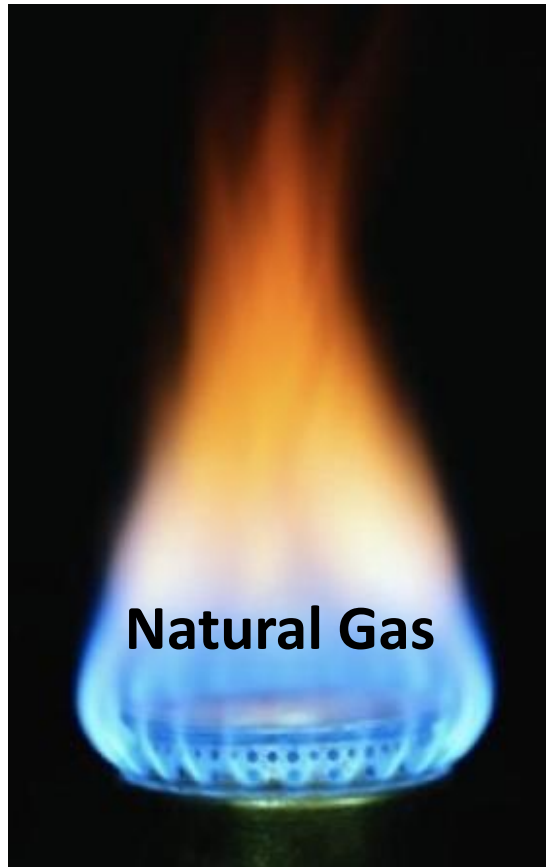
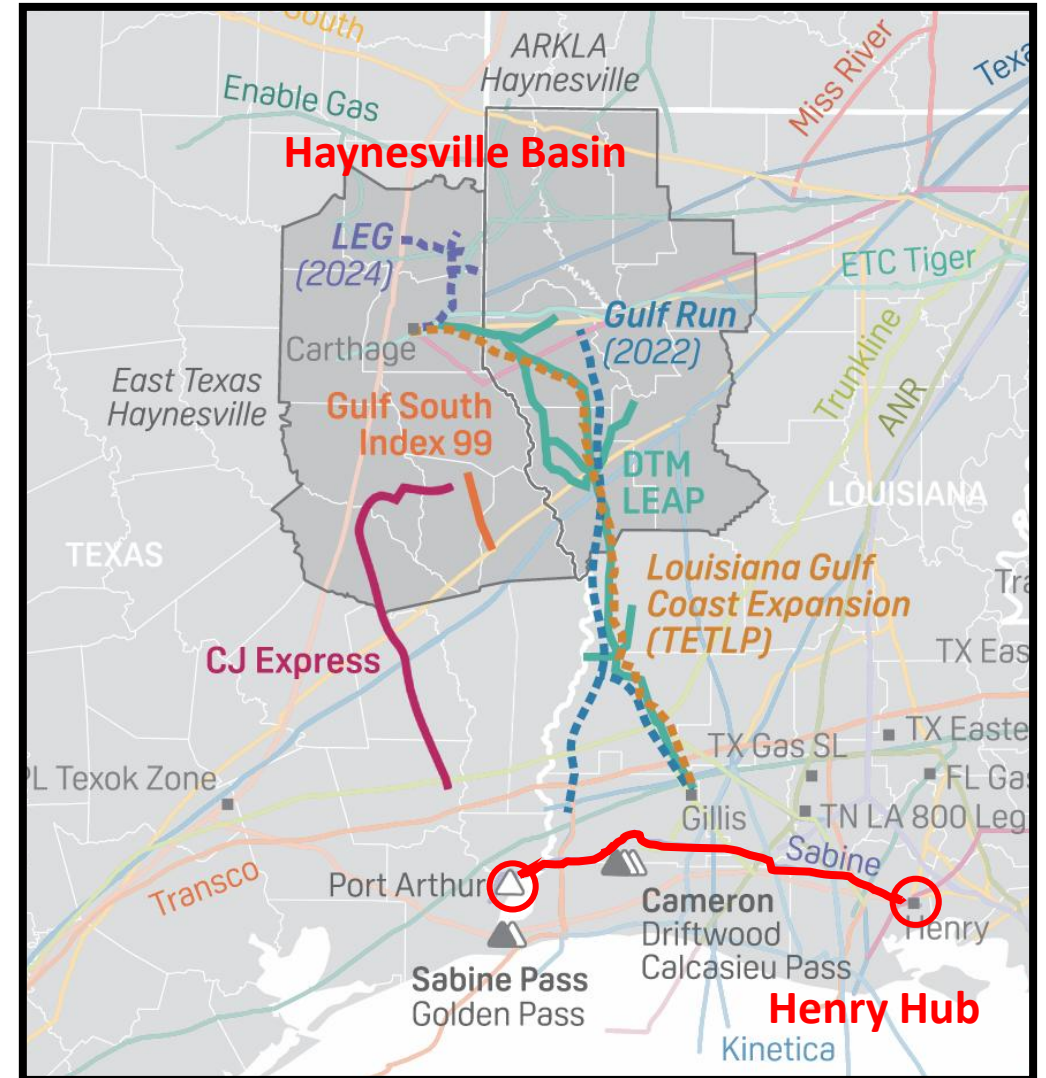


# ***GAS BOOM COMING!***

Donald P. Muth, Sr., AAPG Certified Petroleum Geologist,  
Energy Consultant, Oil Field Brine Lithium, MBA



## ***“ENTERING GOLDEN AGE”***

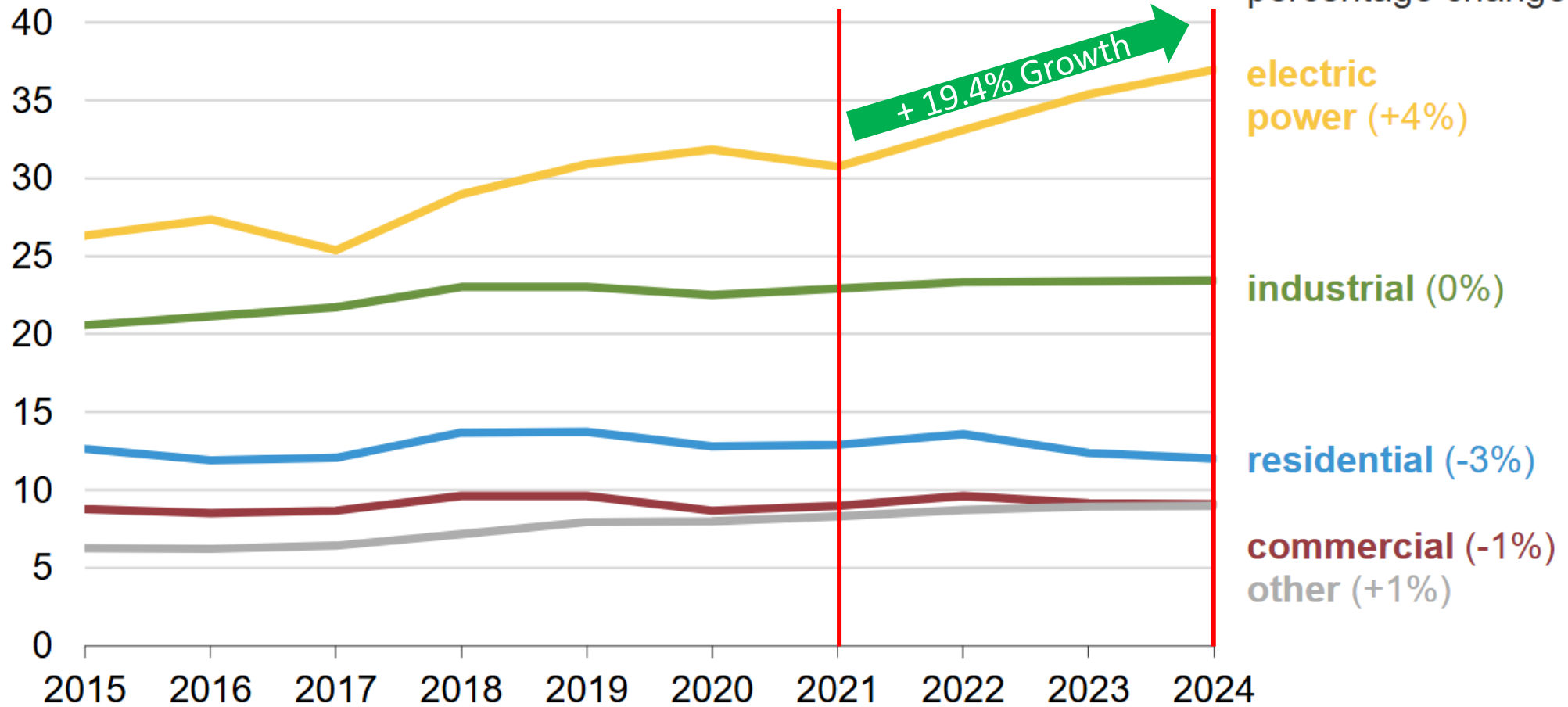


# U.S. annual natural gas consumption by sector (2015–2024)

billion cubic feet per day



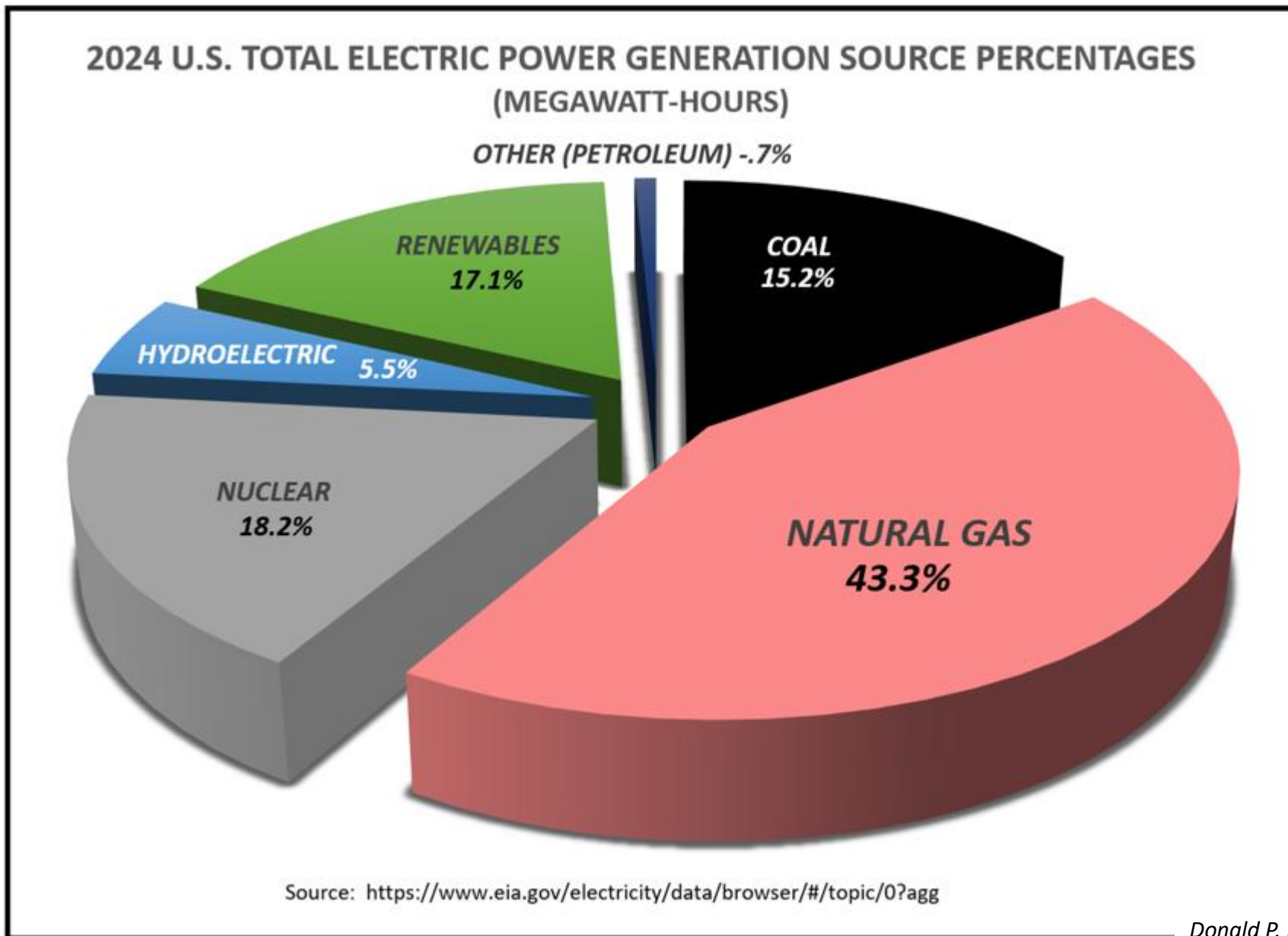
2023 to 2024  
percentage change



Data source: U.S. Energy Information Administration, *Natural Gas Monthly*

Note: Other=natural gas volumes consumed as transportation fuel, as lease and plant fuel, and in pipeline and distribution use

# NATURAL GAS PROVIDES +43.3% OF ELECTRIC POWER GENERATION- GROWING



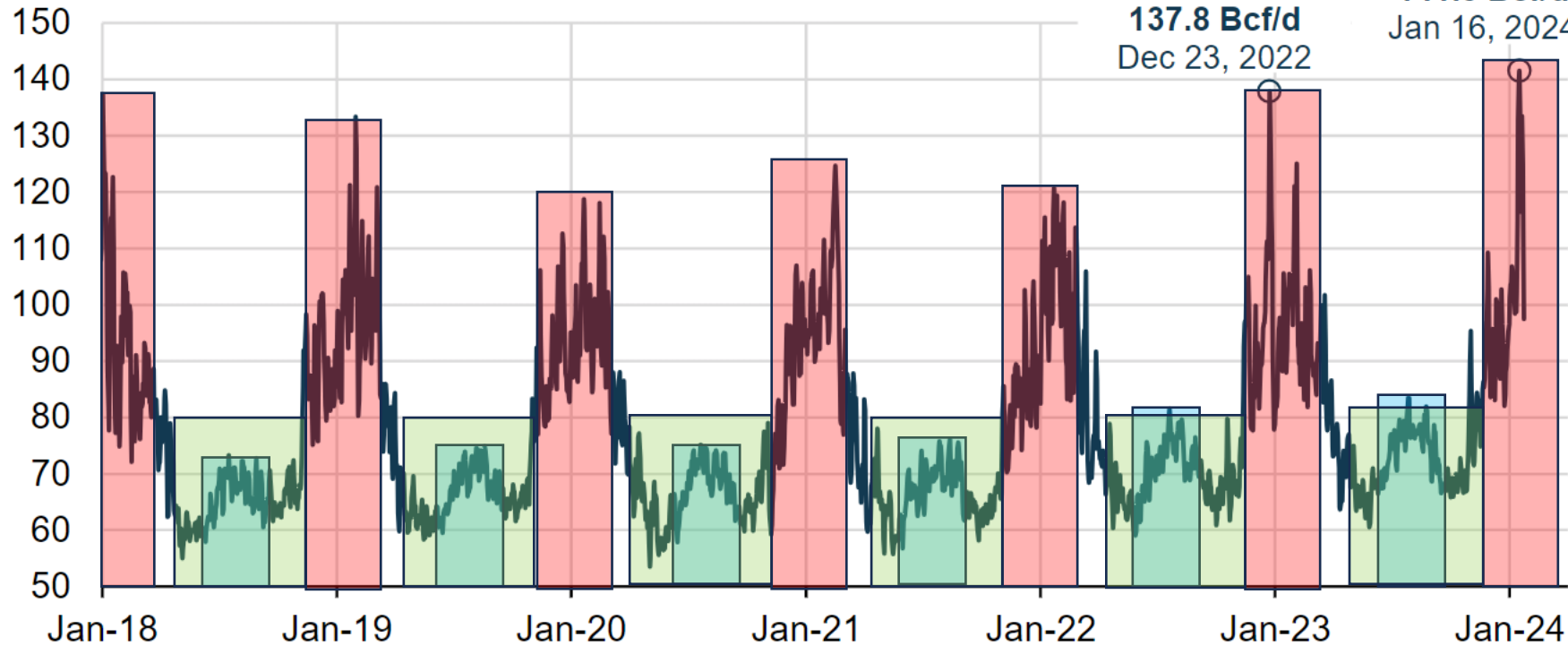
FEBRUARY 6, 2024

# ANNUAL U.S. 'DUAL GAS PEAK' CONSUMPTION

## U.S. natural gas consumption established a new daily record in January 2024

Daily natural gas consumption in the U.S. Lower 48 states (Jan 1, 2018–Jan 22, 2024)

billion cubic feet per day (Bcf/d)



### CONSUMPTION SEASONS

- HEAT** Nov. 1 – Feb. 28
- COOL** July 4 – Sept. 1
- FILL** April 1 – Oct. 31

Data source: S&P Global Commodity Insights

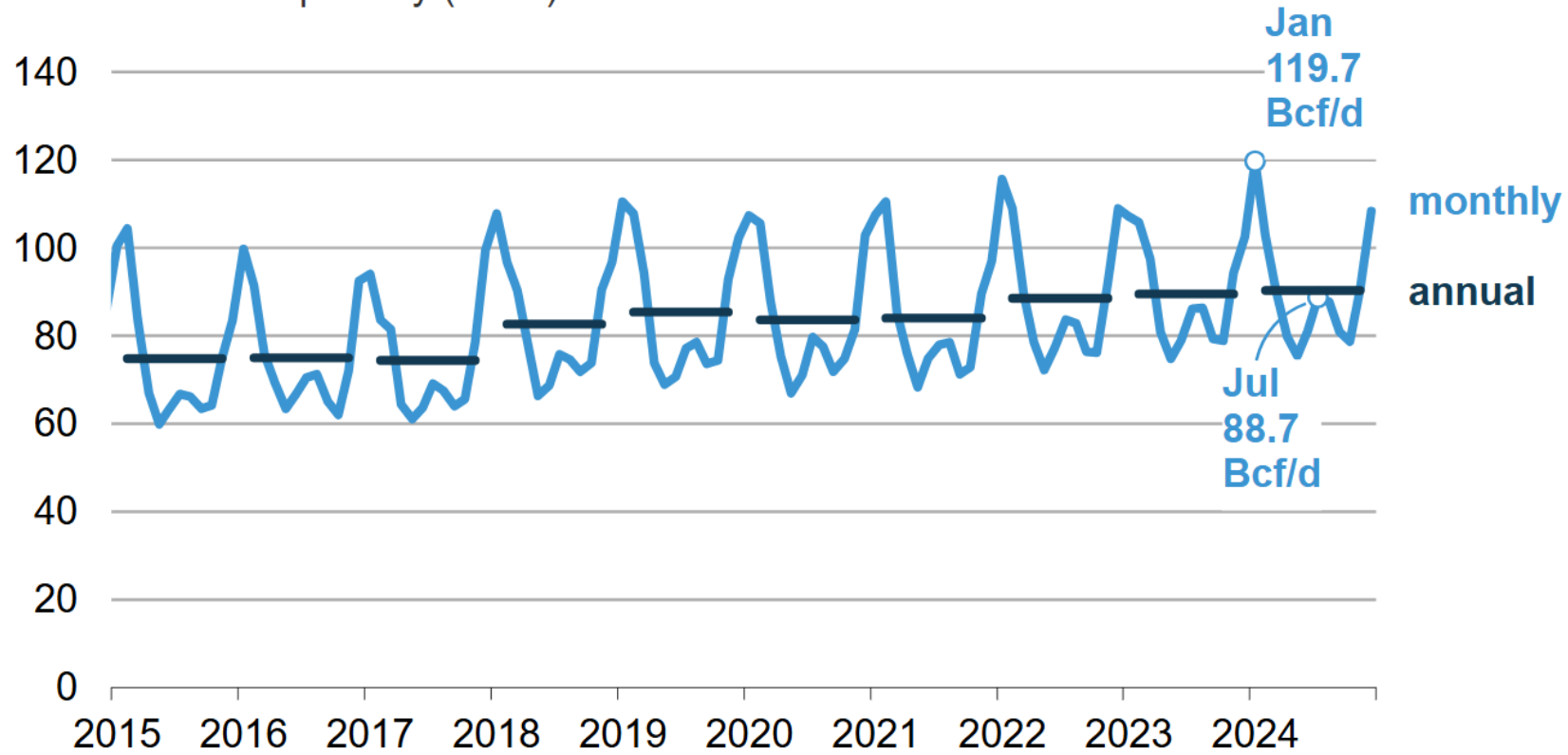
<https://www.eia.gov/todayinenergy/detail.php?id=61383>

Donald P. Muth, Sr., SIPES-Midland 2025

MARCH 31, 2025

## U.S. natural gas consumption set new winter and summer monthly records in 2024

U.S. natural gas consumption averages (Jan 2015–Dec 2024)  
billion cubic feet per day (Bcf/d)



Data source: U.S. Energy Information Administration, *Natural Gas Monthly*

# Energy Transfer sees surge in requests from power plants, data centers

By Georgina McCartney

November 6, 2024 5:20 PM CST · Updated 12 days ago



## Companies



Energy Transfer LP

Follow

HOUSTON, Nov 6 (Reuters) - Midstream company Energy Transfer ([ET.N](#)) on Wednesday said it has received requests for connections to more than 90 power plants and data centers that could total some 16 billion cubic feet per day (bcf/d) of new natural gas demand.

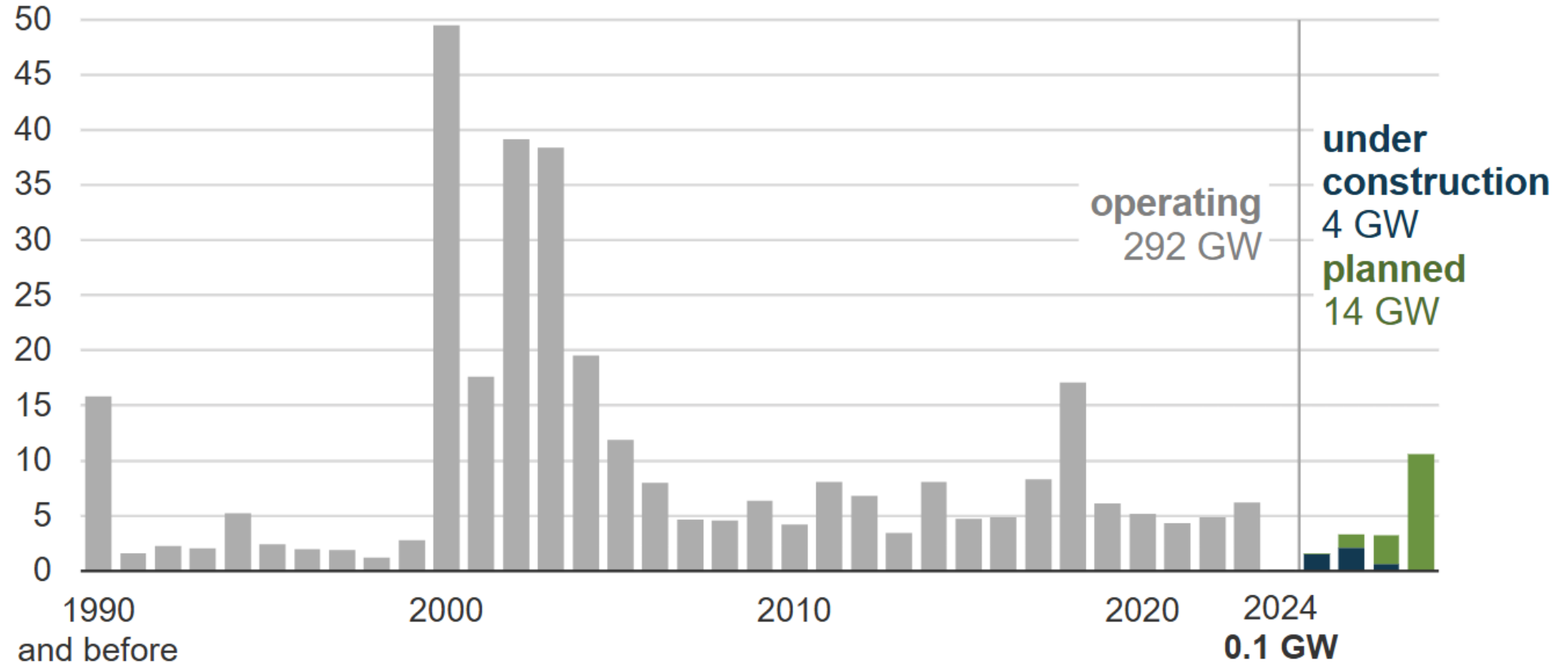
Energy-hungry data centers needed to expand technologies like artificial intelligence are expected to account for 8% of power demand in the U.S. by 2030, compared with 3% in 2022, according to a Goldman Sachs report in May.

Source: <https://www.reuters.com/business/energy/energy-transfers-q3-profits-jump-it-transport-record-volumes-crude-2024-11-06/>



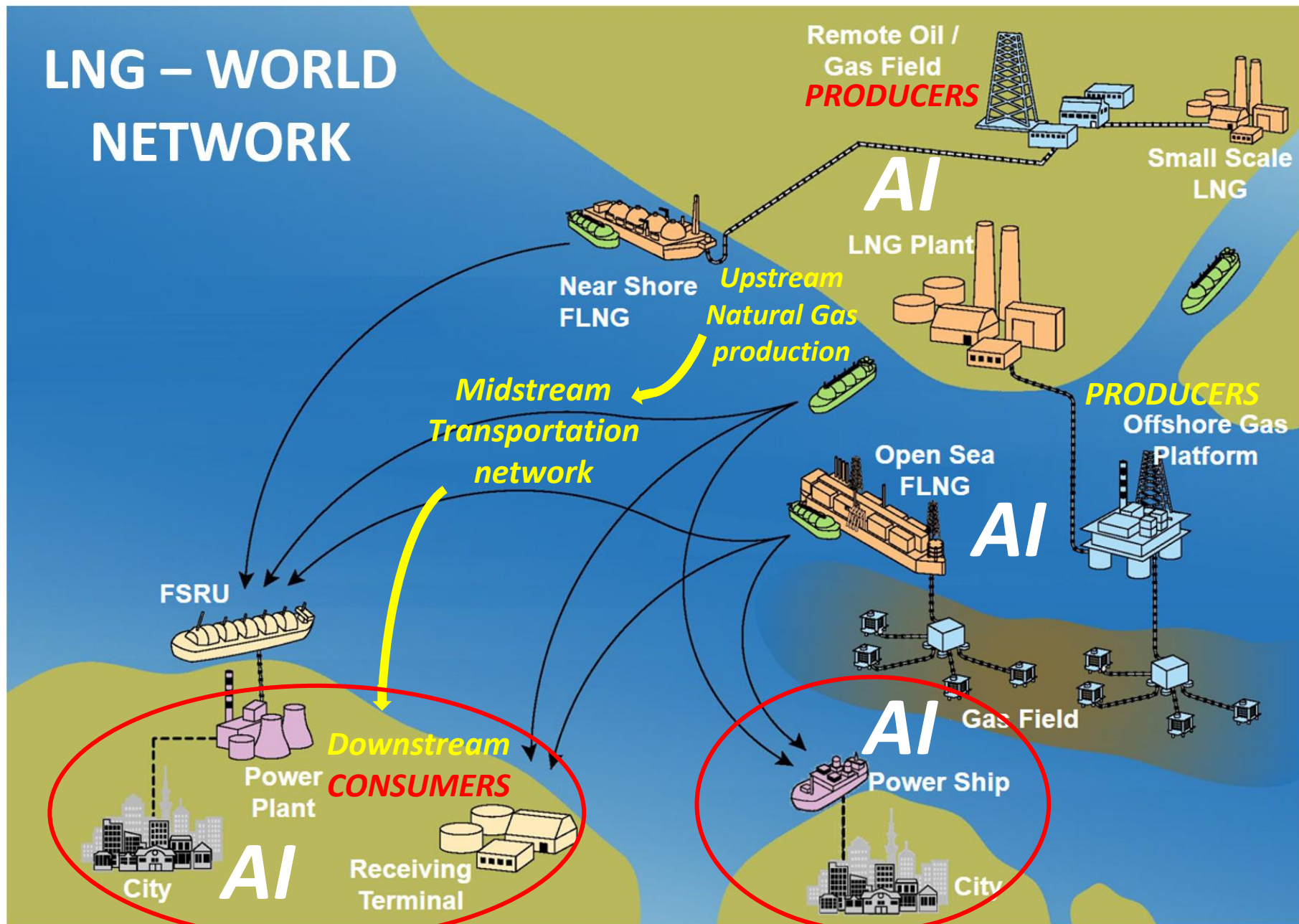
**TOO LITTLE, TOO LATE,....1 GWPD = .118 BCFGPD, 18.7 GW=2.2 BCFGPD**

**U.S. natural gas combined-cycle capacity by initial operating year (1990–2028)**  
gigawatts (GW)



**Data source:** U.S. Energy Information Administration, *Preliminary Monthly Electric Generator Inventory*, May 2025

# LNG – WORLD NETWORK





TOP 40 BIGGEST

# DATA CENTER MARKETS

BY ELECTRICITY CONSUMPTION in MEGAWATTS

2024

Unlike real estate which is measured in square footage, data center size is measured in electricity capacity and consumption.

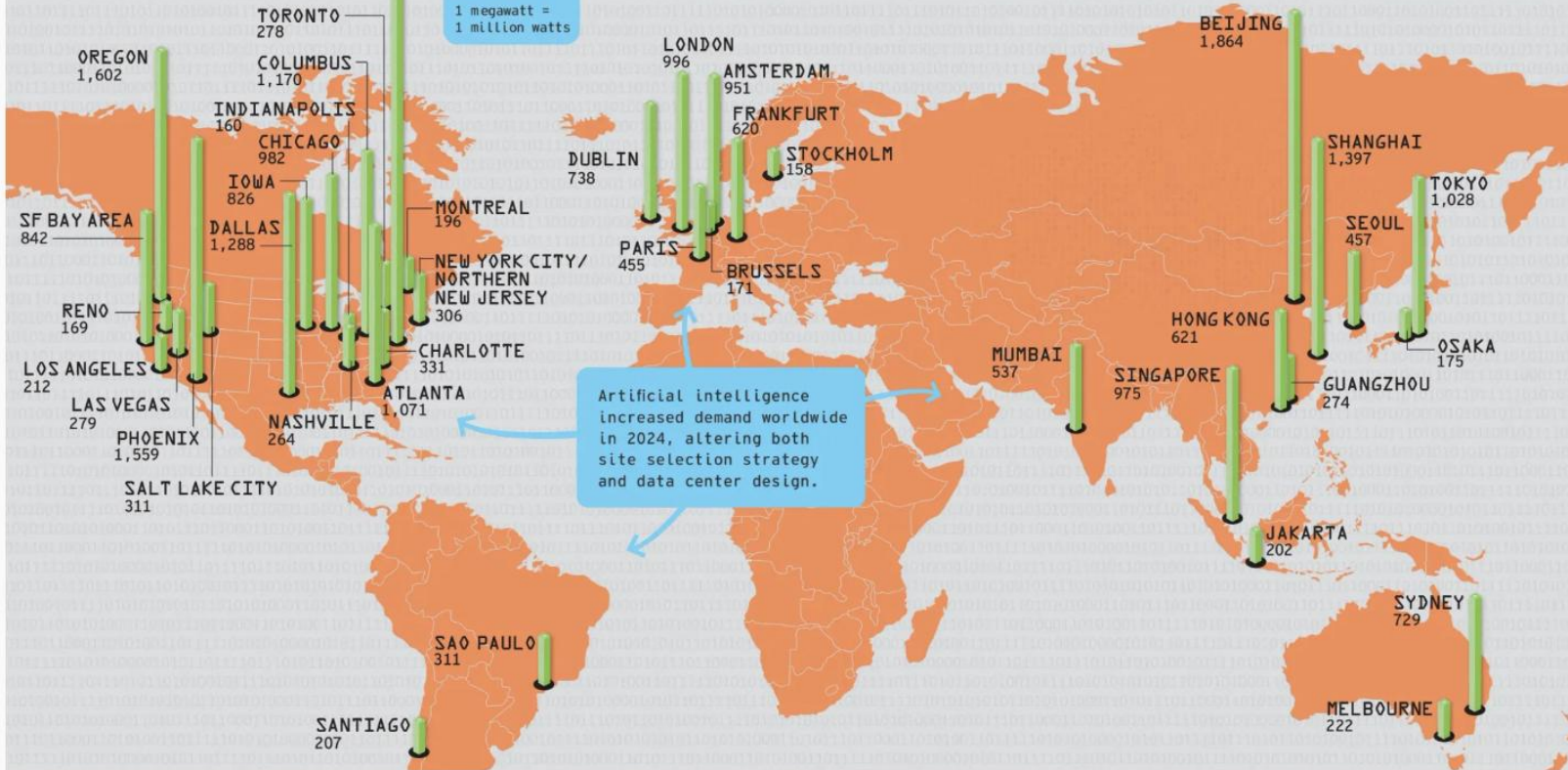
To determine data center size, server density is key because many servers can be stacked vertically into the same footprint, enabling more value from the same square footage.

More servers means more bandwidth but also more power consumed.



VIRGINIA  
4,694

Megawatts  
1 megawatt =  
1 million watts



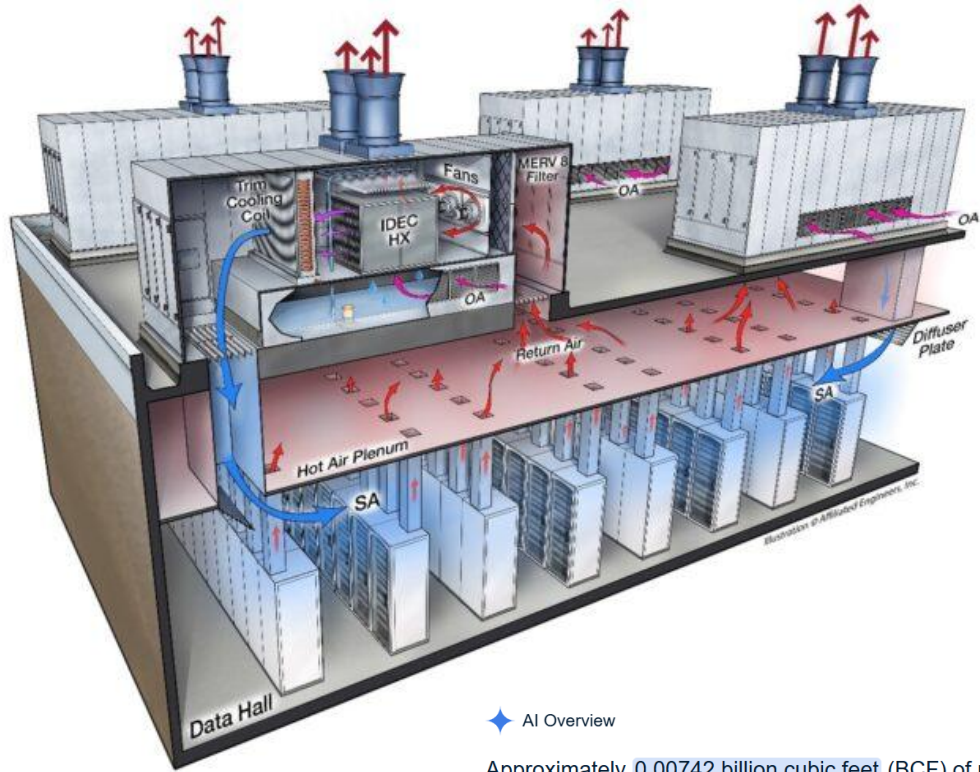
Artificial intelligence increased demand worldwide in 2024, altering both site selection strategy and data center design.

Data is for 2024

WHERE THE INTERNET LIVES

SOURCE: Cushman & Wakefield





◆ AI Overview

Approximately 0.00742 billion cubic feet (BCF) of natural gas is needed to produce one gigawatt-hour (GWh) of electricity. This is based on an average of 7.42 cubic feet of natural gas per kilowatt-hour (kWh) of electricity generated, and 1 GWh is equal to 1,000,000 kWh. ☺

Here's a breakdown:

- **1 kWh:** Requires 7.42 cubic feet of natural gas. ☺
- **1 GWh (1,000,000 kWh):** Requires  $7.42 * 1,000,000 = 7,420,000$  cubic feet of natural gas. ☺
- **7,420,000 cubic feet:** Equals 0.00742 BCF (since 1 BCF = 1,000,000,000 cubic feet). ☺

Therefore, roughly 0.00742 BCF of natural gas is needed to produce one gigawatt-hour of electricity. ☺



Data center electric demands are generally about 20-100 Megawatts (MW) or .020-.1 Gigawatt (GW). Most are smaller, less than 20 MW. Hyperscale centers are 100 MW or more.

Donald P. Muth, Sr., SIPES-Midland 2025





**Round trip Average:**

Europe (Netherlands)= 30 days

Turkiye = 35 days

India = 70 days

South Korea = 90 days

**1 day unload and return**

**Average LNG shipment = 3.6 BCF**

**2024 Top LNG Vessel in U.S. Volumes: Adamastos, Malta Flag, Built 2021, Built by Hyundai Heavy Industries, S. Korea**

**Volume: 39.368 BCF with 11 trips (Netherlands & France), average 3.579 BCF/trip. Corpus Christi Terminal**

# WORLD LNG MARKET SIZE: 19.821-20.03 Tcf in 2024

“Shadow vessels” – Russia, Iran, China & others moving LNG to avoid Sanctions  
Hard to track -

IGU 411.24 MT or 20.027 Tcf in 2024. LNG trade grew 2.4% in 2024.  
U.S. share @ 21.77%

<https://www.igu.org/igu-reports/2025-world-lng-report>

Source: International Gas Union 2024 World LNG Report:  
Release in June 2025

## 2024 U.S. LNG VESSEL EXPORTS @ 4.359 Tcf

Shell LNG Global traded values listed in “red boxes”

407 MT or 19.821 Tcf IN 2024.  
Lowest annual increase in 10 years.

U.S. @ 21.99% share

404 MT or 19.675 Tcf IN 2023.

U.S. @ 22.07% share

1 Million tonnes (LNG) = 48.7 Bcf gas

<https://www.shell.com/what-we-do/oil-and-natural-gas/liquefied-natural-gas-lng/lng-outlook-2025>

Donald P. Muth, Sr., SIPES-Midland 2025

# 2025 vs. 2024 U.S. LNG Vessel Exports by Month

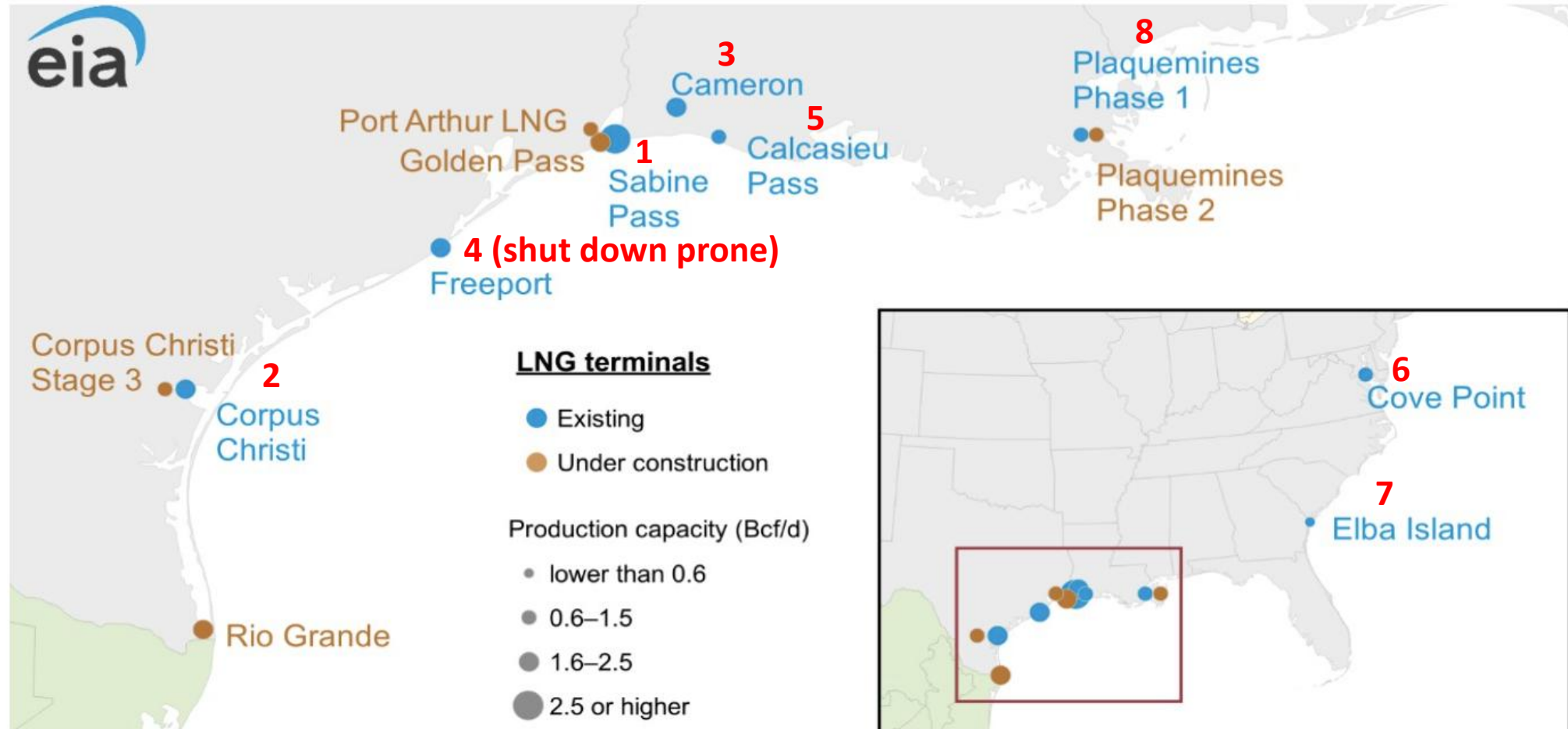
Compiled by: Donald P. Muth, Sr., MBA, AAPG Certified Petroleum Geologist





# U.S. HAS “8” LNG VESSEL EXPORT TERMINALS & INCREASED LIQUEFACTION CAPACITY

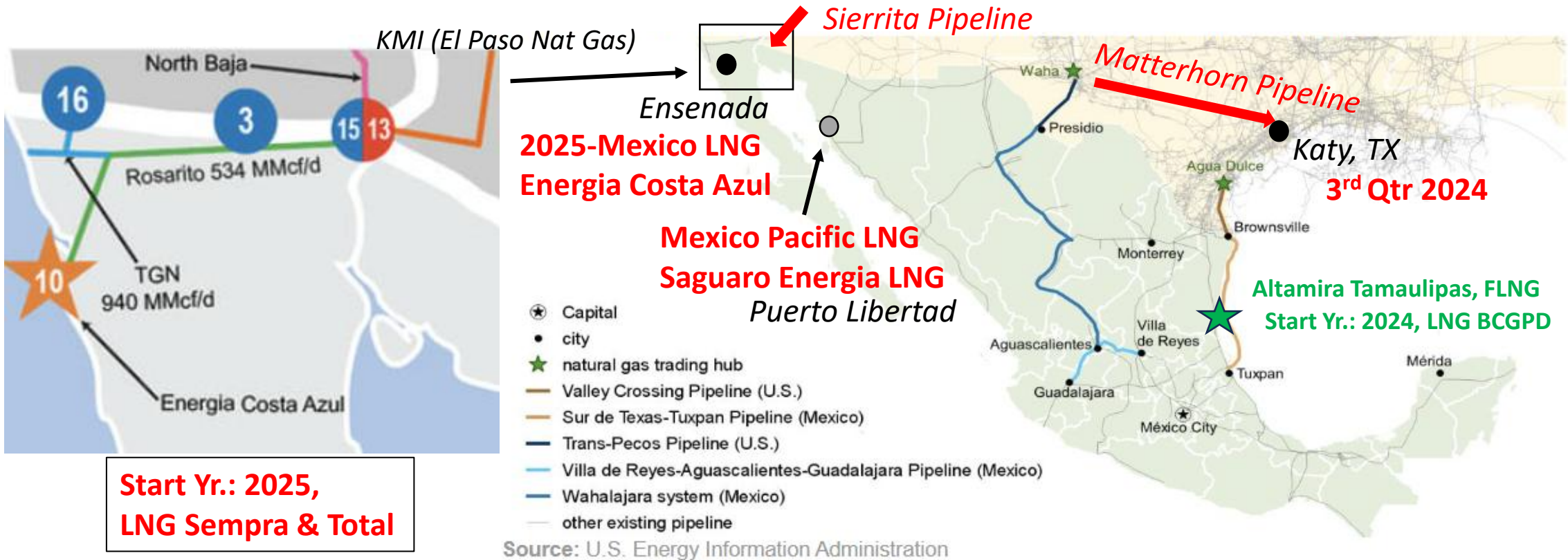
United States liquefied natural gas export facilities, existing and under construction  
(as of January 2025) (Ranking by 2024 Export Volumes, Plaquemines, very new –Dec. 2024)



**Data source:** U.S. Energy Information Administration, [Liquefaction Capacity File](#); trade press  
**Note:** Bcf/d=billion cubic feet per day; LNG=liquefied natural gas

# 2025 NATURAL GAS PIPELINE EXPORTS TO INCREASE - MEXICO

Key cross-border natural gas pipelines from the United States to Mexico



- Mexico to increase net gas pipeline imports to 7 BCFPD by 2030 (Kinder Morgan) or 4.9% YOY. (No LNG).
- Mexico to enter LNG export of U.S. imported gas. 6 LNG Projects planned\*\*. Substantial supply required.

\*Source: Today in Energy, 8.18.2022. EIA. <https://www.eia.gov/todayinenergy/detail.php?id=53499>

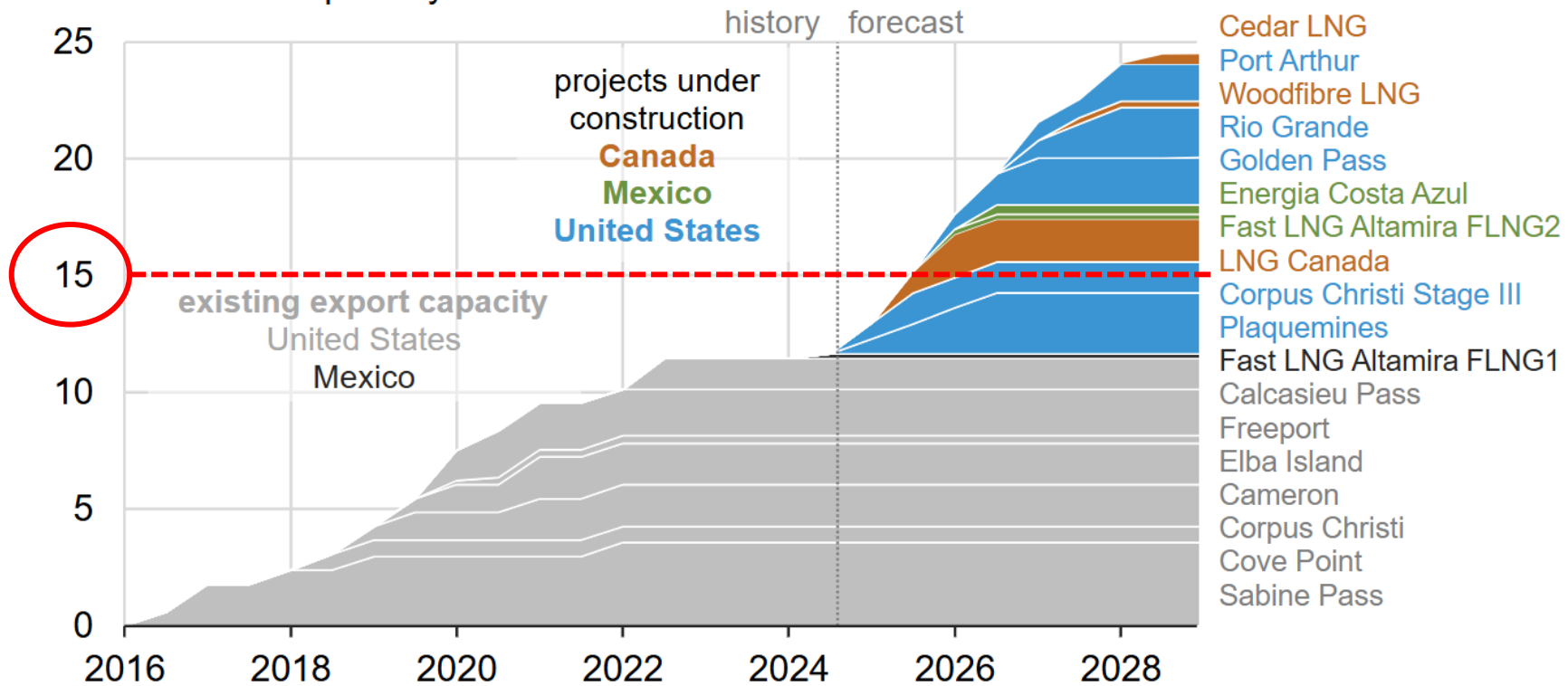
\*\*Source: Mexico Business News, Jan. 3, 2023. A. Gozain, Mexico to Continue Importing Natural Gas in 2023

SEPTEMBER 3, 2024

# North America's LNG export capacity is on track to more than double by 2028

This TIE was updated September 6, 2024 to clarify a data point.

**North America liquefied natural gas export capacity by project (2016–2028)**  
billion cubic feet per day

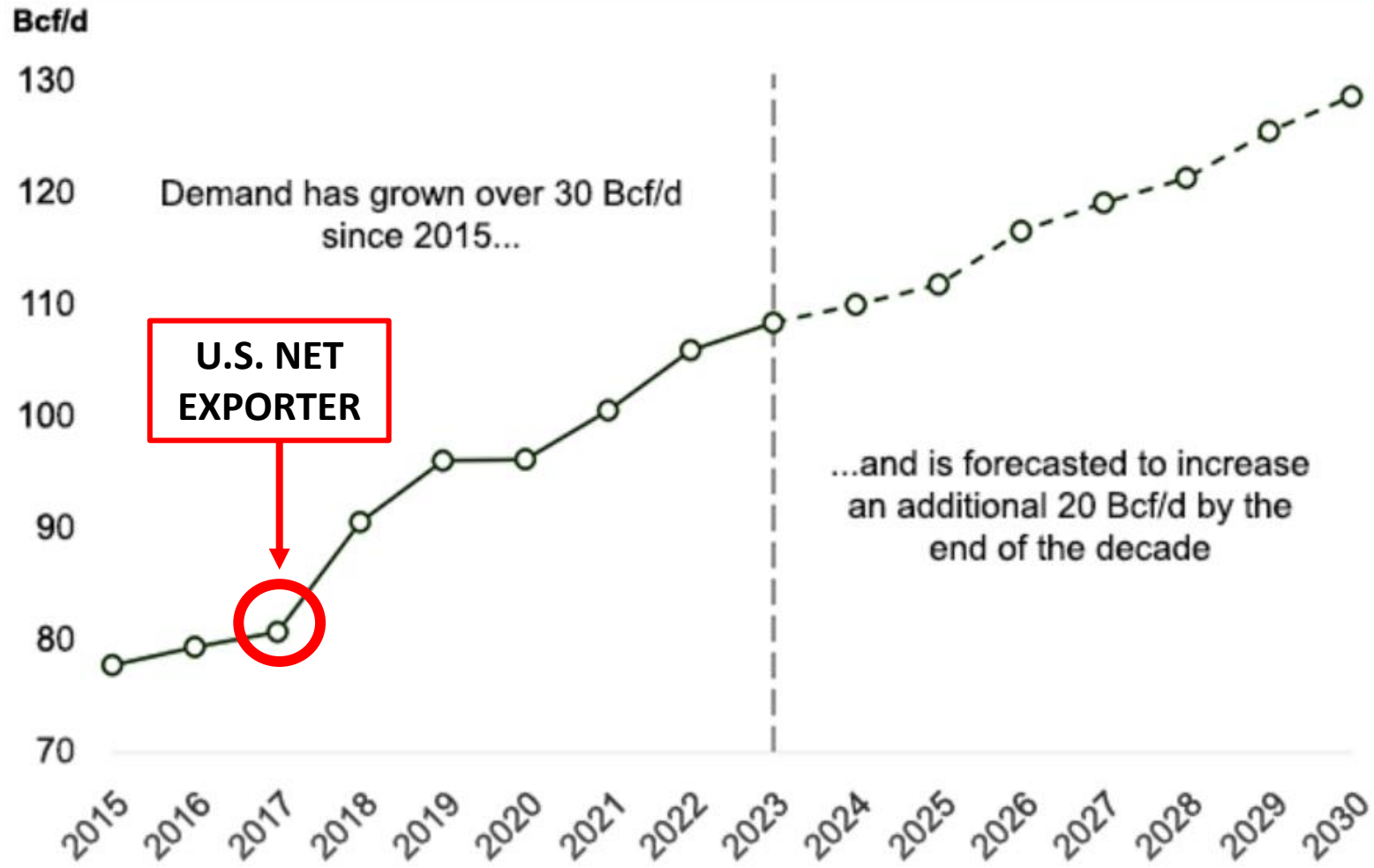


**Data source:** U.S. Energy Information Administration, [Liquefaction Capacity File](#), and trade press

**Note:** Export capacity shown is project's baseload capacity. Online dates of LNG export projects under construction are estimates based on trade press. LNG=liquefied natural gas; FLNG=floating liquefied natural gas

# Demand for U.S. Natural Gas Projected to Grow

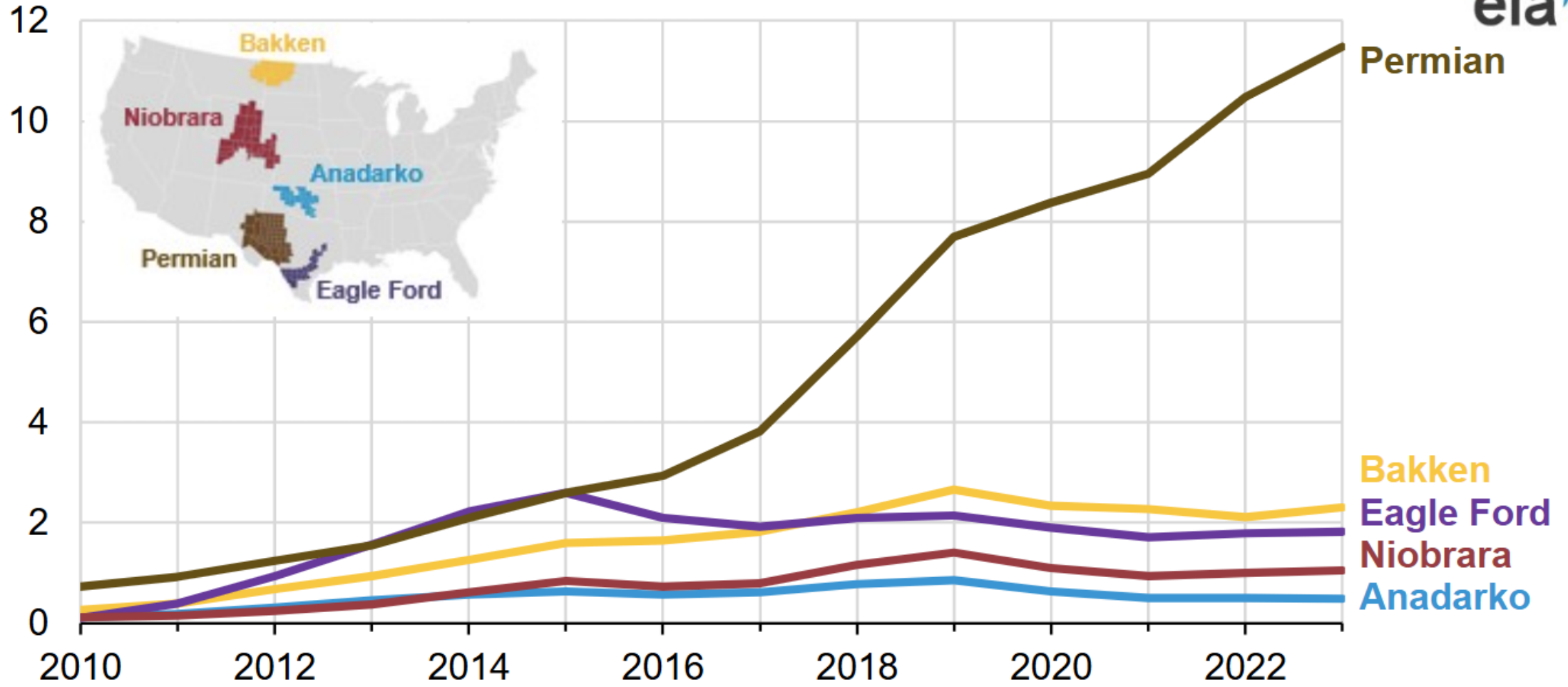
**NGI**



Sources: Kinder Morgan Inc., Wood Mackenzie

# Associated natural gas production in major U.S. crude oil-producing regions (2010–2023)

billion cubic feet per day

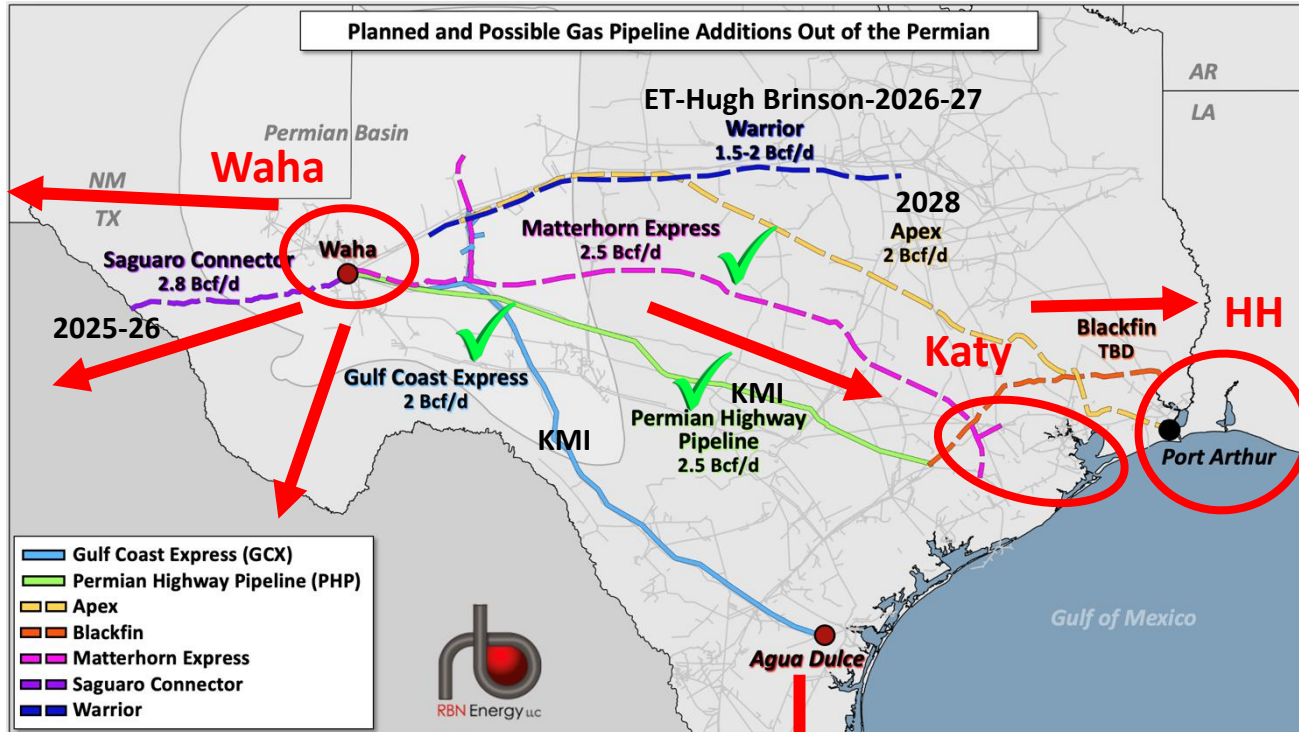


Data source: Enverus Drillinginfo



# TEXAS AFFORDABLE ENERGY..... Natural gas to LNG Terminals

SIX Pipelines: 13.8 BCFGPD: 2025 (Matterhorn, Permian Highway, Gulf Coast Express @ 7 BCFGPD or 50.7% Take-Away



NGI's West Texas Regional Key Forward Basis Curves

NGI



Note: Forward Look trade date as of 2025-03-27

Source: NGI's Forward Look

WEST TEXAS ASSOCIATED GAS GROWTH.....NEEDS MORE PIPELINE CAPACITY TO MARKETS



# Natural Gas Futures

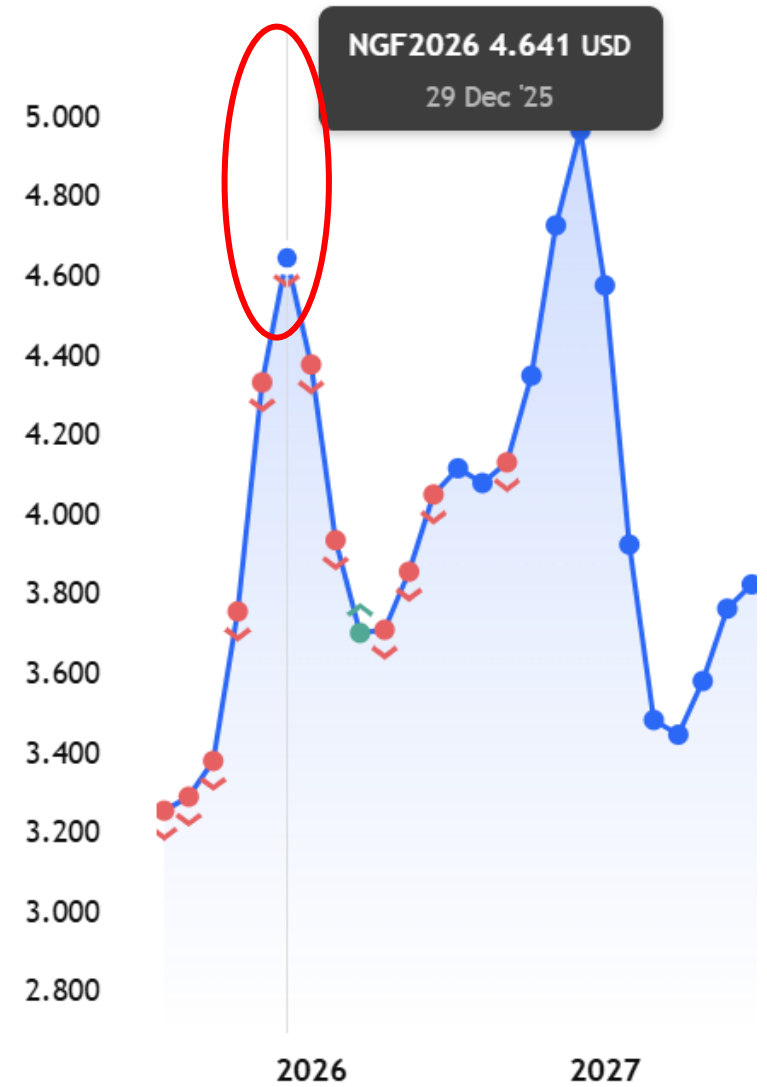
Continuous contract ▾

NG1! · NYMEX ▾



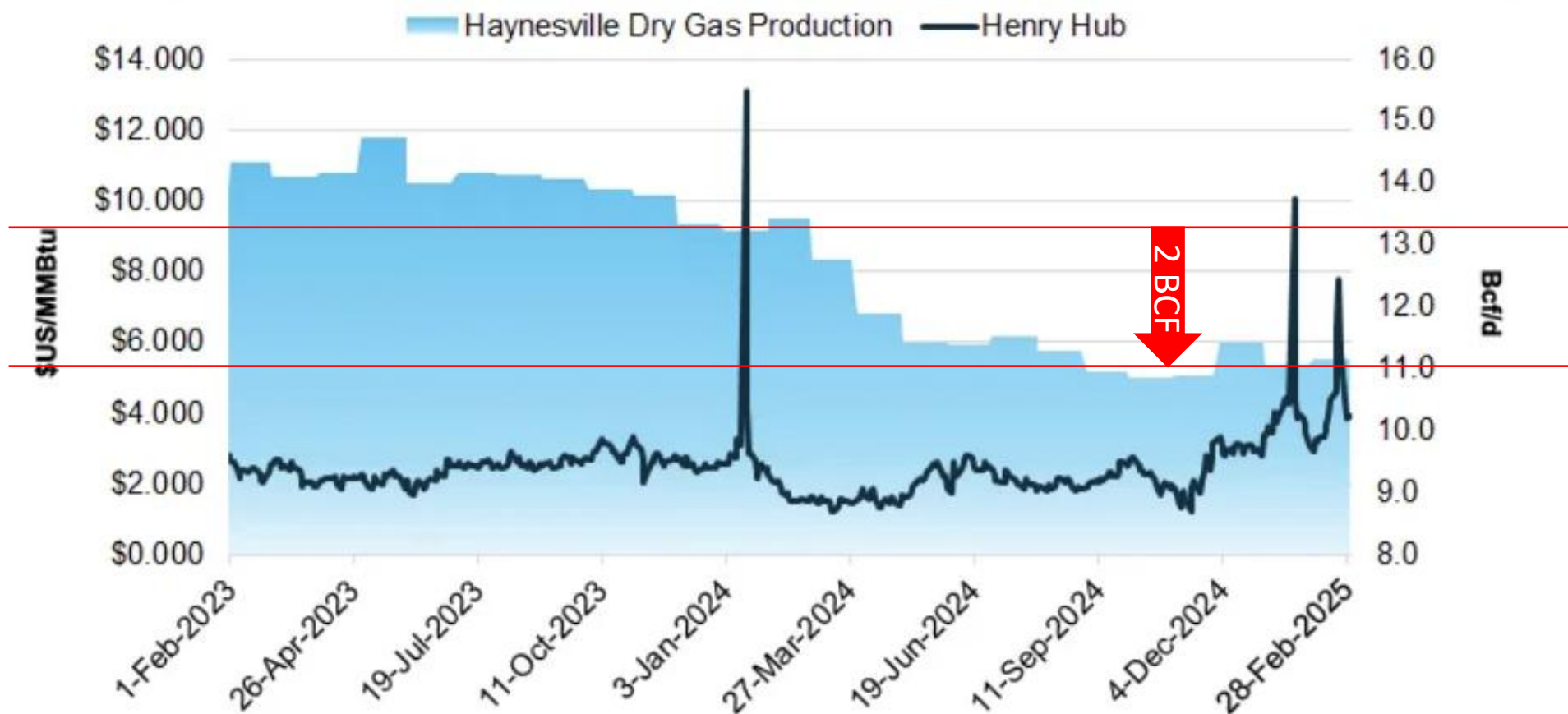
**3.249**<sup>D</sup> USD / MMBTU **-0.076 -2.29%**

As of today at 10:57 GMT-5 Tuesday, July 22, 2025



# NGI's Henry Hub Daily Natural Gas Price vs Haynesville Natural Gas Production

NGI



Source: Compiled by NGI from U.S. Energy Information Administration data, NGI's Daily Gas Price Index

Source: <https://naturalgasintel.com/news/authors/chris-newman/>



# Exclusive: India weighs scrapping import tax on US LNG, boost purchases, sources say

By Nidhi Verma and Manoj Kumar

March 28, 2025 10:17 AM CDT · Updated 8 days ago



## India's LNG import capacity to increase by over 80%

India is expected to bring five liquefied natural gas (LNG) regasification terminals into operation in 2025, with another four to come online in 2026. As a result, the installed capacity of the country's LNG import infrastructure will grow by 85%, from the current 60 billion cubic meters per year to 111 billion cubic meters per year (in regasified equivalent).

21.02.2025 in News

AA



# Tokyo Gas Buys 70% in Chevron's Haynesville Natural Gas Assets

By Tsvetana Paraskova - Apr 01, 2025, 5:30 AM CDT



TG Natural Resources has agreed to buy 70% of Chevron's Haynesville natural gas assets for \$525 million, as the company in... Commodities International expand...

## Japan's Mitsubishi may consider investing in Alaska LNG project, CEO says

By Yuka Obayashi

April 3, 2025 4:51 AM CDT · Updated 2 days ago



## Germany builds up LNG import terminals

Vera Eckert January 30, 2025



(c) Mike Mareen / Adobestock



**Germany is expanding its natural gas import options to replace Russian supply, a drive intensified by the latest suspension of Russian flows via Ukraine and U.S. President Donald Trump targeting Europe with liquefied natural gas exports.**

Plans also include shore-based regasification terminals and facilities to import and produce ammonia and green hydrogen under decarbonization strategies. A synopsis of changes and

additions to Germany's energy plans and infrastructure is listed below:

Sunday March 23, 2025 dictionary +A -A

## Taiwan signs onto \$44 billion Alaska LNG project, daring Korea to follow

SHIN HA-NEE  
shin.hanee@joongang.co.kr

Published 23 Mar 2025, 18:29  
Updated 25 Mar 2025, 10:15



Taiwan signs onto \$44 billion Alaska LNG project, daring Korea to follow  
3 min

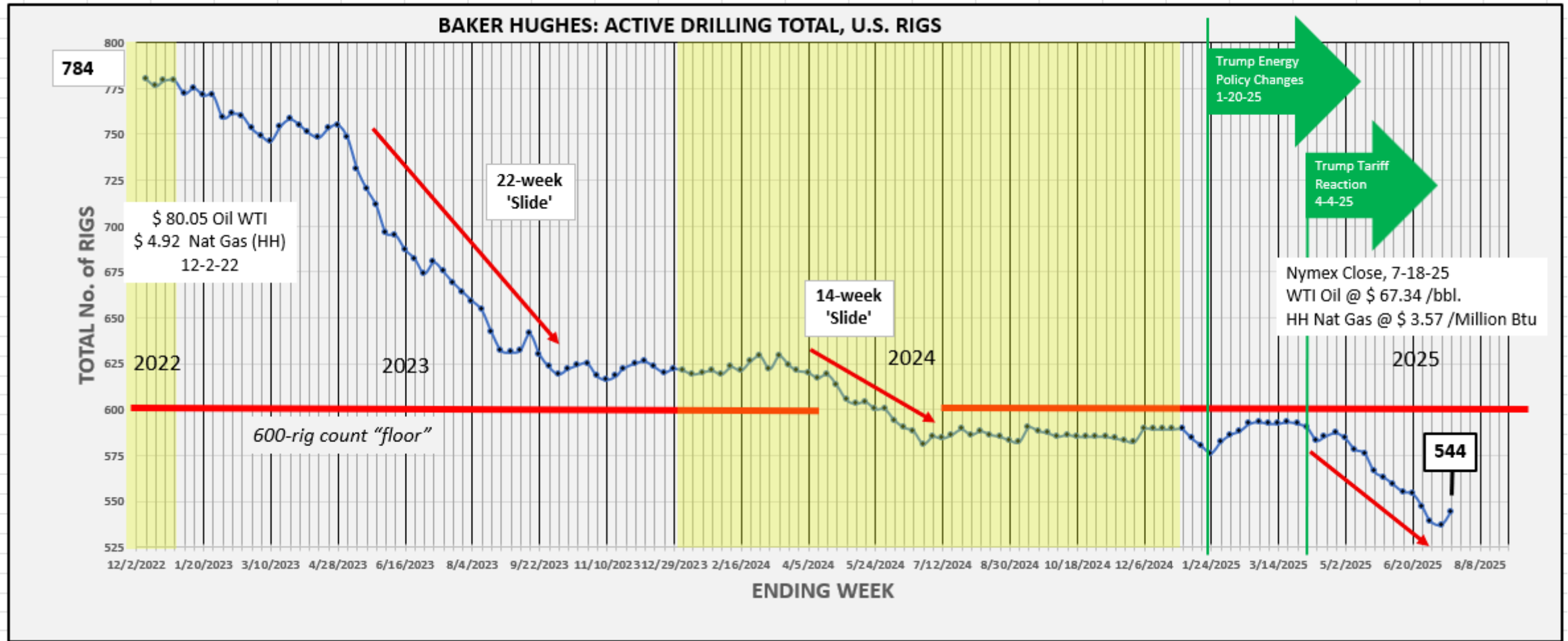
Audio report: written by reporters, read by AI



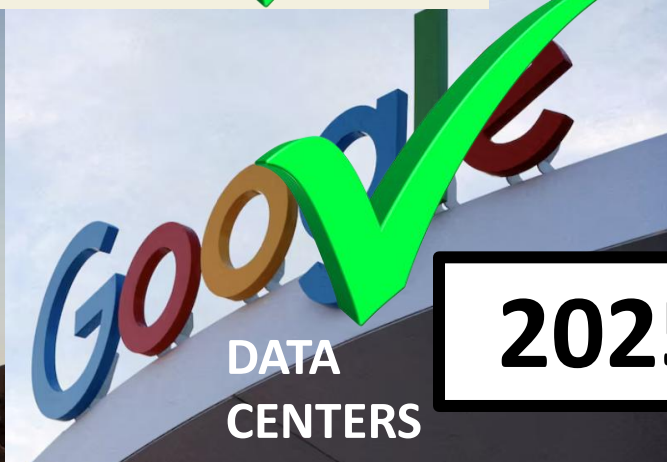
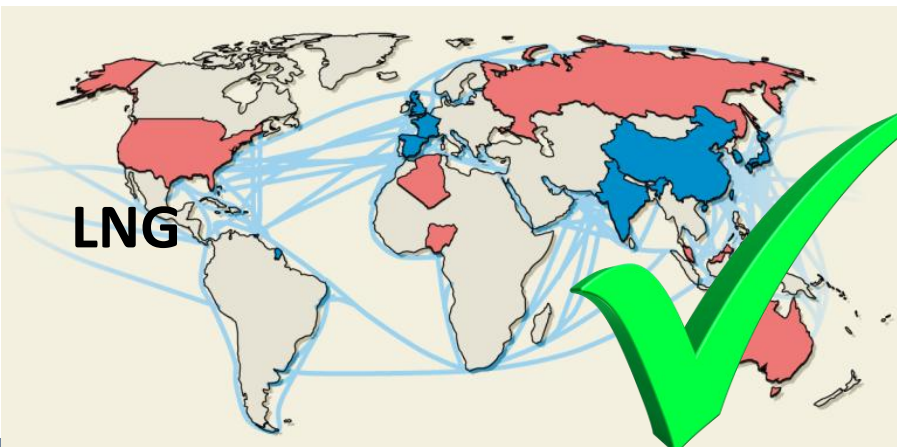
Ahn Duk-geun, Minister of Trade, Industry and Energy, Commerce Secretary Howard Lutnick in Washington (INDUSTRY AND ENERGY)

Donald P. Muth, Sr., SIPES-Midland 2025

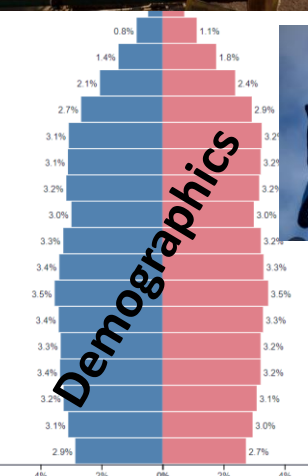
# U.S. DRILLING RIG COUNT (7.18.25): 14 WEEK DECLINE





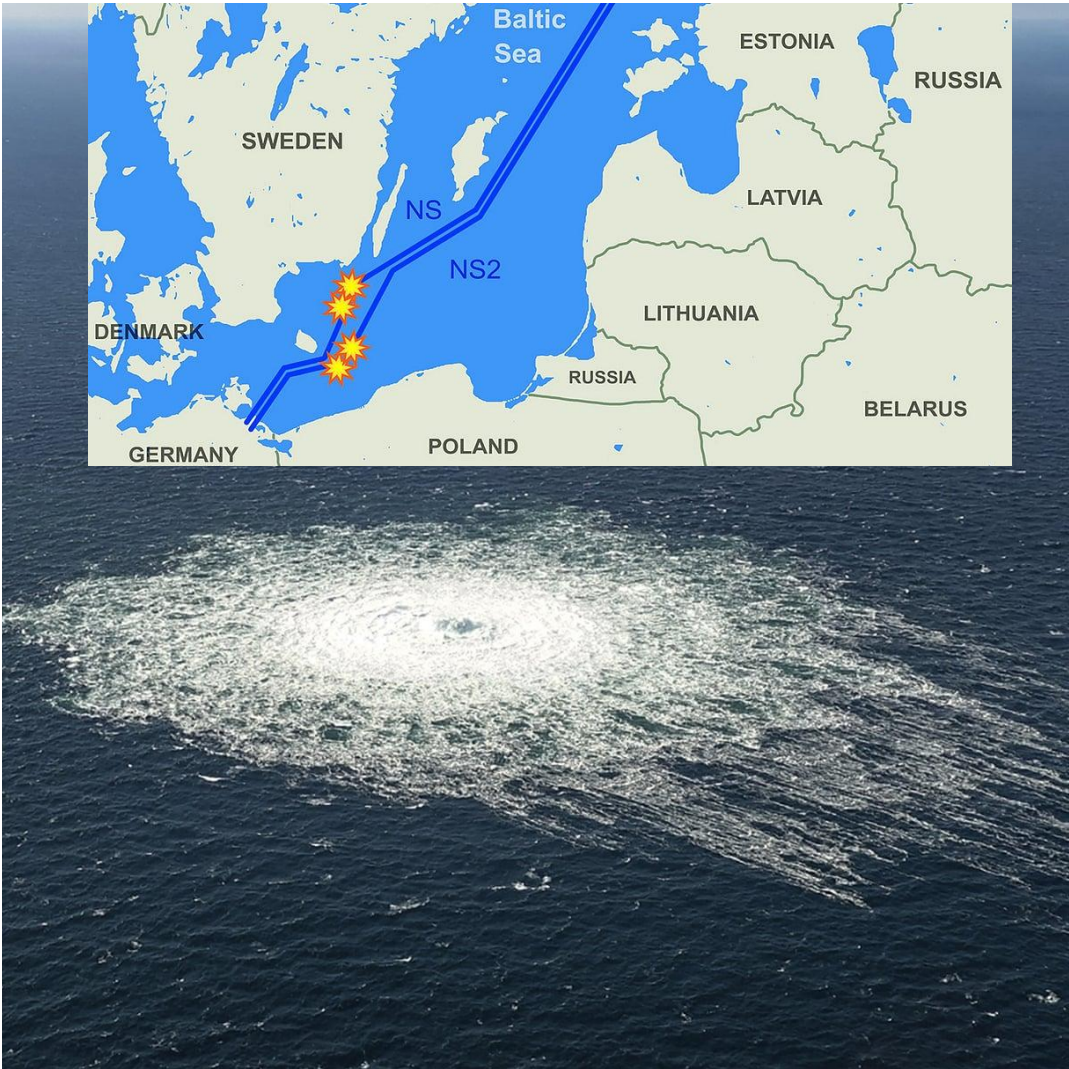


# 2025 PRICE DRIVERS





# CONTRACT RUSSIAN PIPELINE GAS ..... *not coming back to EU*





# European LNG Infrastructure Expansion Plans, end of 2022. Post Russian Invasion – NOT ENOUGH



- 4-FSRUs (Floating Storage Regasification Unit)
- 5-LNG Terminals

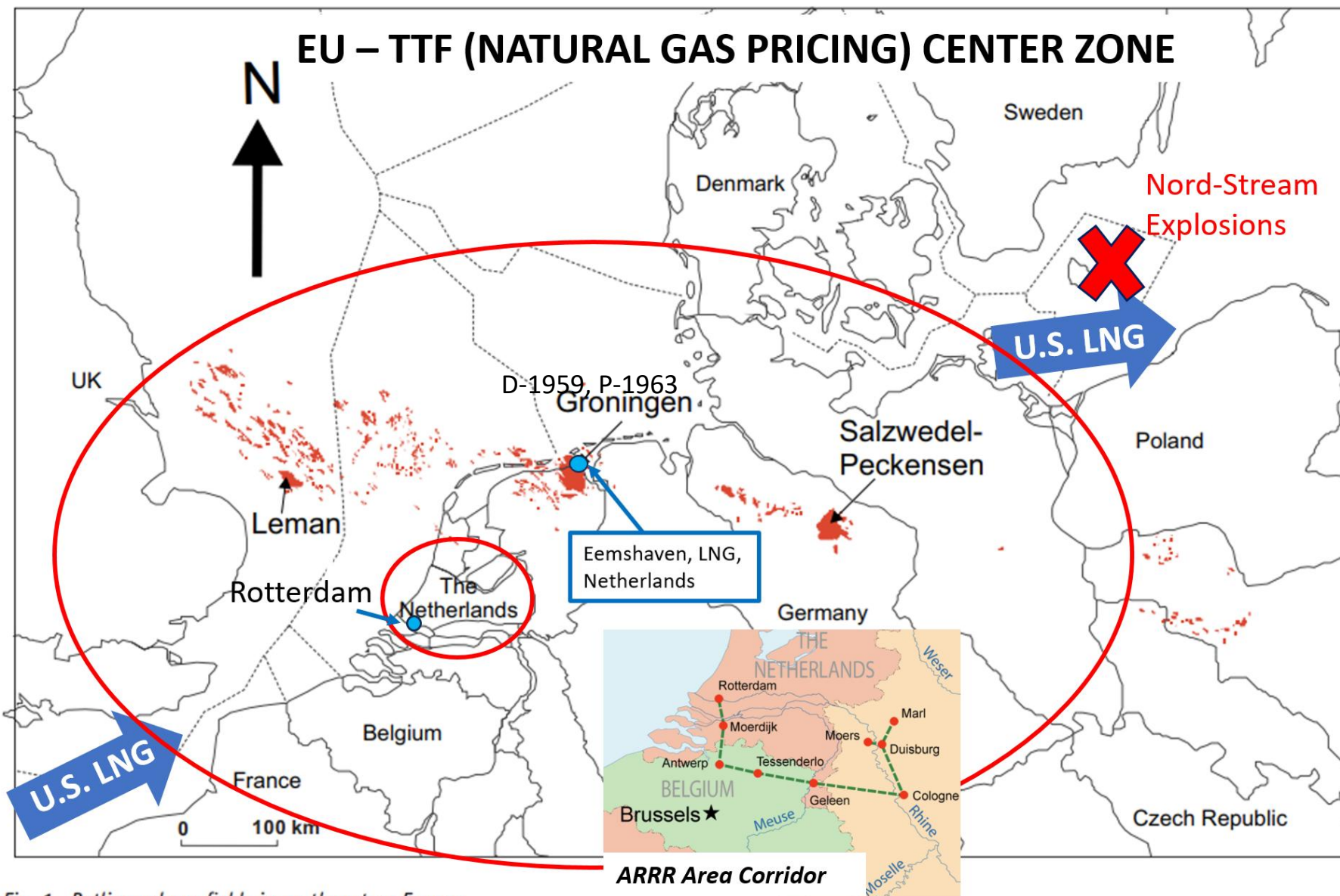
Source: [www.iea.org](http://www.iea.org).

Natural gas supply-demand balance of the EU in 2023. IEA Feb. 2023



CBC News

Donald P. Muth, Sr., SIPES-Midland 2025



**Largest EU Petrochemical Complexes in ARRR:**

1. BASF (Germany)
2. BASF (Antwerp)
3. Shell (Moerdijk)
4. Dow (Netherlands)
5. INEOS (Cologne)
6. SABIC (Geleen)
7. LyondellBasell (Germany)
10. BP

**Others:**

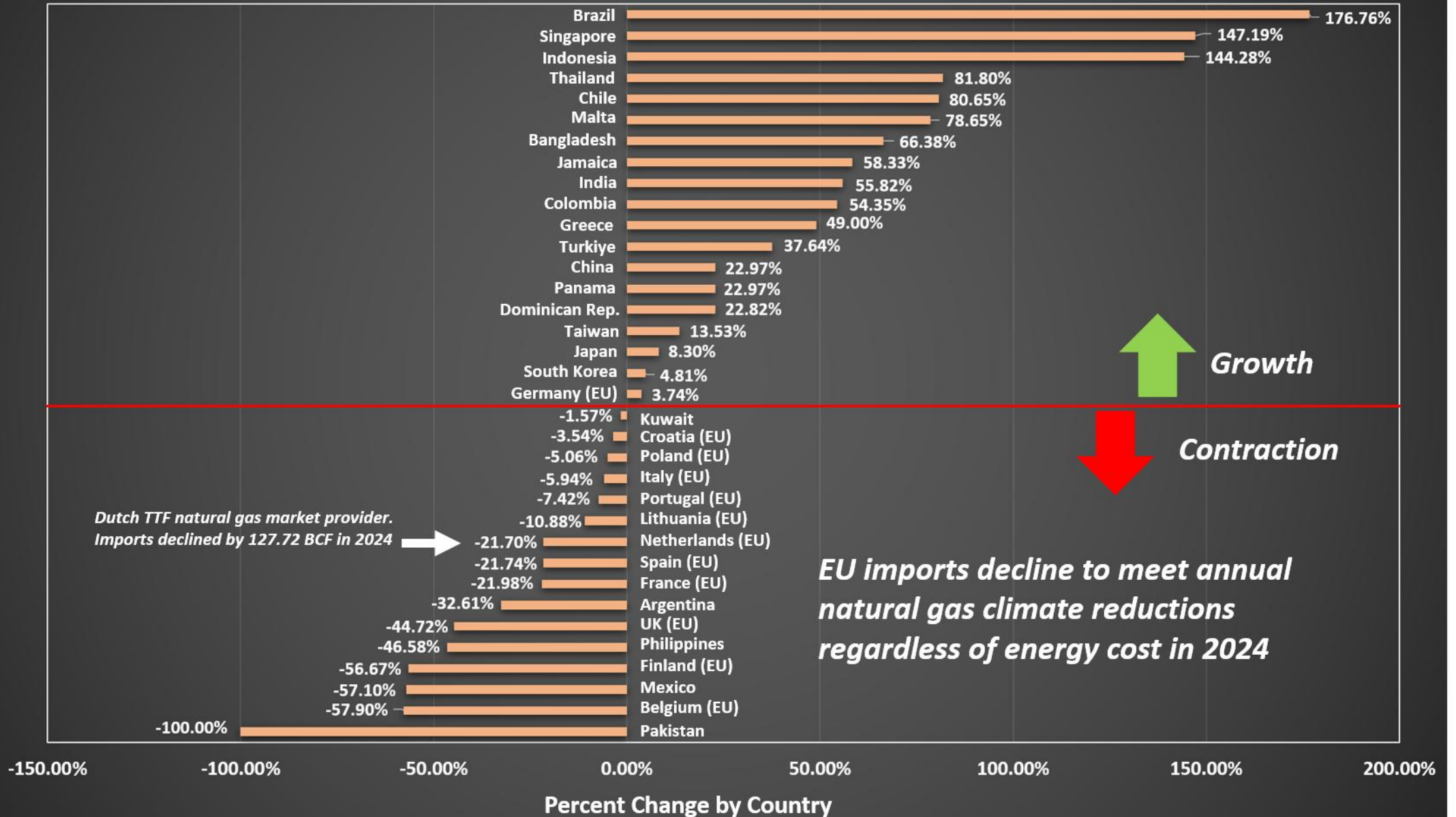
- Air Liquide (France)
- Bayer (Germany)

Fig. 1. Rotliegend gas fields in northwestern Europe.

Source: Geology of the Groningen field-an overview, Jan de Jager & Clemens Visser, 2017, Netherlands Journal of Geosciences.



# U.S. LNG VESSEL IMPORTS, 2023 THRU 2024 YEAR OVER YEAR CHANGE





Technology

## Google invests \$640 mln in new data centre in Netherlands

By Reuters

April 23, 2024 7:17 AM CDT · Updated 4 days ago



The Google logo is seen on the Google house at CES 2024, an annual consumer electronics trade show, in Las Vegas, Nevada, U.S. January 10, 2024. REUTERS/Steve Marcus//File Photo [Purchase Licensing Rights](#)

AMSTERDAM, April 23 (Reuters) - Alphabet-owned Google ([GOOGL.O](#)) is investing 600 million euros (\$640.62 million) in a new data centre in the Dutch city of Groningen, it said on Tuesday, adding the investment will create 125 new jobs.

**NATURAL GAS / LNG required  
for EU petrochemical Feedstock  
in the Antwerp-Rotterdam-  
Rhein-Ruhr Area (ARRRA)**

**and now “AI”  
2024 DATA CENTER GROWTH**

*Donald P. Muth, Sr., SIPES-Midland 2025*

**ARUN**  
*Advocates & Solicitors*



**CLICK FOR MORE INFORMATION**  
Bids close at 12 noon  
on 17 June 2024

## GAS

[See all articles](#)

 Alert me about Gas

### LATEST JOBS **Shipbroker position for East Coast South America**



The large LNG dual-fuelled newbuildings due for delivery in the next two years are set to transform the dynamics of the sector. Photo: Titan Clean Fuels and STX Group

**DECARBONIZATION**  
-DIESEL FUEL POWER  
REPLACEMENT.

### REPLACED BY:

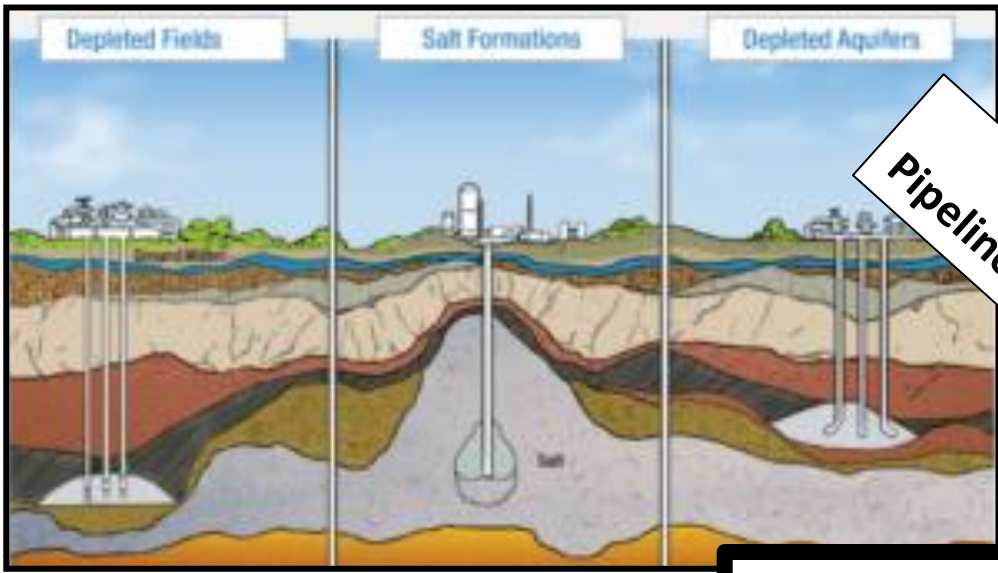
- LNG
- METHANOL
- AMMONIA

## LNG bunkering hovers on brink of triple-digit growth

But looming bunker vessel supply crunch and operational experience is prompting rethinks on ship designs

16 May 2024 8:35 GMT *UPDATED* 16 May 2024 11:25 GMT

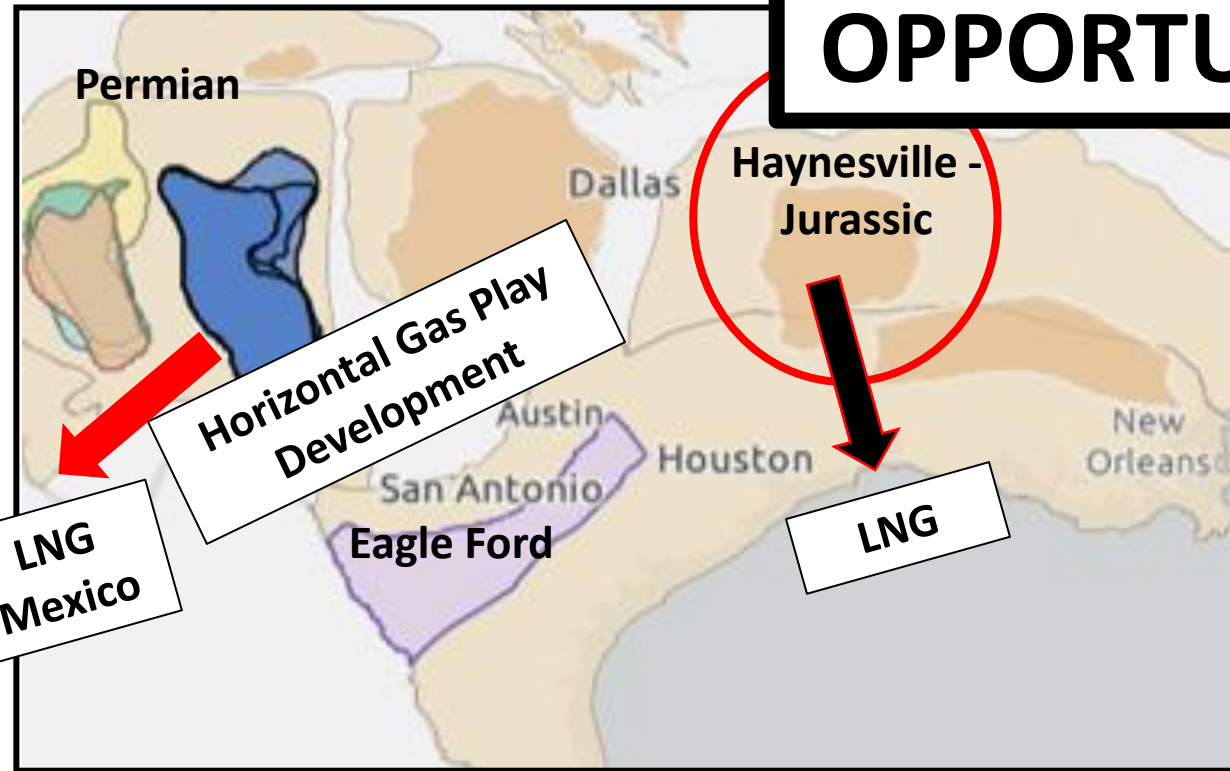




Pipeline - Midstream - Gas Storage



# OPPORTUNITIES



# QUESTIONS ?

**COPY OF PRESENTATION SLIDE DECK**

Email: [donaldpmuth@yahoo.com](mailto:donaldpmuth@yahoo.com)

LinkedIn. **DONALD P. MUTH, Sr.**

Website:

<https://www.donaldmuth.com>

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**LET'S GET TO WORK!**



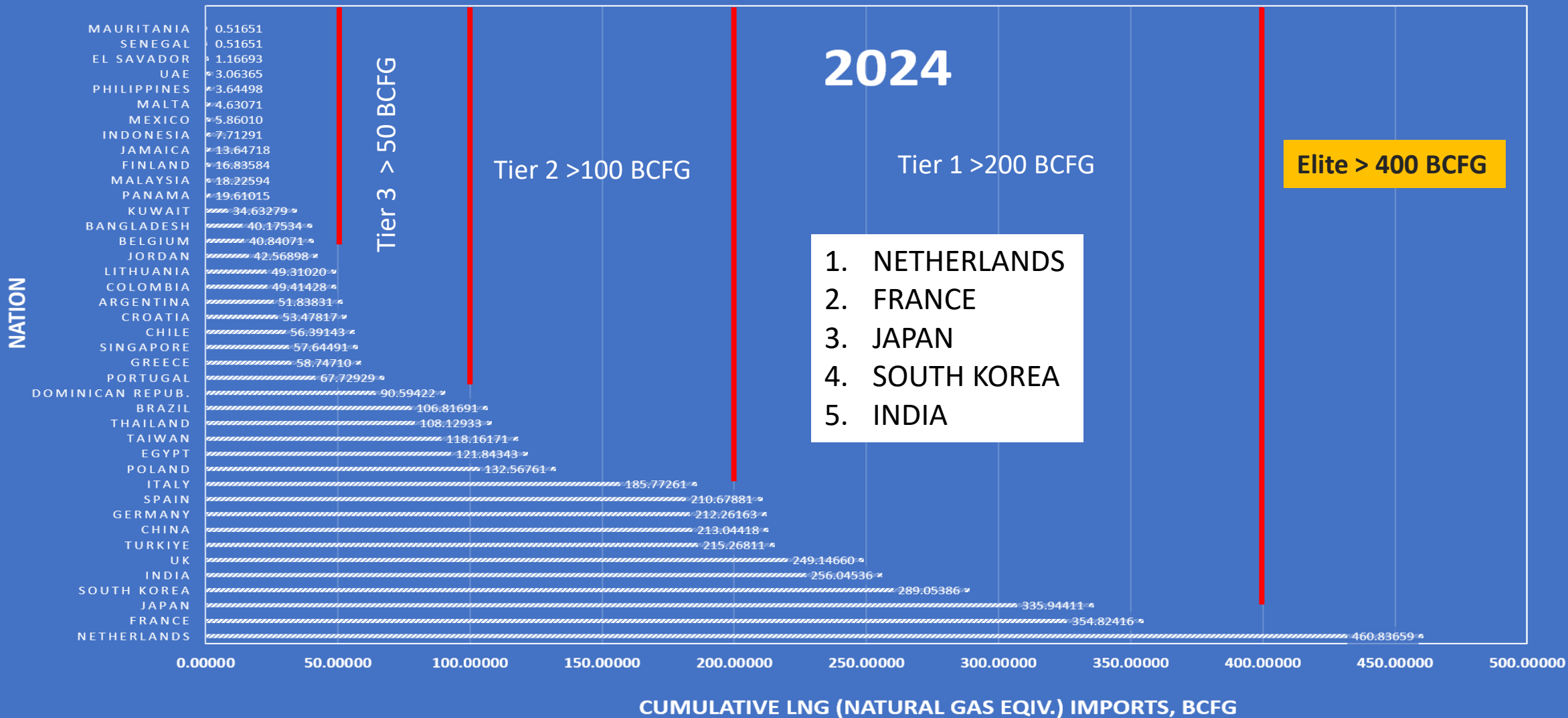
# ADDENDUM

# 2025 (JAN-APR.) LNG VESSEL EXPORTS FROM '8' U.S. TERMINALS & MEXICO (ALTAMIRA)

UPDATED, 7.22.25														
2025 LNG Vessel Exports														
U.S. LNG EXPORT TERMINALS	Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2025 Annual Total to Date
<b>Calcasieu Pass (Venture Global)</b>	Volumes	39,157.77	36,604.54	46,233.330	46,067.24									168,062.88
	Shipments													
	BCF/D	1.263	1.307	1.491	1.536	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.460
<b>Elba Island (Southern LNG/Shell)</b>	Volumes	6,065.14	9,774.98	2,849.220	7,226.52									25,915.86
	Shipments													
	BCF/D	0.196	0.349	0.092	0.241	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.071
<b>Freeport (Freeport LNG)</b>	Volumes	56,009.97	61,749.76	64,485.930	68,866.08									251,111.74
	Shipments													
	BCF/D	1.807	2.205	2.080	2.296	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.752
<b>Cameron (Cameron LNG)</b>	Volumes	62,370.78	60,182.15	59,910.200	60,418.71									242,881.84
	Shipments													
	BCF/D	2.012	2.149	1.933	2.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.665
<b>Corpus Christi (Cheniere Marketing et al)</b>	Volumes	62,138.99	66,326.92	66,590.730	63,645.67									258,702.31
	Shipments													
	BCF/D	2.004	2.369	2.148	2.122	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
<b>Cove Point (Warren Buffet / Dominion)</b>	Volumes	28,431.32	22,292.71	25,094.920	20,852.74									96,671.69
	Shipments													
	BCF/D	0.917	0.796	0.810	0.695	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.265
<b>Sabine Pass (Cheniere)</b>	Volumes	138,008.03	117,492.29	137,016.520	127,445.37									519,962.21
	Shipments													
	BCF/D	4.452	4.196	4.420	4.248	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.425
<b>Plaquemines (Venture Global)</b>	Volumes	21,491.06	31,609.56	49,380.26	53,479.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00		155,960.15
	Shipments												1.00	1.00
	BCF/D	0.693	1.129	1.593	1.783								0.000	
<b>U.S. All Terminals Sum. BCFPD</b>		13.344	14.001	14.566	14.933	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1719268.680
	Monthly total	413673.060	374423.350	402180.850	394522.330	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1584.800
<b>MEXICO (Altamira)</b>	Volumes	1199.5	3094.55	6281.08	0									
	BCF/D	0.039	0.111	0.203										

# FINAL 2024 CUMULATIVE TOTAL U.S. LNG VESSEL EXPORT VOLUMES & DESTINATION FROM 8-U.S. TERMINALS CUM: 4.359 TCFG TO 41 NATIONS, (JAN. THRU DEC.)

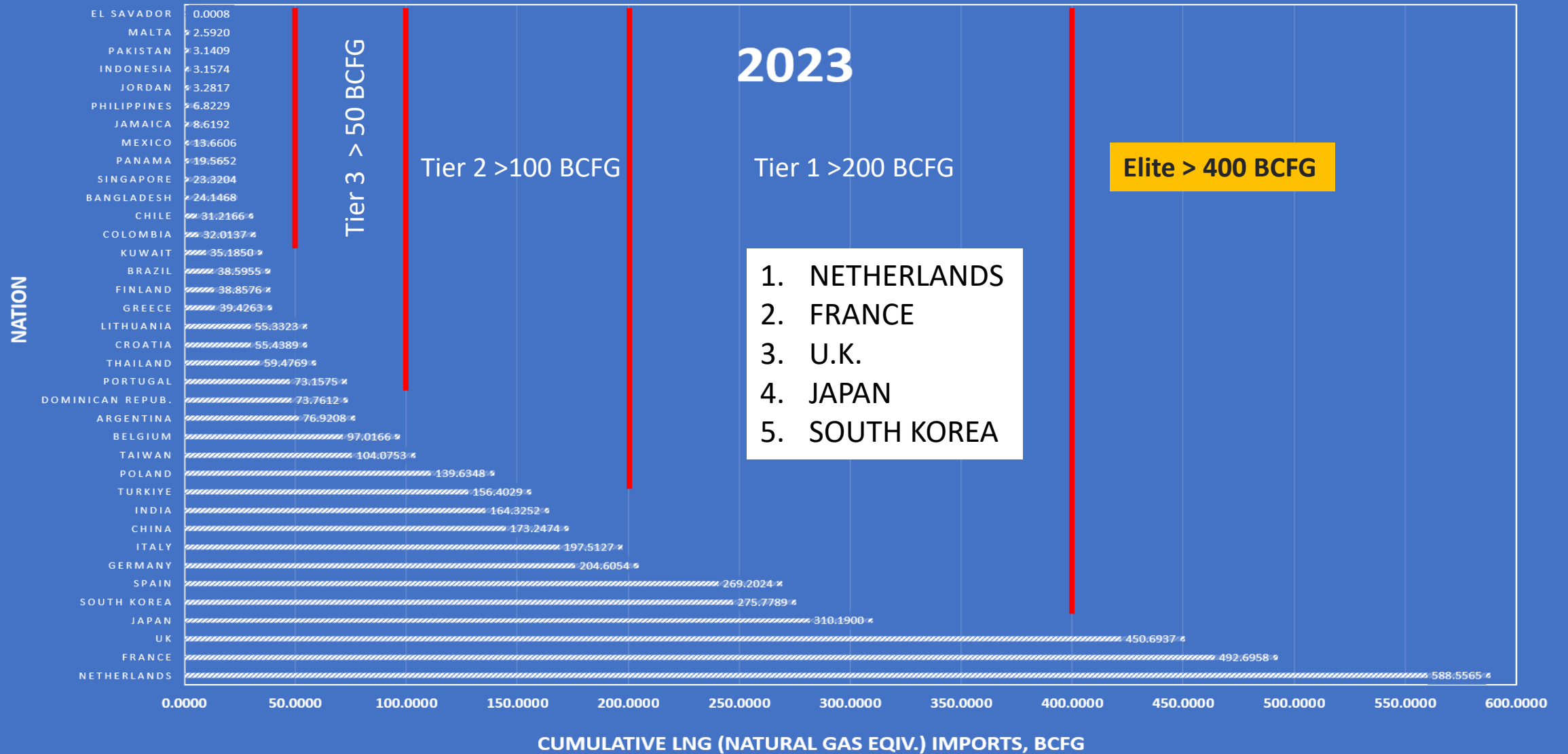
Donald Muth, Sr., AAPG Certified Petroleum Geologist



Data Source: LNG Monthly Reports. <https://www.energy.gov/fecm/listings/lng-reports>

**FINAL 2023 CUMULATIVE TOTAL U.S. LNG VESSEL EXPORT VOLUMES & DESTINATION FROM 7-U.S. TERMINALS  
CUM: 4.342 TCFG TO 37 NATIONS, (JAN. THRU DEC.)**

*Donald Muth, Sr., AAPG Certified Petroleum Geologist*



Data Source: LNG Monthly Reports. <https://www.energy.gov/fecm/listings/lng-reports>



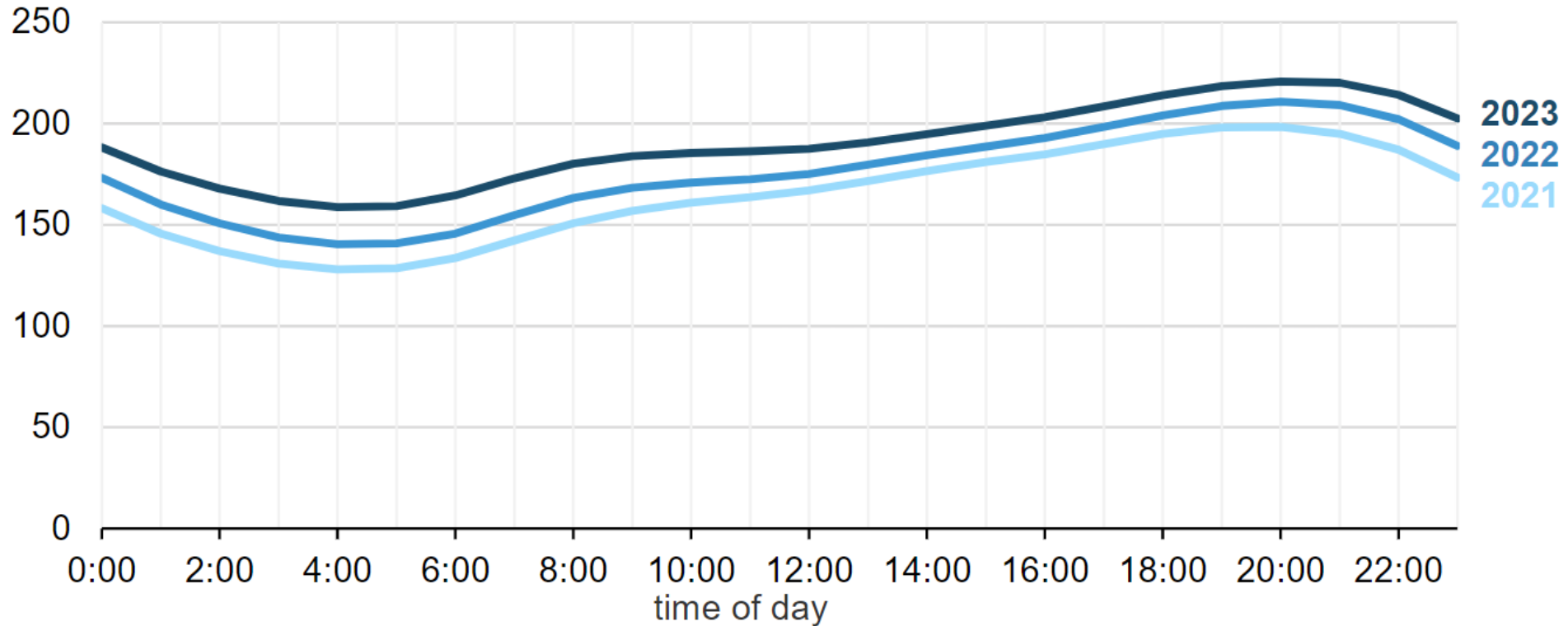
APRIL 26, 2024

# U.S. natural gas-fired electricity generation consistently increased in 2022 and 2023

Lower 48 states annual average natural gas generation by hour of dispatch  
(Jan 1, 2021–Dec 31, 2023)



gigawatthours



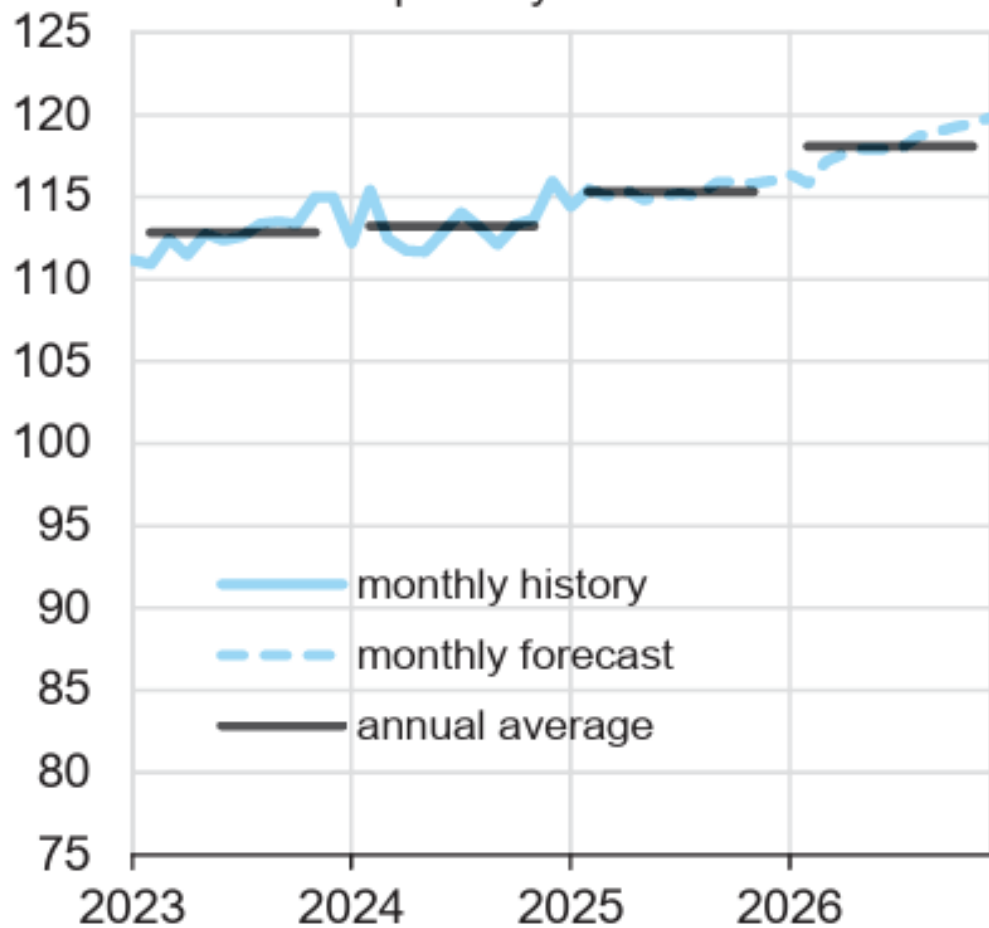
Data source: U.S. Energy Information Administration, *Hourly Electric Grid Monitor*

Note: The chart series reflect the average electricity generation for a given hour across an entire year; they are reported in 24-hour increments for the U.S. Lower 48 states, based on local time.

Donald P. Muth, Sr., SIPES-Midland 2025

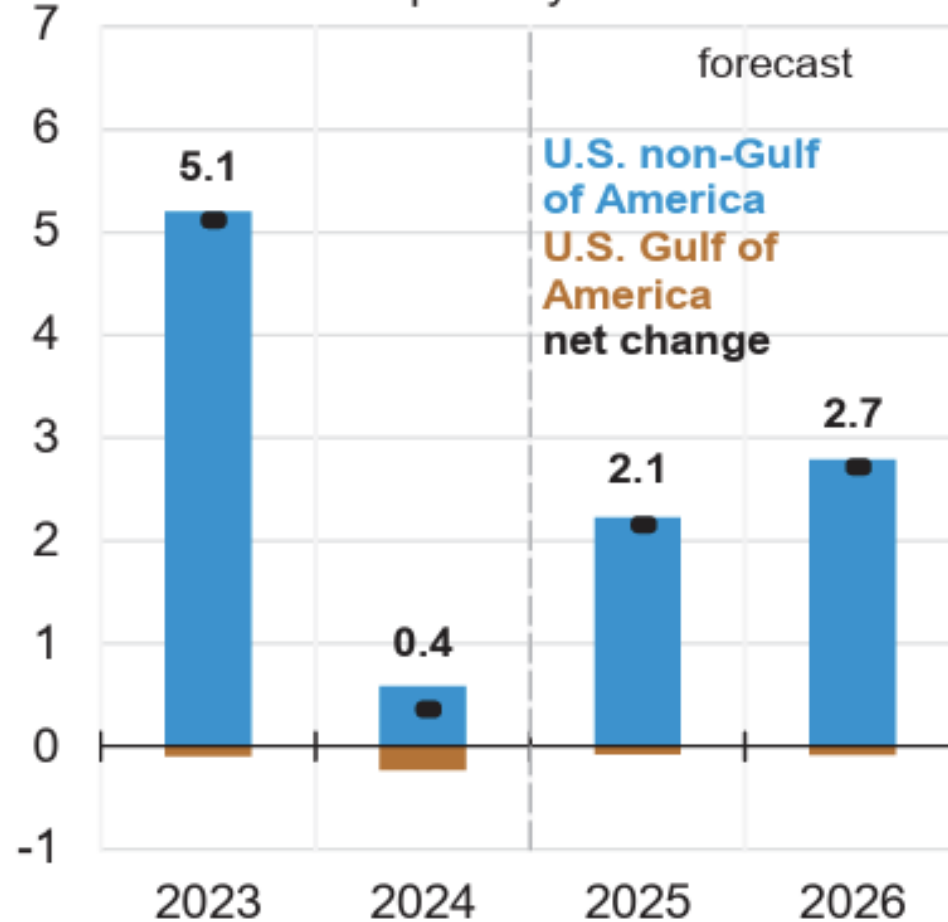
### U.S. marketed natural gas production

billion cubic feet per day



### Components of annual change

billion cubic feet per day

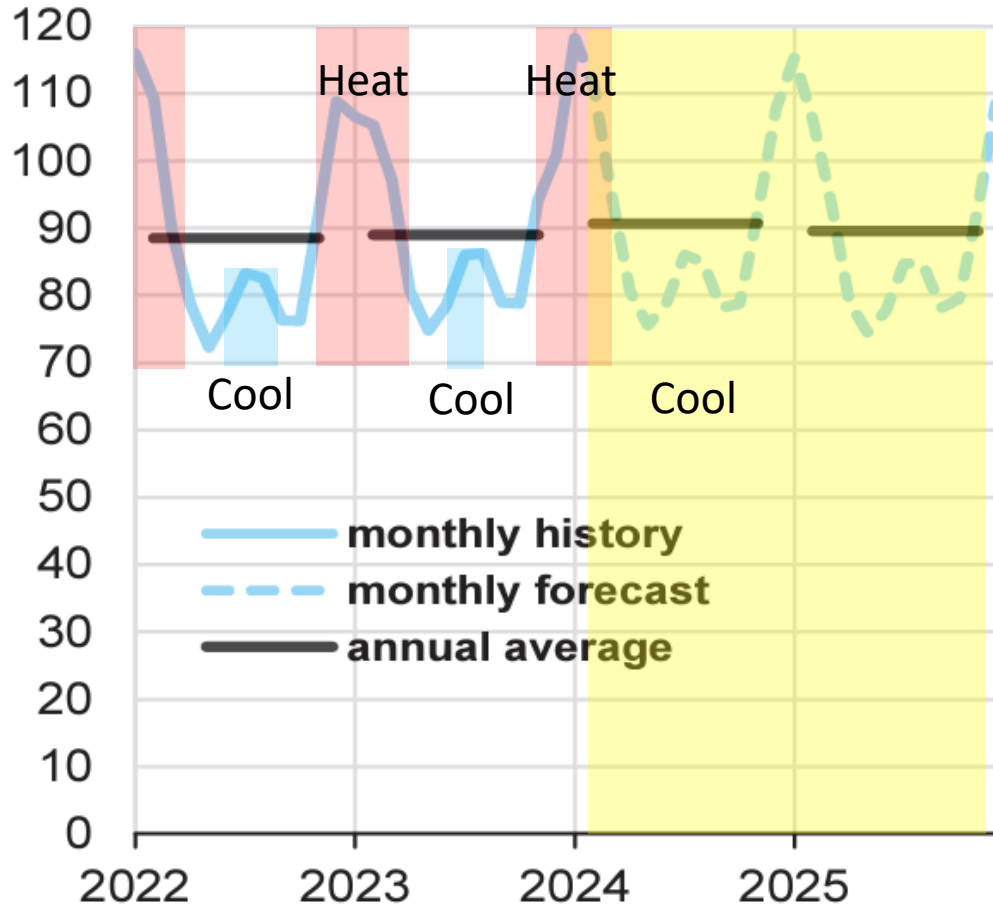


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2025

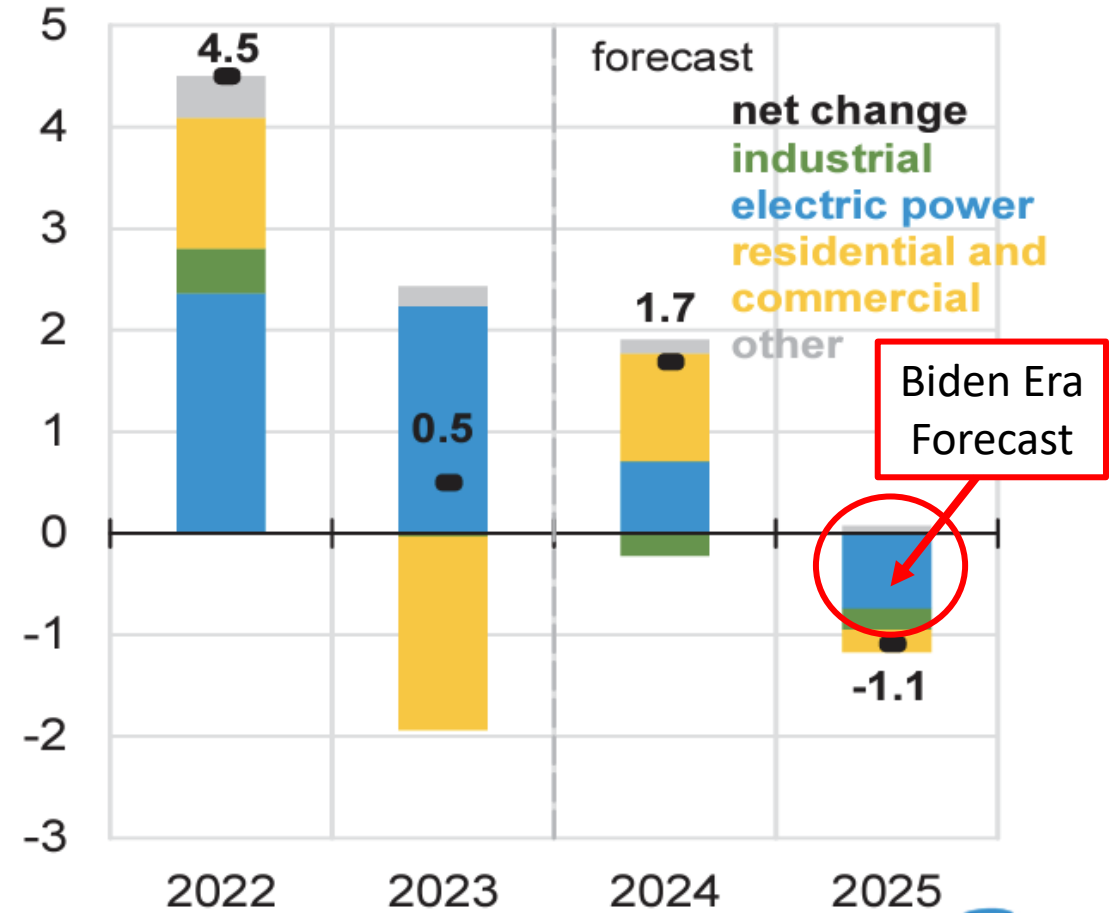


# U.S. NATURAL GAS CONSUMPTION, ANNUAL DUAL PEAK CYCLE. Feb. STEO '24

**U.S. natural gas consumption**  
billion cubic feet per day



**Components of annual change**  
billion cubic feet per day



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2024



# 2023 ANNUAL FINAL, MONTHLY U.S. LNG VESSEL EXPORTS BY TERMINAL. CUM: 4.342 TCF GAS

Freeport, back-online from 6-2022 shut-down

2023 FINAL														2023
U.S. LNG EXPORT TERMINALS	Month													Annual Total to Date
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
<b>Calcasieu Pass (Venture Global)</b>														
Volumes	42,760,800	44,968,520	38,134,540	39,668,440	41,843,870	29,855,530	38,728,000	35,659,830	38,997,050	47,859,720	46,508,830	45,150,440	490,135,570	MCF
Shipments	12	14	12	12	15	12	11	12	12	15	13	16	156	
BCF/D	1.3794	1.6060	1.2301	1.3223	1.3498	0.9952	1.2493	1.1503	1.2999	1.5439	1.5503	1.4565	1.34	BCFPD
<b>Elba Island (Southern LNG)</b>														
Volumes	9,421,890	10,577,160	11,416,700	7,322,910	7,378,050	12,995,510	9,252,510	2,945,500	11,877,240	6,483,350	8,095,770	10,948,090	108,714,680	MCF
Shipments	3	3	5	2	3	6	5	2	6	4	3	6	48	
BCF/D	0.3039	0.3778	0.3683	0.2441	0.2380	0.4332	0.2985	0.0950	0.3959	0.2091	0.2699	0.3532	0.30	BCFPD
<b>Freeport (Freeport LNG)</b>														
Volumes	0	11,556,120	28,981,130	62,518,240	68,406,130	63,286,600	59,522,090	61,436,100	54,021,390	63,952,060	60,101,240	71,223,660	605,004,760	MCF
Shipments	Offline	6	12	18	26	19	19	20	16	20	18	22	196	
BCF/D	Offline	0.4127	0.9349	2.0839	2.2066	2.1096	1.9201	1.9818	1.8007	2.0630	2.0034	2.2975	1.81	BCFPD
<b>Cameron (Cameron LNG)</b>														
Volumes	62,077,970	55,867,720	61,874,270	54,825,440	38,892,940	52,181,080	49,802,160	50,072,230	49,360,580	59,543,060	55,661,930	66,379,310	656,538,690	MCF
Shipments	21	18	23	17	12	16	15	15	15	20	18	21	211	
BCF/D	2.0025	1.9953	1.9959	1.8275	1.2546	1.7394	1.6065	1.6152	1.6454	1.9207	1.8554	2.1413	1.80	BCFPD
<b>Corpus Christi (Cheniere Marketing et al)</b>														
Volumes	62,568,140	64,113,940	67,530,470	55,550,890	57,740,440	62,449,770	58,638,870	62,433,640	59,359,400	63,384,880	64,452,890	64,189,050	742,412,380	MCF
Shipments	19	18	20	16	18	18	20	18	17	19	18	18	219	
BCF/D	2.0183	2.2898	2.1784	1.8517	1.8626	2.0817	1.8916	2.0140	1.9786	2.0447	2.1484	2.0706	2.03	BCFPD
<b>Cove Point (Warren Buffet / Dominion)</b>														
Volumes	20,791,270	19,429,350	27,758,550	18,816,160	26,265,660	23,252,810	19,927,130	21,934,320	17,465,280	10,675,760	20,932,360	23,434,010	250,682,660	MCF
Shipments	6	6	8	6	9	7	6	7	5	4	6	7	77	
BCF/D	0.6707	0.6939	0.8954	0.6272	0.8473	0.7751	0.6428	0.7076	0.5822	0.3444	0.6977	0.7559	0.69	BCFPD
<b>Sabine Pass (Cheniere)</b>														
Volumes	139,242,340	119,454,940	130,969,690	136,989,060	126,153,540	83,743,860	113,327,870	118,485,600	115,399,860	132,426,670	130,426,710	141,518,630	1,488,138,770	MCF
Shipments	40	34	41	39	38	26	35	35	33	39	42	42	444	
BCF/D	4.4917	4.2662	4.2248	4.5663	4.0695	2.7915	3.6557	3.8221	3.846662	4.2718	4.3476	4.5651	4.08	BCFPD
All Terminals Sum. BCFPD	10.8665	11.6417	11.8279	12.5230	11.8284	10.9255	11.2645	11.3860	11.5494	12.3976	12.87265767	13.6401029	4,341,627,510	MCF Total
Average BCFGPD												YTD	4,342	BCF
Monthly total	336,862,410	325,967,750	366,665,350	375,691,140	366,680,630	327,765,160	349,198,630	352,967,220	346,480,800	384,325,500	386,179,730	422,843,190	4,342	TCF
	2023 Final									2023 Best Month				
Rank	TERMINAL	AVG. VOL. (BCFPD)	SHIPMENTS	YTD	AUTH. CAP.	Avg. Utiliz.	Rank	TERMINAL	VOLUMES (BCFPD)	SHIPMENTS	MONTH	AUTH. CAP.	Utilization (Best/Auth. Cap)	
1	Sabine Pass	4.08	444	YTD	4.55		1	Sabine Pass	4.57	42	Dec.	4.55		
2	Corpus Christi	2.03	219	YTD	2.4		2	Corpus Christi	2.29	18	Feb.	2.4		
3	Freeport	1.81	196	YTD	3.1		3	Cameron	2.14	21	Dec.	3.53		
4	Cameron	1.80	211	YTD	3.53		4	Freeport	2.3	22	Dec.	1.7		
5	Calcasieu Pass	1.34	156	YTD	1.7		5	Calcasieu Pass	1.61	14	Feb.	3.1		
6	Cove Point	0.69	77	YTD	0.77		6	Cove Point	0.9	8	March	0.77		
7	Elba Island	0.30	48	YTD	0.36		7	Elba Island	0.43	6	June	0.36		
All	Avg.	12.05			16.41	0.73422999		Best	14.24	131		16.41	0.867763559	



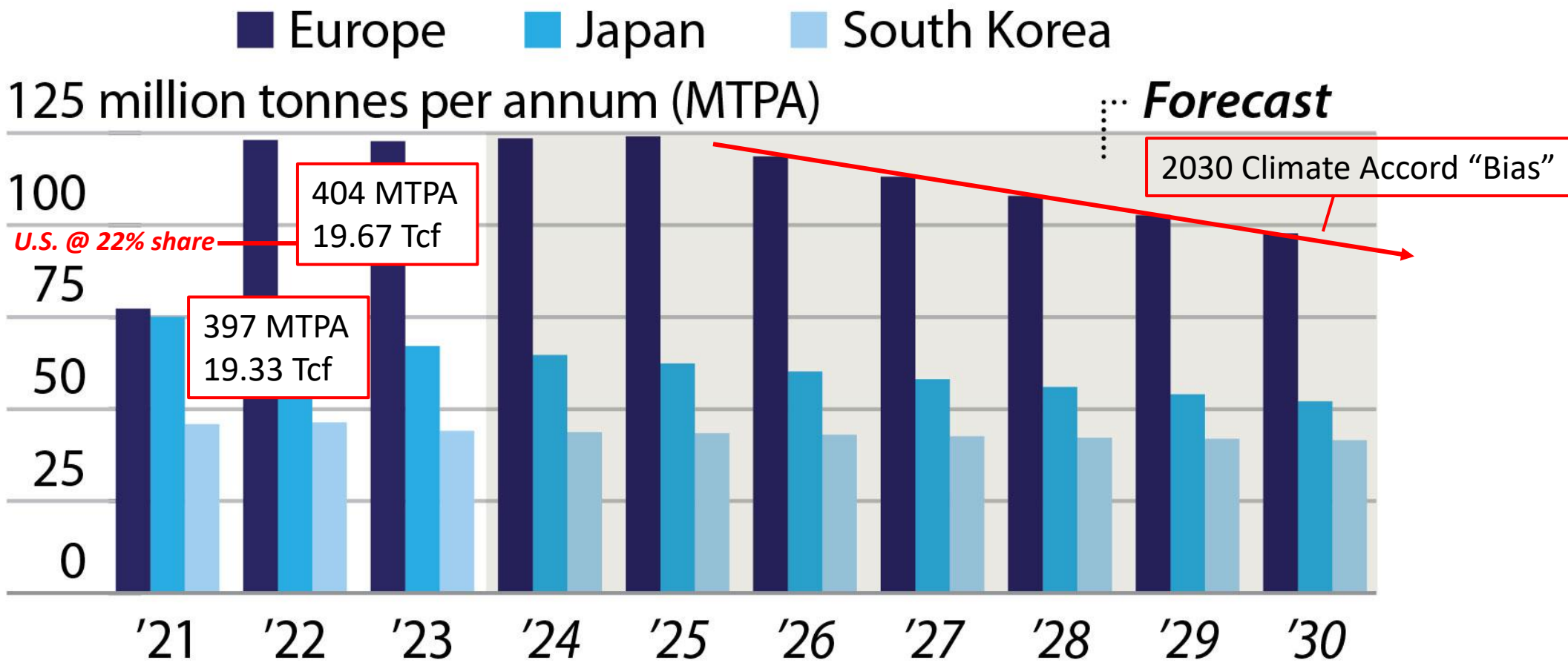
# 2024 ANNUAL FINAL, MONTHLY U.S. LNG VESSEL EXPORTS BY TERMINAL. CUM: 4.359 TCF GAS

UPDATED, 3.1.25

## 2024 LNG Vessel Exports

U.S. LNG EXPORT TERMINALS	Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2024 Annual Total to Date	
<b>Calcasieu Pass (Venture Global)</b>															
Volumes		48,208.05	44,349.24	47,062.760	38,095.26	44,911.45	41,804.80	39,270.83	32,682.78	34,908.42	38,557.01	39,052.34	39,114.86	488,017.80	MCF
Shipments														0.00	
BCF/D		1.56	1.53	1.5182	1.2698	1.4488	1.3935	0.0013	1.0543	1.1636	1.2438	1.3017	1.2618	1.34	BCFPD
<b>Elba Island (Southern LNG)</b>															
Volumes		10,512.34	7,009.22	12,835.250	7,188.73	5,847.86	6,411.86	9,739.50	13,607.00	6,871.34	6,359.65	5,239.26	9,767.67	101,389.68	MCF
Shipments														0.00	
BCF/D		0.34	0.24	0.4140	0.2396	0.1886	0.2137	0.3142	0.4389	0.2290	0.2052	0.1746	0.3151	0.28	BCFPD
<b>Freeport (Freeport LNG)</b>															
Volumes		52,765.88	41,475.86	26,250.170	10,736.07	55,238.19	64,944.23	24,767.36	62,901.19	62,977.97	69,031.46	55,614.99	68,101.83	594,805.20	MCF
Shipments														0.00	
BCF/D		1.70	1.43	0.8468	0.3579	1.7819	2.1648	0.7989	2.0291	2.0993	2.2268	1.8538	2.1968	1.78	BCFPD
<b>Cameron (Cameron LNG)</b>															
Volumes		64,531.65	59,314.28	58,931.180	53,558.93	43,444.06	50,901.42	51,605.53	52,029.09	51,893.87	53,660.08	60,070.75	65,160.12	665,100.96	MCF
Shipments														0.00	
BCF/D		2.08	2.05	1.9010	1.7853	1.4014	1.6967	1.6647	1.6784	1.7298	1.7310	2.0024	2.1019	1.82	BCFPD
<b>Corpus Christi (Cheniere Marketing et al)</b>															
Volumes		61,078.40	55,752.48	61,273.590	50,128.55	61,507.94	64,580.74	57,384.16	63,539.15	64,643.97	66,779.92	65,495.27	67,263.17	739,427.34	MCF
Shipments														0.00	
BCF/D		1.97	1.92	1.9766	1.6710	1.9841	2.1527	1.8511	2.0497	2.1548	2.1542	2.1832	2.1698	0.00	BCFPD
<b>Cove Point (Warren Buffet / Dominion)</b>															
Volumes		21,288.88	23,275.20	25,203.310	24,263.32	25,155.72	19,116.39	21,181.47	19,541.50	17,592.32	12,741.01	22,875.69	22,322.19	254,557.00	MCF
Shipments														0.00	
BCF/D		0.69	0.80	0.8130	0.8088	0.8115	0.6372	0.6833	0.6304	0.5864	0.4110	0.7625	0.7201	0.70	BCFPD
<b>Sabine Pass (Cheniere)</b>															
Volumes		137,771.23	128,285.37	138,259.460	119,717.88	131,500.95	108,543.81	119,812.18	118,419.96	121,139.35	128,920.60	126,862.14	133,011.82	1,512,244.75	MCF
Shipments														0.00	
BCF/D		4.44	4.42	4.4600	3.9906	4.2420	3.6181	3.8649	3.8200	4.037978333	4.1587	4.2287	4.2907	4.14	BCFPD
<b>Plaquemines (Venture Global)</b>															
Volumes		0	0	0	0	0	0	0	0	0	0	0	3649.42	3649.42	MCF
Shipments													1	1	
BCF/D													0.117723226		BCFPD
All Terminals Sum. BCFPD		12.78	12.40	11.9295	10.1230	11.8583	11.8768	10.4439	11.7007	12.0009	12.1306	12.5070	13.1739	4,359,192.15	MCF Total
Monthly total		396,156.43	359,461.65	369,815.720	303,688.740	367,606.170	356,303.250	323,761.030	362,720.670	360,027.240	376,049.730	375,210.440	408,391.080	4,359.192	BCF

# IEEFA LNG DEMAND FORECAST



Sources: GIE, Kpler, Eurostat, UK ONS, MOTIE, KITA, METI IEEFA

1 Million tonnes (LNG) = 48.7 Bcf gas

Shell LNG Global traded values listed in "red boxes"

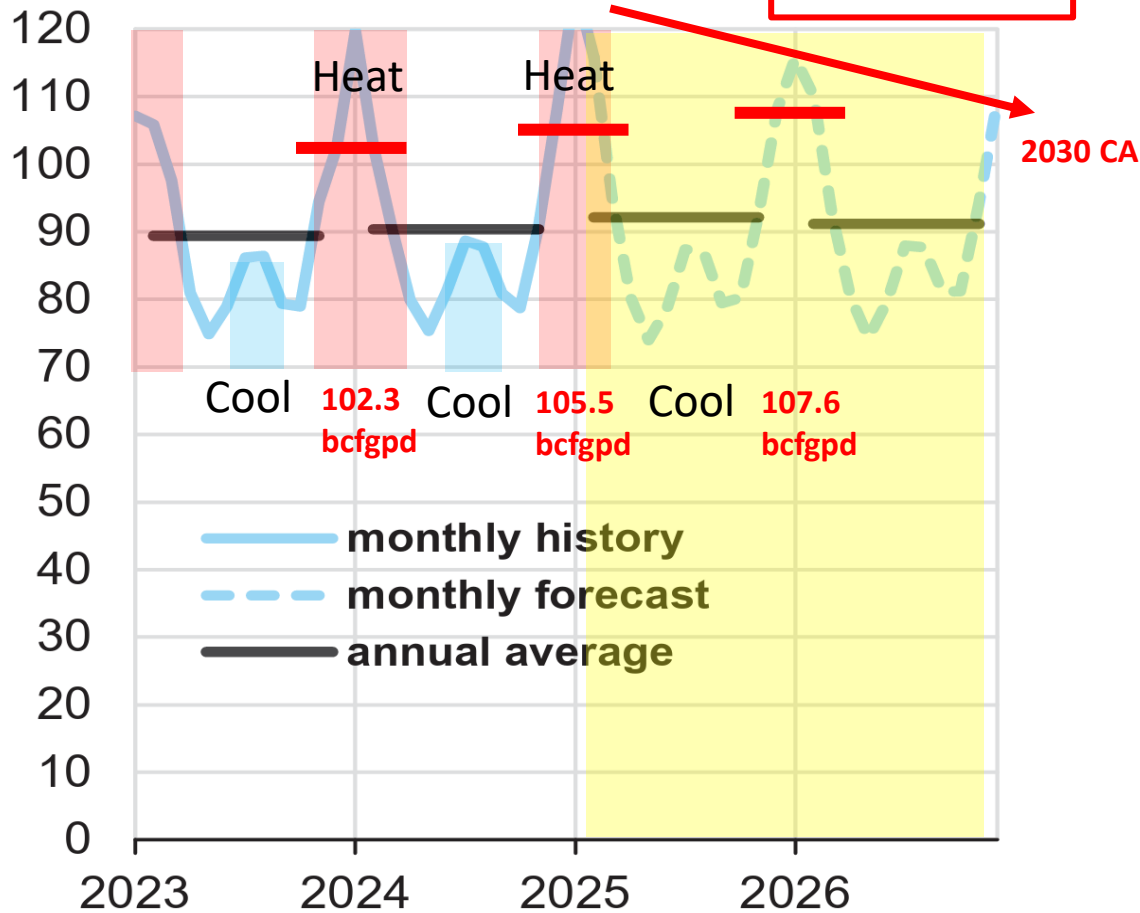
<https://www.shell.com/what-we-do/oil-and-natural-gas/liquefied-natural-gas-lng/lng-outlook-2024>

<https://ieefa.org/resources/global-lng-outlook-2024-2028> (Institute for Energy Economics and Financial Analysis)

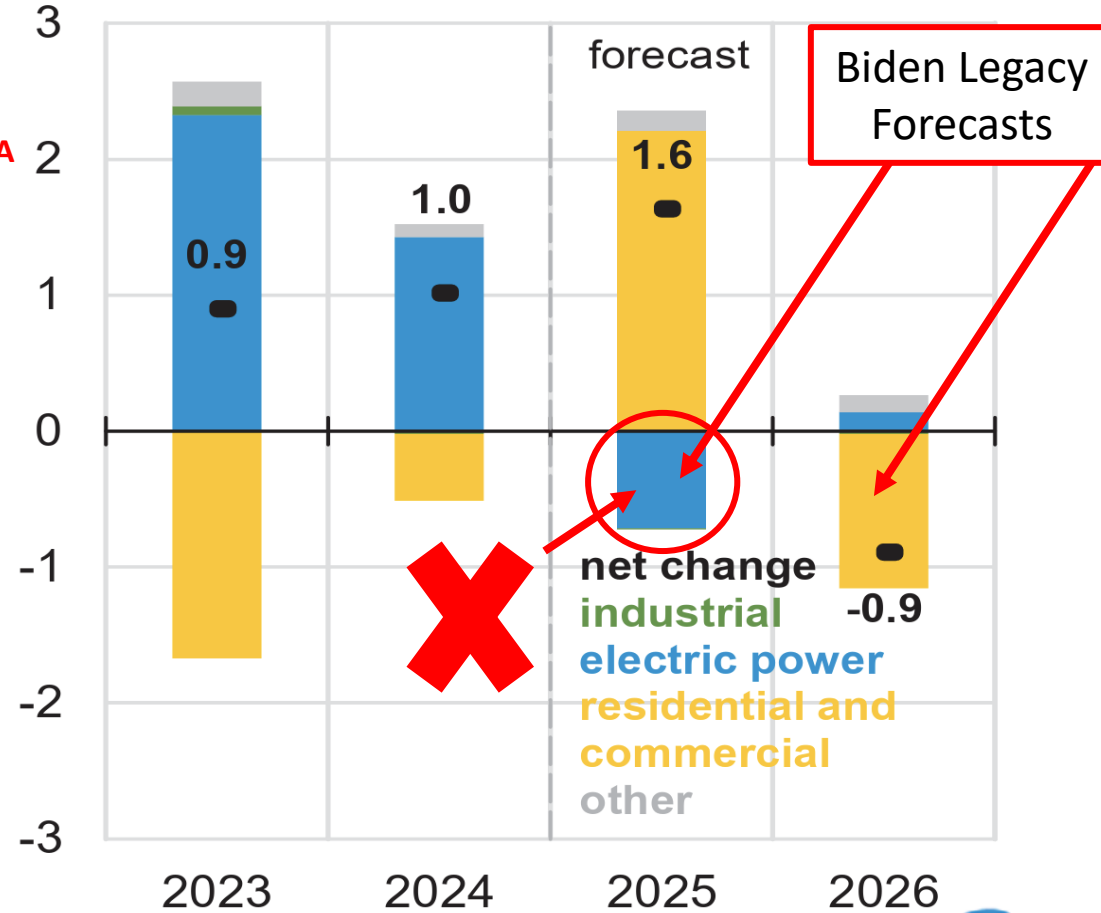
Donald P. Muth, Sr., SIPES-Midland 2025

# U.S. NATURAL GAS CONSUMPTION, ANNUAL DUAL PEAK CYCLE. March. STEO '25

U.S. natural gas consumption  
billion cubic feet per day



Components of annual change  
billion cubic feet per day



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2025





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