

Manufacturing Energy Challenges 2025/2026

Paul Cicio
Industrial Energy Consumers of America

IECA Mission: To Reduce and Avoid Energy Costs to Ensure Affordability and Support Reliability

- 100% manufacturing companies.
- Focused exclusively on energy.
- The “Voice of the Industrial Energy Consumer” in WDC.
- Intervene at FERC/Congress more than any manufacturing organization.
- Nationwide coalition builder. (Electricity Transmission Competition Coalition)
- Policy-focused. Not political.

IECA Annual Meeting

- **Old Era:** The manufacturing sector has benefited by a decade of affordable and reliable energy.
- **New Era with a lot of Uncertainty:** Escalating electricity and natural gas prices and declining reliability.
- **Implication:** Loss of competitiveness and jobs.



WSJ

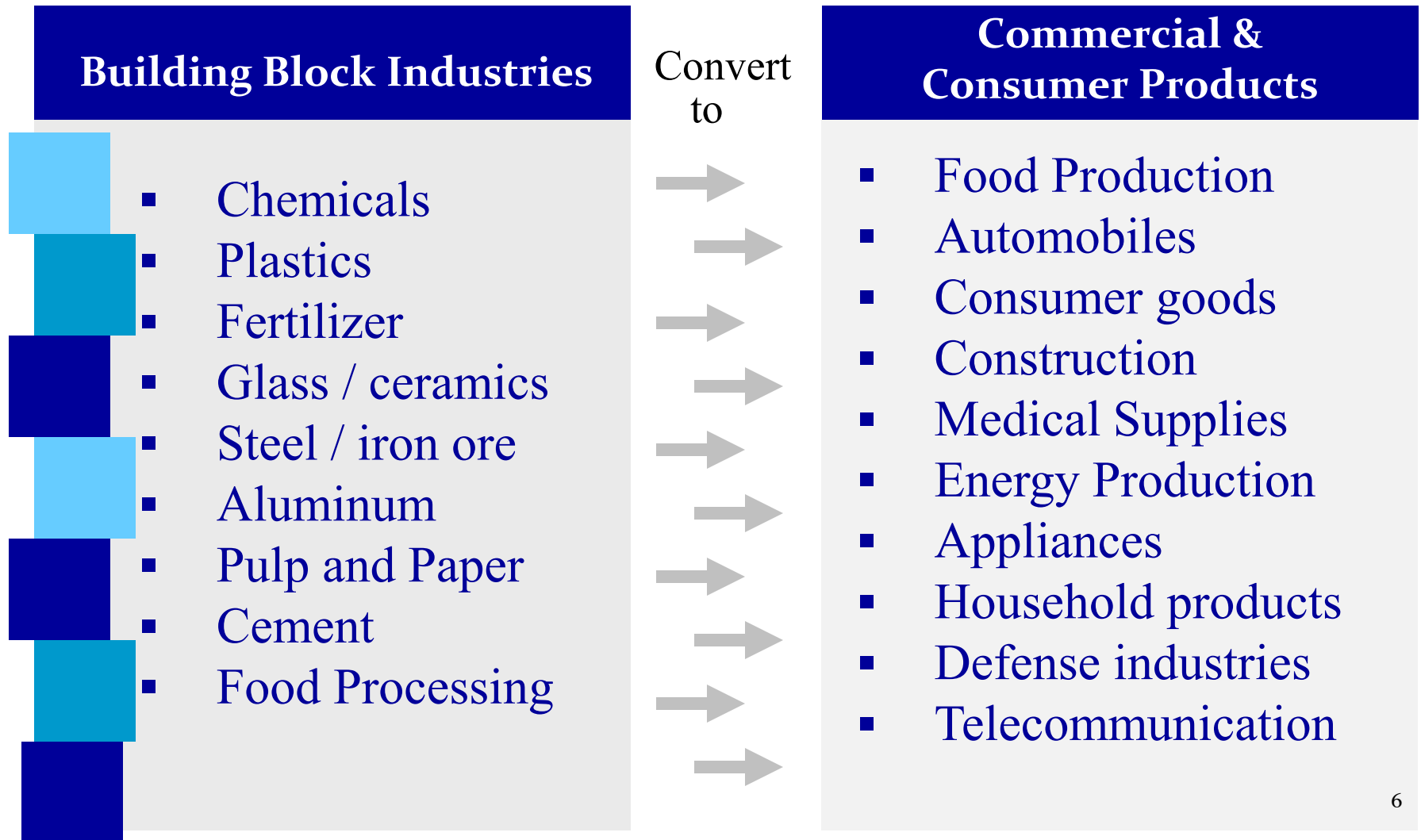
“China Plots Victory in AI Cold War”

A US national security imperative!

The New Era of Increased Energy Uncertainty

- Increasing electricity demand: 20 yr high
- Decreasing reserve capacity
- Increasing electric generation costs
- Increasing electric transmission & distribution costs
- Decreasing electric reliability
- Inadequate natural gas pipeline capacity
- Increasing natural gas pipeline transportation rates
- Increasing LNG export capacity
- Inadequate natural gas storage capacity

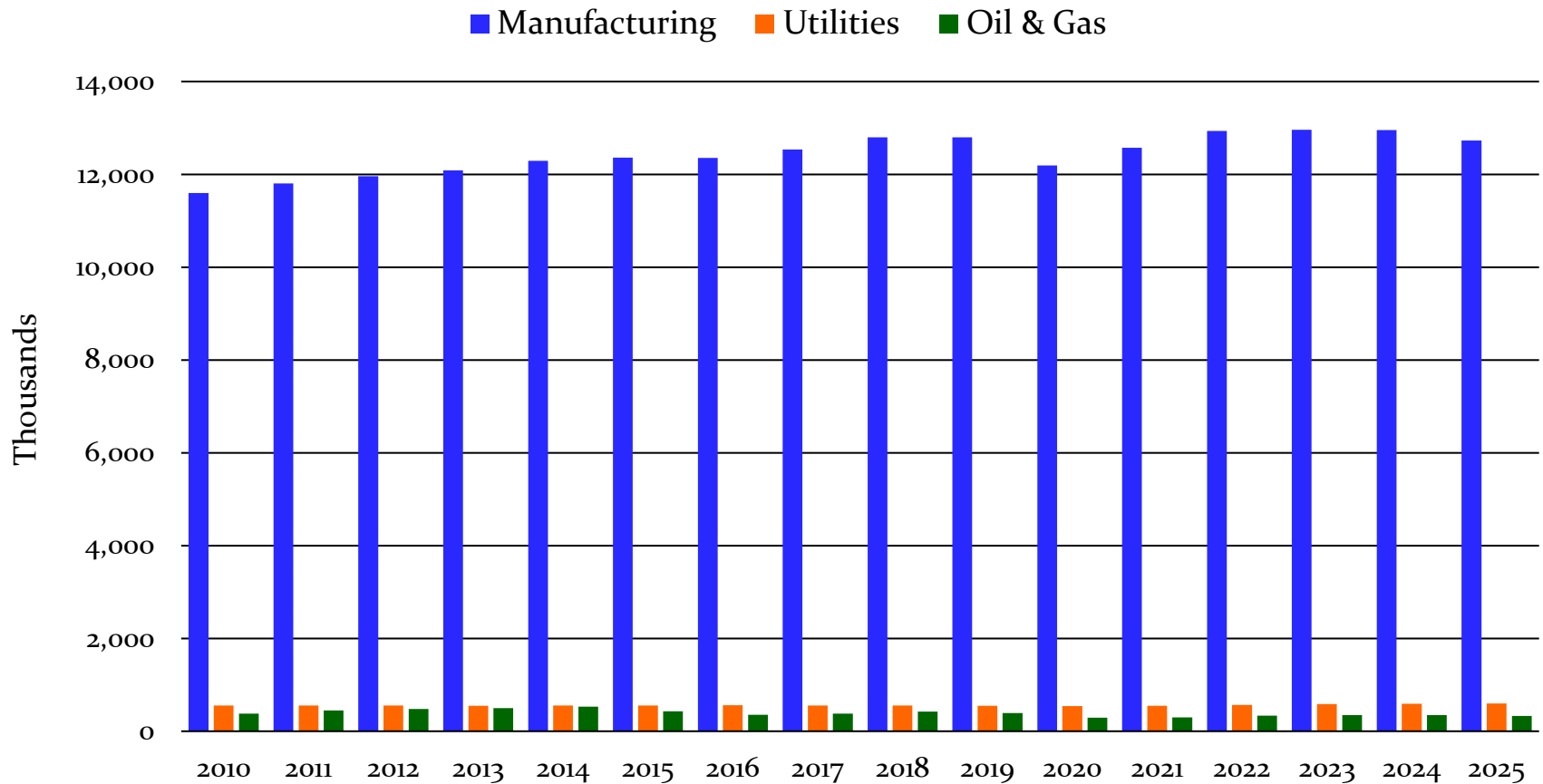
Energy Price Sensitive Products are Essential for Economic Growth



U.S. Manufacturing is Important!

- Consumes 32% of U.S. natural gas
- Consumes 29% of U.S. electricity
- 400 thousand facilities
- 12.7 million direct employees: Creates 3 jobs for every one job in manufacturing.
- \$2.9 trillion – value added
- 9.7% of U.S. GDP

Manufacturing Employment vs Oil & Gas/Utilities



Source: National Employment, U.S. Bureau of Labor Statistics (BLS), <https://www.bls.gov/ces/data/>

Small Changes to Natural Gas Prices has Significant National Economic Consequences

For every \$1.00/MMBtu increase in natural gas Henry Hub price:

- Natural gas = \$34 billion
- Electricity = \$20 billion
- Total = \$54 billion

IECA Policy Issues 2025/2026

1. Competitive bidding of new electricity transmission projects (FERC) (states)
2. Interconnection of large loads (FERC) (states)
3. Insufficient growth of natural gas pipeline capacity (FERC)
4. Energy permitting reform legislation (Congress)
5. Accelerating LNG exports (DOE): “Policy to insulate US consumers”
6. WRI GHG Reporting methodology change

Sleeper Issues

1. Impact of accelerating LNG exports on prices during winter months.
2. Embedded transmission costs that increase consumer rates for 40 years.
3. The decline of manufacturing self-generation of electricity and its impact on the electricity market. 55 GWs. 10 GW retired. 5GW/2028.
4. Escalating cost of natural gas pipeline transportation costs.

Trump Administration-Top 10

1. Accelerate electric generation capacity.
Win the AI race.
2. Actions to keep existing nuclear/coal/gas generation online.
3. De-emphasize renewables.
4. Increase natural gas pipeline capacity.
5. Increase LNG exports.

Trump Administration-Top 10

6. Increased access to federal lands and waters for energy & metals production.
7. Speed interconnection for large loads.
8. Decouple from int'l climate treaties.
9. Remove anti-market regulations.
10. U.S. DOJ action against 'Right of First Refusal' laws/reg's that prevent competitive bidding of new transmission lines.

FERC Commissioners

- Laura Swett, Chair (R)
- David LaCerte (R)
- Lindsay See (R)
- David Rosner (D)
- Judy Chang (D)



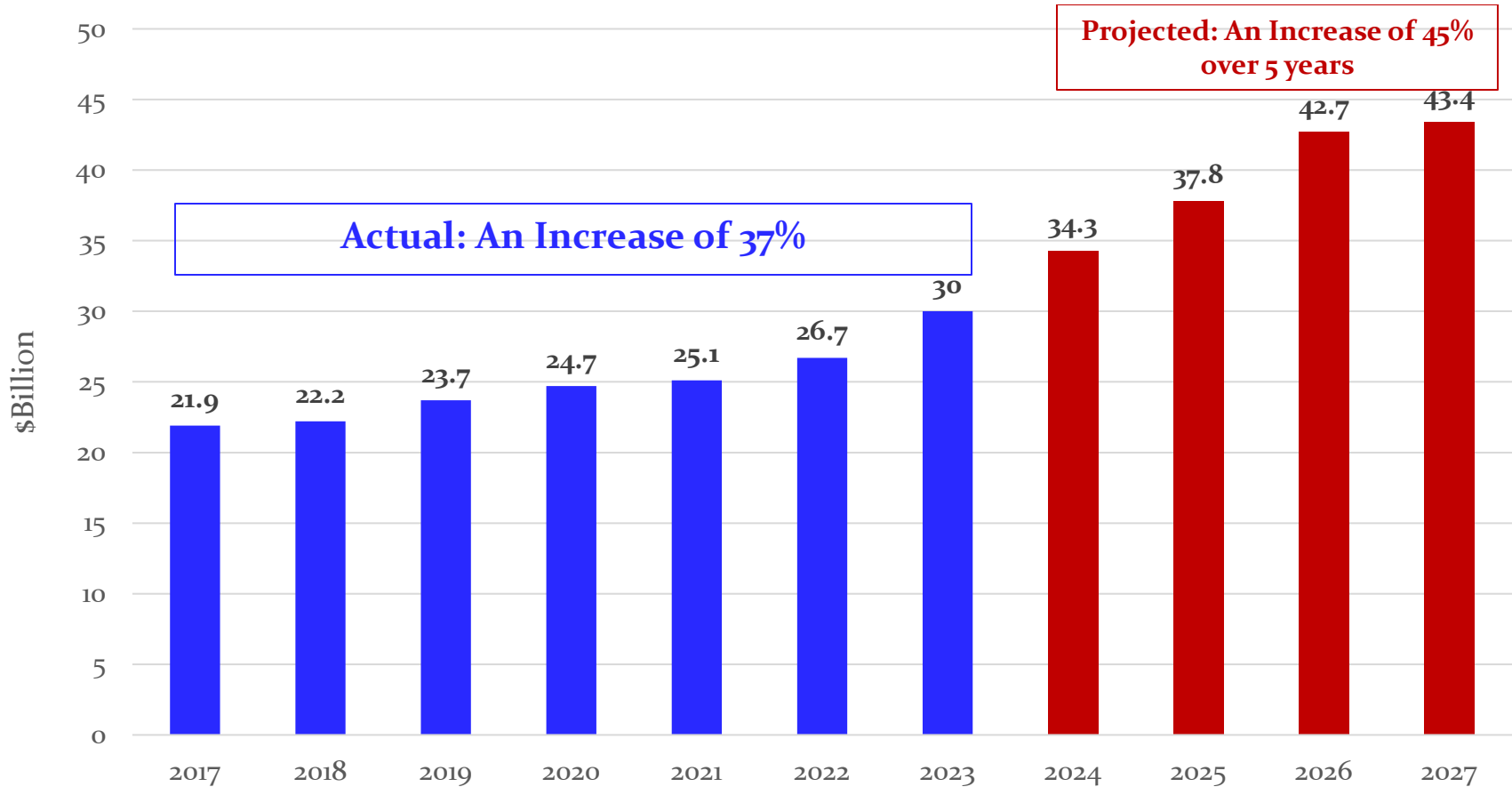
Three IECA Policy Issues 2025/2026

#1. Competitive Bidding of New Transmission Lines

- Competition in building new transmission lines reduces costs by 25-30% on average.
- Despite the decade old FERC Order 1000, only 5% of all transmission projects are competitively bid to reduce costs.
- Order 1920: Not a single cost containment.
- Trump EO to remove anti-competitive regulations.

EEl: Transmission Investment is Accelerating

(Nominal Dollars)



Source: Edison Electric Institute
Business Analytics Groups

Investment of investor-owned electric companies and stand-alone transmission companies. Actual Investment figures were obtained from the EEI Property & Plant Capital Investment Survey supplemented with FERC Form 1 data. Projected investment figures¹⁷ were obtained from the EEI Transmission Capital Investment Forecast Survey supplemented with data obtained from company 10-k reports and investor presentations.

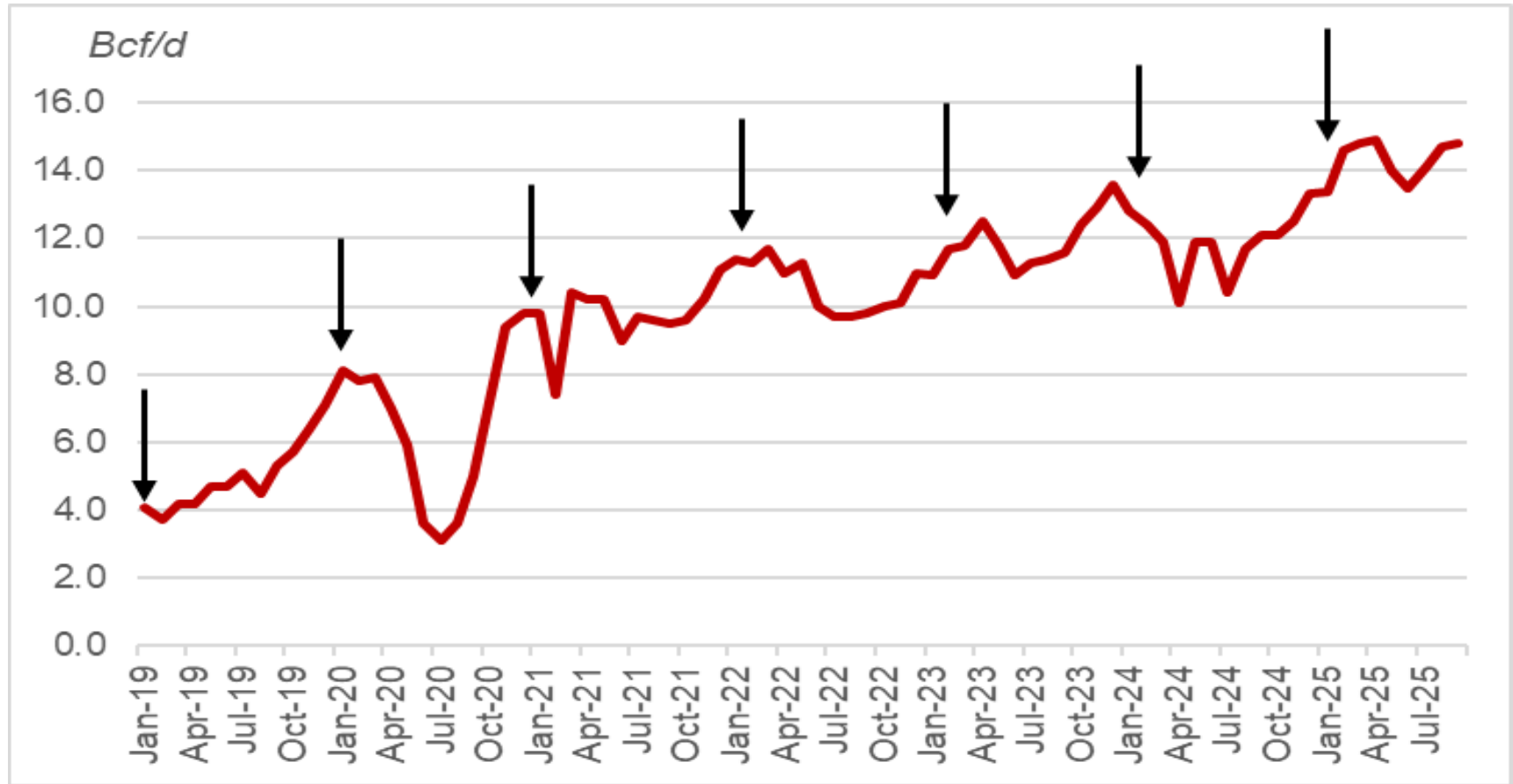
Embedded Transmission Costs

- **2017-2023 total capital spending of \$174 billion:** When the ROE and financing costs are added, the real cost to consumers over 40 years is \$871 billion (Five-fold increase).
- **2024-2027 total of \$158.2 billion:** Actual cost to consumers over 40 years = \$791 billion.

#2. LNG Export Impacts

- 1. Exporters maximize shipments during winter months.** As export capacity increases, it accelerates the drawdown of U.S. natural gas inventory – increasing prices for both natural gas and electricity.
- 2. LNG customers are price insensitive.** Manufacturers cannot compete with LNG.

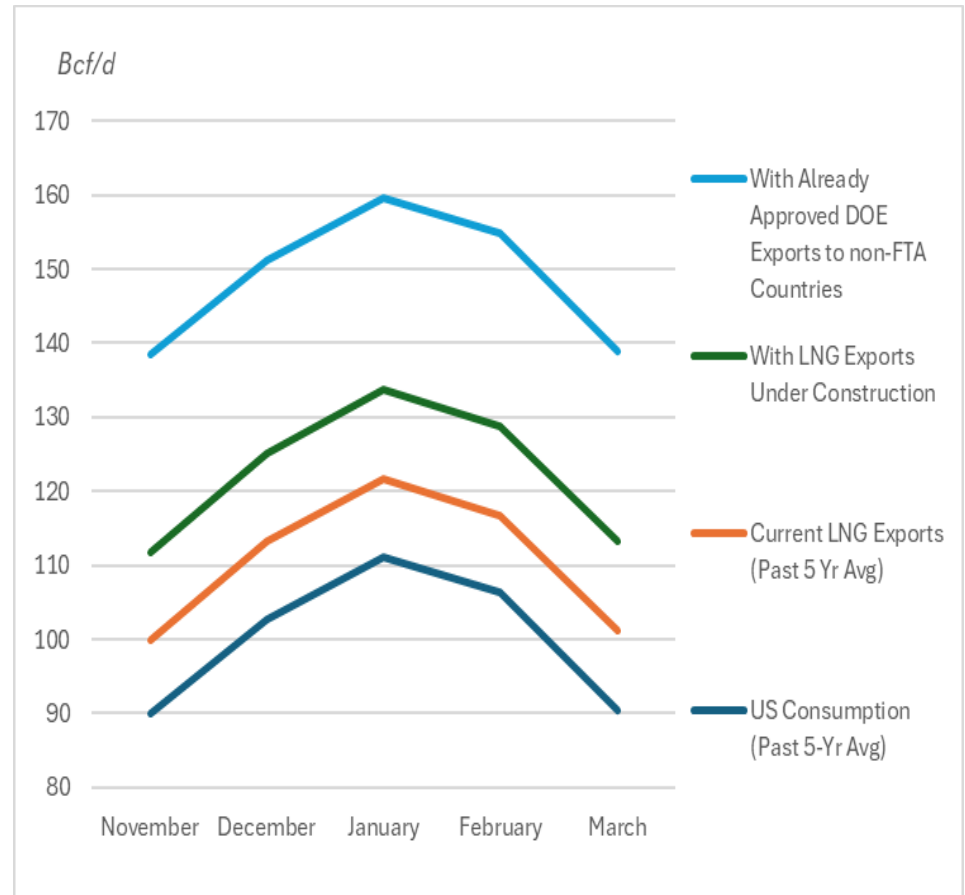
LNG Exports are Highest During Winter Months Which Reduces Inventory and Increases Natural Gas and Electricity Prices



Source: U.S. Energy Information Administration (EIA)

Already Approved LNG Exports Lift “Peak” Winter Demand Above Current Records (10/25)

- LNG exports already approved by the DOE for non-FTA countries lift average winter demand by 34%.



Status of U.S. LNG Export Capacity (FERC)

October 14, 2025

1. Operating capacity: 14.29 Bcf/d (*15.1% of net supply)
2. Approved, under construction: 21.81 Bcf/d (*23.1%)
3. Approved, not under construction: 10.48 Bcf/d (*11.2%)

Total approved volume: 46.58 Bcf/d or 49% of 2024 net supply* (51 Bcf/d with feedgas loss)

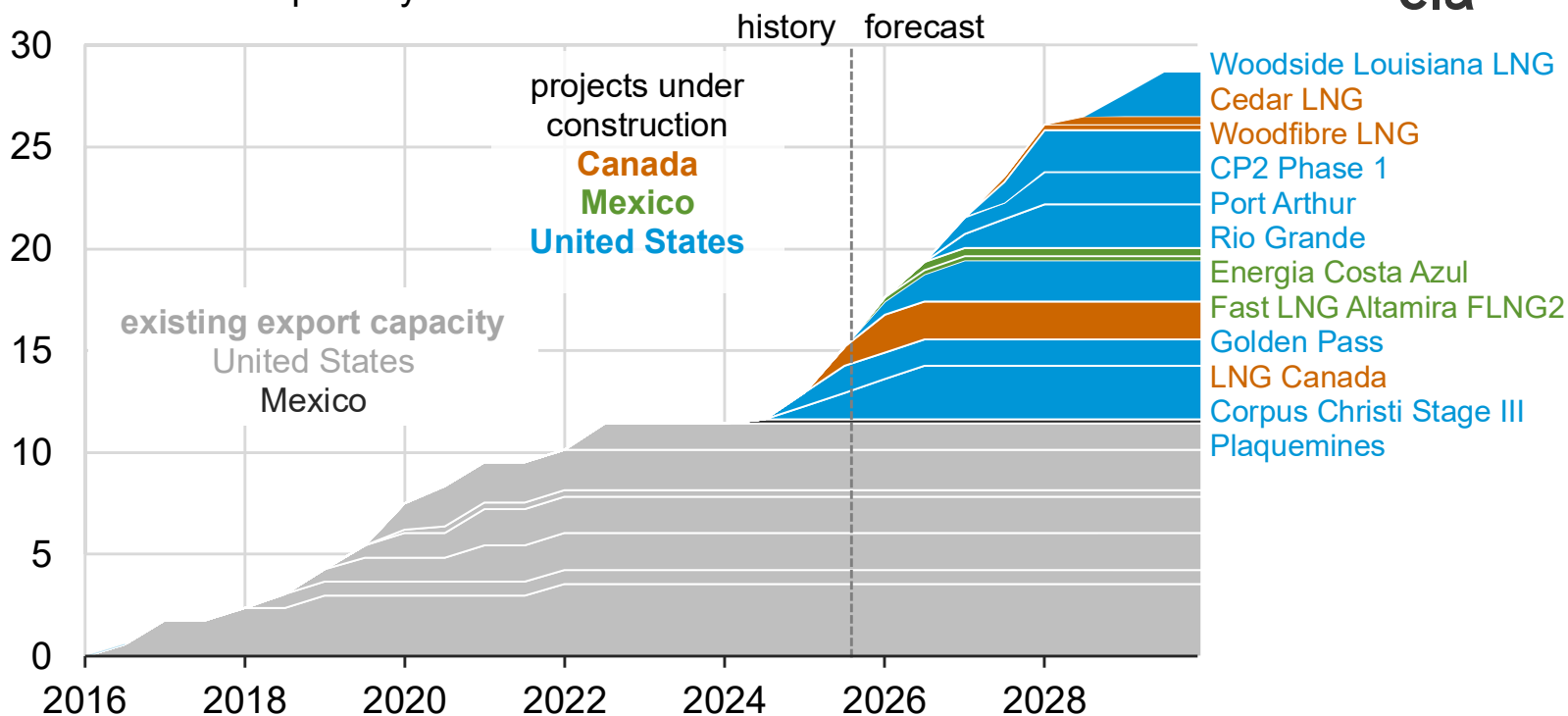
4. Pending Applications: 3.15 Bcf/d (*3.3%)
 5. Projects in Pre-filing: 9.34 Bcf/d (*9.9%)
- **TOTAL: 59.07 Bcf/d ****

*EIA. In 2024, total U.S. dry production was 103.5 Bcf/d. Total net supply of 94.6 Bcf/d (minus lease and plant fuel, pipeline and distribution use).

**Source: U.S. LNG Export Terminals – Existing, Approved not Yet Built, and Proposed, FERC, as of October 14, 2025, <https://www.ferc.gov/media/us-lng-export-terminals-existing-approved-not-yet-built-and-proposed>

LNG Export Capacity to Double in Three Years (10/25)

North America liquefied natural gas export capacity by project (2016–2029)
billion cubic feet per day



#3. Insufficient Natural Gas Pipeline Capacity

- **Issue: Manufacturers are always the first to be curtailed.** Homeowners, power generators and LNG exporters get the gas and we do not.
- Most manufacturers cannot do 10-year 'firm' pipeline contracts.

In 2025, 52% of New Pipeline Projects Miles are for LNG Exports – Not Domestic Supply

Year in Service	Total Miles	Total LNG Miles	% of Total
2022	319.8	134.0	42%
2023	465.5	118.2	25%
2024	1,574.4	131.0	8%
2025	2,263.0	1,167.0	52%
2026	1,412.8	918.9	65%
2027	947.6	322.0	34%
2028	896.0	896.0	100%
2029	60.0	0.0	0%
Totals	7,939.1	3,687.1	46%

Source: Natural Gas, Pipeline Projects, U.S. Energy Information Administration



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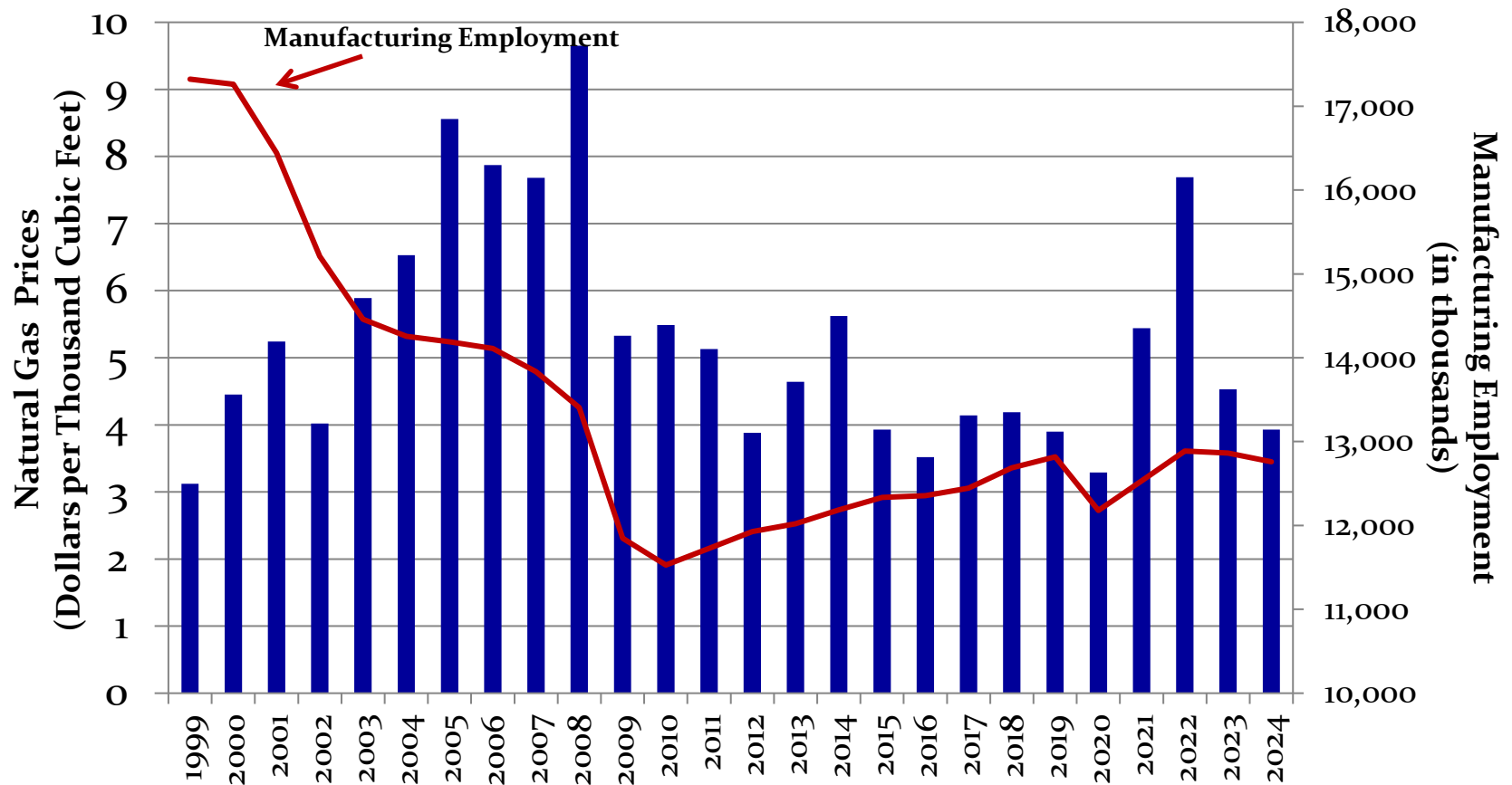
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“A Direct Relationship Between Natural Gas Costs and Manufacturing Jobs”

54,900 factories closed from 2000 to 2010 (BLS)



Source: EIA (delivered natural gas prices), Bureau of Labor Statistics

Top Questions that Need Answers

Natural Gas Production:

- If crude oil prices fall, will there be sufficient supply to replace associated NG from Permian Basin?

Natural Gas Pipeline Capacity:

- Is there sufficient natural gas pipeline capacity for the next 3-5 years to accommodate the increased demand?

Top Questions that Need Answers

LNG Exports:

- Will accelerating LNG exports impact winter NG and electricity prices?

Top Questions that Need Answers

Electricity Generation:

- Is there sufficient dispatchable generation for the next 2-3 years to meet escalating demand?