		
Year(s)	Event	MB/d
1956 - 1957	Suez Crisis	2.0
1973 - 1974	Arab Oil Embargo	4.3
1978 - 1981	Iranian Revolution	5.6
1990 - 1991	Iraq Invasion of Kuwait	4.3
2003 - 2005	Iraq War	2.3
2011	Libyan Civil War	1.5

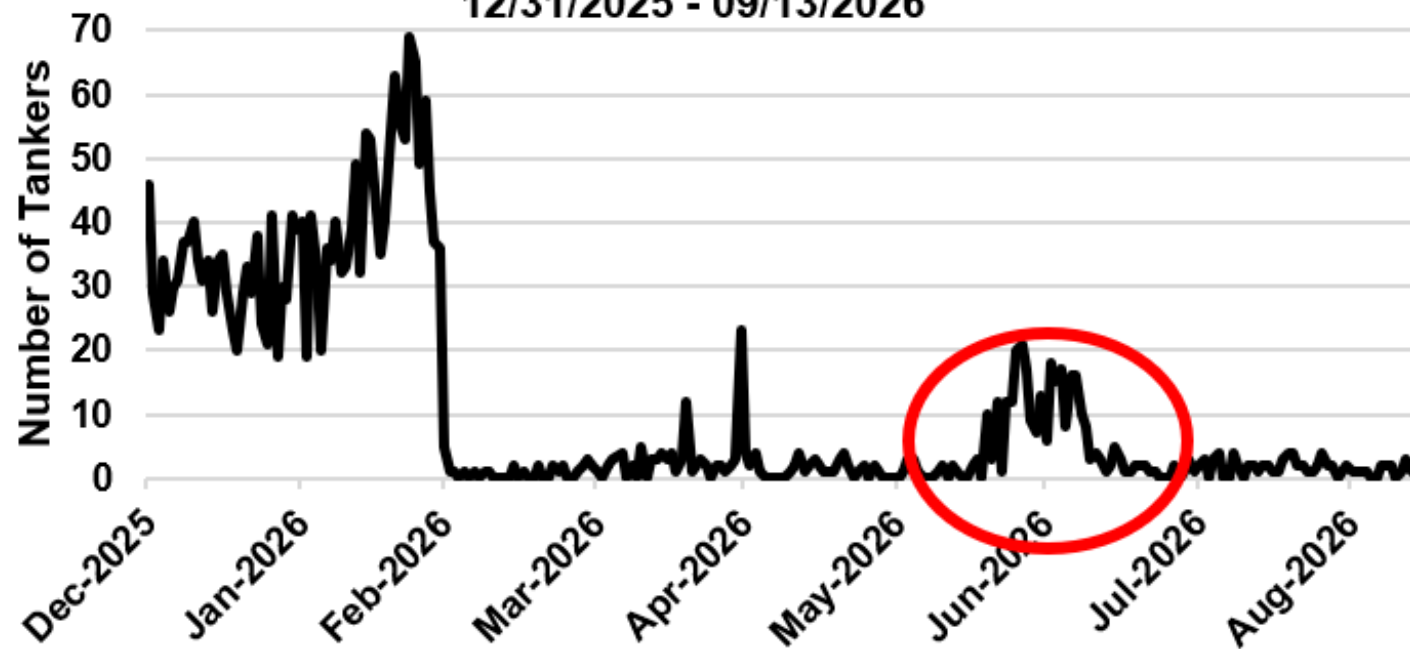
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Hormuz – Some Considerations



Hormuz Tanker Traffic

12/31/2025 - 09/13/2026



Analysis Based on Daily IMF Portwatch Data

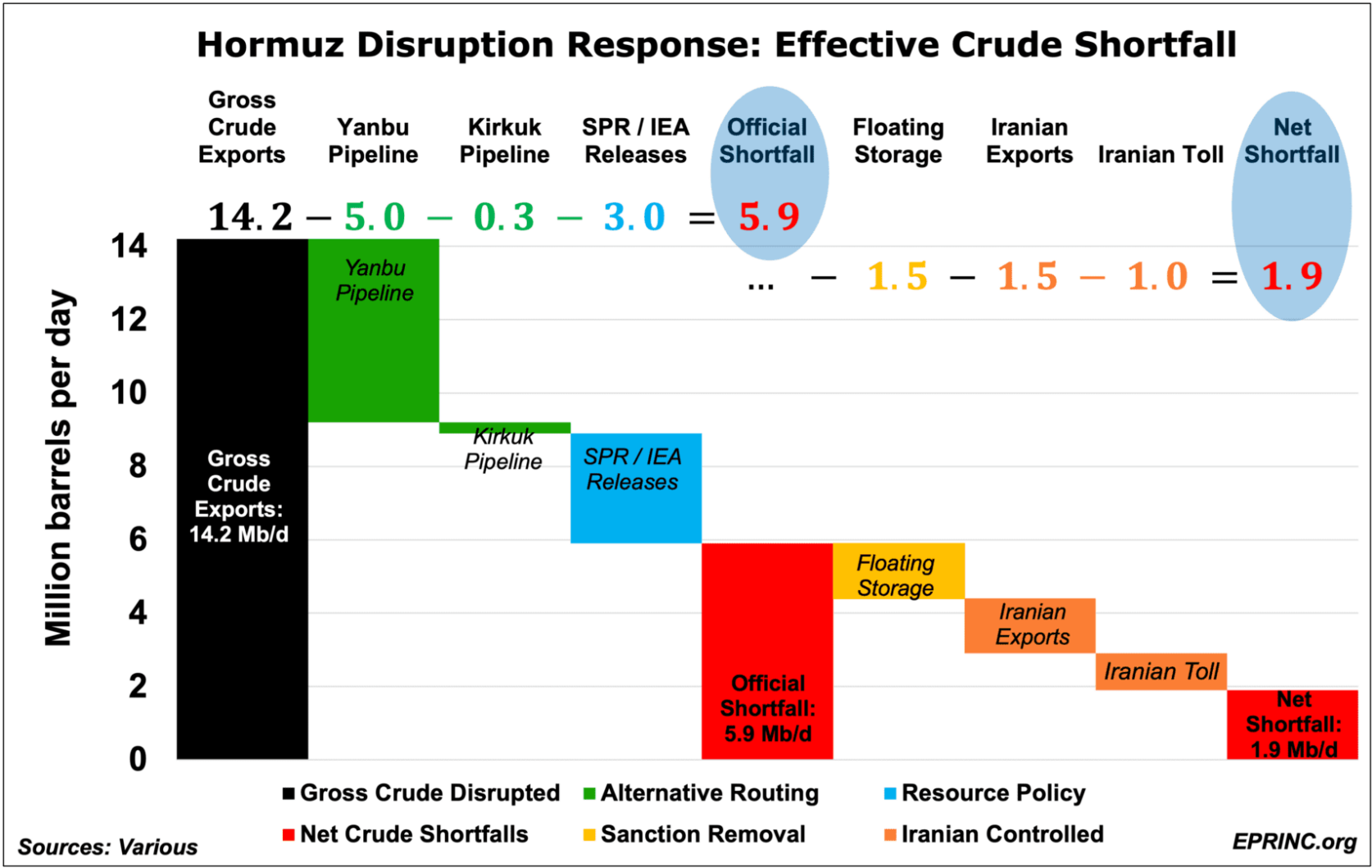
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The Strait of Hormuz is critical to the shipment of a variety of crude oil and petroleum product exports ranging up to 20 million barrels per day (MBD). In addition, 20% of global LNG trade passes through the strait, primarily from Qatar, along 10% of global nitrogen fertilizer and helium trade.

With the war that started on February 28, 2026, vessel traffic through the Hormuz stopped almost completely.

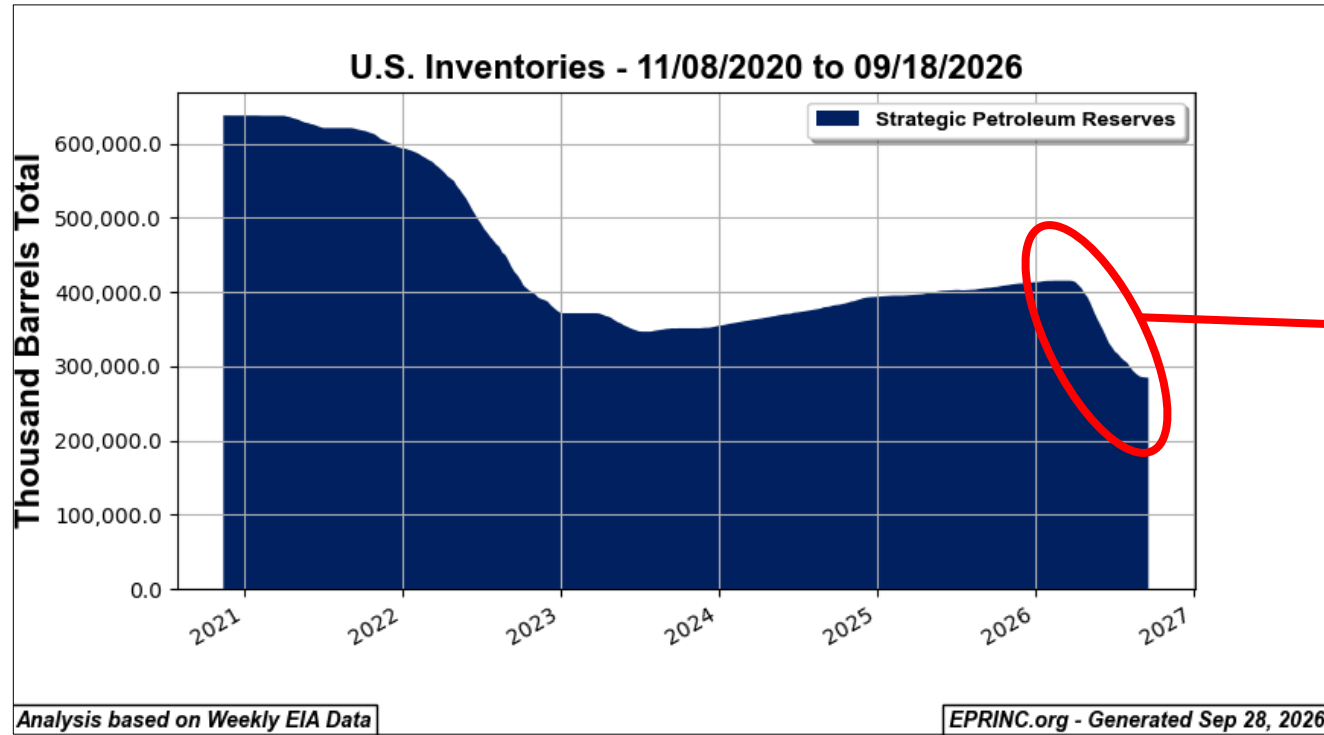
Hormuz tanker transit has been minimal since then. There had been a resumption in mid-June; but since the recent renewal in hostilities, tanker traffic has fallen back.

Hormuz Closure: Assessing the Shortfall in Crude and Condensate Production and Exports

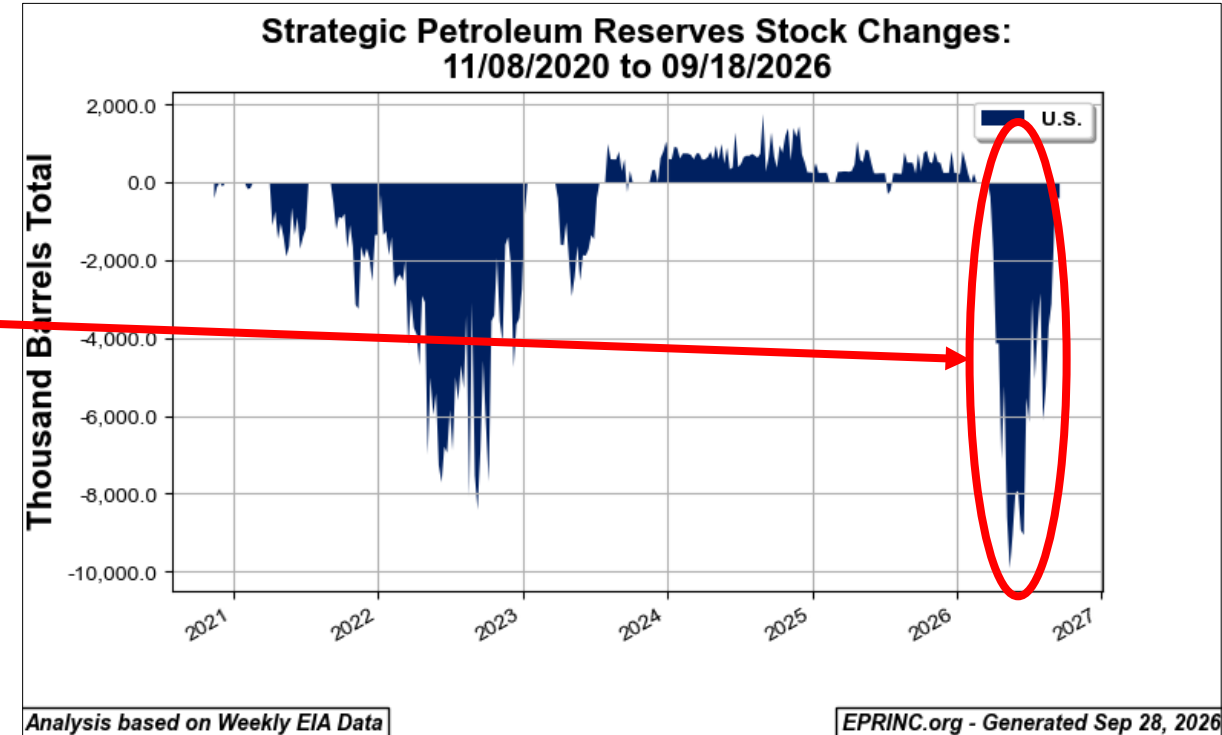


Hormuz Closure: Strategic Inventory Releases – the View from the U.S.

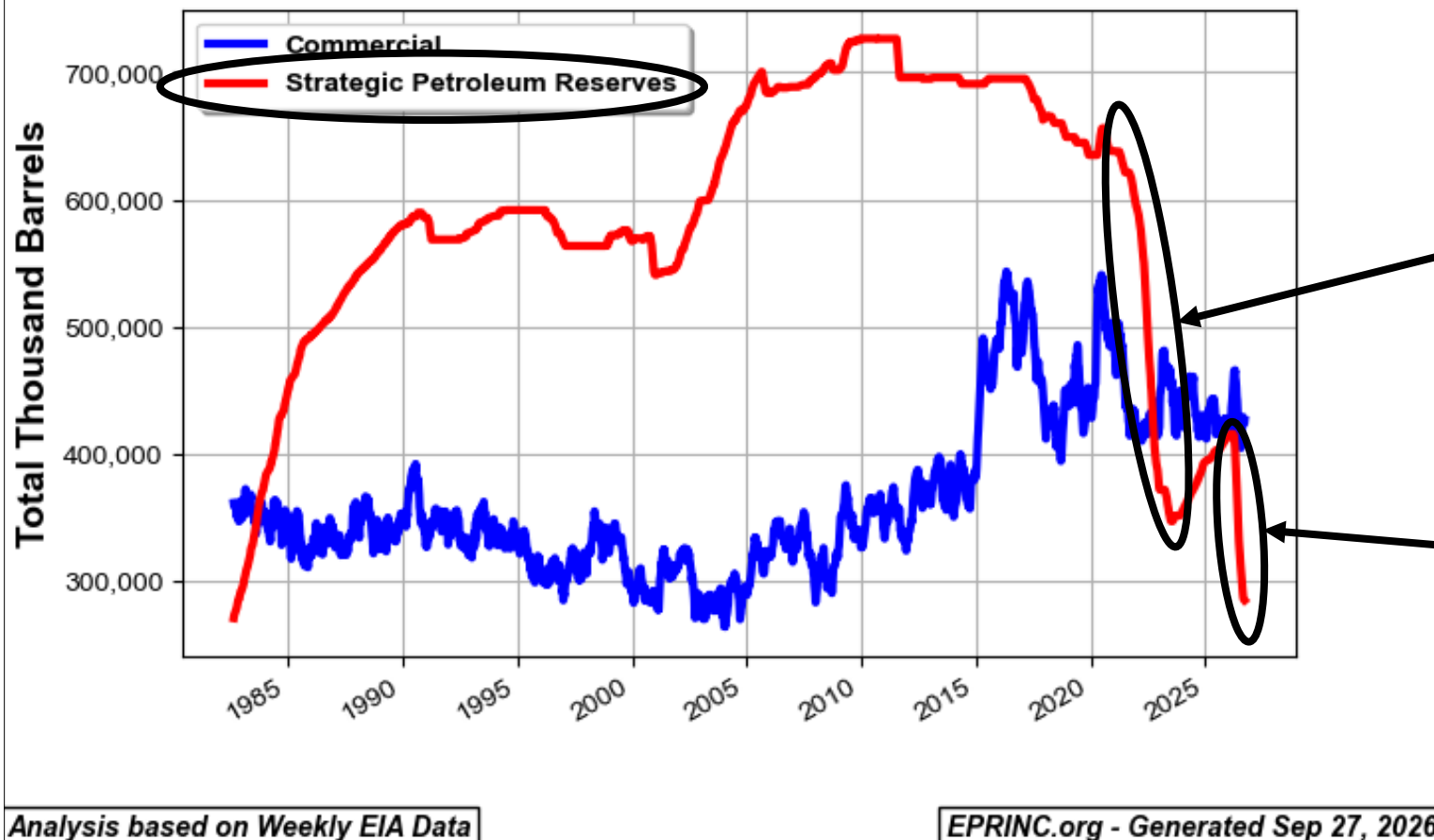
SPR Stock Levels



SPR Stock Changes



U.S. Crude Oil Inventories - Commercial and Strategic Petroleum Reserves - 08/20/1982 to 09/18/2026

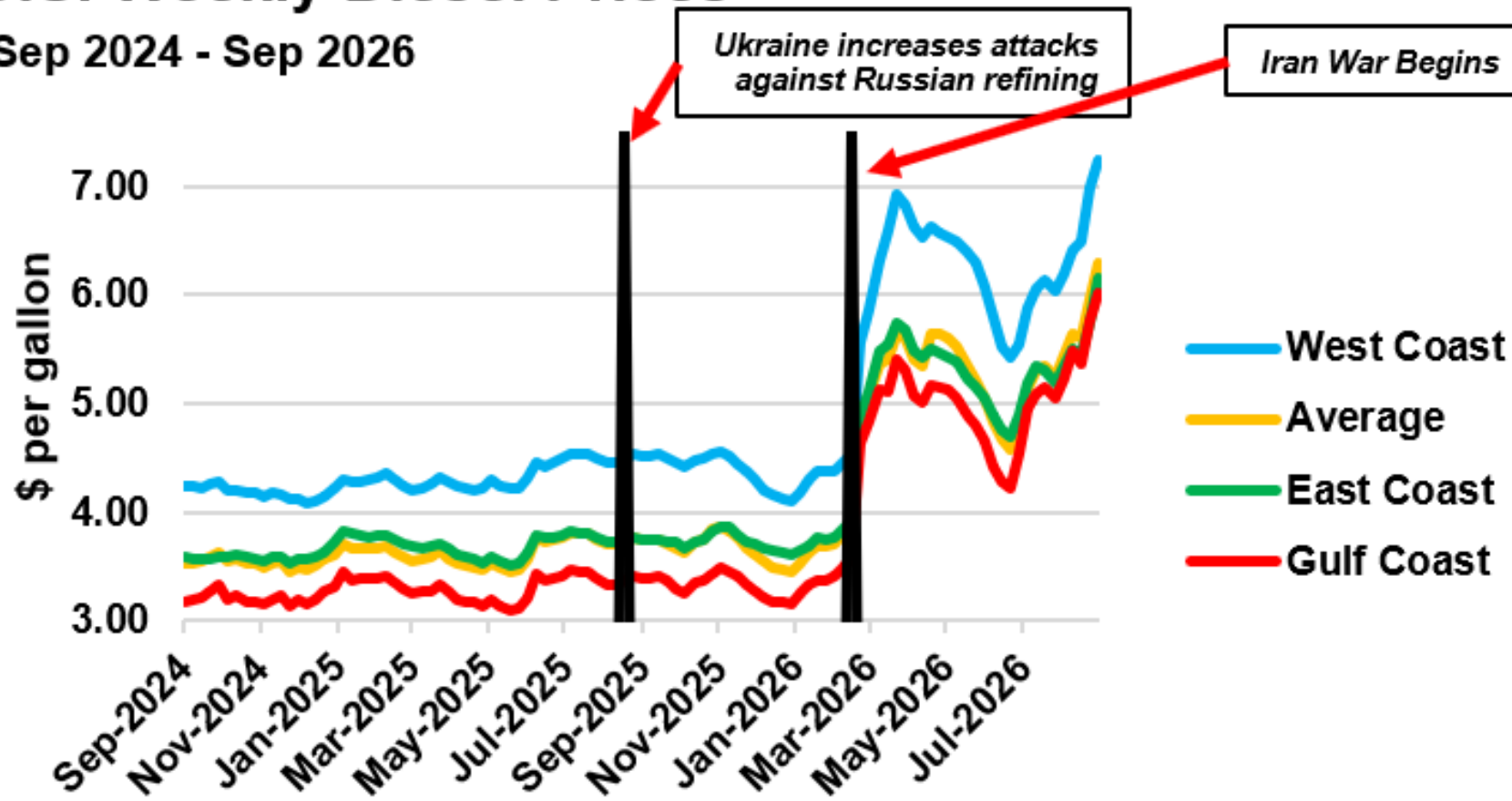


**Biden Administration
November 2021 – March
2023 SPR drawdown
seeking to limit post-
Covid fuel price increases**

**Trump / IEA coordinated
emergency SPR release
brought on by the Strait
of Hormuz closure.**

U.S. Weekly Diesel Prices

Sep 2024 - Sep 2026



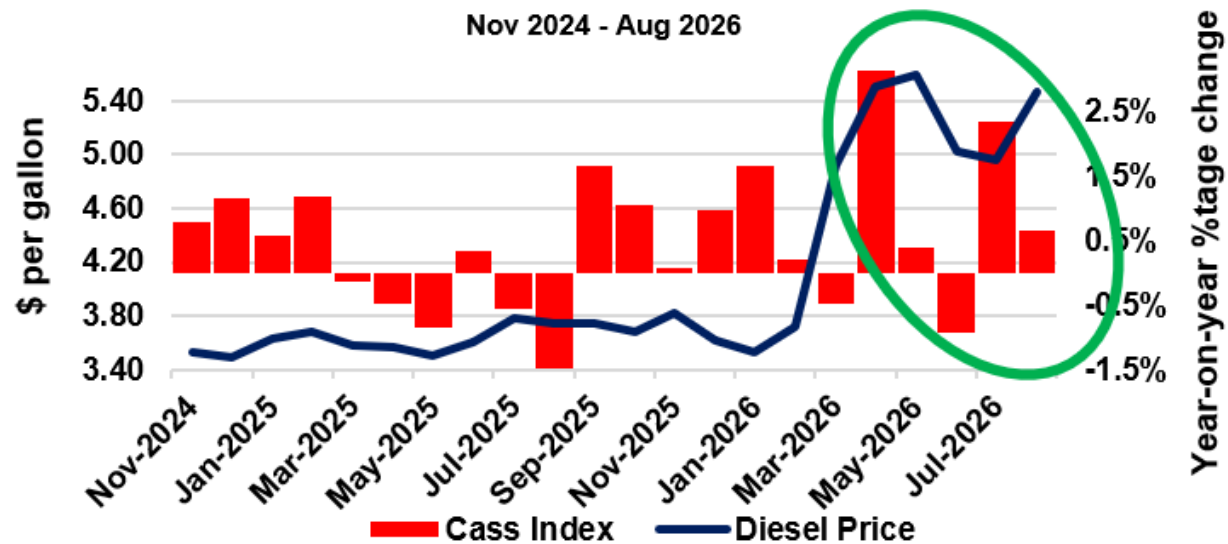
Source: EIA Data

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With little cessation in hostilities and the substantial impairment to Persian Gulf and Russian refining capacity, global diesel prices have risen. The U.S. national weekly average diesel price has risen above \$6 per gallon with West Coast prices breaching \$7

Monthly U.S. Retail Diesel Price vs Cass Truckload Linehaul Index ®

Nov 2024 - Aug 2026

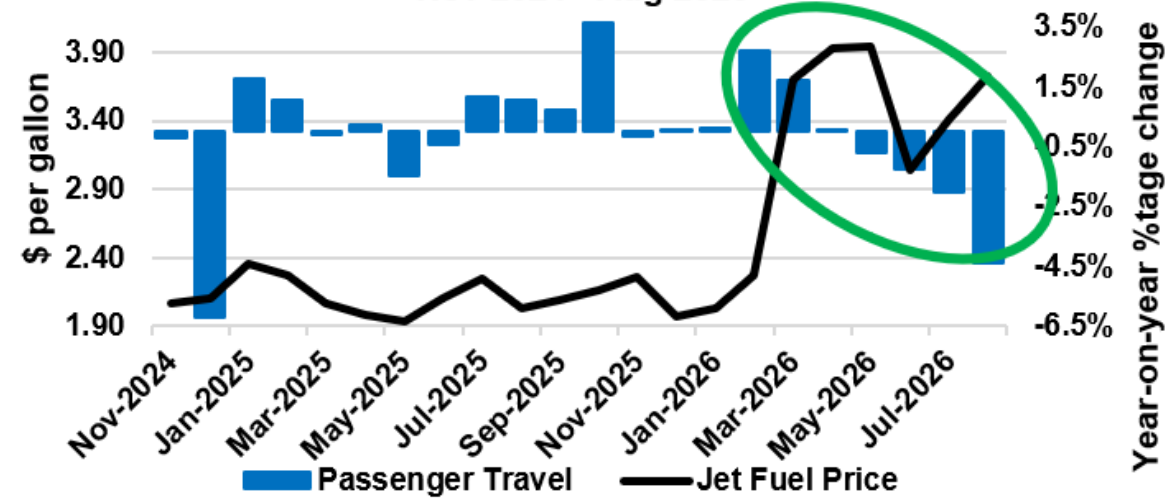


Source: Cass Information Systems & EIA Data

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Monthly U.S. Jet Fuel Price vs Change in Passenger Travel

Nov 2024 - Aug 2026



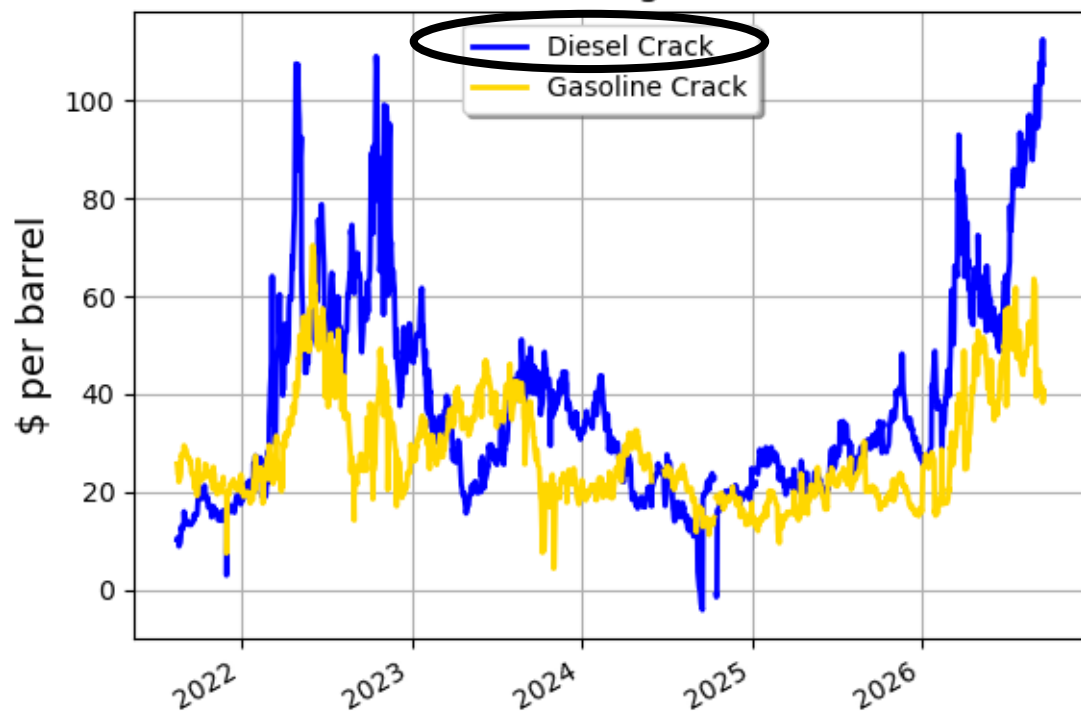
Source: TSA & EIA Data

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Impact on U.S. commercial activity is varied. Despite increased diesel prices and except for one month, changes in trucking activity have continued to be positive year-on-year from March through August 2026.

Jet fuel, primarily kerosene, is produced from a subset of diesel molecules. It is also vulnerable to global supply shortages. With 80% of jet travel being discretionary and higher fuel costs passed on to passengers, the degradation in U.S. air travel over the last six months is unambiguous

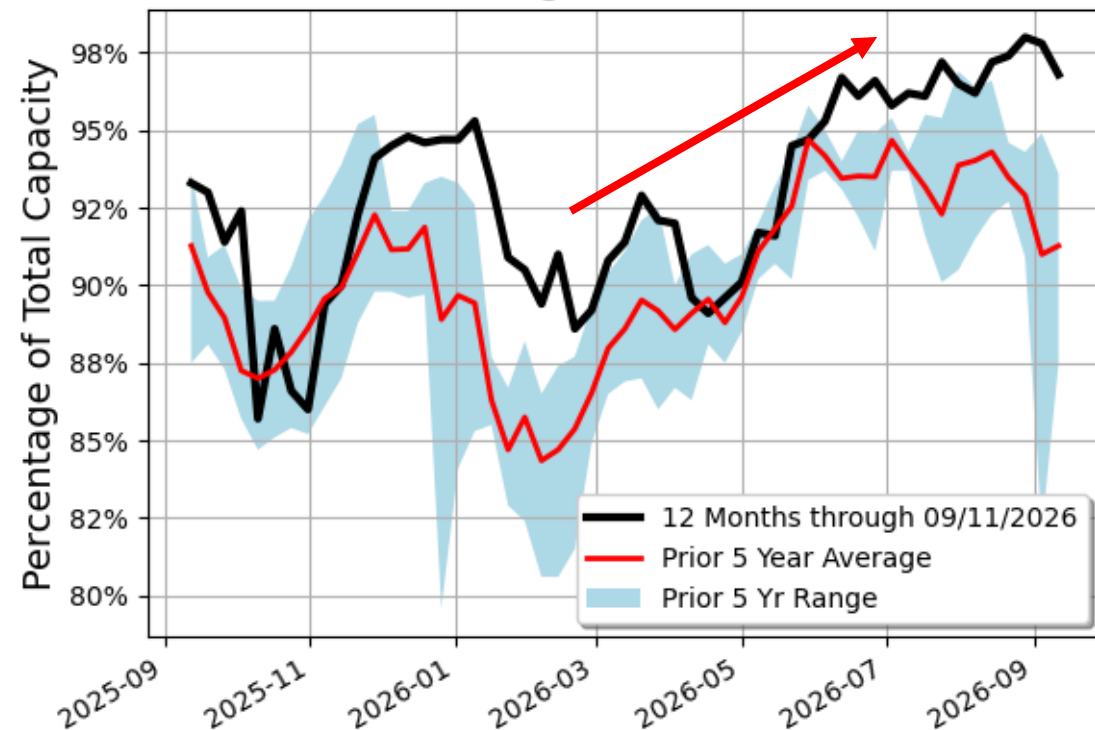
Simple Diesel and Gasoline Crack Spreads:
08/15/2021 through 09/18/2026



Analysis based on CME and EIA Data

EPRINC.org - Generated Sep 22, 2026

U.S.: Weekly Refinery Capacity Utilization twelve months
through 09/11/2026



Analysis based on EIA Data

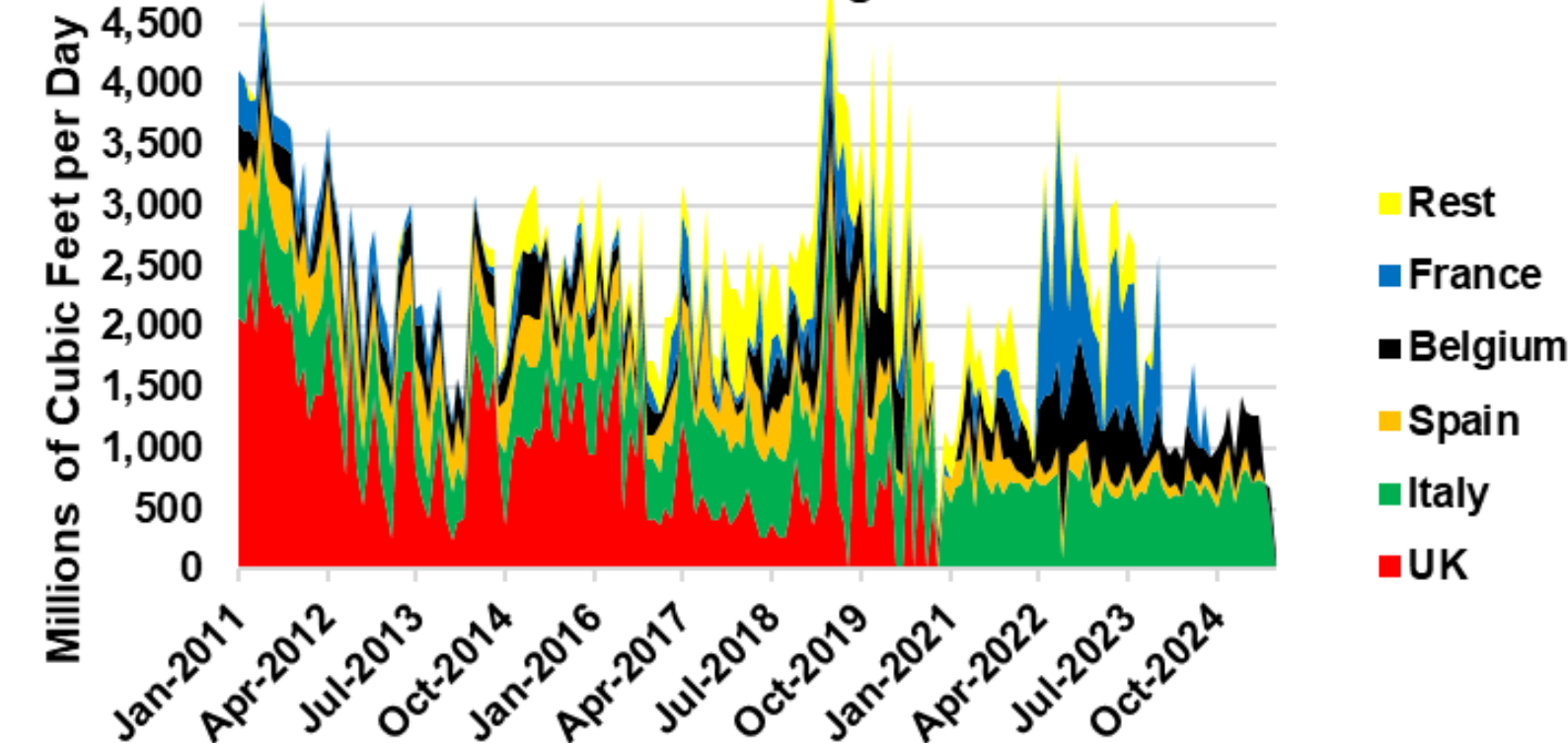
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With fuel shortages, refiners crack spreads (the implied profitability calculated as the difference of product prices less the cost of crude oil) have increased substantially. But gasoline and diesel cracks have diverged with diesel ones spiking over \$100 per barrel. U.S. refiners, with over 18 MB/d of capacity, have responded accordingly, running at an unprecedented 98% utilization

Hormuz Closure: Qatari LNG Impairment

European Imports of Qatari LNG

Jan 2011 to Aug 2025



Analysis Based on Eurostat Monthly Data

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2024 Qatari LNG Import Dependency

	BCF/d	Total LNG Imports	Qatari Sourced	
Total		52.6	10.3	19.6%
of which				
Europe		12.9	1.4	10.9%
Belgium		0.7	0.3	40.6%
France		2.5	0.0	1.6%
Italy		1.4	0.6	45.6%
Spain		1.8	0.1	5.5%
United Kingdom		0.9	0.1	8.4%
Other EU		4.4	0.2	5.6%
Asia		36.3	8.2	22.7%
China		10.2	2.4	24.0%
India		3.7	1.5	40.3%
Japan		8.6	0.4	4.4%
Pakistan		1.1	0.9	89.3%
Singapore		0.8	0.2	27.6%
South Korea		6.1	1.2	19.2%
Taiwan		2.8	0.7	25.3%
Thailand		1.5	0.3	19.9%
Other Asia Pacific		1.1	0.6	52.5%

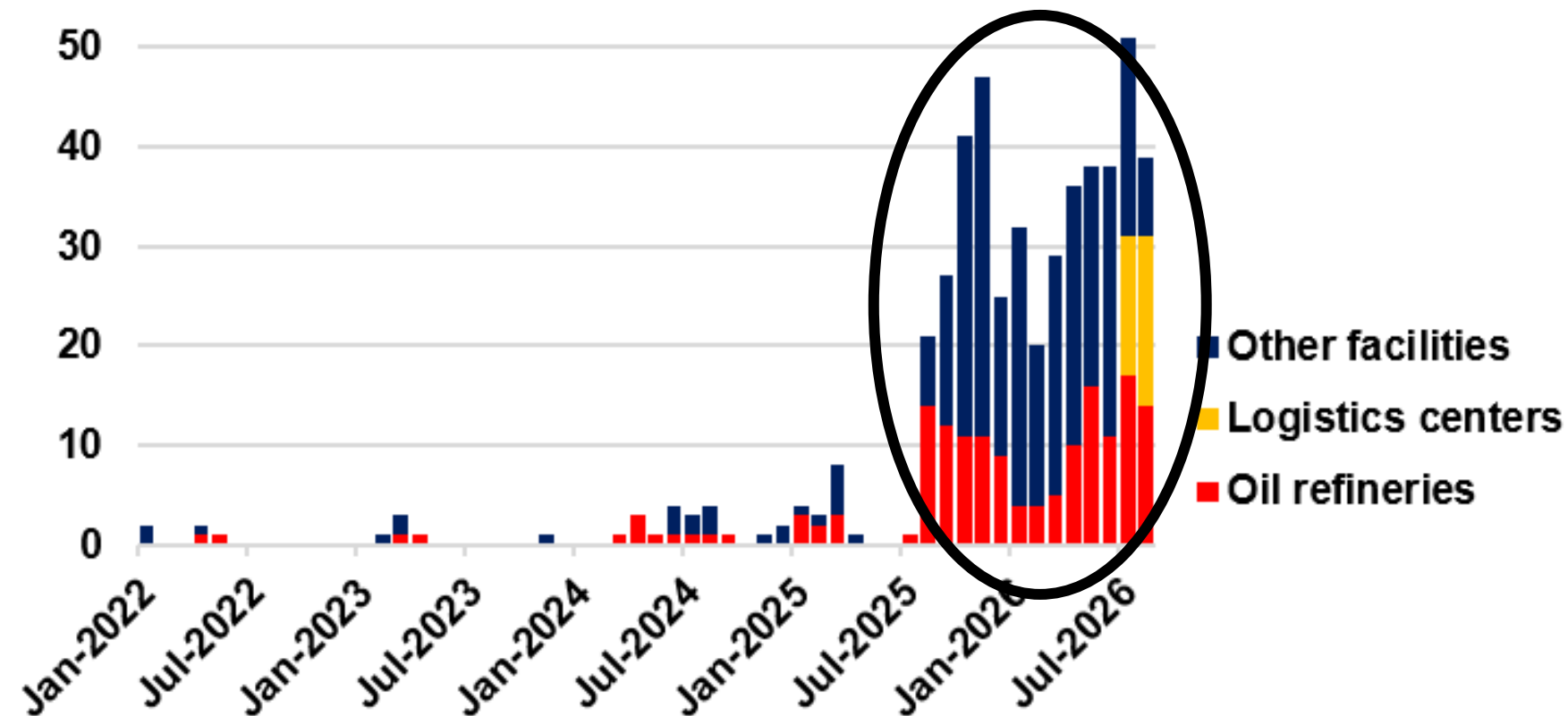
Source: Energy Institute

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Ukrainian Impairment of Russian Hydrocarbon Production & Exports, Sanctions Policy and is there a better way: Something to Learn from Hormuz?

Ukrainian Strikes on Russian Critical Infrastructure

Apr 2022 - Aug 2026

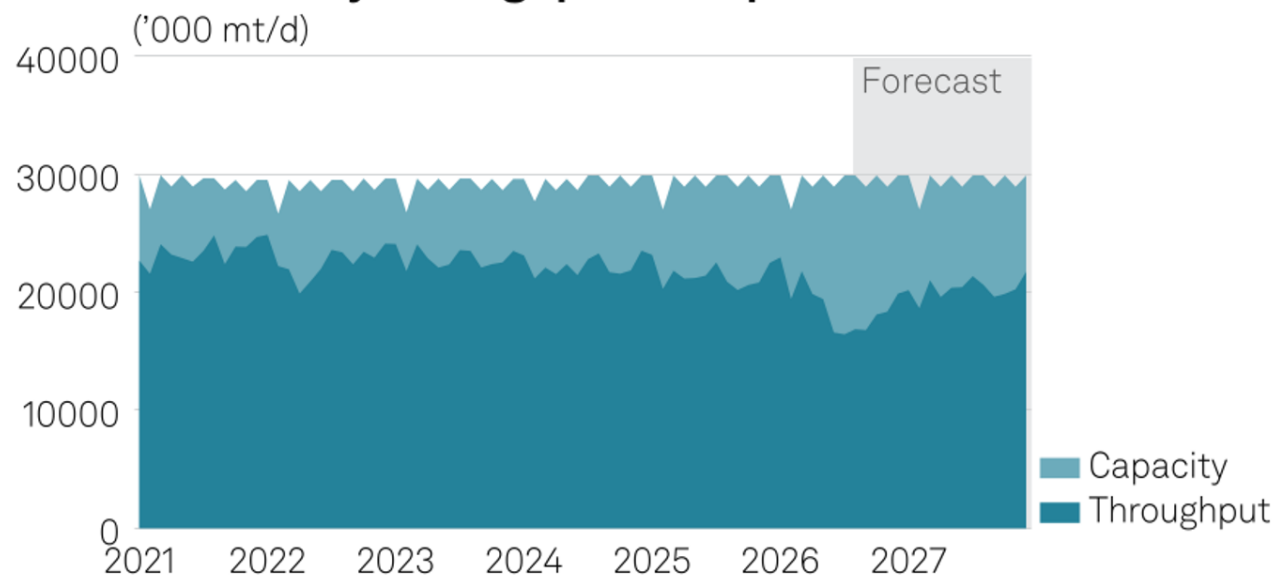


Source: Rochan via WSJ Data

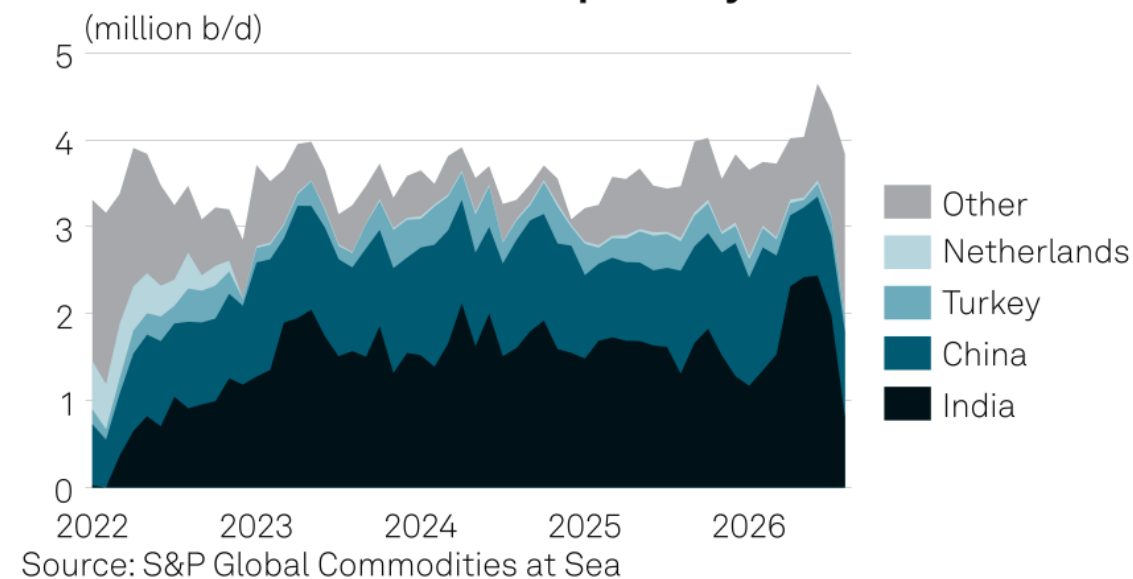
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Ukraine's Impairment of Russian Crude and Products Production & Exports?

Russian refinery throughput slumps on Ukrainian attacks



Russian seaborne crude exports by destination



Kpler's Conclusions on Ukraine's Attacks on Russian Energy Infrastructure

- **A swift return of Russian refining capacity any time soon remains unlikely.**
- **Transportation fuel shortages in Russia's domestic market are here to stay, increasing the probability of product export curbs.**
- **Brazil and Turkey are looking to diversify their product imports away from Russian sourced.**

Is there something to learn from Hormuz? And sanctions policy ...

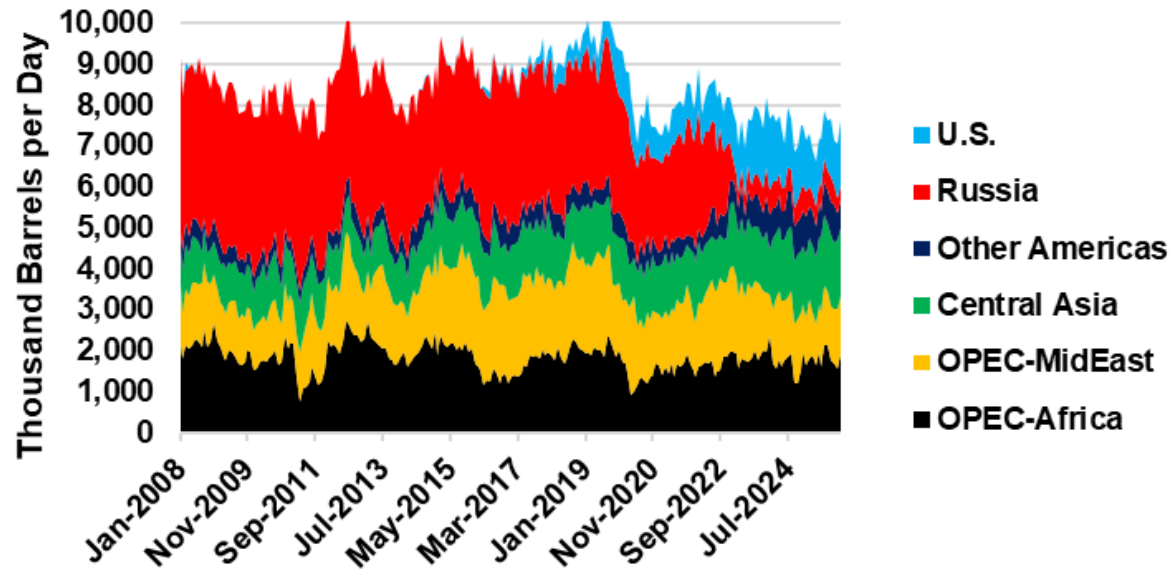
- In 1507, Portuguese explorers conquered and settled the Island of Hormuz.
- For over 500 years (1328 – 1857) the Danish Crown collected “Sound Duties” from ships transiting the Danish Straits.
- At the beginning of March 2026, Iran closed the Hormuz and began demanding tolls for passage.
 - Has the Right of Innocent Passage and Freedom of Navigation eroded through global maritime chokepoints?
 - Has this created a strategic roadmap for others?
- E.g: Beginning in late 2022: Russian Sanctions Policy & Black Markets
 - Prohibitions -> Shadow Fleets -> Marginal Impairment but the Russian National Treasury still collects

European Russian Hydrocarbon Avoidance – A Progress Report

European Russian Hydrocarbon Avoidance – Crude Oil

European Crude Oil Imports

Jan 2008 - Dec 2025

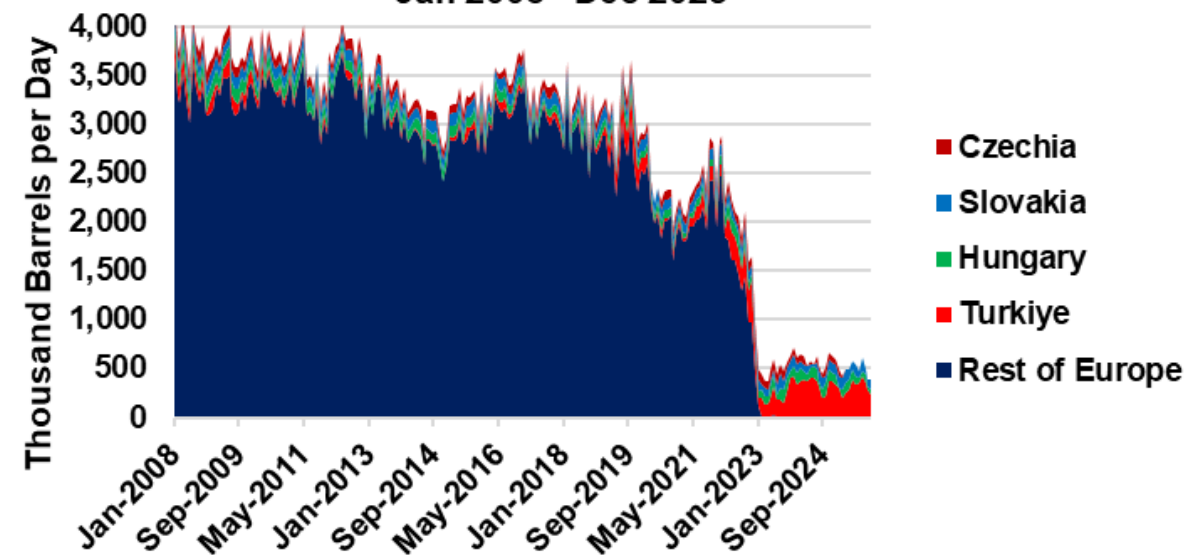


Analysis Based on Monthly Eurostat Data

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European Crude Oil Imports from Russia

Jan 2008 - Dec 2025



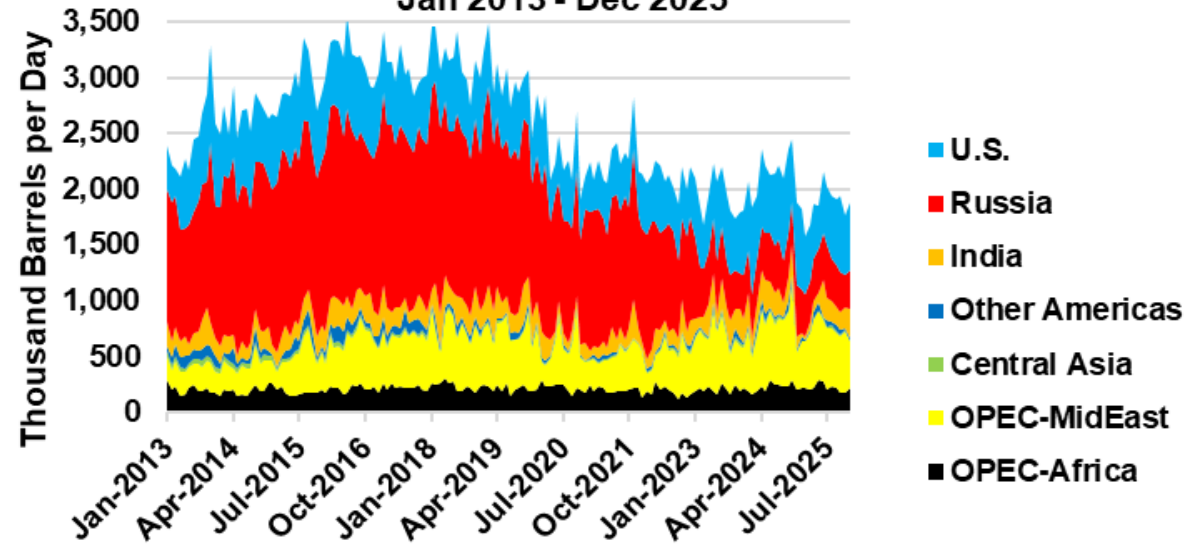
Analysis Based on Monthly Eurostat Data

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European Russian Hydrocarbon Avoidance – Petroleum Products

European Petroleum Product Imports

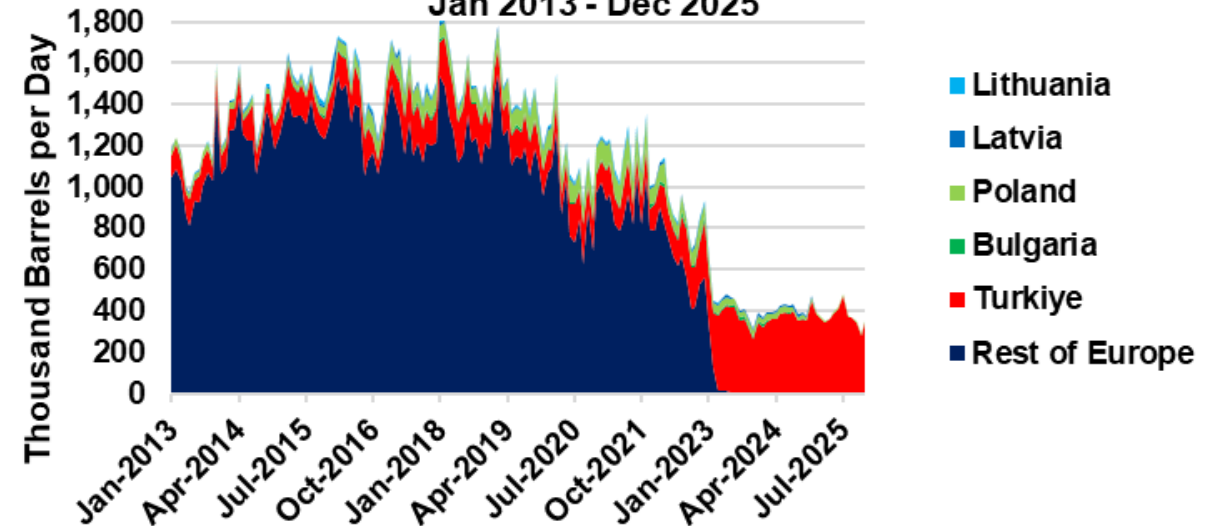
Jan 2013 - Dec 2025



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European Petroleum Product Imports from Russia

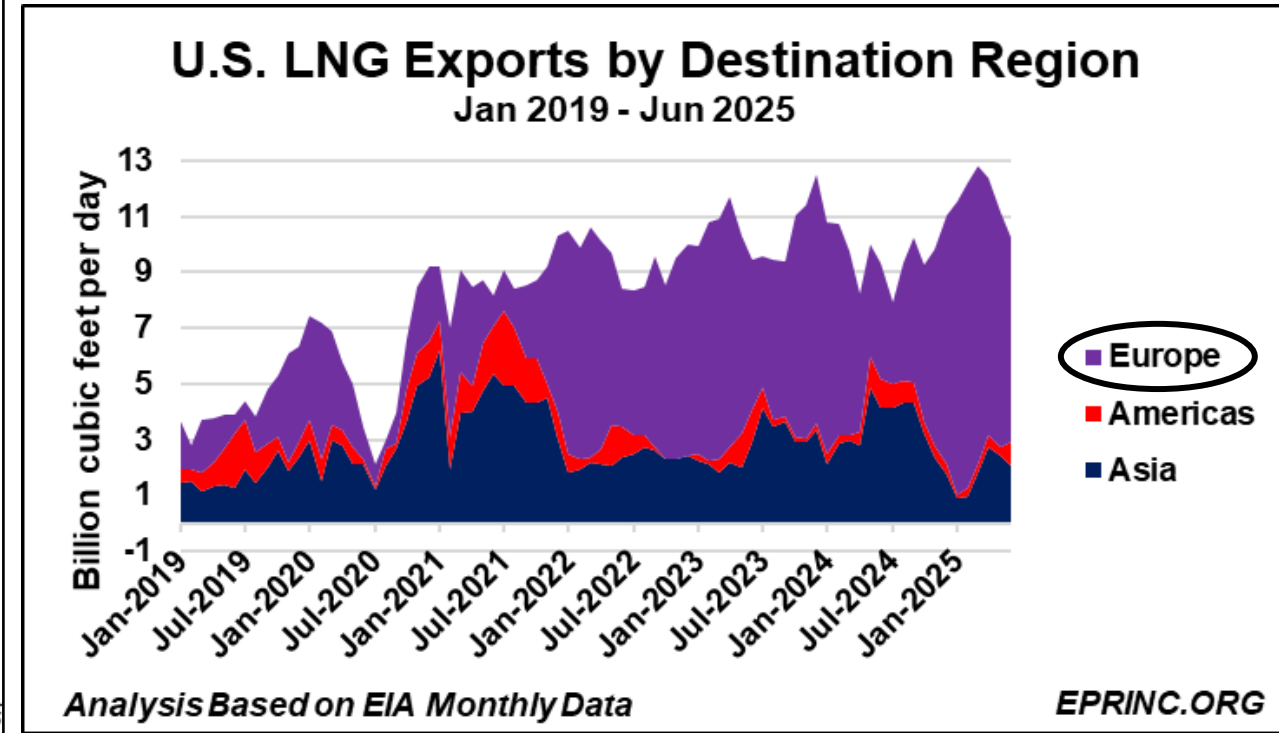
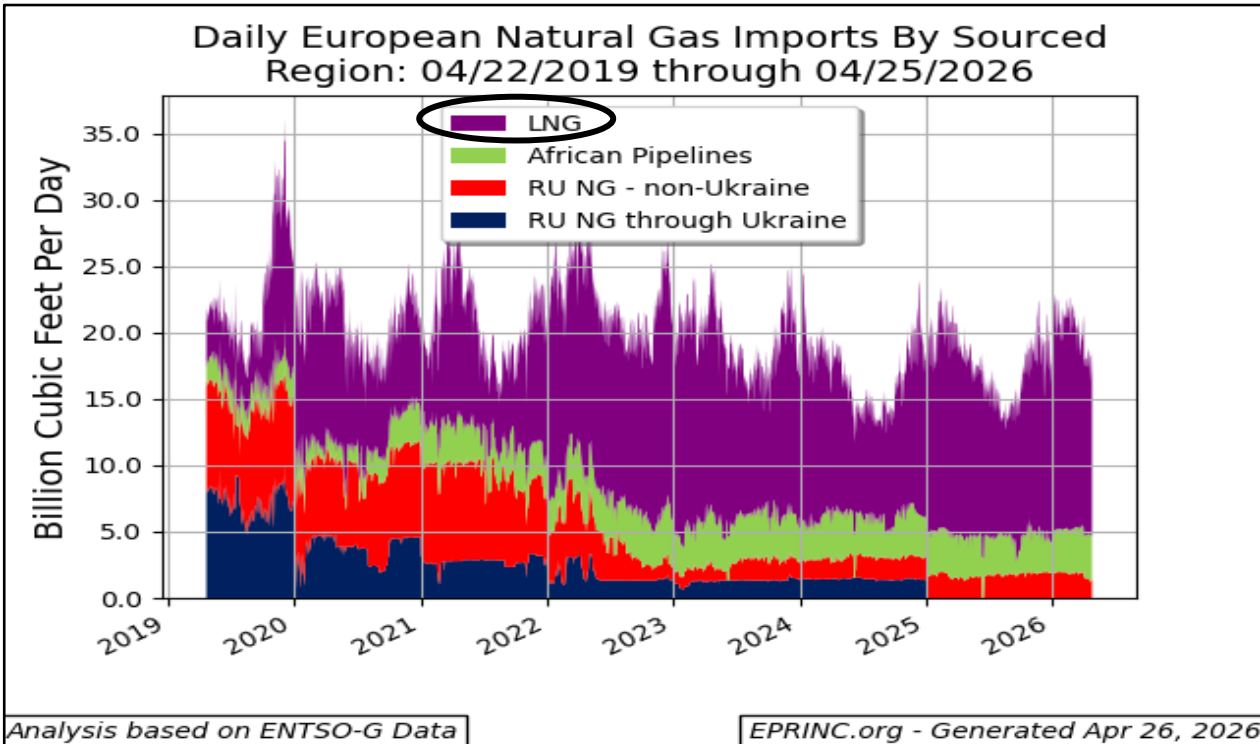
Jan 2013 - Dec 2025



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European Russian Hydrocarbon Avoidance

– Natural Gas Imports — Note the Complementarity



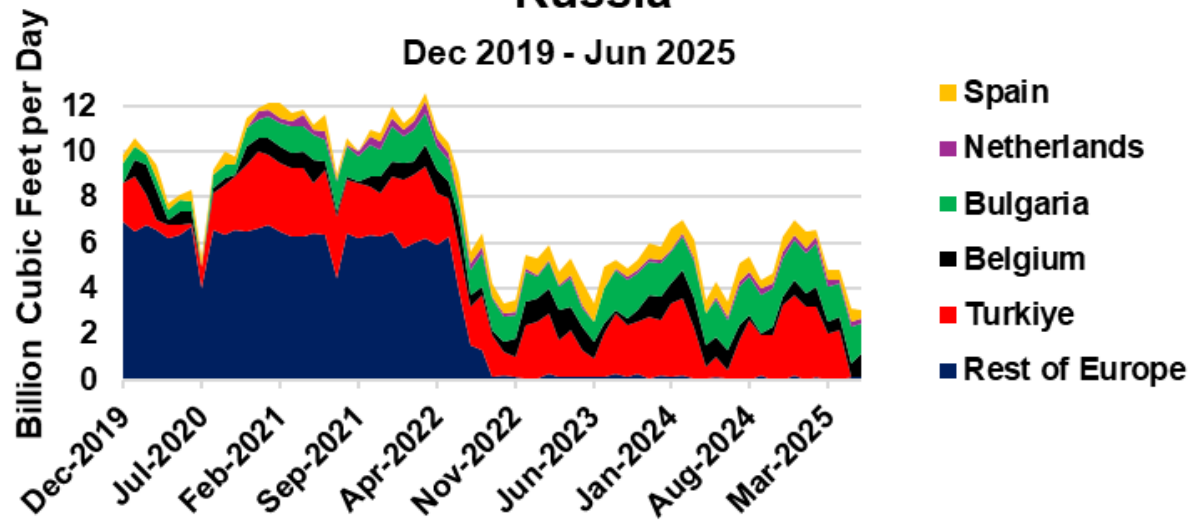
Europe became the dominant destination for U.S. LNG exports following Russia's February 2022 full-scale invasion of Ukraine.

It has continued in this fashion, making Europe less vulnerable to Qatari LNG export disruptions.

European Imports of U.S. Energy and Displacing Russian Exports – Natural Gas

European Natural Gas Imports from Russia

Dec 2019 - Jun 2025

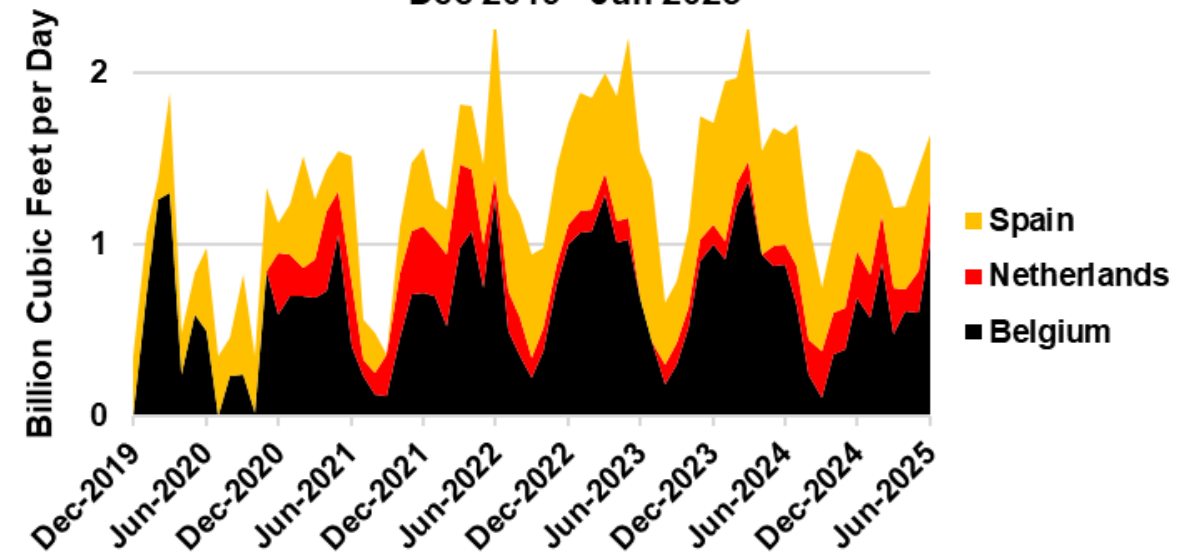


Analysis Based on Monthly Eurostat Data

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European LNG Imports from Russia

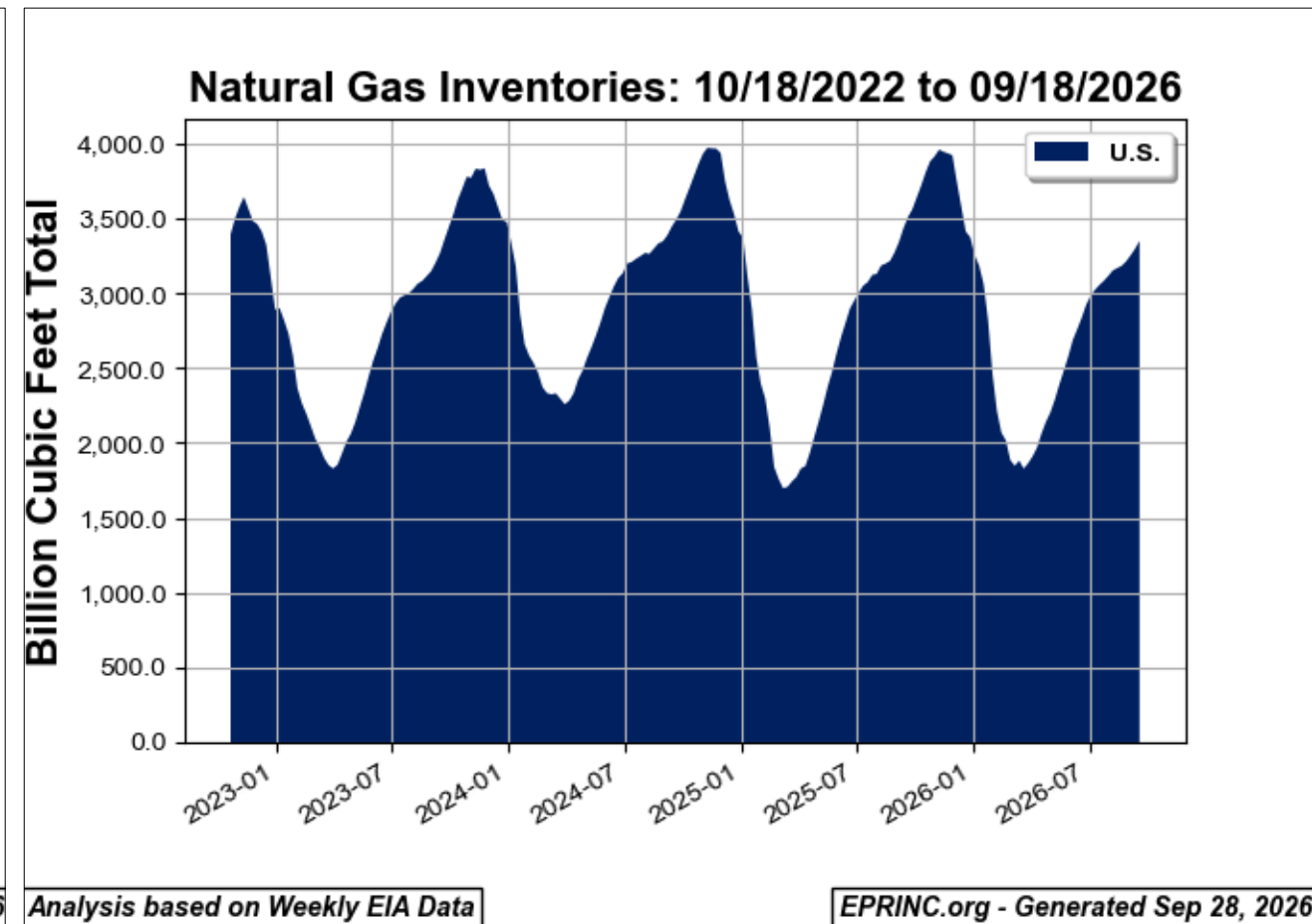
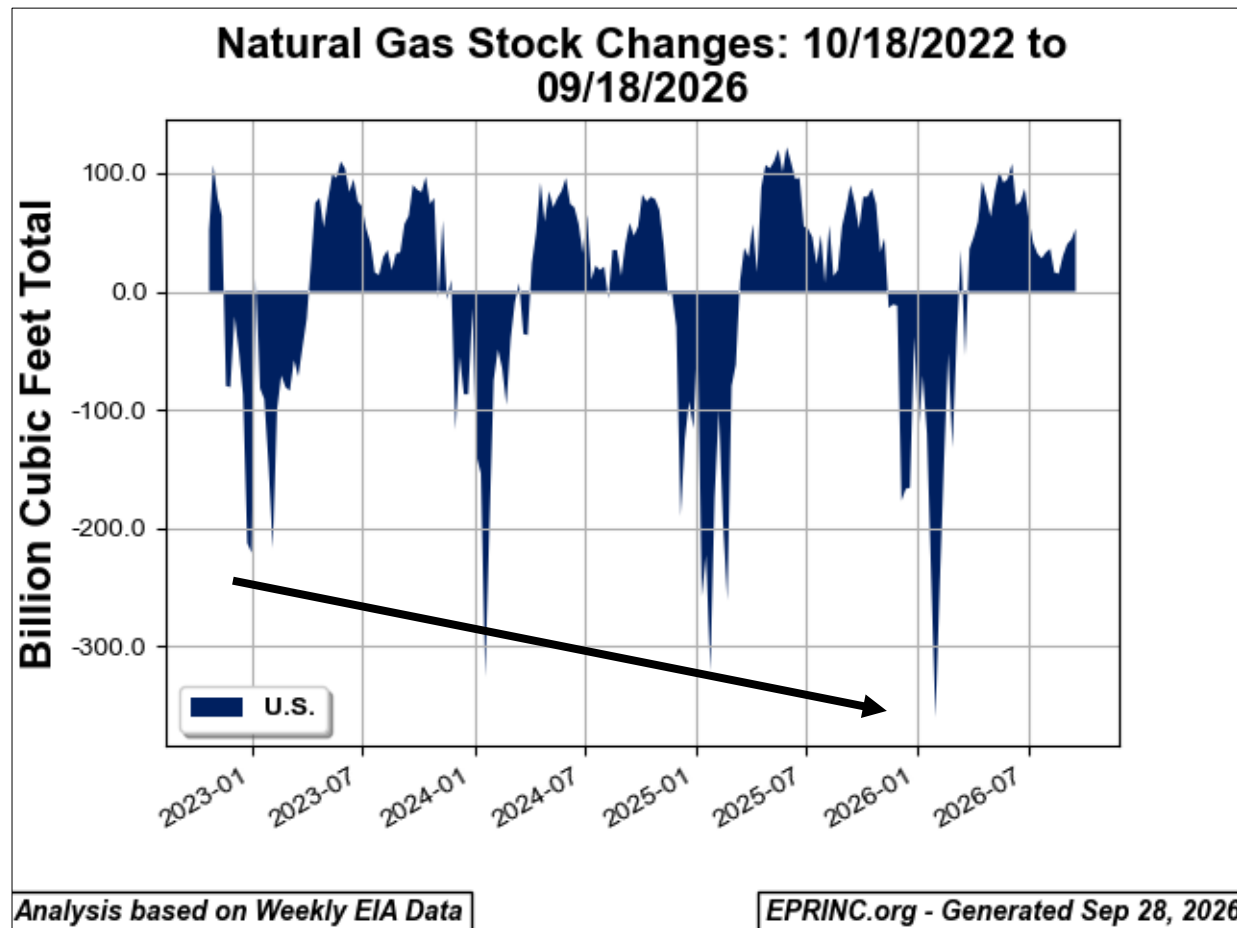
Dec 2019 - Jun 2025



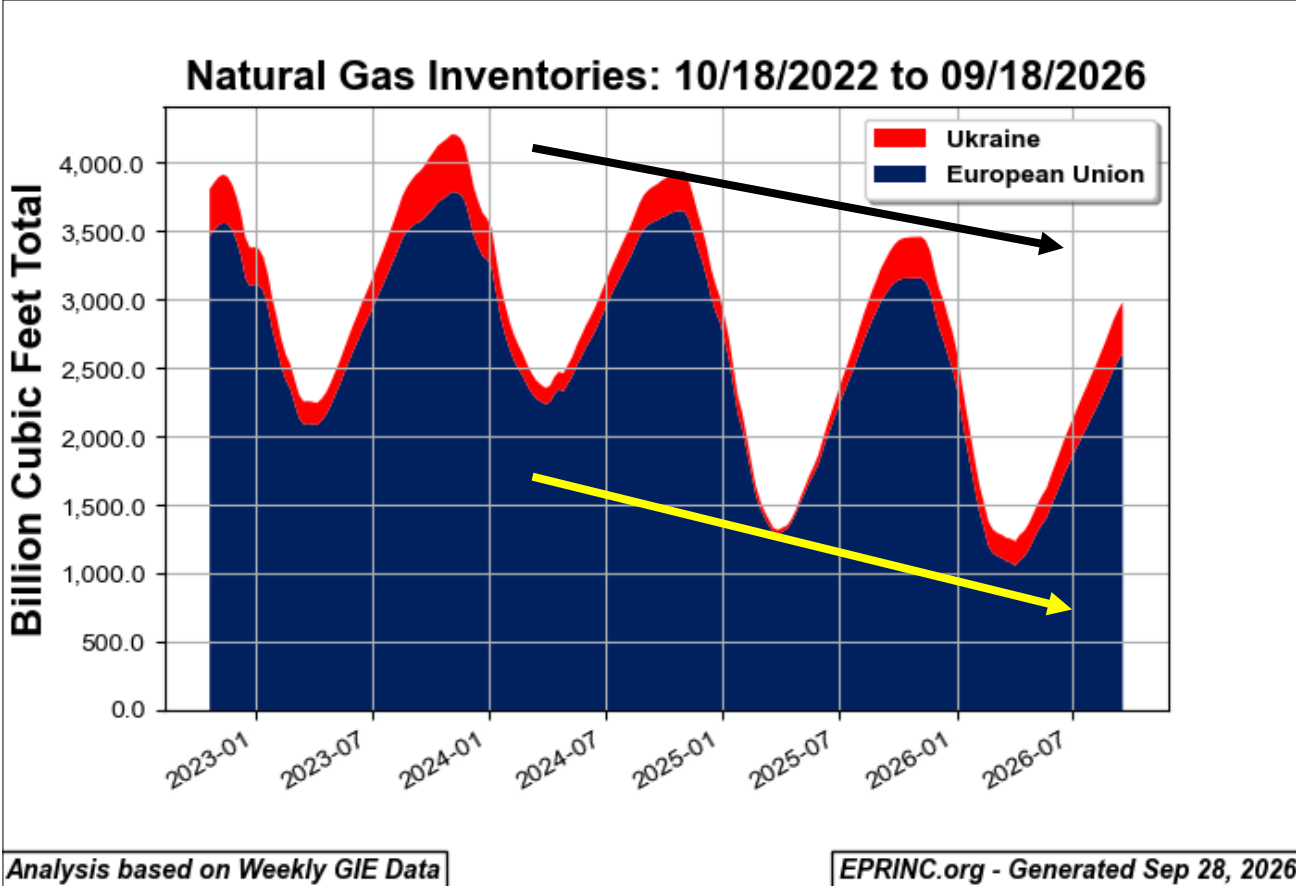
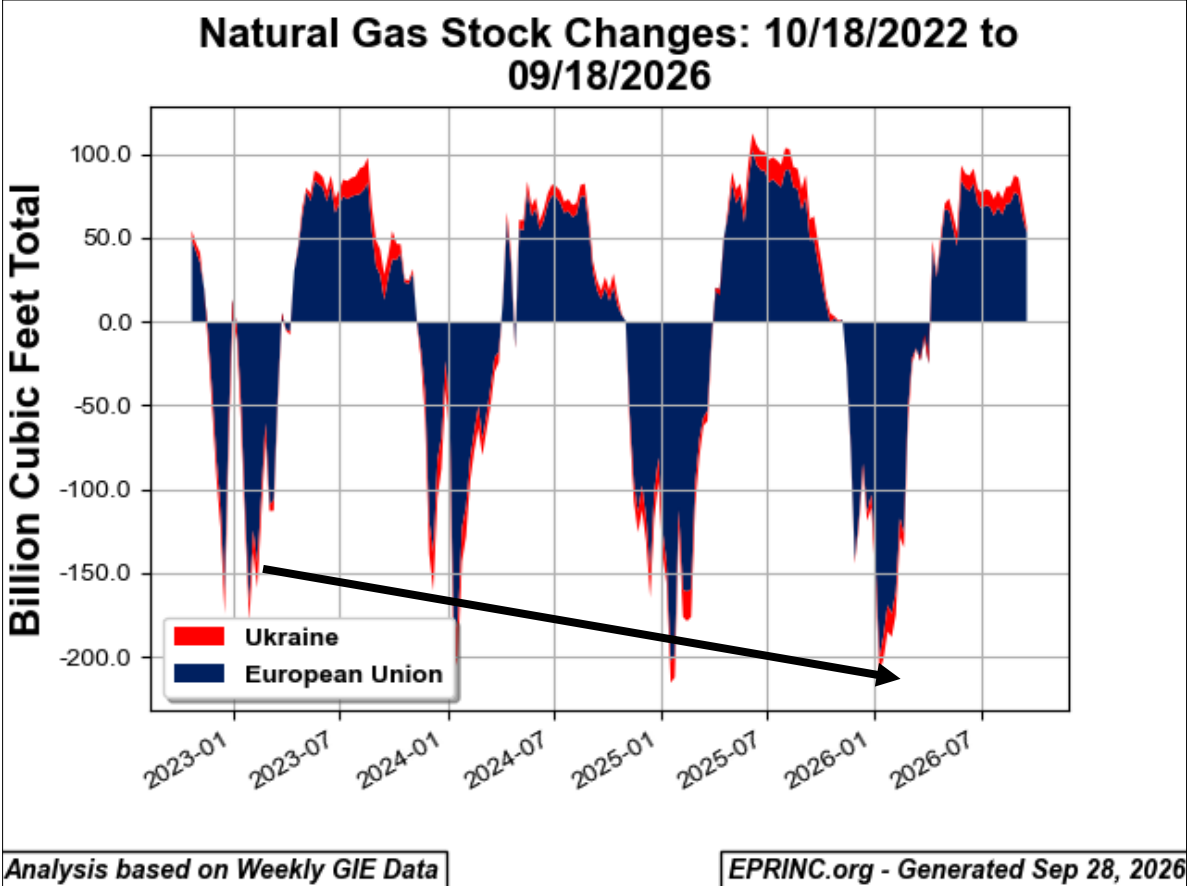
Analysis Based on Monthly Eurostat Data

EPRINC.org

Natural Gas Inventories: The View from the U.S.

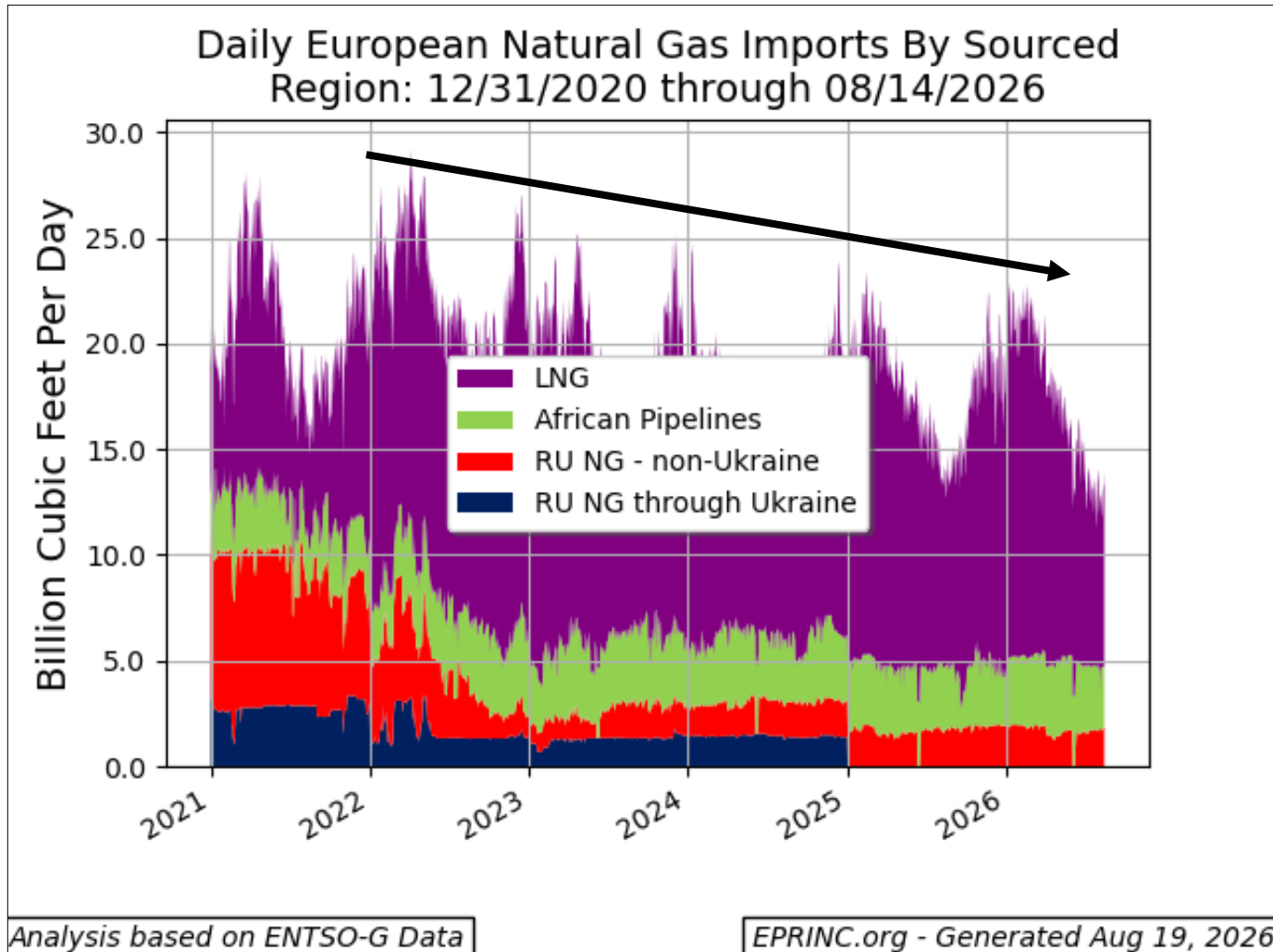


Natural Gas Inventories: The View from Europe



European Natural Gas Inventories

Summer 2026 Assessment



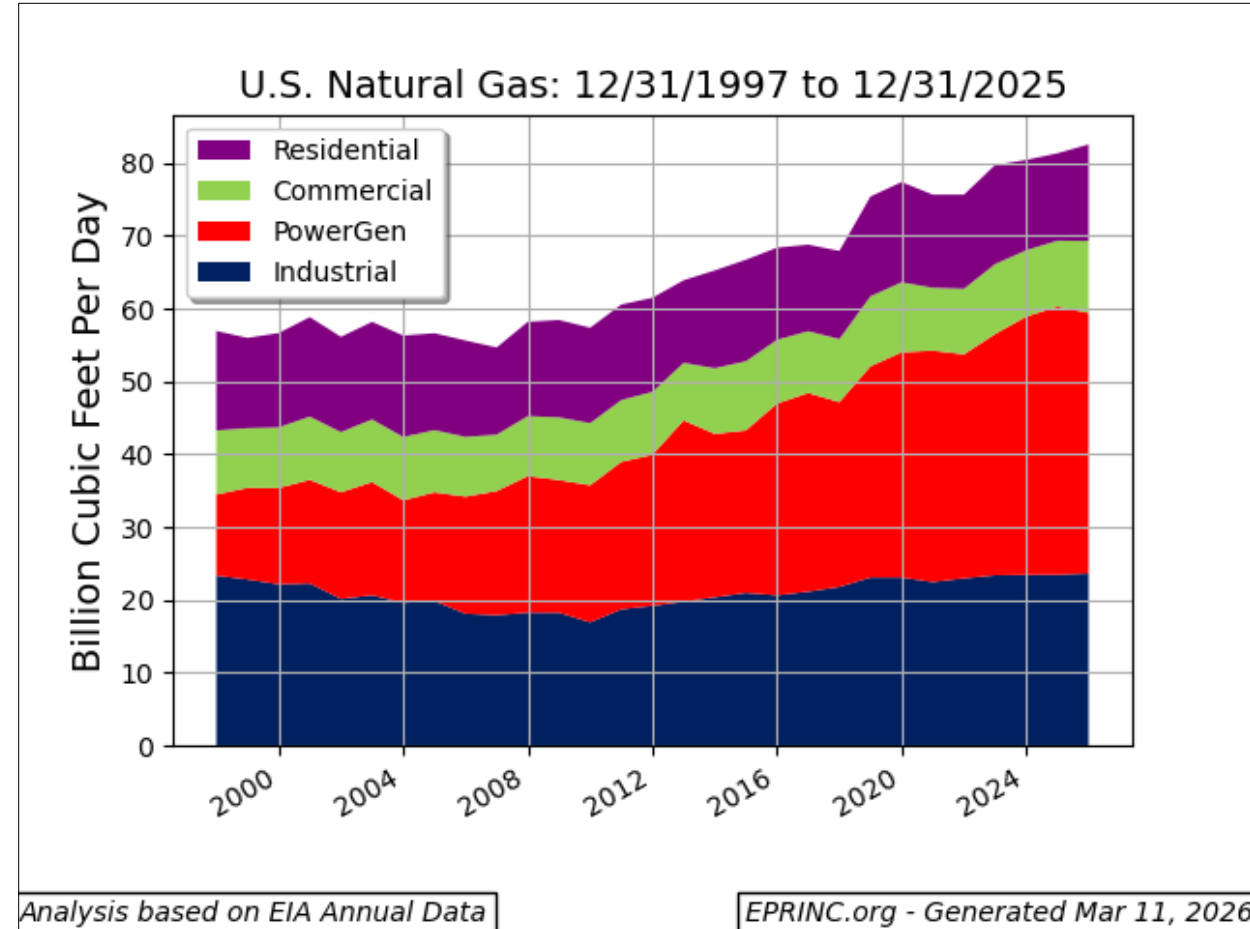
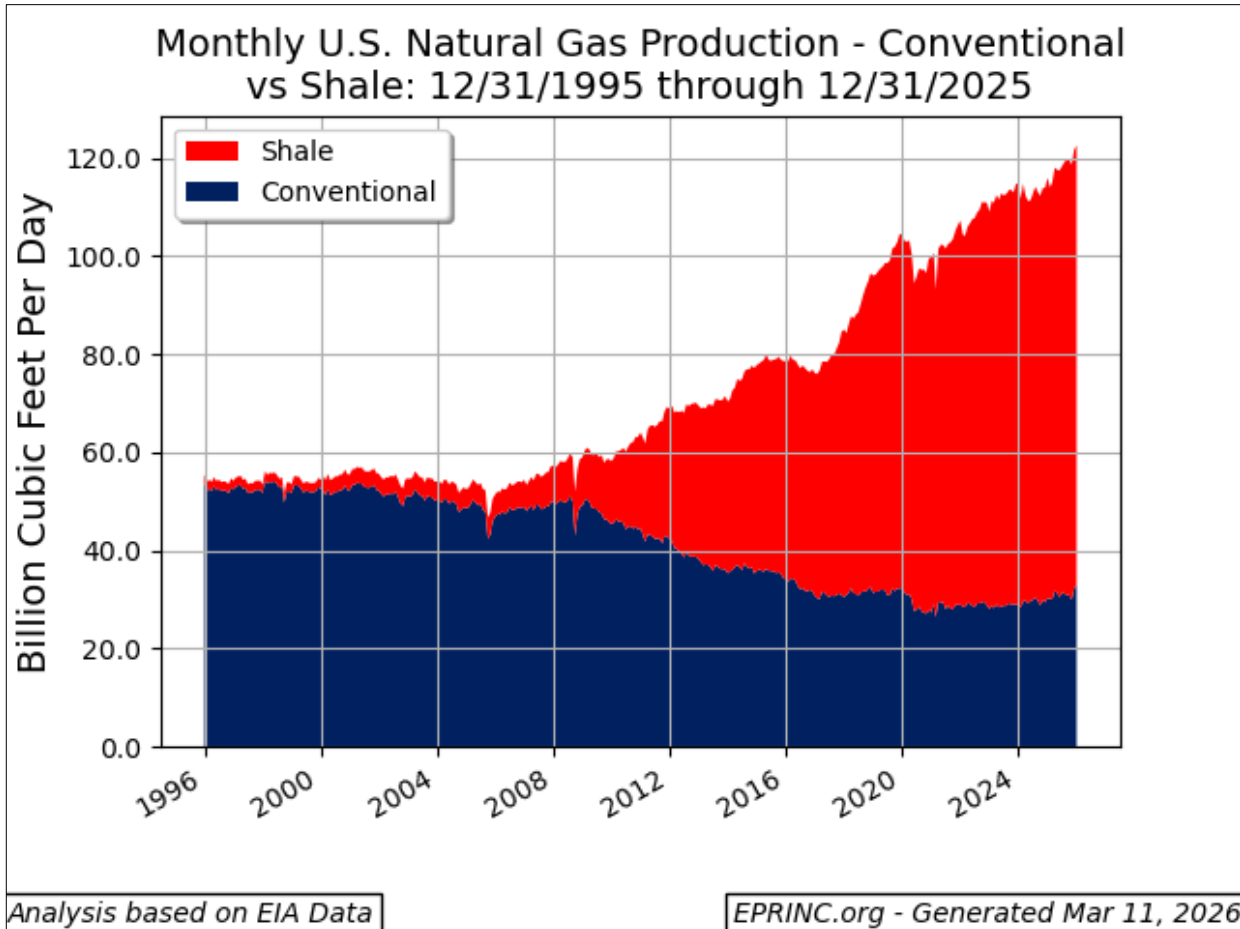
European sanctions policy against Russia, failure to renew pipeline transit agreements, and other things have caused Europe to shift from a situation where most natural gas imports were transited via international pipelines to one where the majority is moved as LNG (and since mid-2022 the bulk of that Europe-bound LNG is coming from the U.S.).

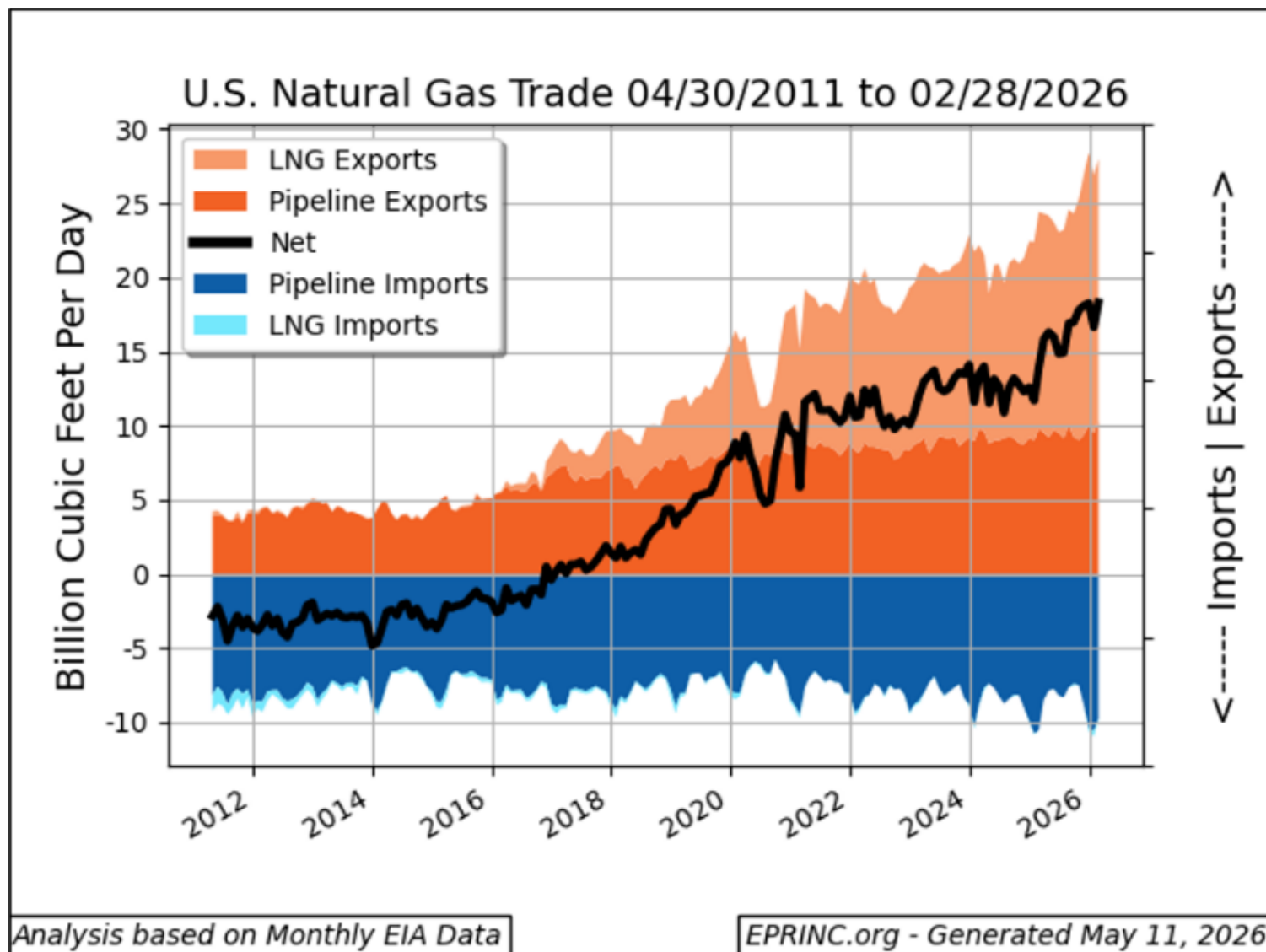
But despite the shift in strategy, total European natural gas imports continue to trend lower.

U.S. Natural Gas Markets

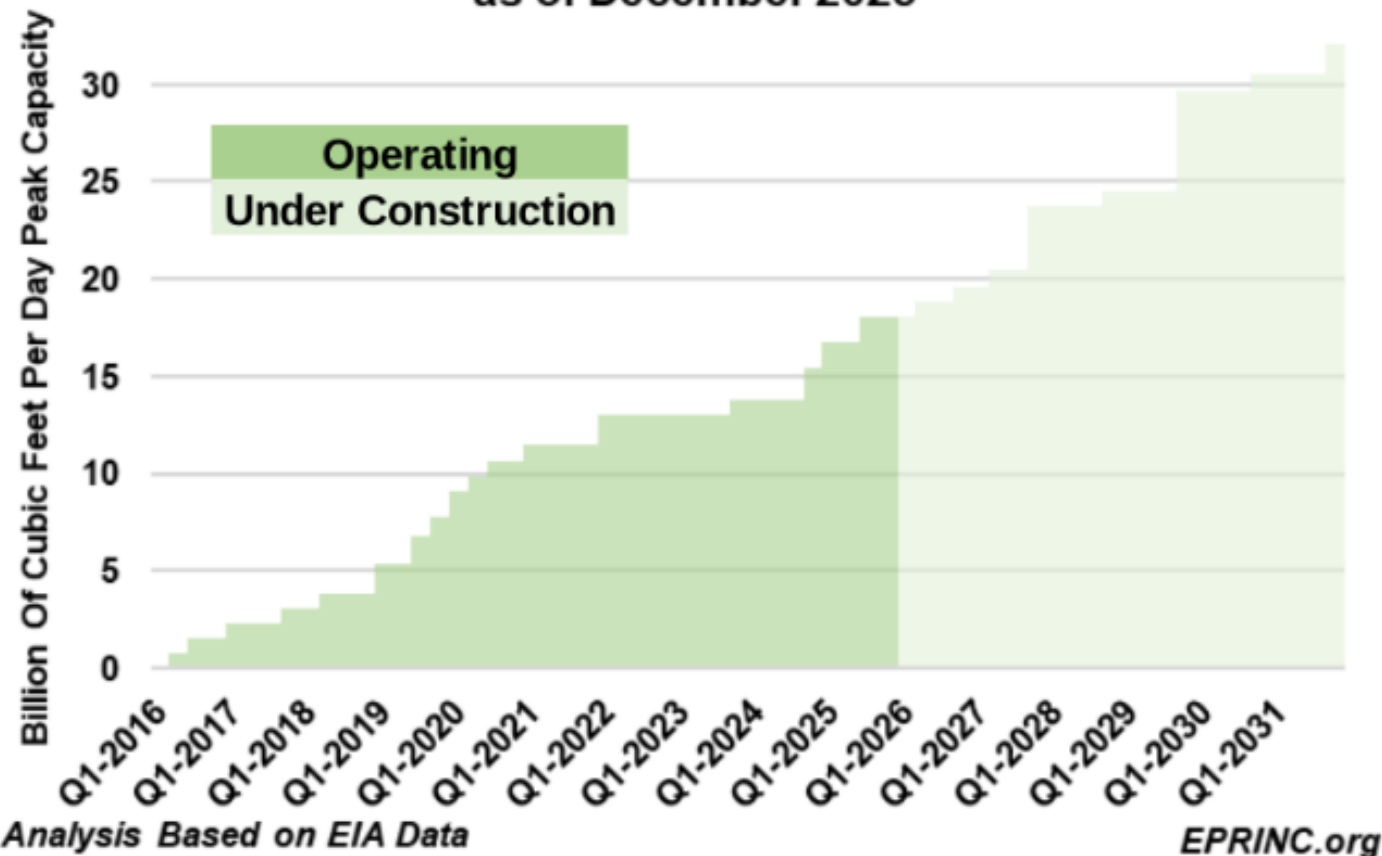
An Overview







U.S. LNG Capacity: Operating or Under Construction as of December 2025



U.S. LNG Plants - Operating

(Trains)	BCF/d	MTP/a	Commissioning Period
Sabine (1-6)	4.6	34.6	May-2016 to Feb-2022
Cove Point	0.8	5.8	Apr-2018
Corpus Christi (1-7)	3.7	28.3	Feb-2019 to Feb-2025
Cameron (1-3)	2.0	15.0	Aug-2019 to Aug-2020
Freeport (1-3)	2.1	16.3	Dec-2019 to Aug-2020
Elba Island (1-10)	0.4	2.7	Dec-2019 to Aug-2020
Calcasieu Pass (1-18)	1.6	12.0	Mar-2022 to Oct-2023
Plaquemines (1-36)	2.9	21.9	Dec-2024 to Sep-2025
<i>Subtotal</i>	18.0	136.5	

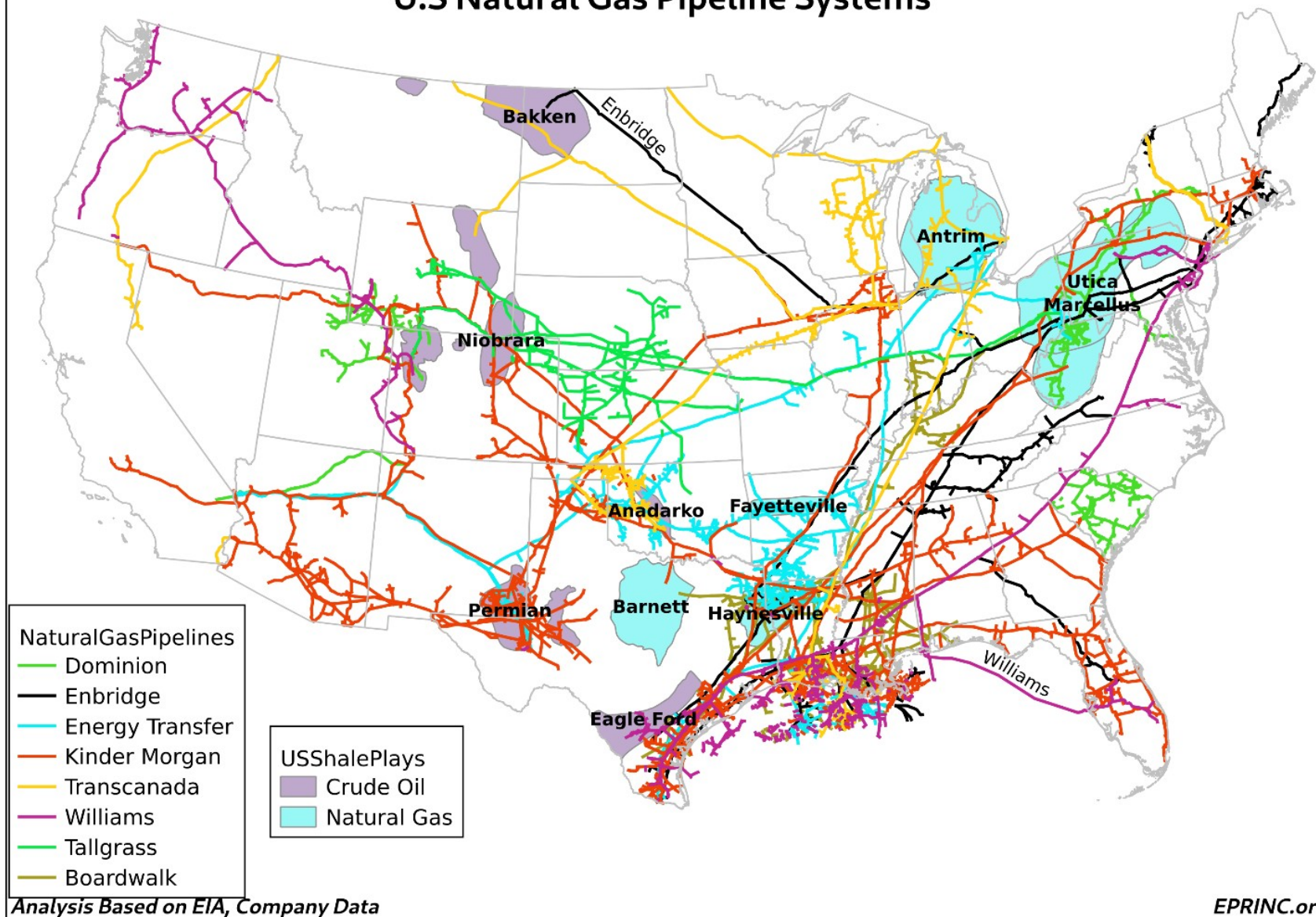
U.S. LNG Plants - Under Construction

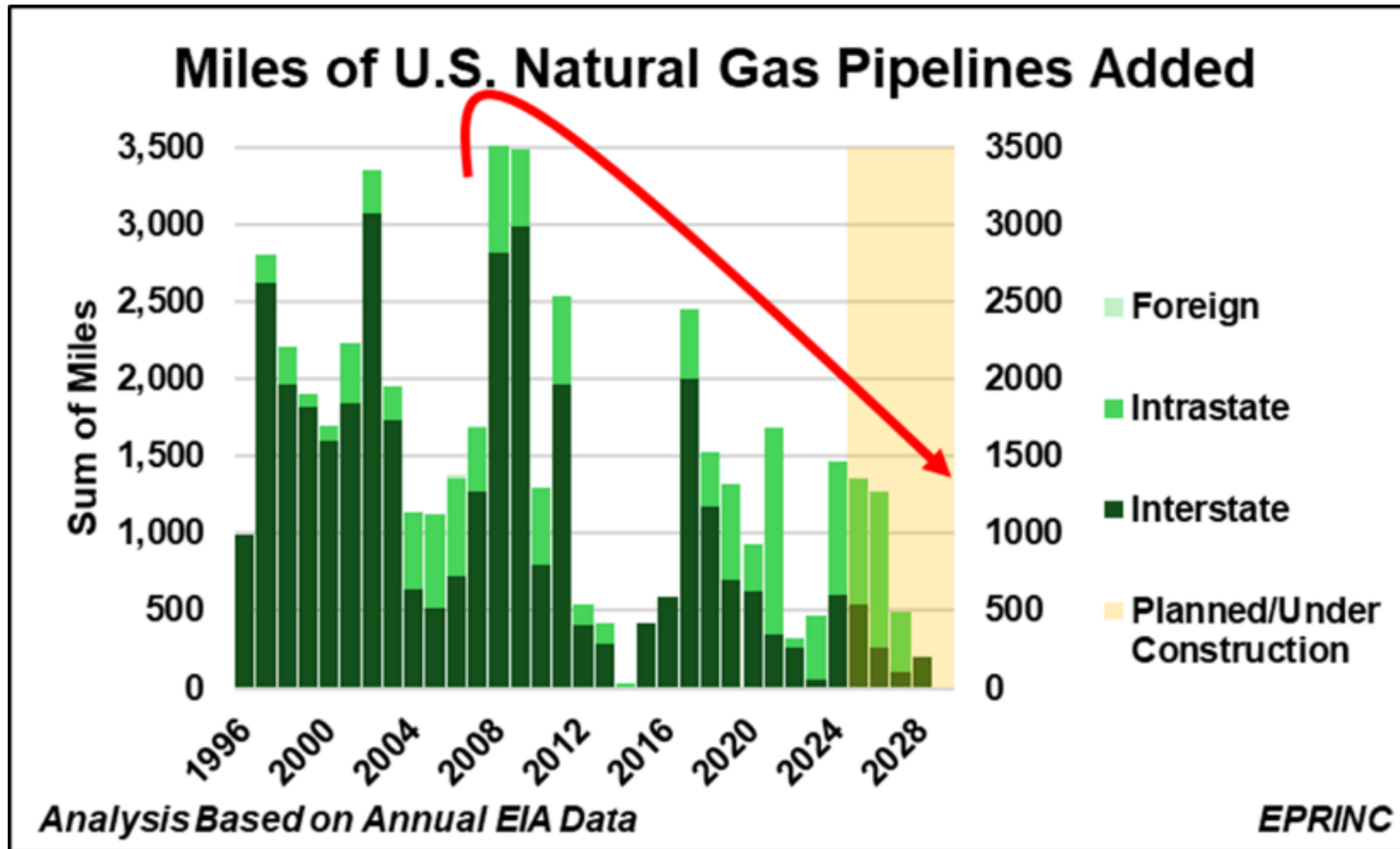
Golden Pass (1-3)	2.4	18.1	Jun-2026 to Jun-2027
Port Arthur LNG (1-4)	3.6	27.0	Dec-2027 to Dec-2031
Rio Grande (1-5)	3.9	29.3	Dec-2027 to Dec-2031
Woodside LA (1-3)	2.3	17.7	Dec-2029
Venture Global CP2 #1	2.9	20.2	Dec-2029
<i>Subtotal</i>	15.0	112.3	
<i>Total</i>	33.0	248.8	

Analysis based on EIA Data

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Main Shale Play Formations and U.S. Natural Gas Pipeline Systems

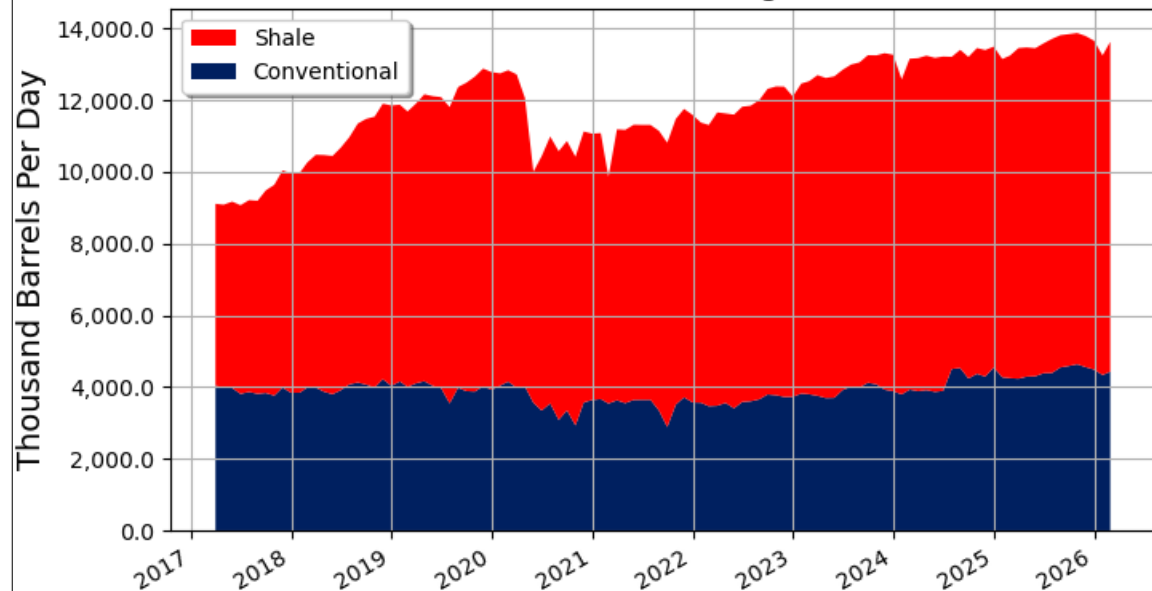




U.S. Petroleum Markets

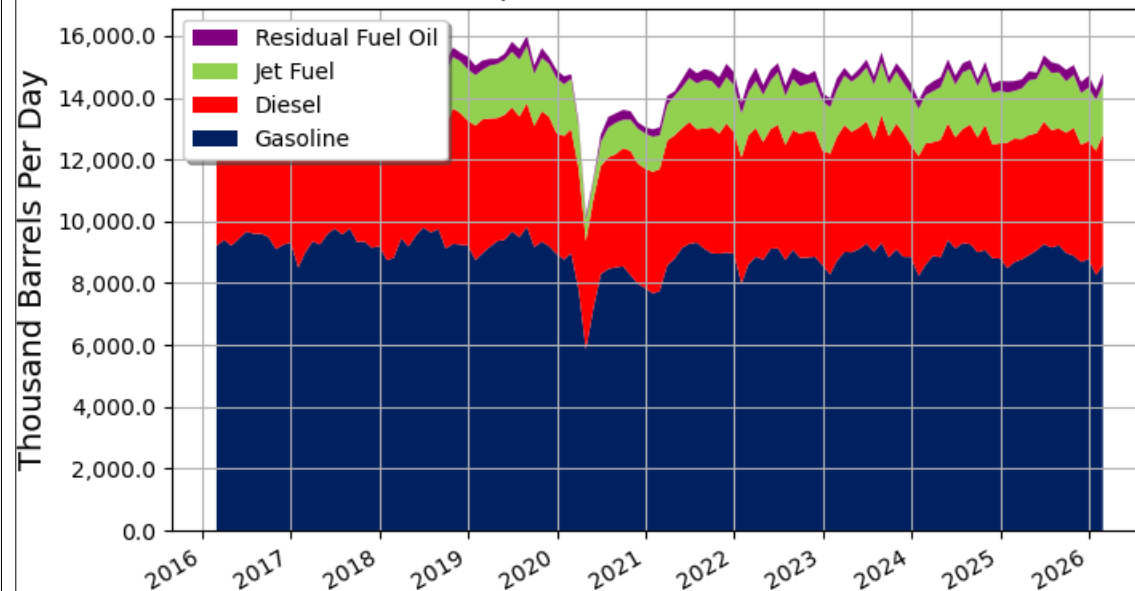
An Overview

Monthly U.S. Crude Oil Production - Conventional
vs Shale: 03/31/2017 through 02/28/2026



EPRINC.org - Generated May 05, 2026

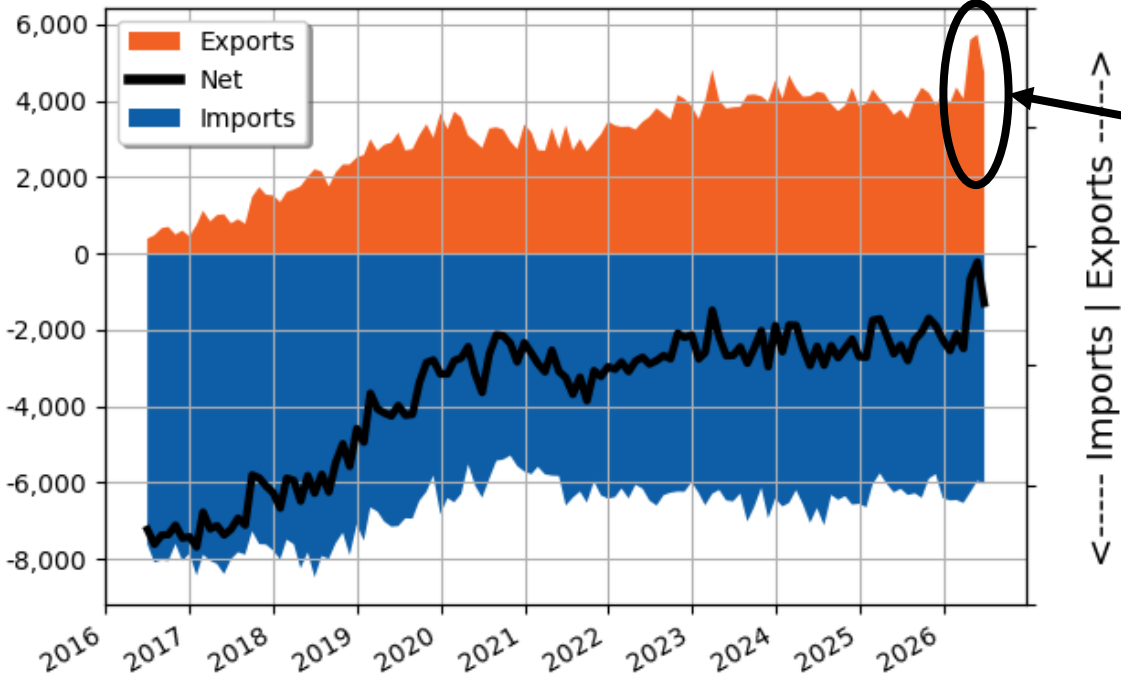
U.S. Consumption - 02/28/2016 to 02/28/2026



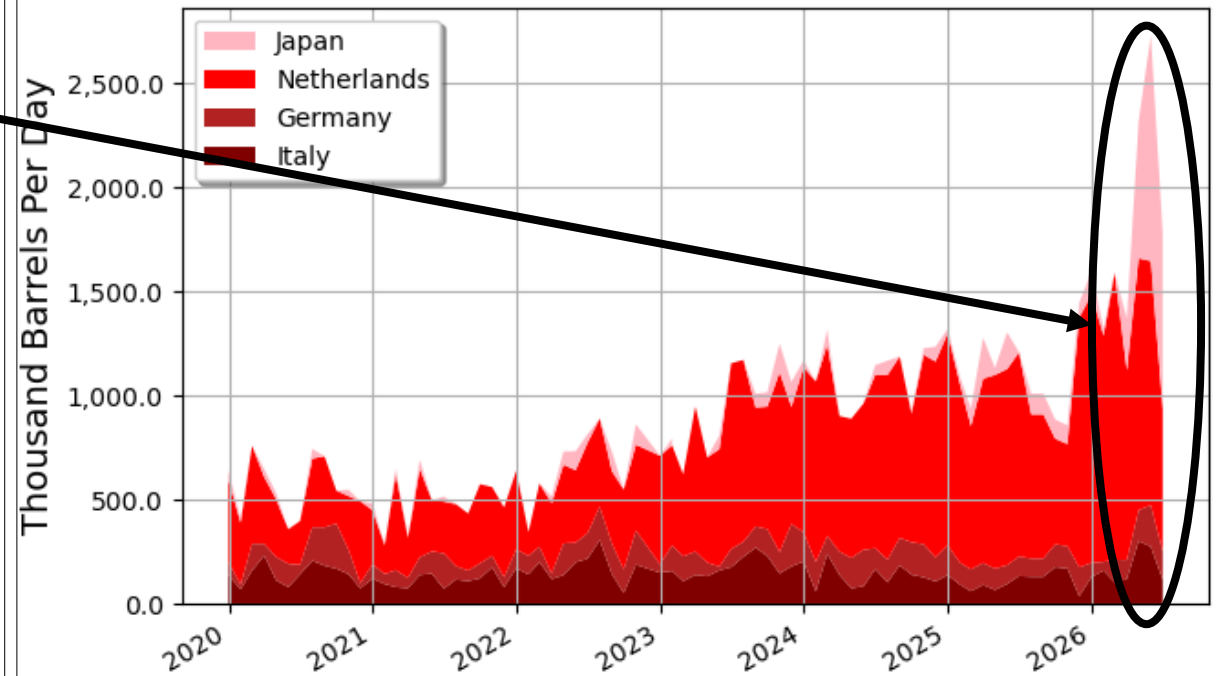
EPRINC.org - Generated May 05, 2026

U.S. Crude Oil Export Response to Hormuz Closure

U.S. Crude Oil Trade 06/30/2016 to 06/30/2026



U.S. Crude Oil Exports by Destination Country -
12/31/2019 to 06/30/2026

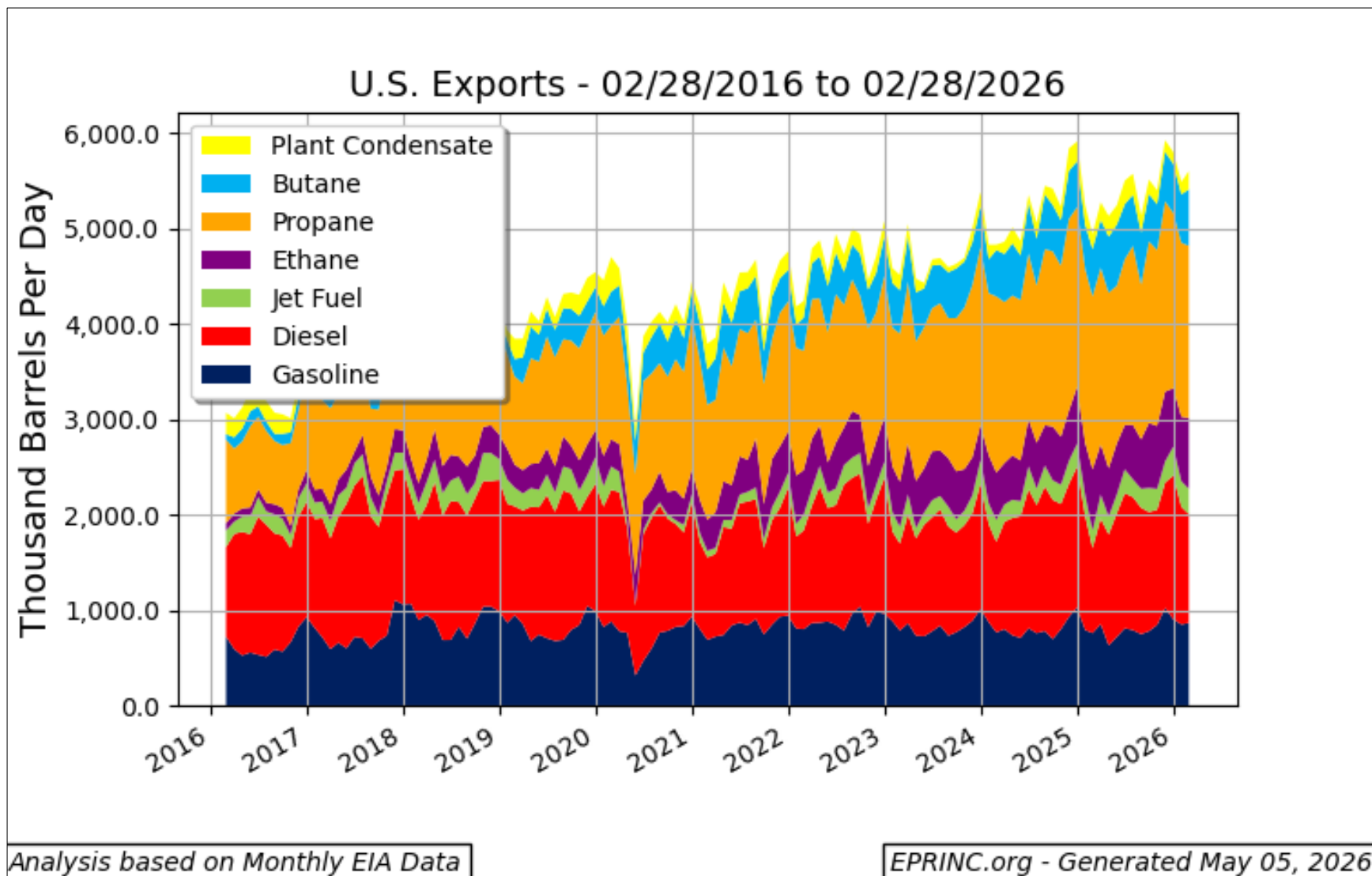


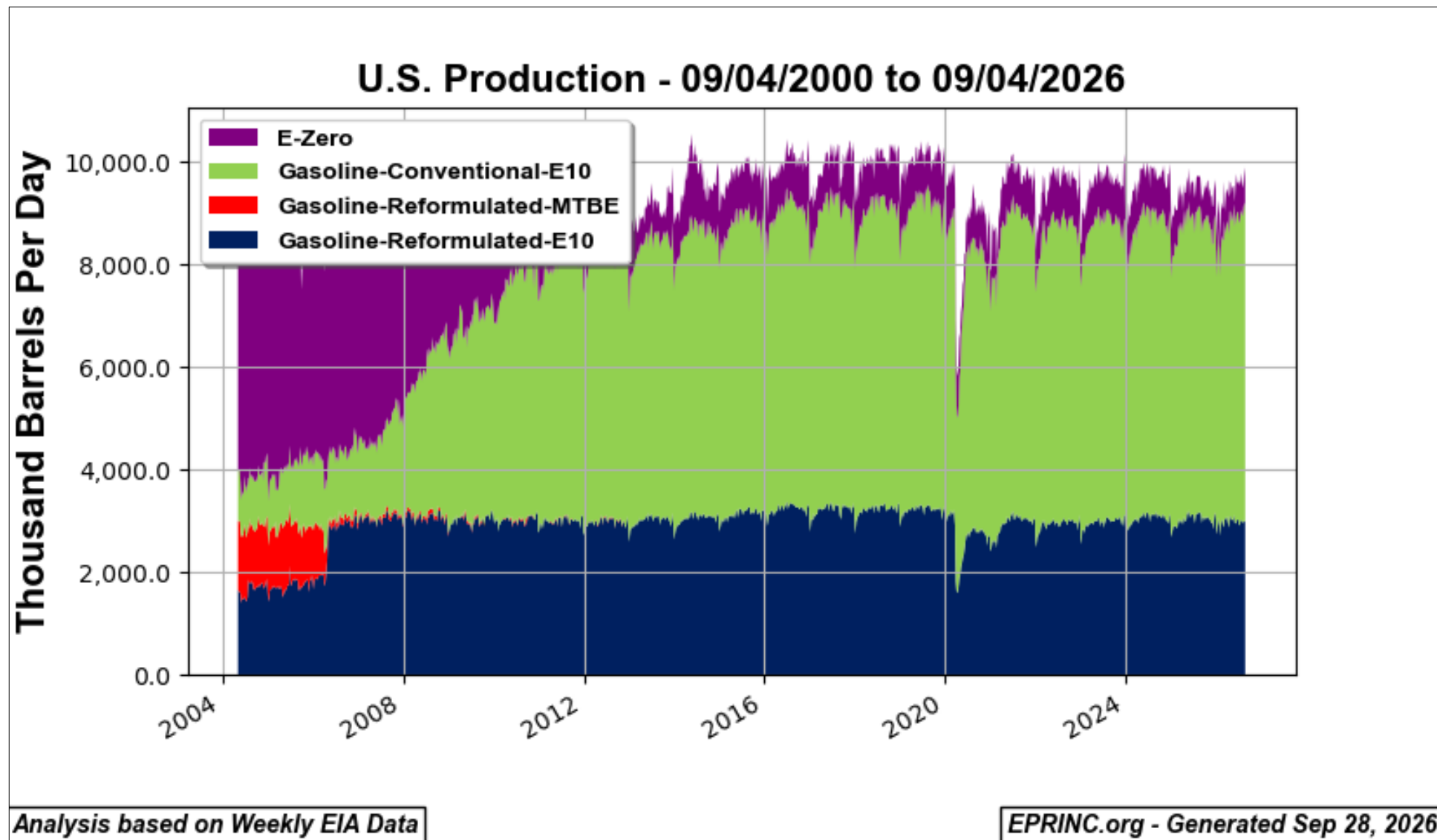
Analysis based on Monthly EIA Data

EPRINC.org - Generated Sep 08, 2026

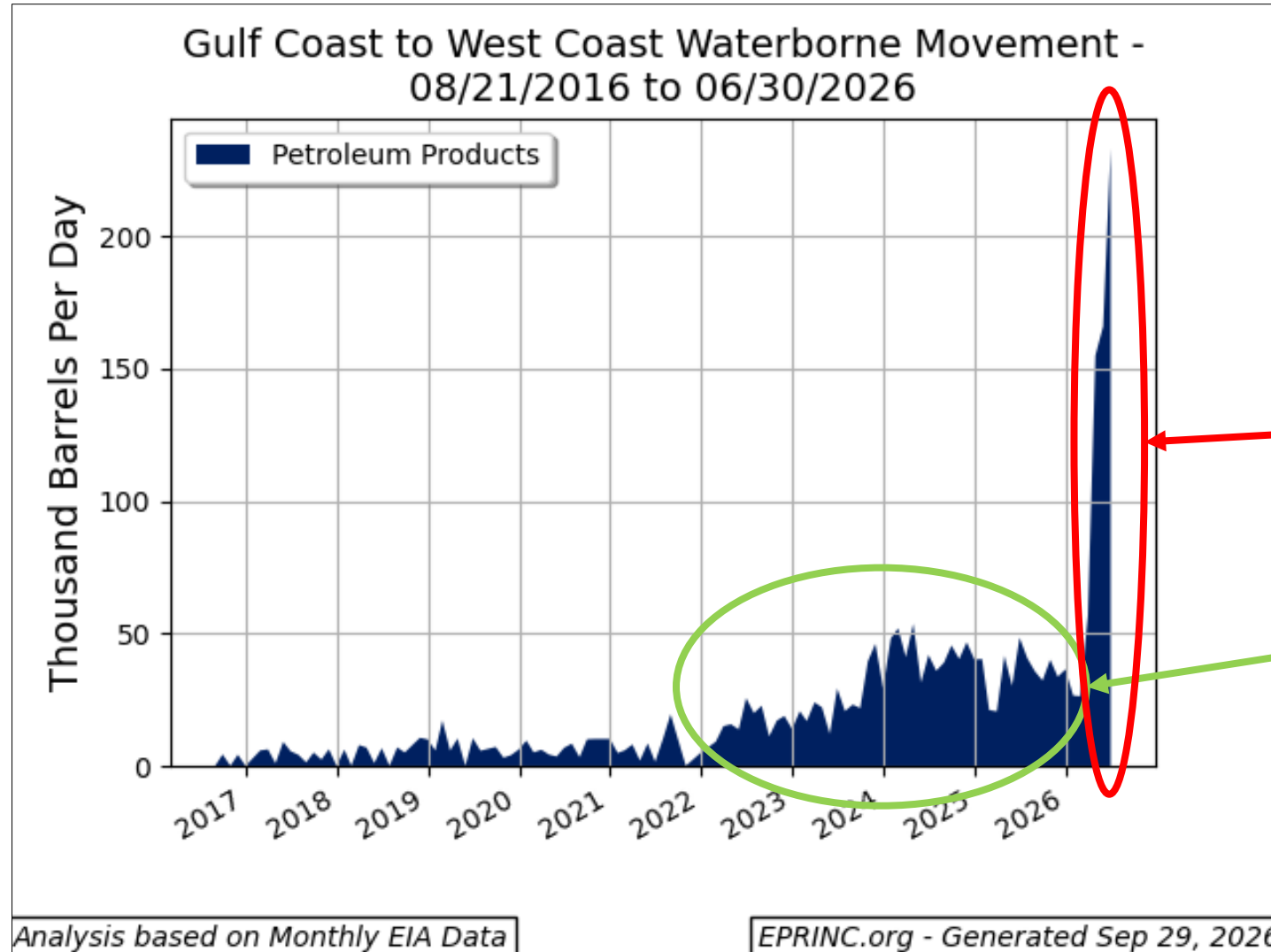
Analysis based on Monthly EIA Data

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The Impact of the March 2026 90-Day Jones Act Waiver



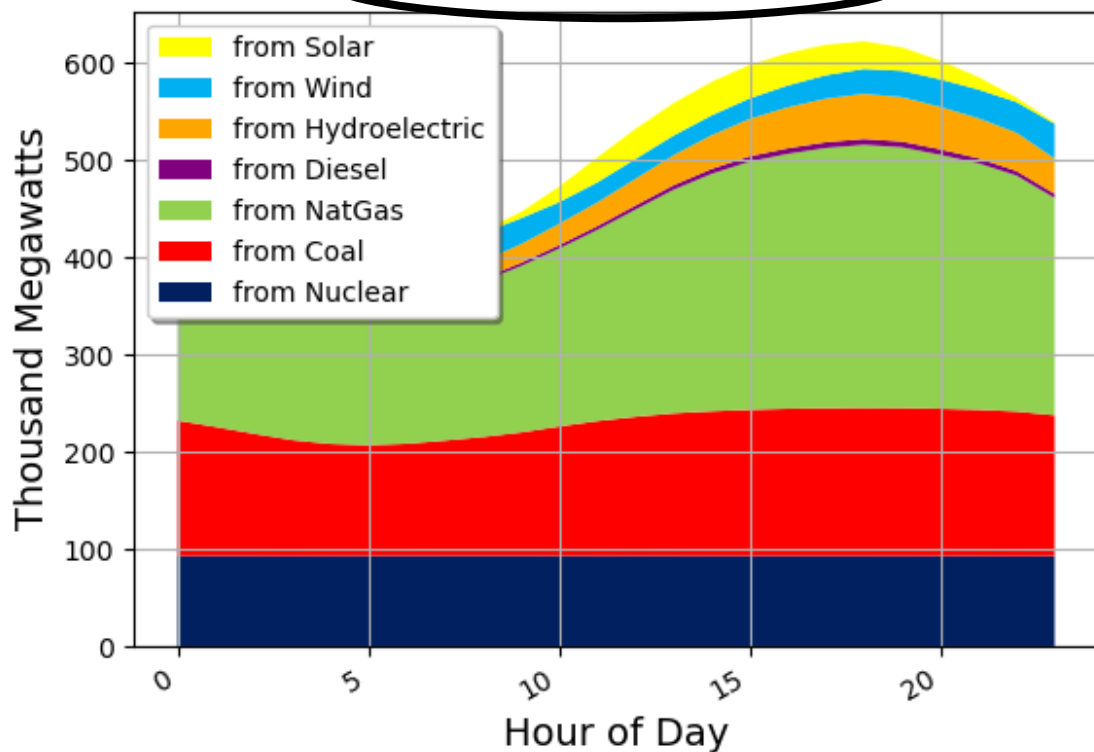
**Due to temporary
March 2026 Jones Act
waiver.**

**Due to California
refinery
closures/conversions.**

U.S. Electricity Markets

An Overview

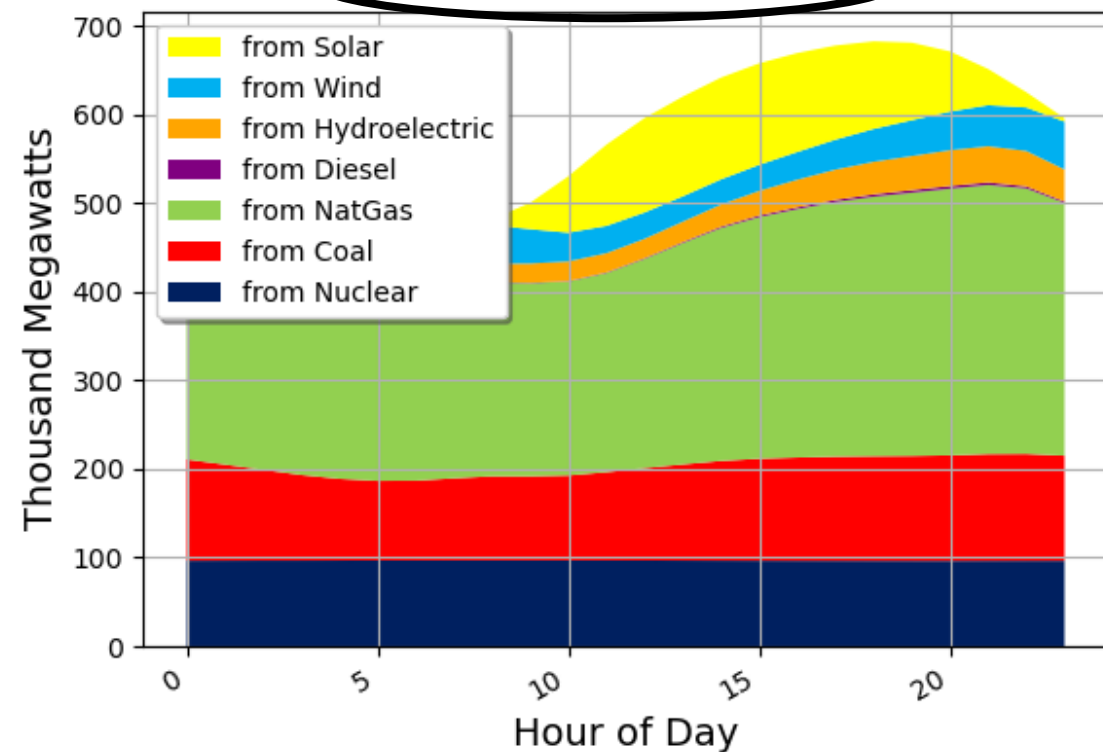
U.S. Average Hourly Electricity Production: from
07/01/2021 to 07/31/2021



Analysis based on Hourly EIA Data

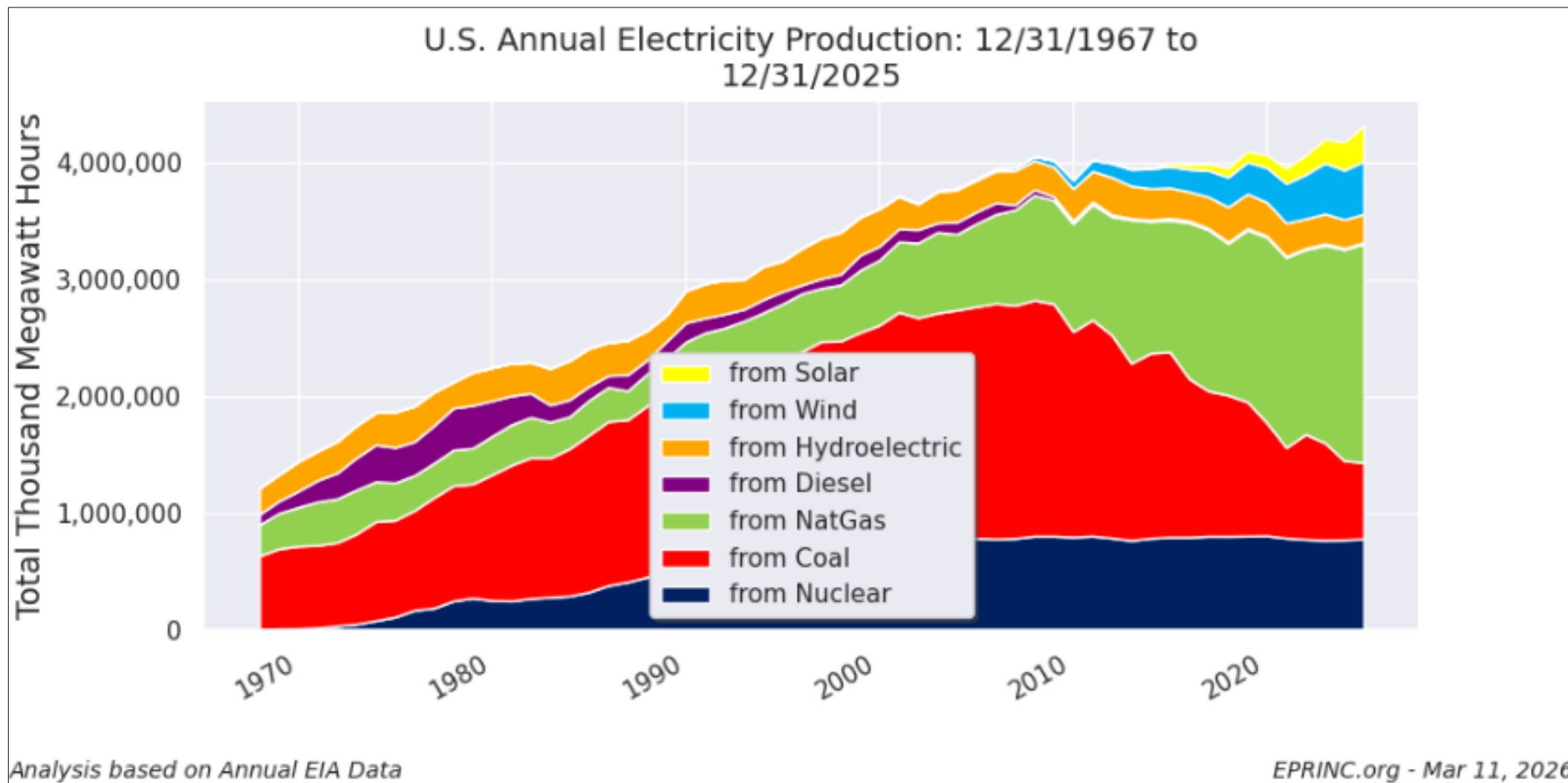
EPRINC.org - Generated Sep 28, 2026

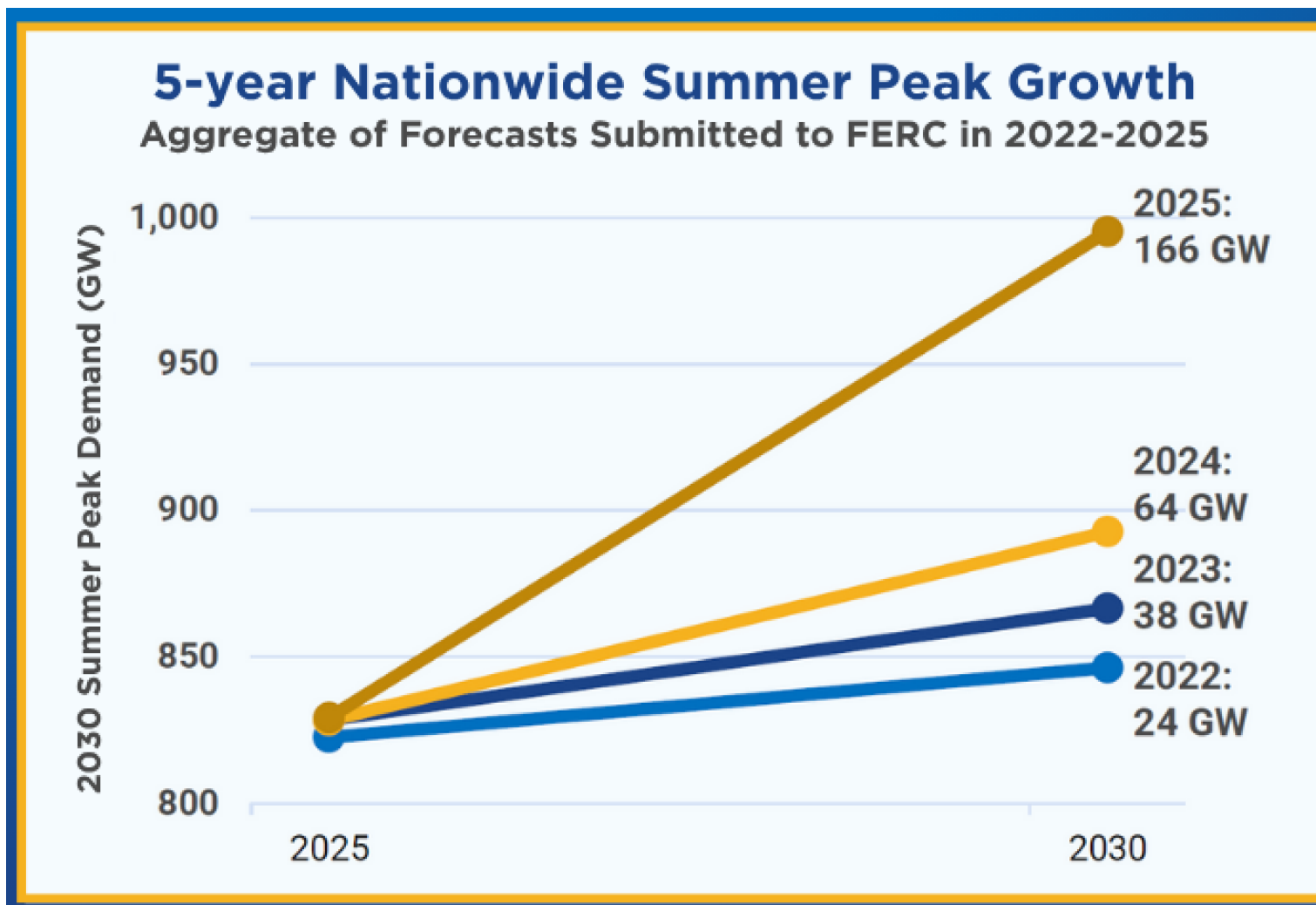
U.S. Average Hourly Electricity Production: from
07/01/2026 to 07/31/2026



Analysis based on Hourly EIA Data

EPRINC.org - Generated Sep 28, 2026





Дякую Вам За Вашу Уваги!

Питання?