

GAS AS A KEY TO REGIONAL GROWTH AND STABILITY IN POST-WAR MIDDLE EAST

LESSONS FROM THE U.S.

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CONTENTS

On Day 1 after the last shot is fired, how can the policy-maker achieve the greatest regional impact boosting economic growth, enhancing security and political stability, and protecting the environment.

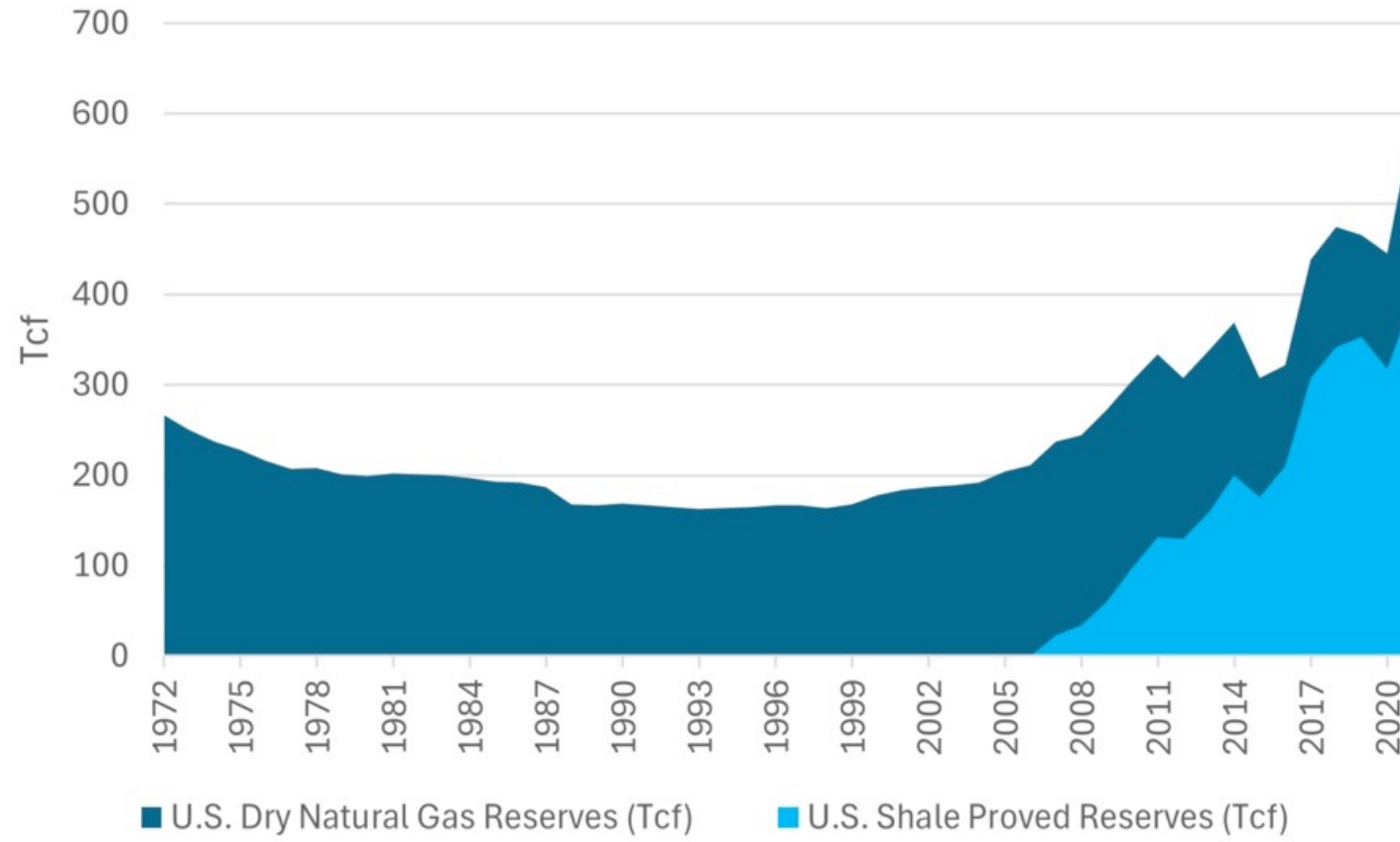
- Snapshot of the rise of gas in the U.S. achieving energy independence
 - How the U.S. leveraged private capital to build the critical midstream infrastructure to:
 - exploit natural gas reserves
 - improve our economic growth and
 - enhance energy security
- Proven U.S. policy model to achieve all four goals by leveraging private capital to realize growth in energy and infrastructure
- Relevance of U.S. experience to regional growth and stability in the Middle East
- Questions?

RECENT HISTORY OF U.S. NATURAL GAS

- Shale Revolution
- Market Impact
- Net Exports
- LNG

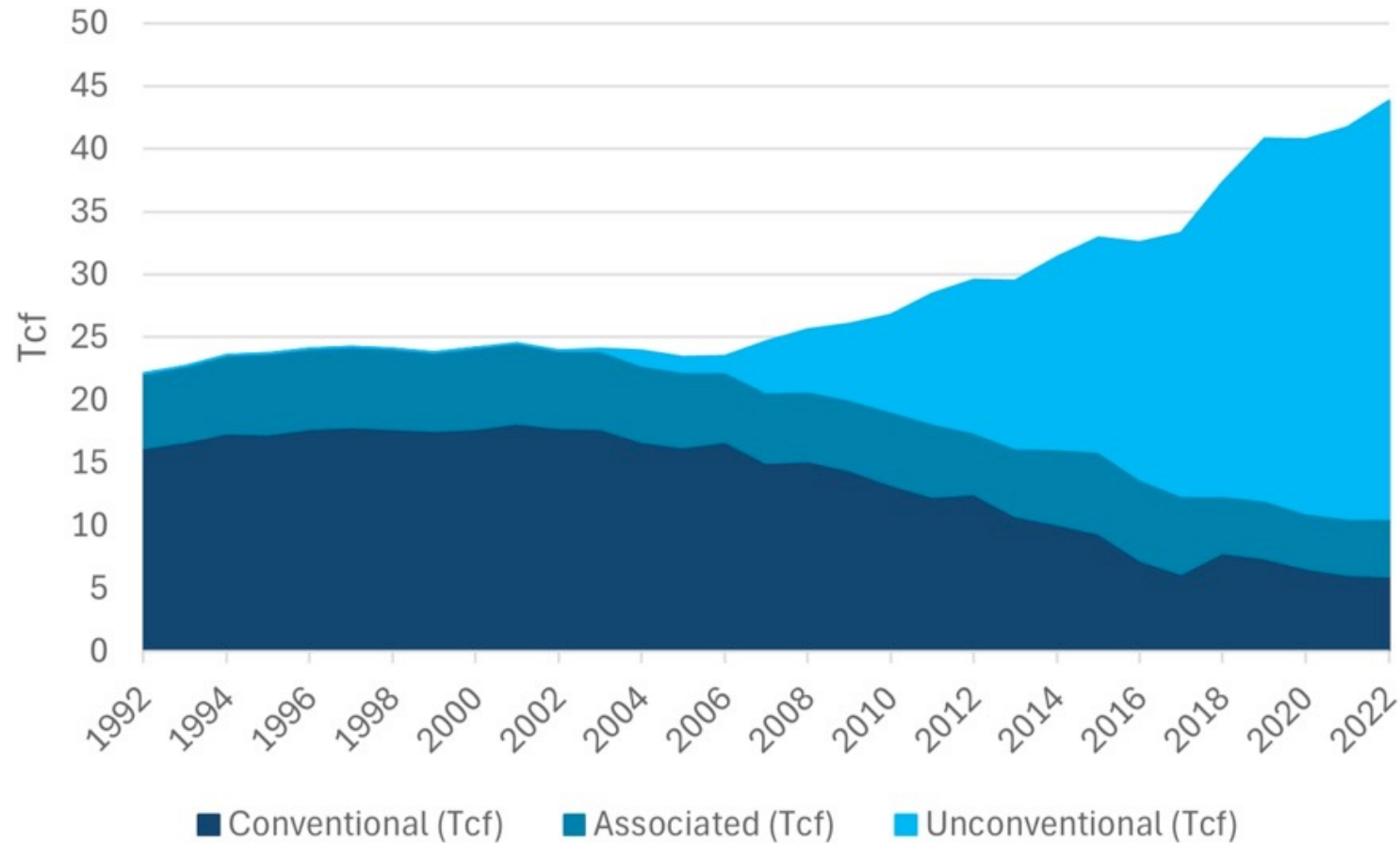
RESERVES

UNCONVENTIONAL RESOURCES REVERSED DECADES OF DECLINE



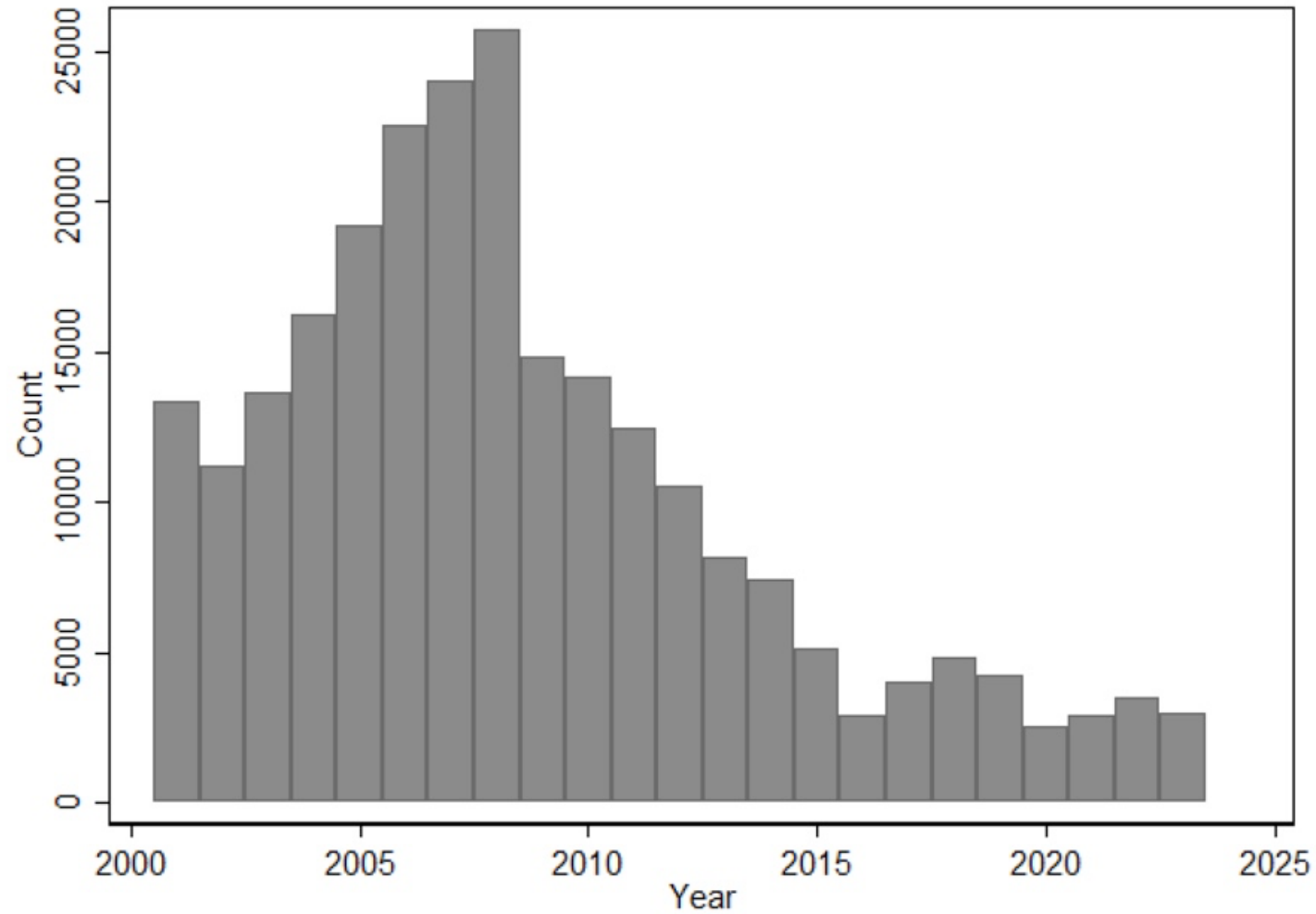
PRODUCTION

U.S. GAS PRODUCTION IS UNCONVENTIONAL



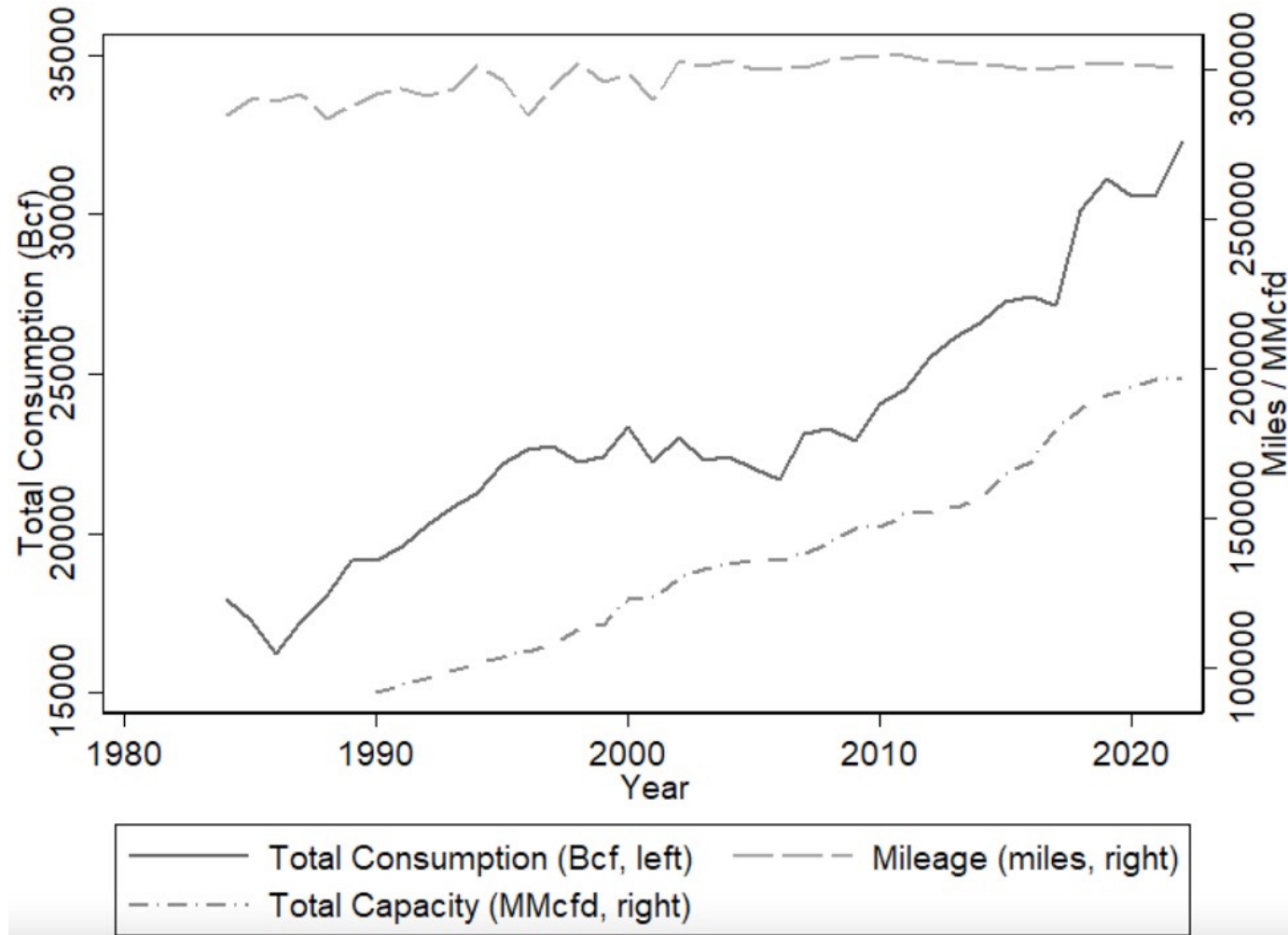
INVESTMENT

NEARLY 250,000 NEW GAS WELLS



INVESTMENT

PIPELINES: INTENSIVE MORE THAN EXTENSIVE

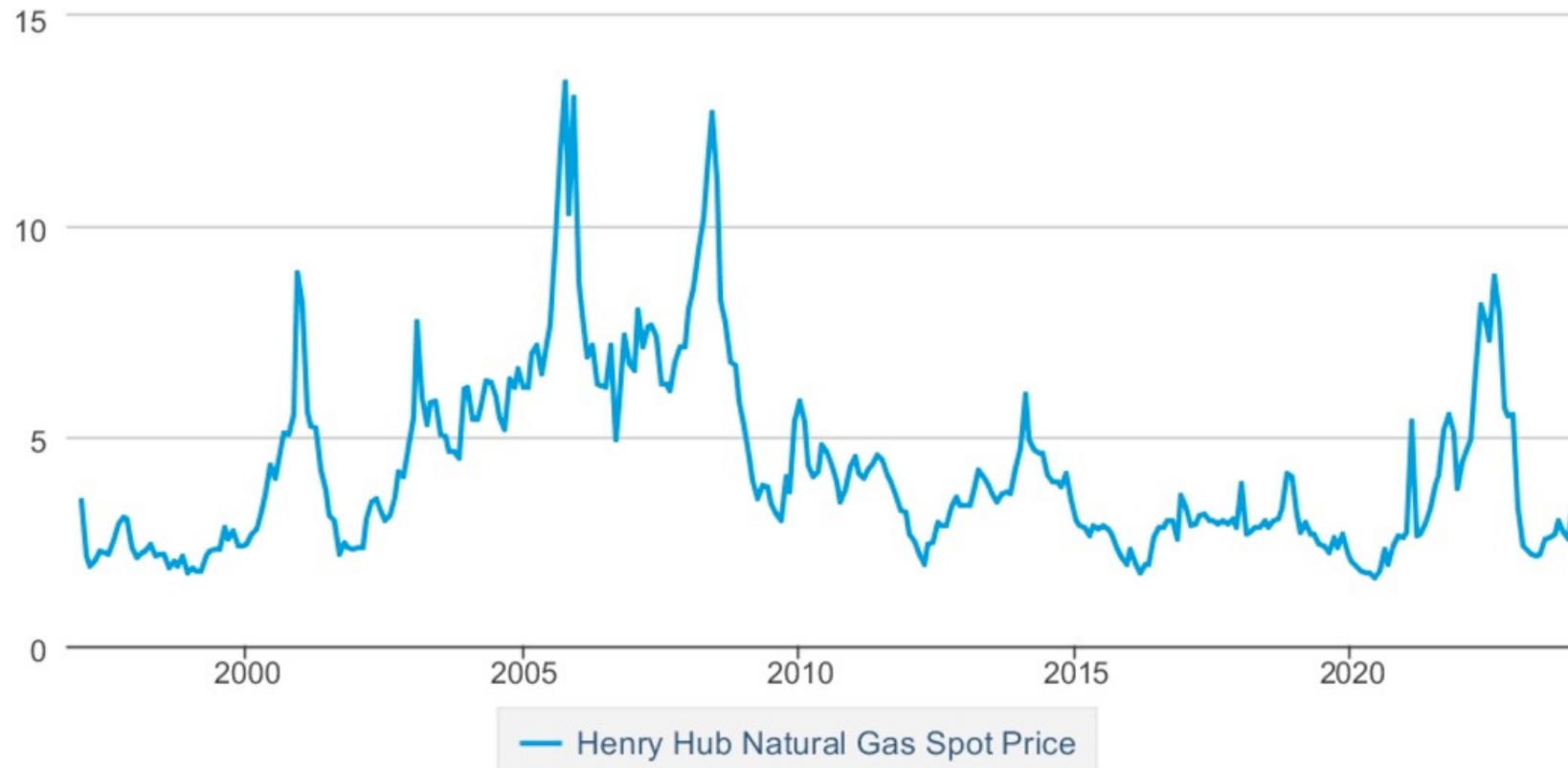


PRICES

SHALE BROUGHT LOWER, MORE STABLE PRICES

Henry Hub Natural Gas Spot Price

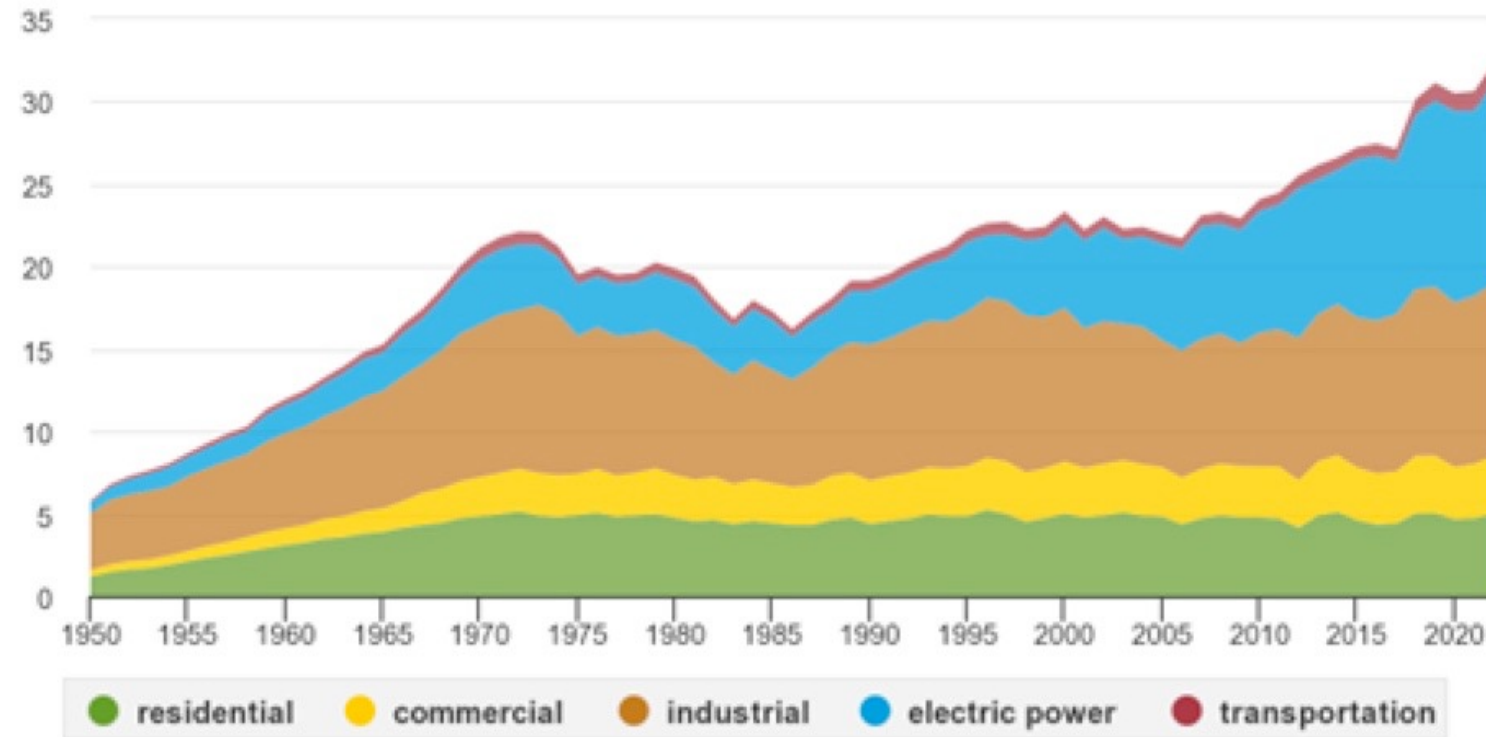
Dollars per Million Btu



GROWING CONSUMPTION

U.S. natural gas consumption by sector, 1950-2022

trillion cubic feet

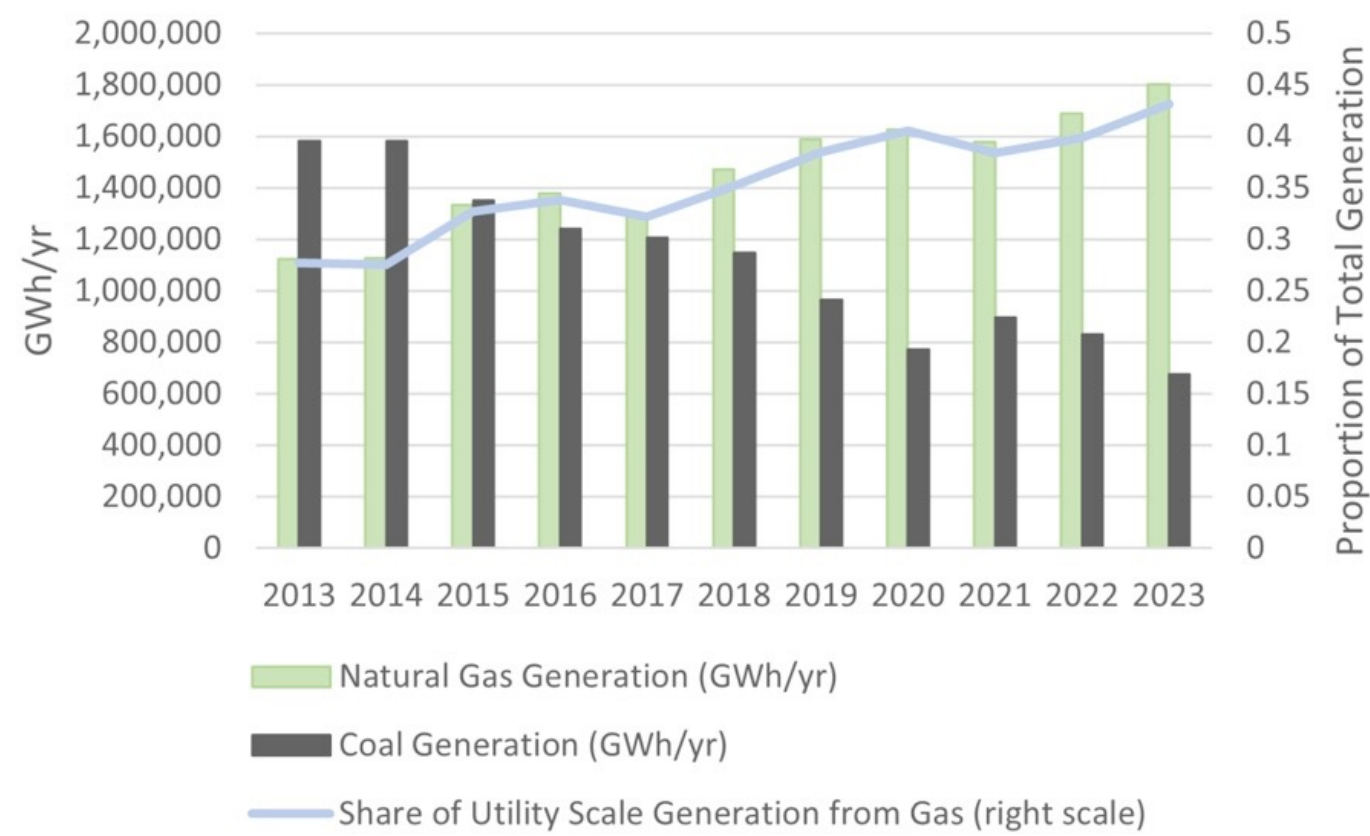


Data source: U.S. Energy Information Administration, *Monthly Energy Review*, Table 4.3, April 2023; preliminary data for 2022

Note: Transportation includes pipeline and distribution use and vehicle fuel.

CHANGING DEMAND

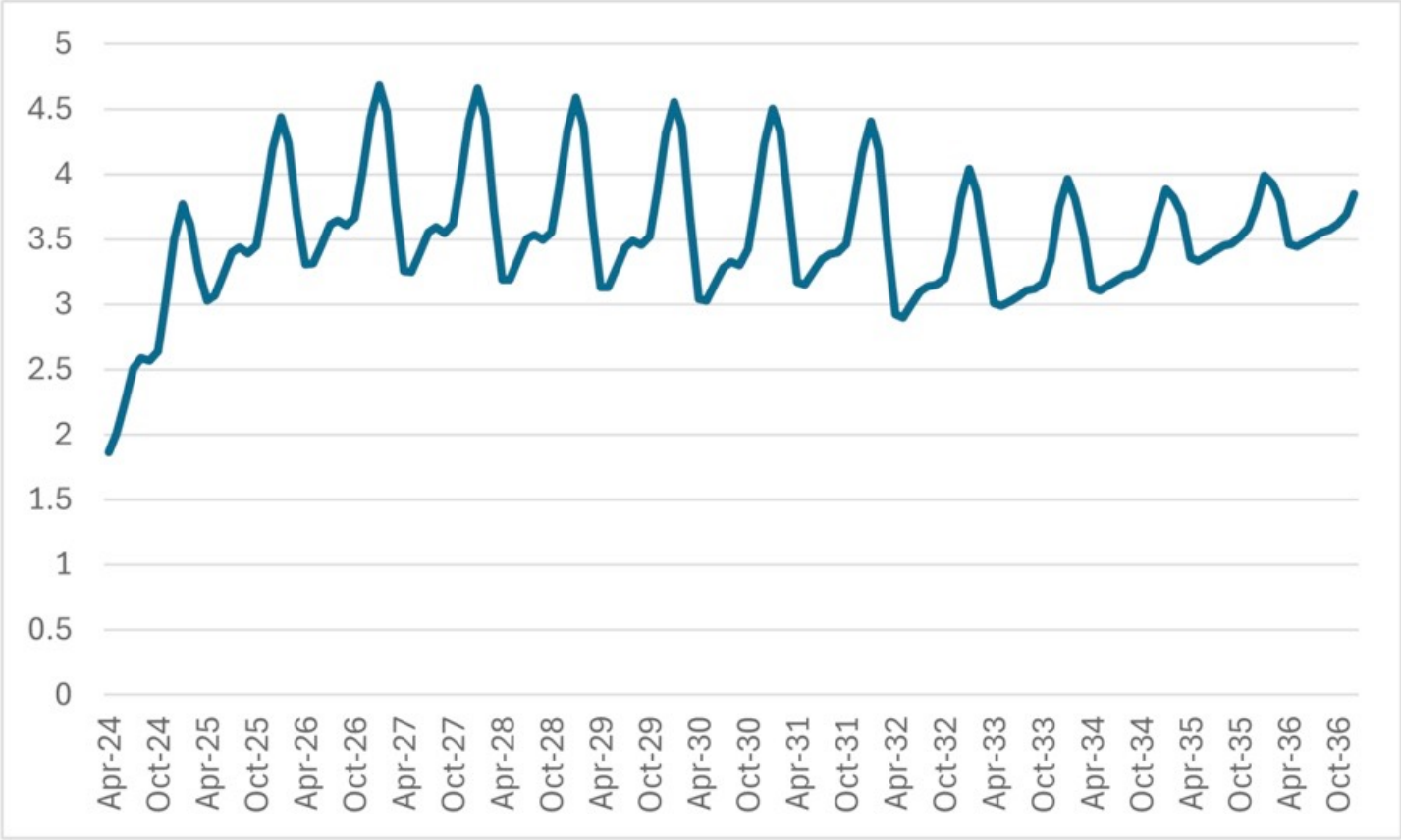
ELECTRIC POWER



Source: EIA

FUTURE FORECAST

FORWARD PRICES



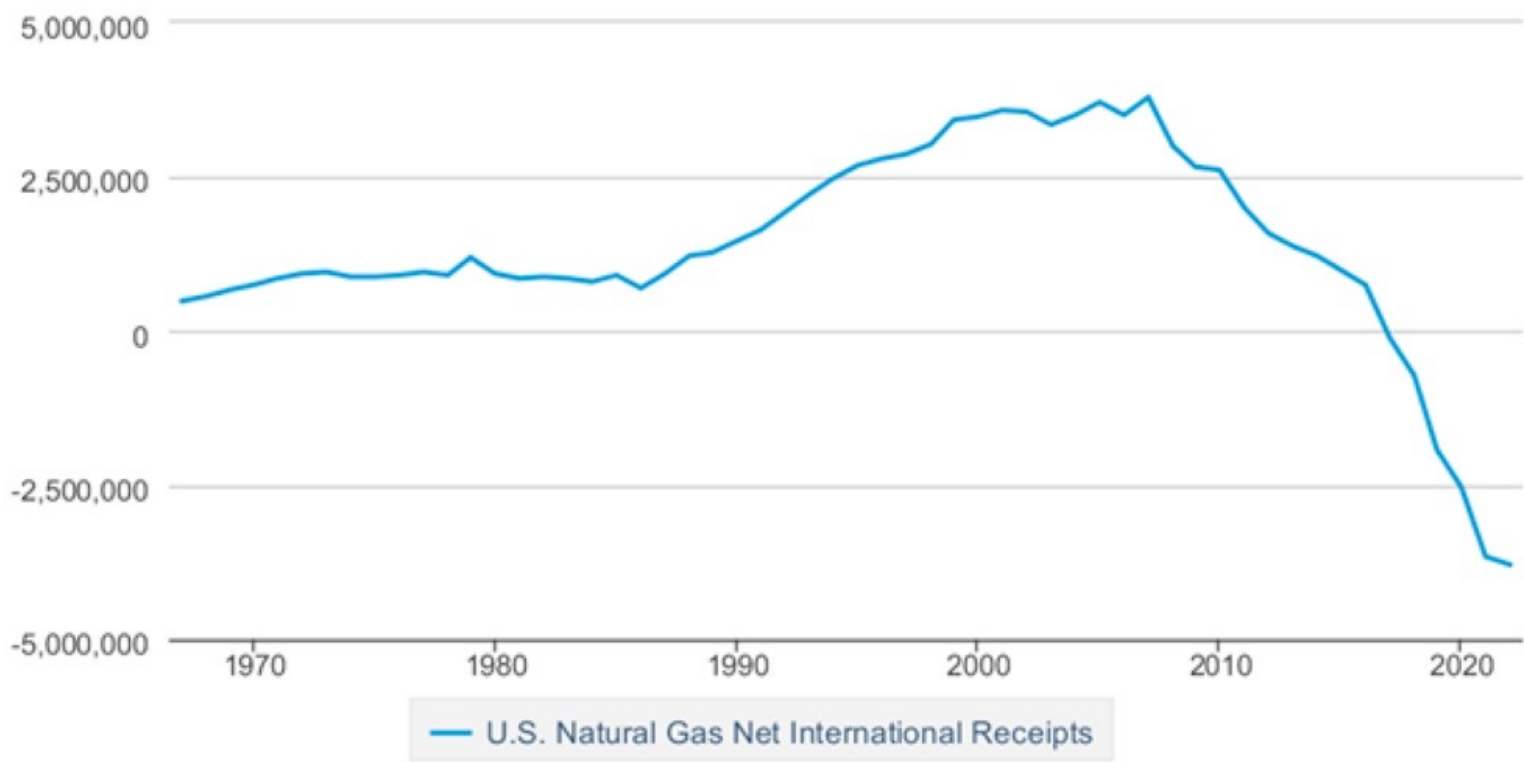
Source: CME

NET IMPORTS TIP NEGATIVE

NET EXPORTER OF NATURAL GAS

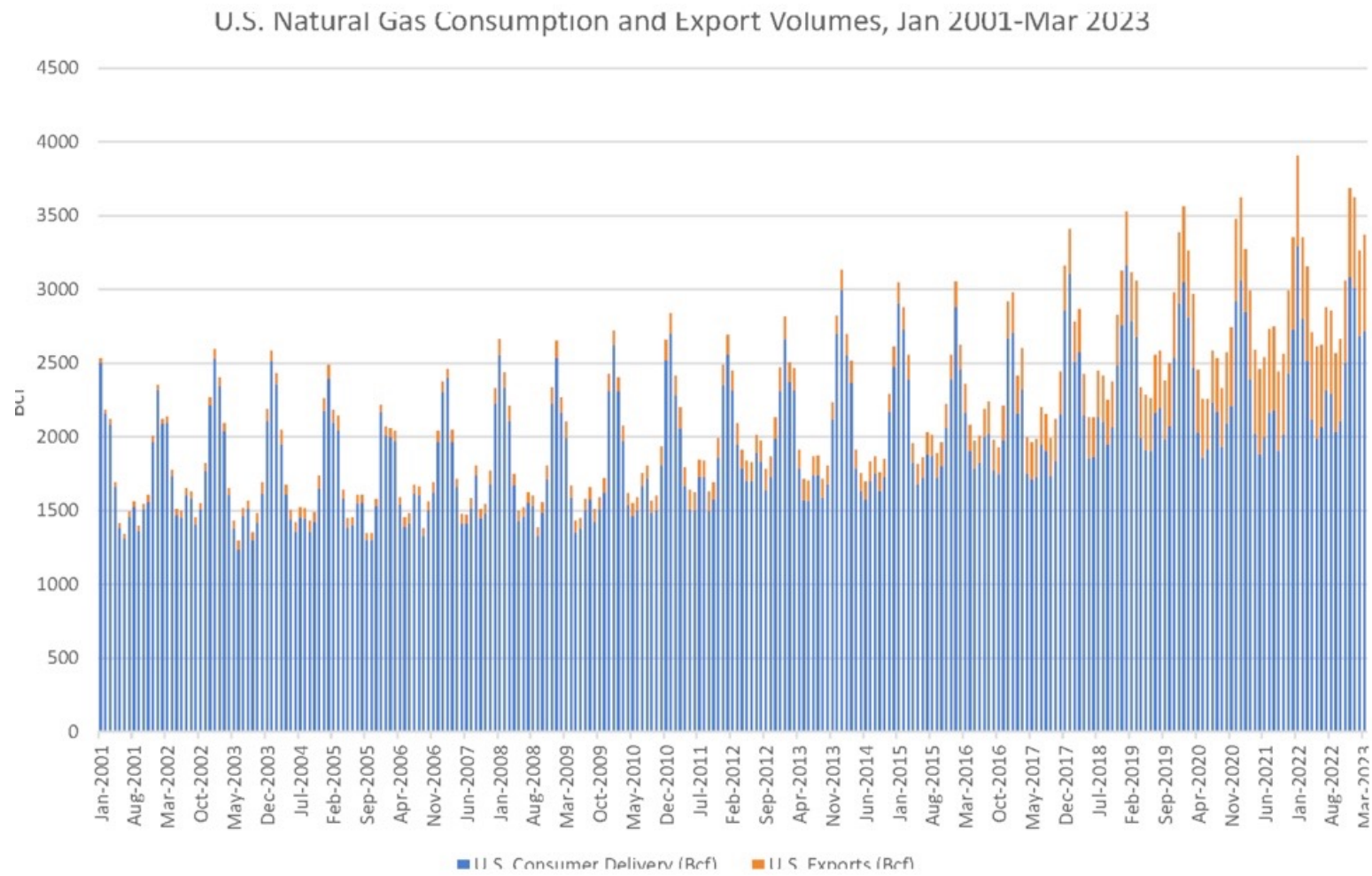
U.S. Natural Gas Net International Receipts

Million Cubic Feet

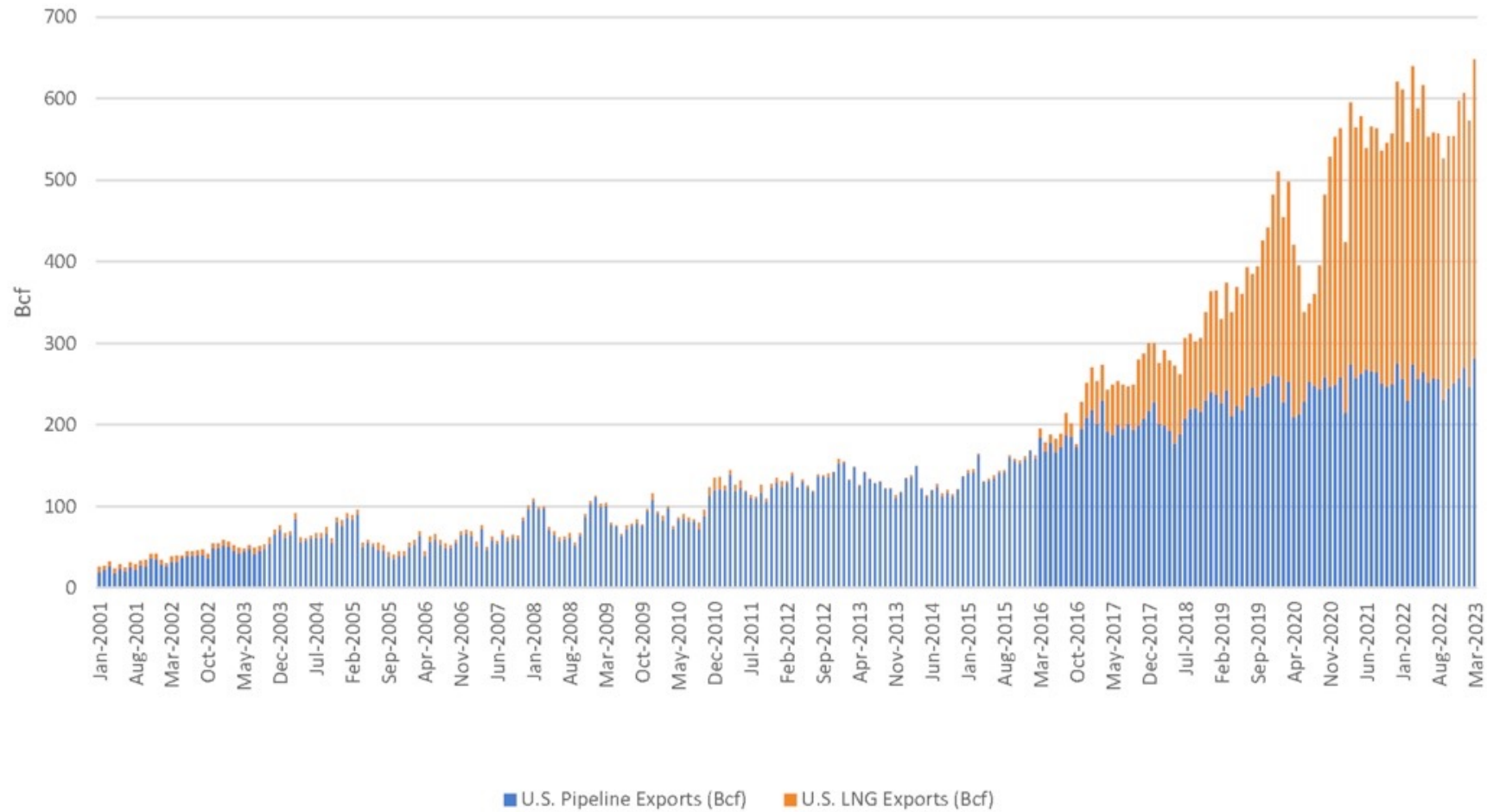


EXPORTS V. CONSUMPTION

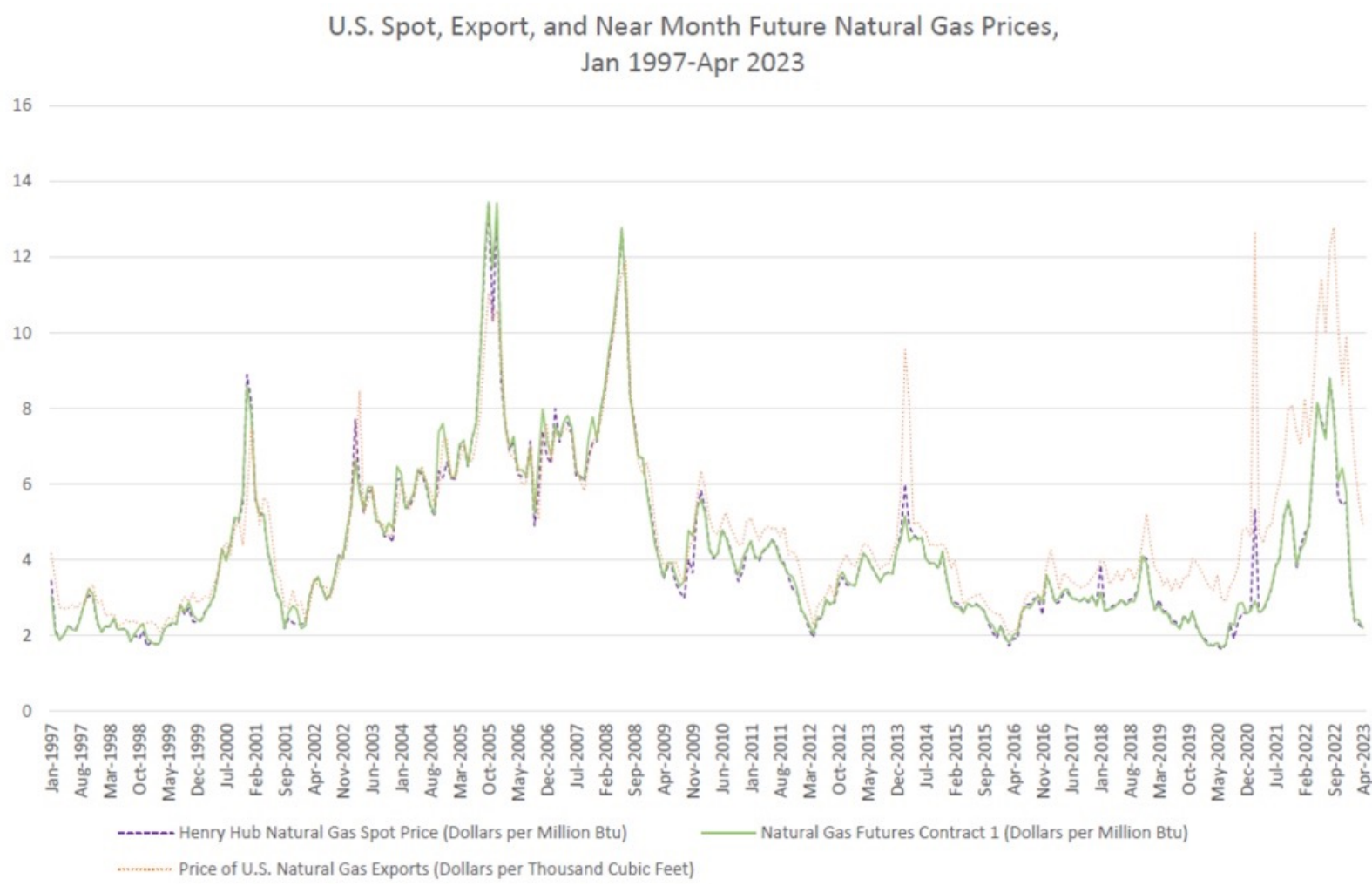
SPITING OURSELVES TO HELP NEIGHBORS?



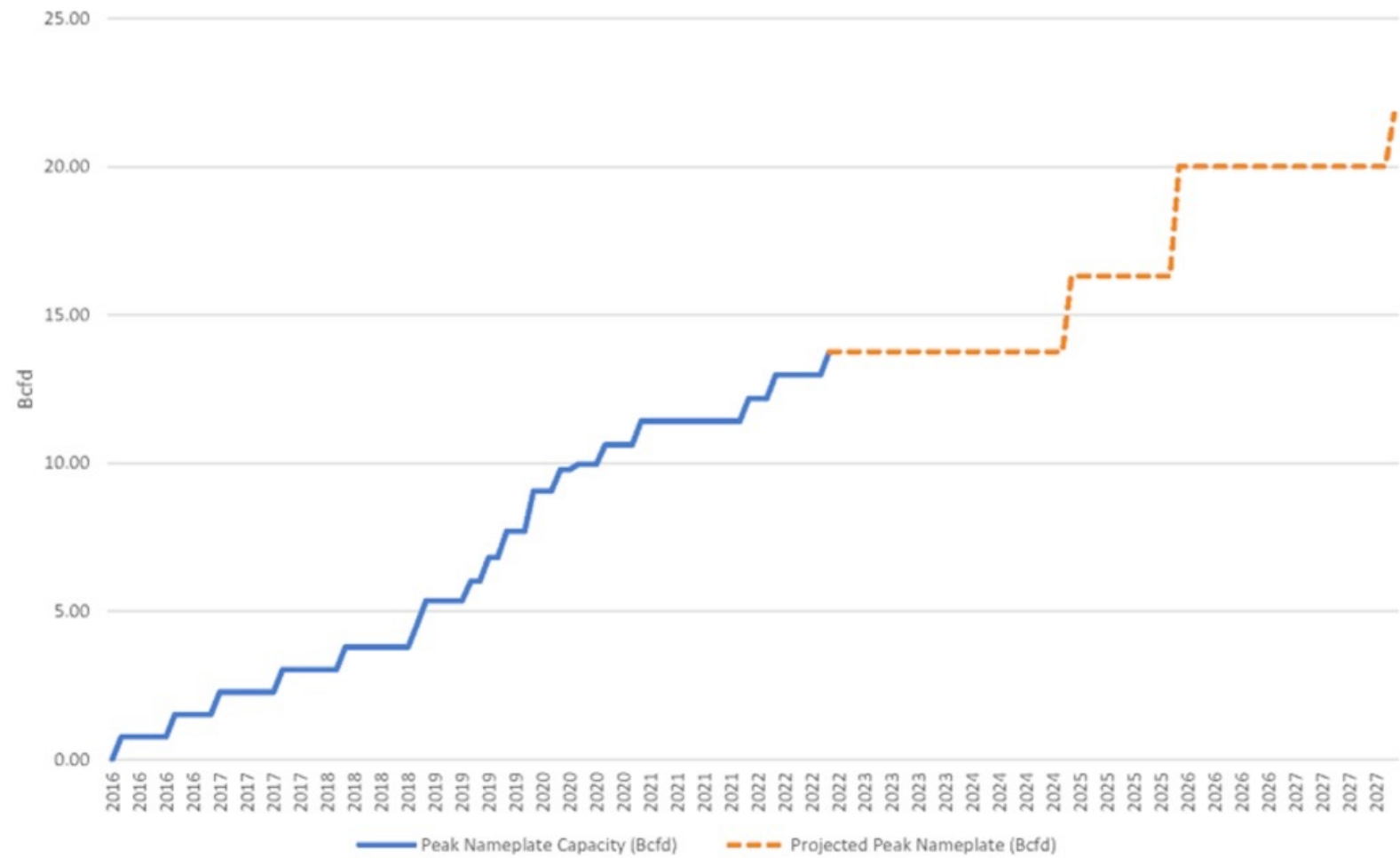
PIPELINE V. LNG EXPORTS



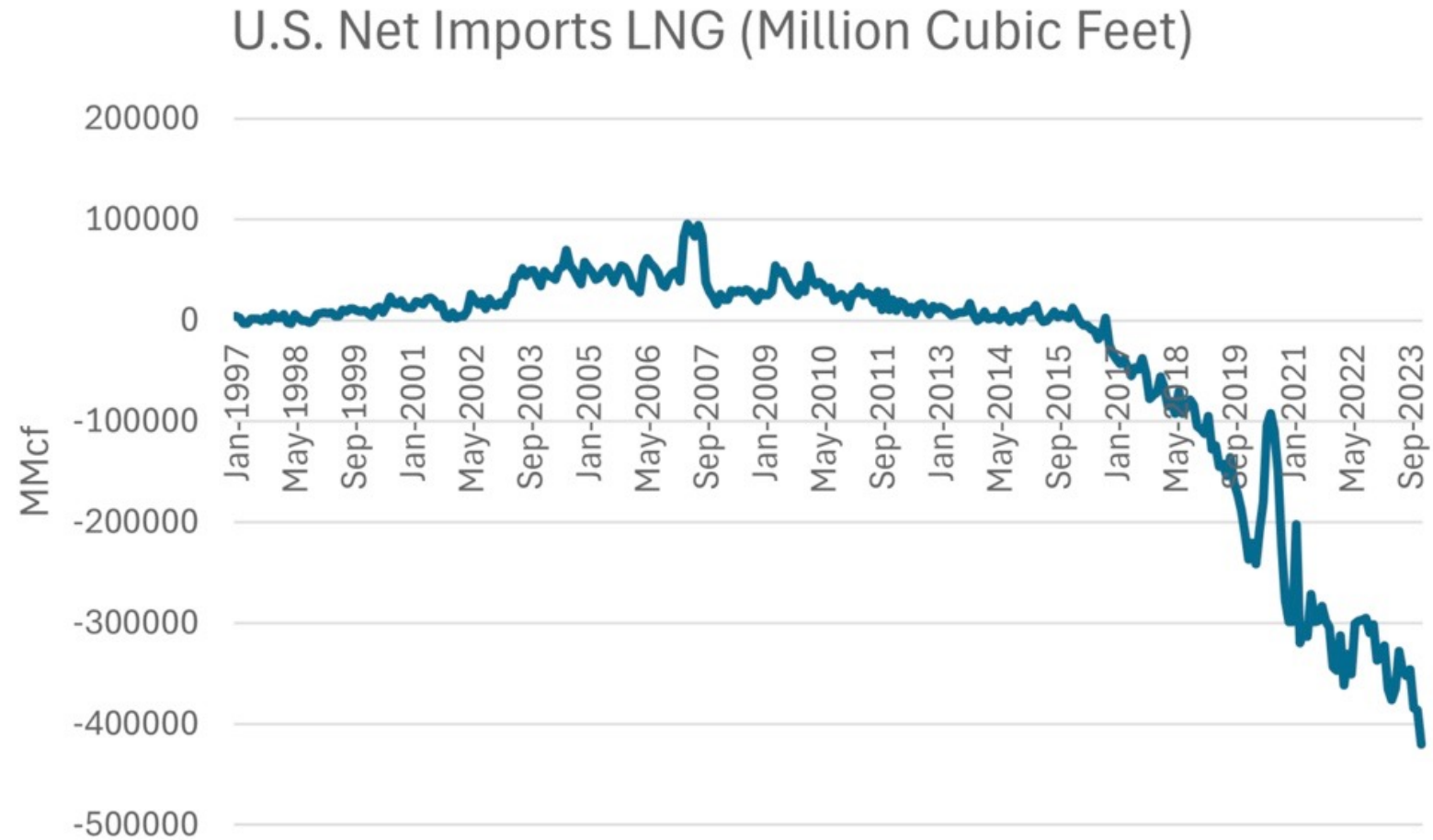
PRICE IMPACTS



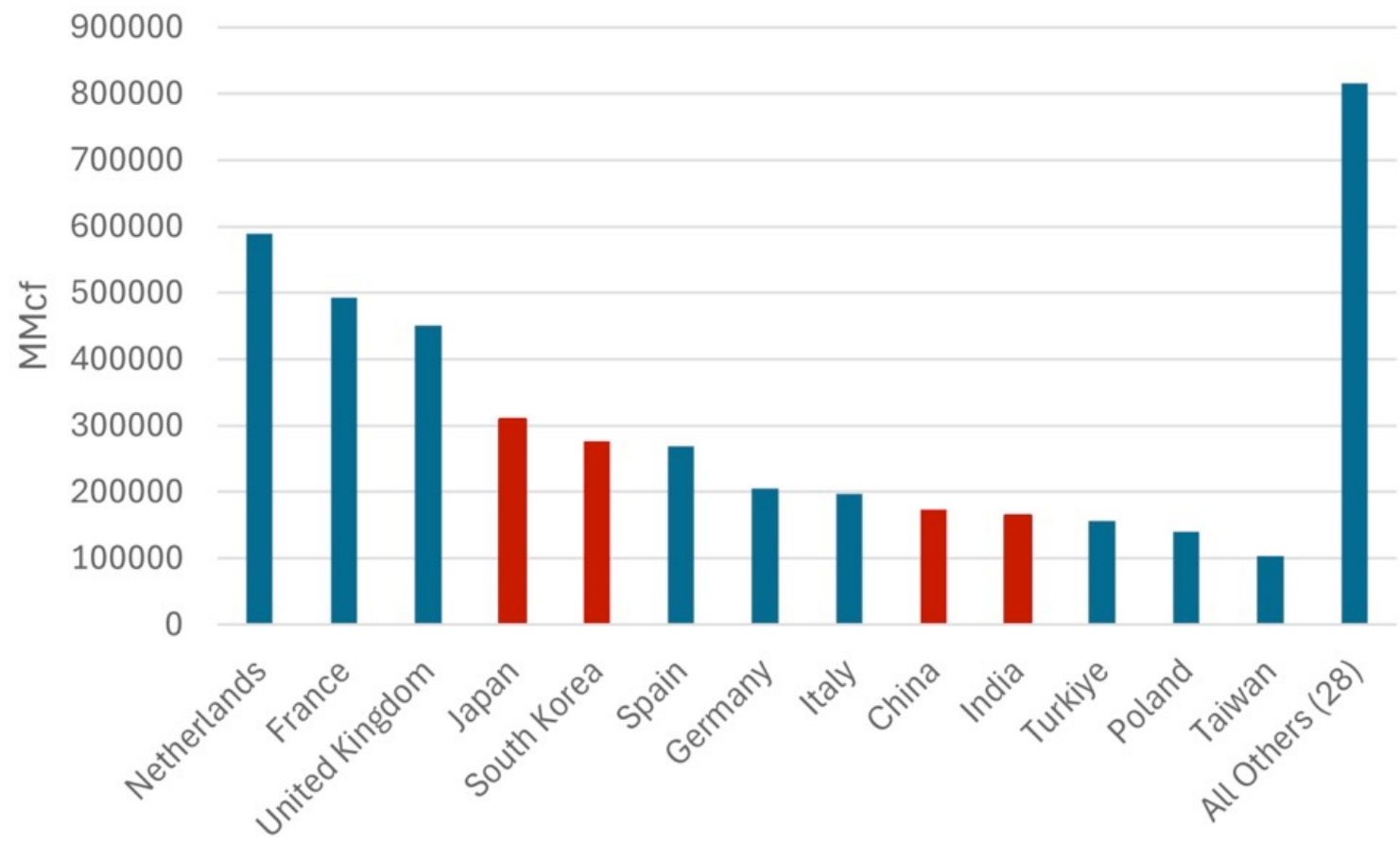
U.S. LNG EXPORT CAPACITY



U.S. LNG NET IMPORTS



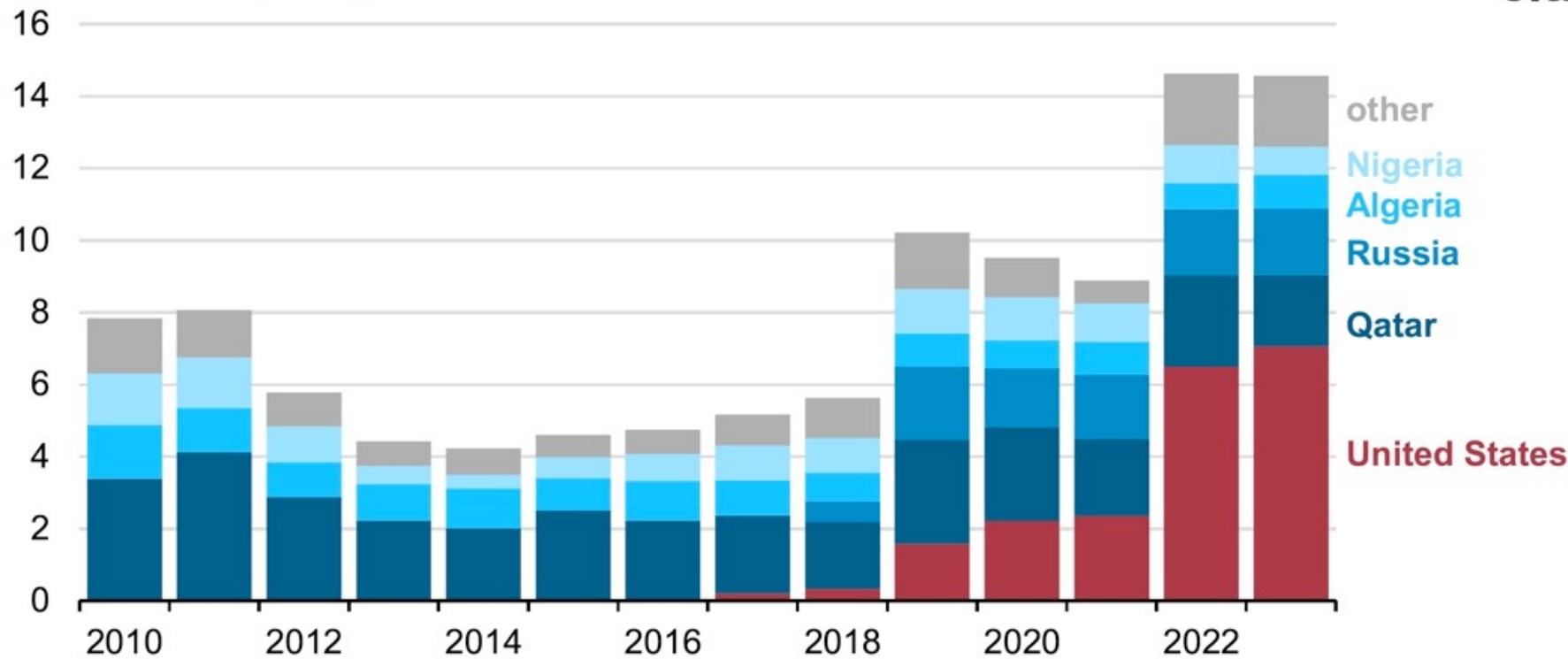
EXPORT PARTNERS



PARTNERS

Europe (EU-27 and UK) annual LNG imports by exporting country (2010–2023)

billion cubic feet per day



PROVEN POLICY MODEL

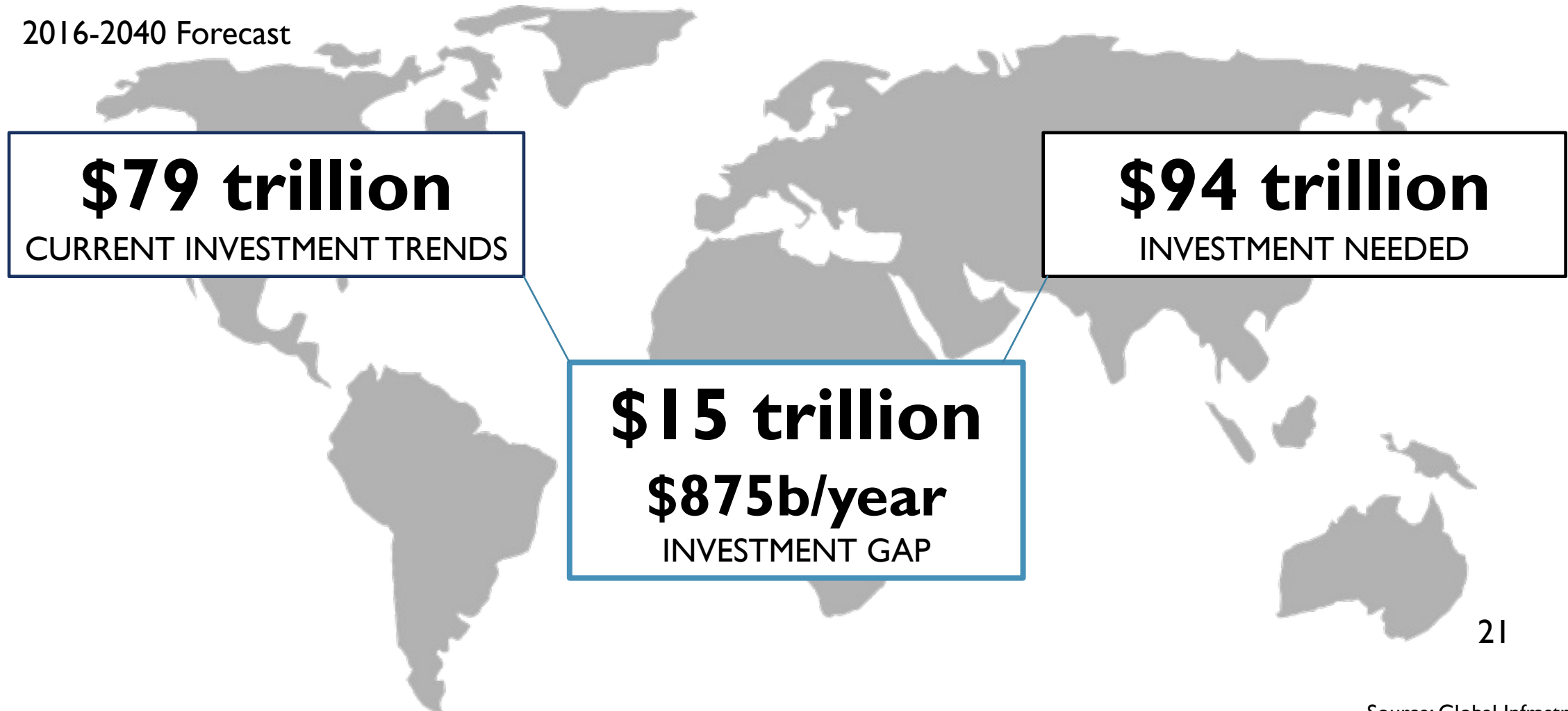
LEVERAGING PRIVATE CAPITAL TO ACHIEVE GROWTH AND STABILITY

- Policy Context
- Bridging the Funding Gap
- Framework Approach
- Regional Application and Successes

POLICY CONTEXT: GROWTH

BRIDGE GLOBAL INFRASTRUCTURE GAP

2016-2040 Forecast



POLICY CONTEXT: STABILITY

PROMOTE GOOD PRACTICES TO KEEP THE BAD GUYS OUT

- Promote procurement practices that include life-cycle cost analysis and determine best value in objective, transparent manner
- Help partners build modern, sustainable infrastructure at an overall savings to their government and was sized and sited to specific need
- Technical assistance scope:
 - Rational project scoping, including considerations of sizing and siting
 - Reasonable infrastructure commodity (e.g., retail electric power)
 - Appropriate Bidder Qualifications and Process
 - Technical Spec
 - Market-based Commercial Terms and Contracts

INFRA FINANCE FRAMEWORK APPROACH

1

Identify and unleash value in partners energy and infrastructure markets by identifying impactful and scaled investment opportunities that rely on private capital solutions

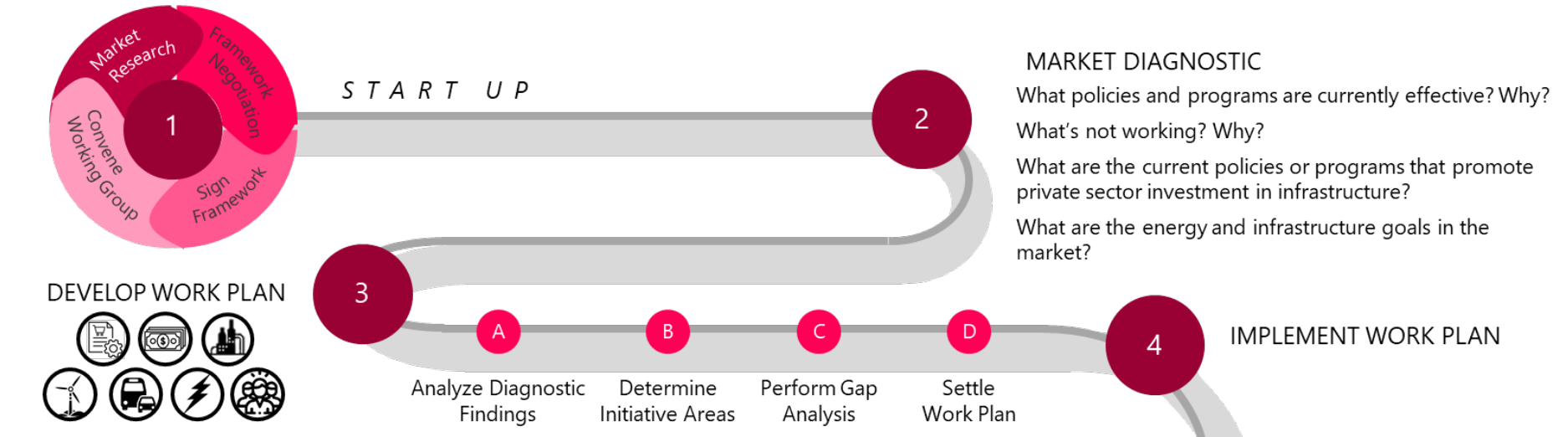
2

Engage bilateral partners through infrastructure finance frameworks on a transaction-oriented approach


3

Deploy resources and tools of all relevant U.S. government agencies and the private sector

Bilateral Energy and Infrastructure Finance Approach




Whole of Government Toolkit					
Enabling Environment	Market Feasibility & Framing	Project Preparation	Project Structuring & Design	Project Procurement & Construction	Project Finance
Technical Assistance Legal Drafting Economic Diplomacy	Market Intelligence Trade Counseling Trade Missions Technical Assistance	Feasibility Studies Technical Assistance Trade Missions Study Tours Solution Identification	Government Debt and Infrastructure Finance Program Technical Assistance Commercial Diplomacy Advocacy	Infrastructure Finance Program Business Matchmaking Technical Assistance Economic Diplomacy	Equity Financing Debt Financing Political Risk Insurance Loan Guarantees Government Debt and Infrastructure Finance Program




IMPACT

Catalyze private sector investment in priority energy and infrastructure projects



IMPACT

Optimize state-owned utility balance sheets



IMPACT

Improve tendering rules and processes to maximize financial efficiencies, ensure level playing field, and protect against predatory practices

BRIDGING THE FUNDING GAP: PRACTICE

KEY GOALS

Frameworks focus on key goals of:

1. Supporting infrastructure investment opportunities in priority sectors agreed with partners and tailoring them to attract private capital by meeting limited recourse project finance bankability standards
2. Providing technical assistance to enhance enabling and foreign direct investment environments to reduce policy, legal, regulatory and market barriers
3. Advising government partners on SOE utility (a) balance sheet and debt capacity optimization, (b) value monetization and (c) off-taker creditworthiness enhancement
4. Improving and implementing bidding and procurement processes
5. Building financial markets, including depth and liquidity in infrastructure debt markets and domestic trading markets

REGIONAL INITIATIVES

LATIN AMERICA

The U.S. Government signed 13 partnership frameworks in support of *America Crece*

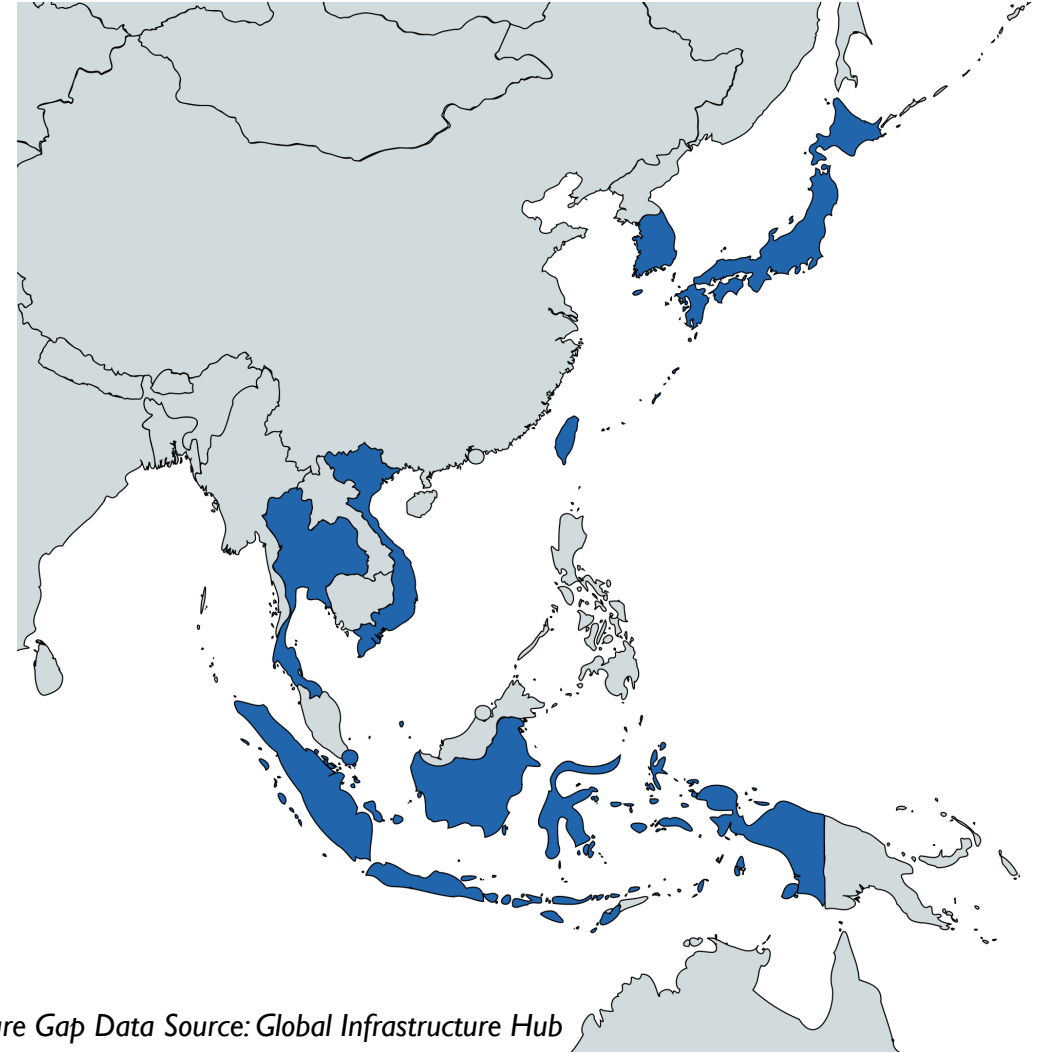
■ Argentina	\$74.27 B	■ El Salvador	\$4.38 B
■ Bolivia	\$6.23 B	■ Guyana	\$1.29 B
■ Brazil	\$14.59 B	■ Haiti	\$1.27 B
■ Chile	\$10.92 B	■ Honduras	\$4.03 B
■ Colombia	\$20.69 B	■ Jamaica	\$2.54 B
■ Dominican Republic	\$14.44 B	■ Panama	\$11.37 B
■ Ecuador	\$11.44 B		

REGIONAL INITIATIVES

INDO- PACIFIC

Seven infrastructure finance frameworks across Asia in support of Asia EDGE and ITAN

■ Japan	■ Vietnam	\$21.7 B
■ Korea	■ Indonesia	\$14.59 B
■ Singapore	■ Thailand	\$20.77 B
■ Taiwan		





Growth
in the Americas



PANAMA: Snapshot of U.S. Government Investment and Impact



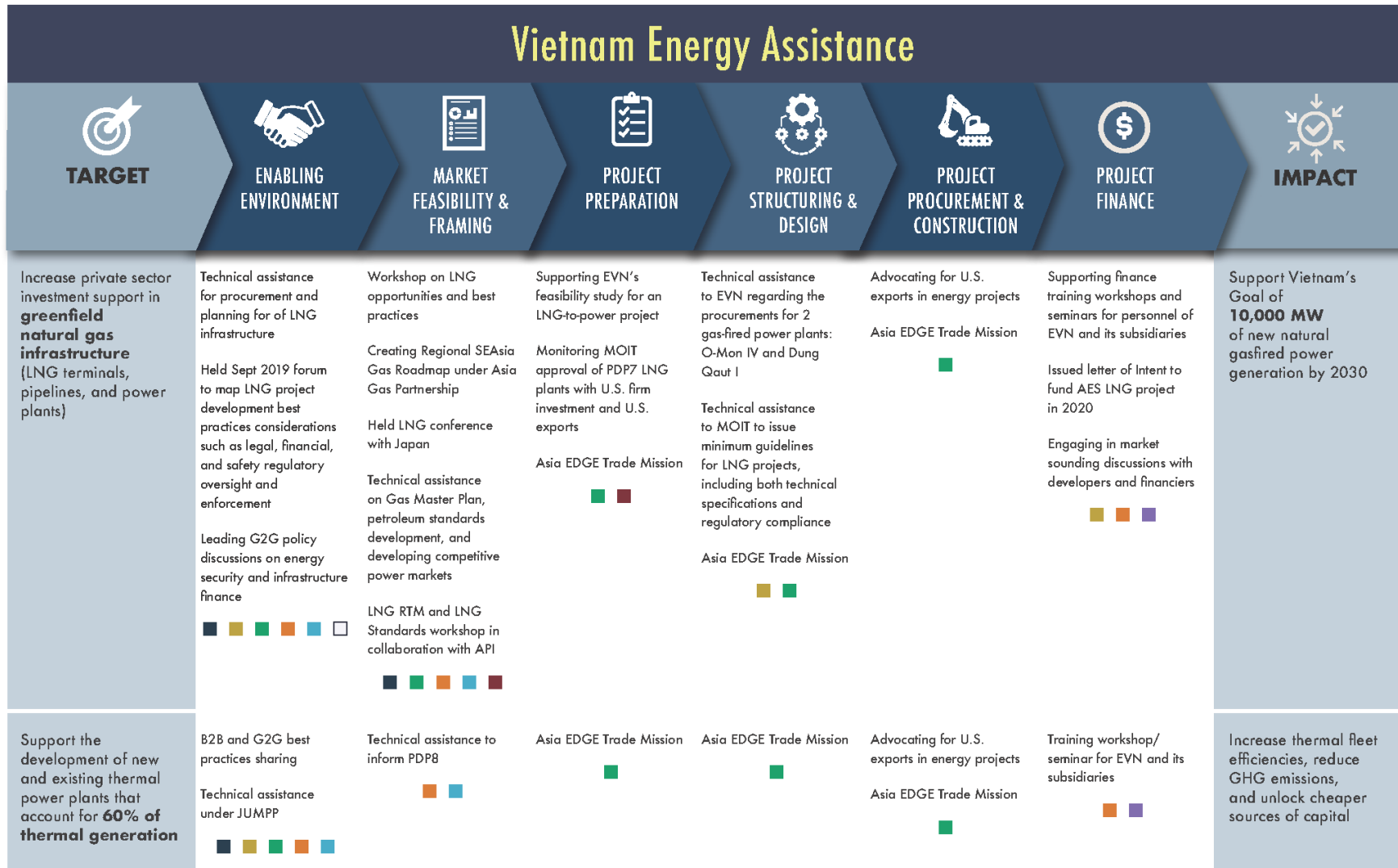
Impact: 6 Agencies Catalyzing \$2,455,000,000



Participating Agencies: ■ STATE ■ TREASURY ■ COMMERCE ■ ENERGY ■ USAID ■ USDA ■ DFC ■ EXIM ■ DOT



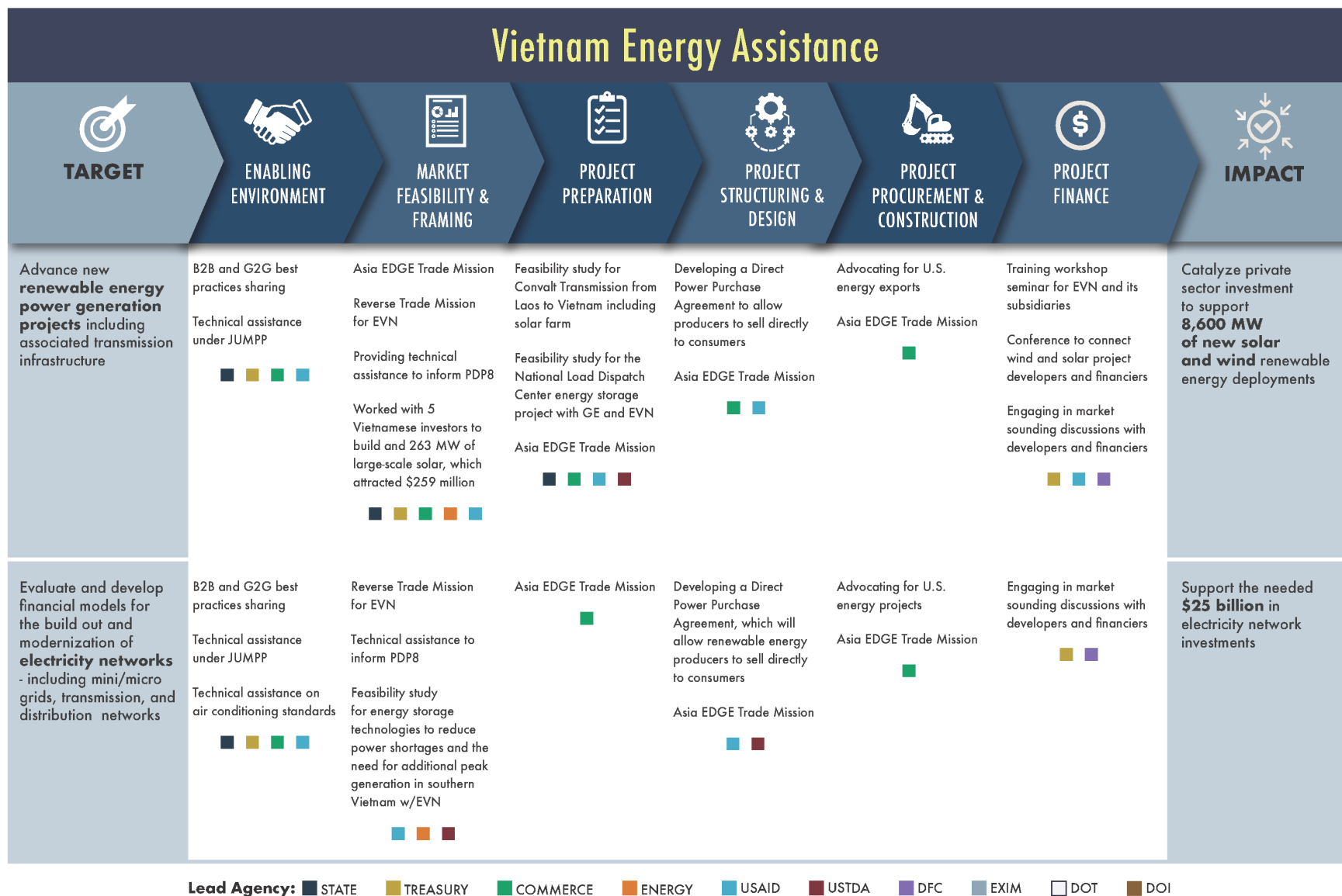
VIETNAM: Snapshot of U.S. Government Investment and Impact



Lead Agency: ■ STATE ■ TREASURY ■ COMMERCE ■ ENERGY ■ USAID ■ USTDA ■ DFC ■ EXIM □ DOT ■ DOI



VIETNAM: Snapshot of U.S. Government Investment and Impact

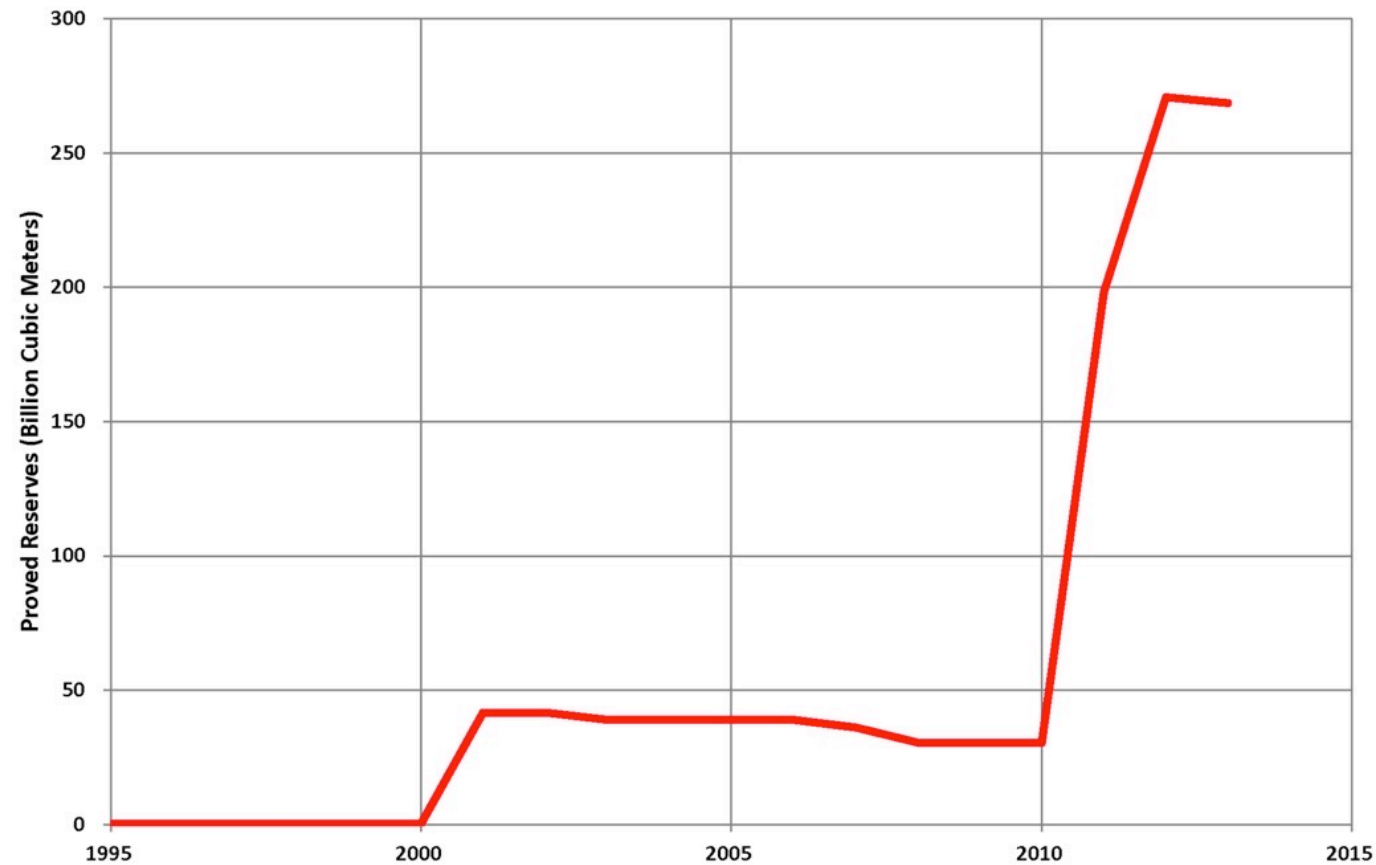


RECENT HISTORY OF ISRAEL NATURAL GAS

- East Mediterranean Revolution
 - Reserves
 - Production
 - Consumption

RESERVES

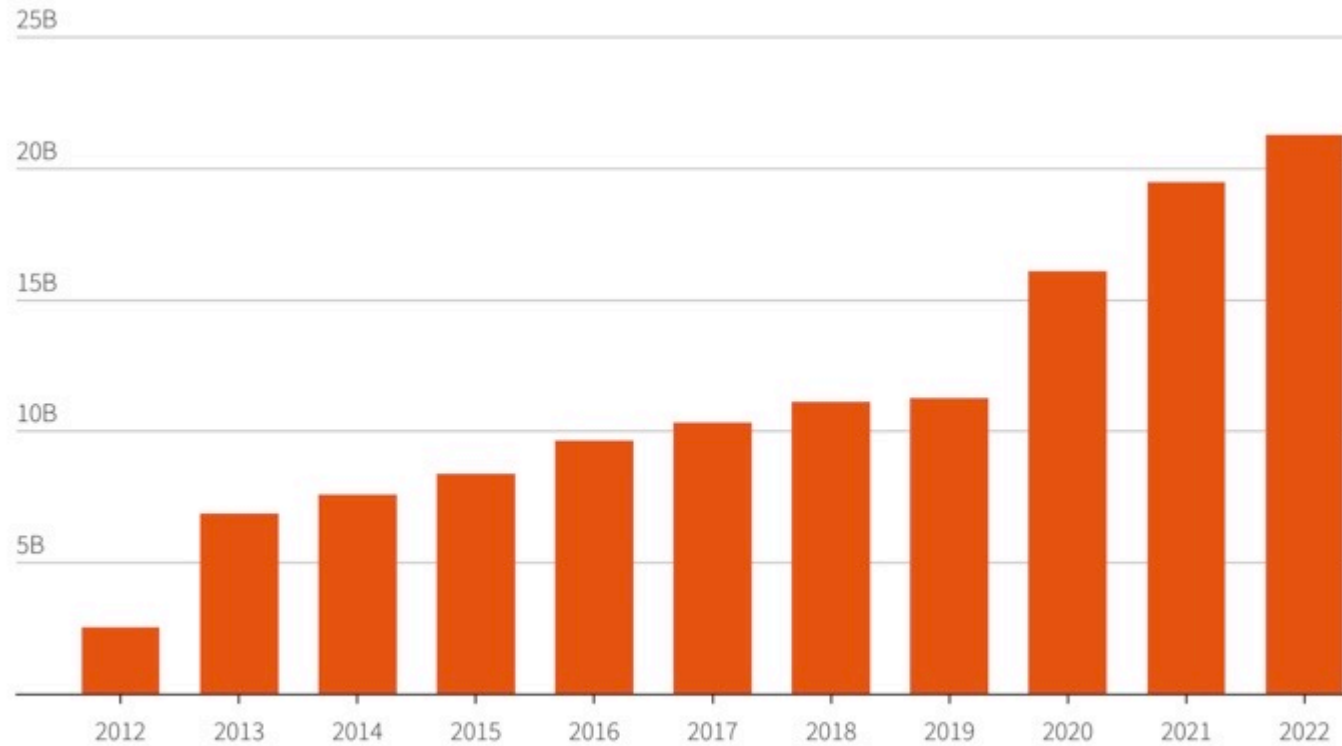
OFFSHORE DISCOVERIES CHANGED OUTLOOK



PRODUCTION

ISRAEL GAS PRODUCTION: GENERAL

Israel's gas production rose 700% in the past decade



Note: In billion cubic metres (bcm)

Source: Israeli Ministry of Energy, Bank Leumi | Breakingviews | Y. Chen | Oct. 16, 2023

Reuters Graphics

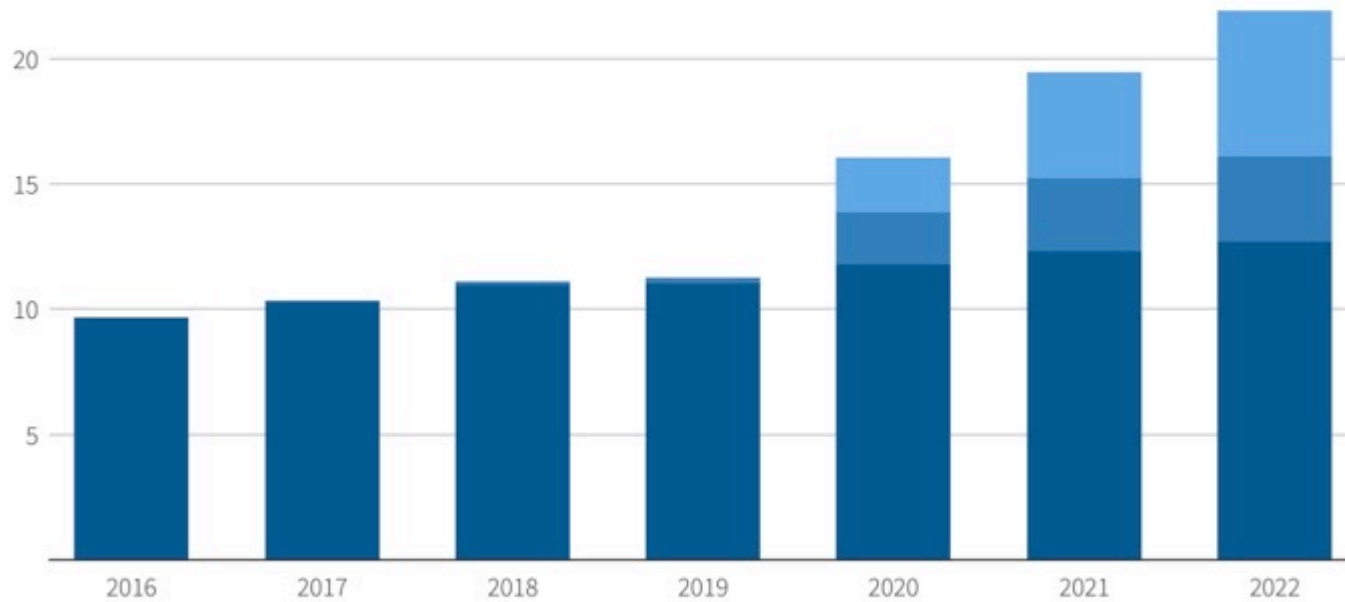
PRODUCTION

ISRAEL GAS PRODUCTION: EXPORTS

Israel's natural gas production

Israel became a major exporter of natural gas to neighbouring Egypt and Jordan since 2020

● Israel ● Jordan ● Egypt



Note: Destinations of Israel's gas production, in billion of cubic metres (BCM)

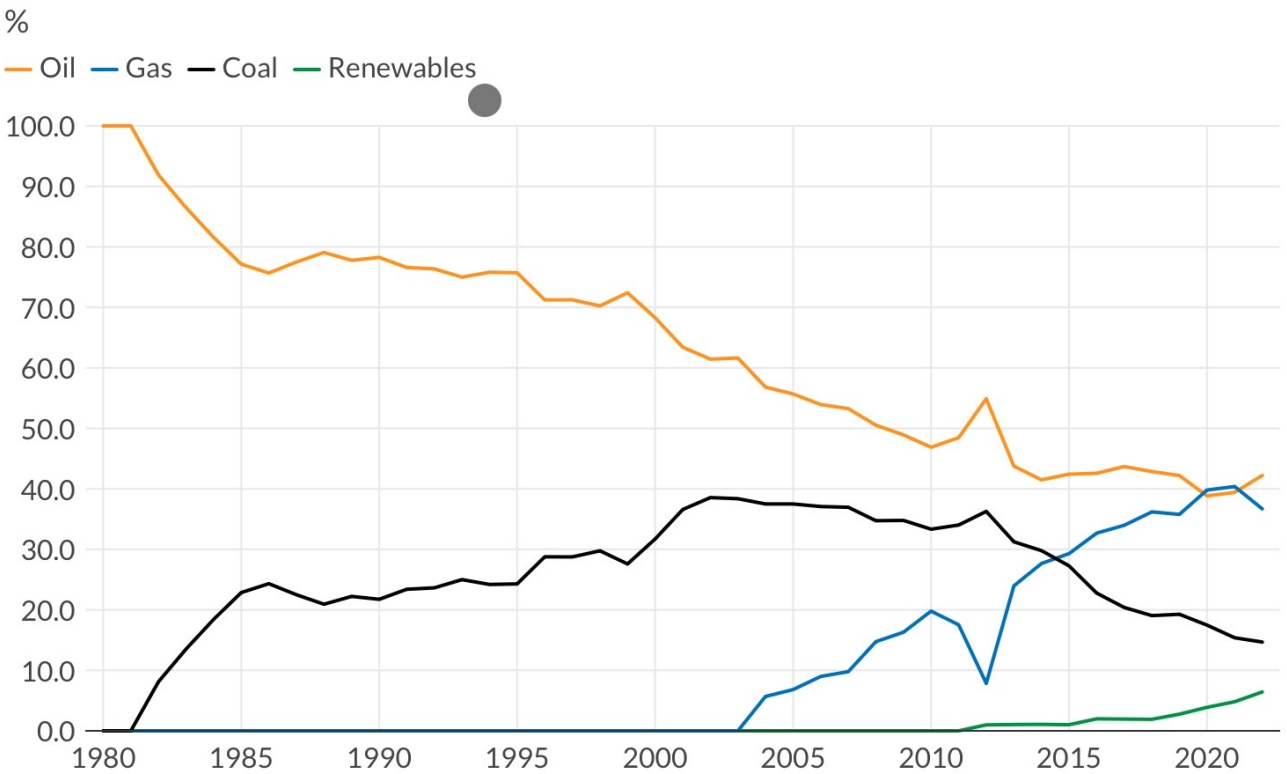
Source: Israeli energy ministry

Reuters Graphics

ENERGY MIX

GAS PROVIDES CLEANER ALTERNATIVE

Evolution of Israel's primary energy mix



Israel has reduced its dependence on oil and coal mainly in favor of natural gas but also renewable energy.

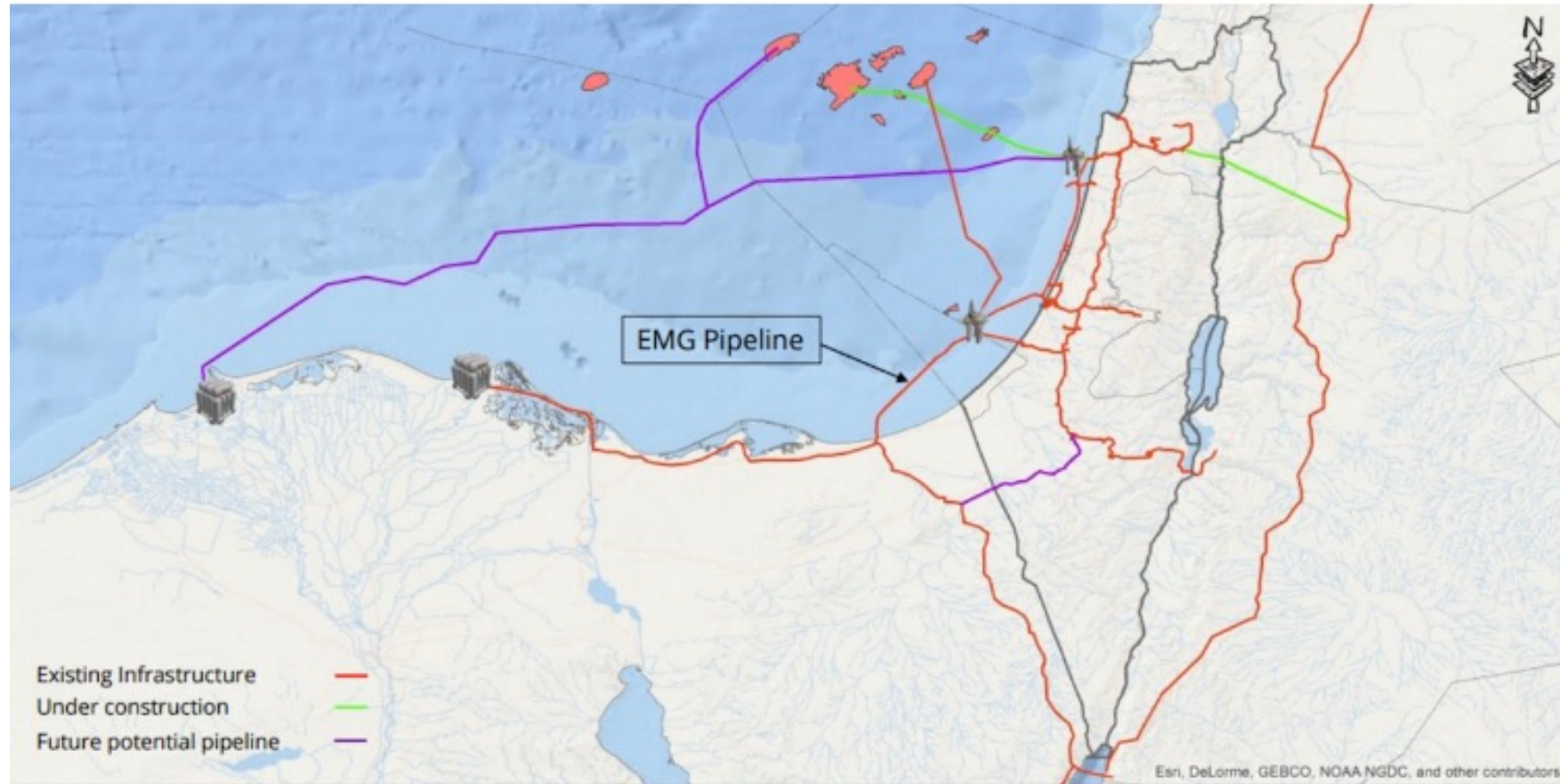
Source: Energy Institute, International Energy Agency

REPLICATING U.S. GAS REVOLUTION IN THE MIDDLE EAST

- What would it take to enable East Mediterranean gas growth?
 - No man is an island: increase downstream demand to finance midstream investment to leverage upstream investment
- Implications for Regional Growth and Stability
 - Economic, energy security, political and environmental benefits

INFRASTRUCTURE

WHERE ARE WE NOW?



INFRASTRUCTURE

POTENTIAL NEAR-TERM GROWTH

- Bolster political stability by creating energy security and economic interdependencies and shared interests in the near term by
 - Further integrating and expanding natural gas networks among Israel, Egypt and Jordan
 - Identifying and framing concrete opportunities for downstream power generation capacity in Egypt and Jordan – both gas-fired and “value add” renewables
 - Proposing projects in Saudi Arabia that would be accretive, including development of shale gas resources, downstream power generation (gas and renewables) and associated midstream gas infrastructure in Western Saudi
 - Supporting post-war reconstruction by considering energy supply needs of Palestinian Territories

INFRASTRUCTURE

POTENTIAL FOR MID- TO LONG-TERM GROWTH

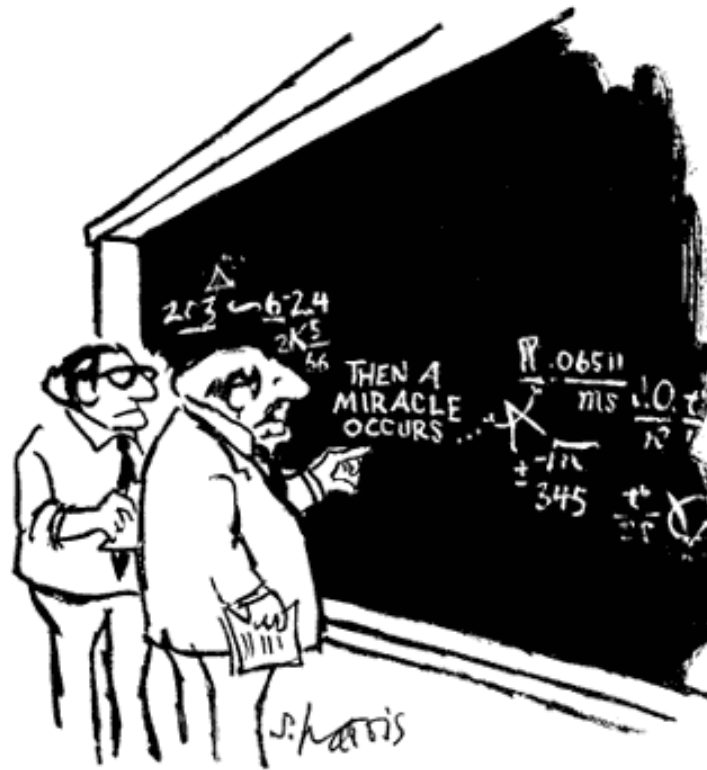
- Bolster political stability by creating energy security and economic interdependencies and shared interests in the mid- to long term by
 - Midstream gas infrastructure in Saudi Arabia, including a pipeline on the West Coast from Jordan and LNG terminals
 - Expand Egyptian LNG export capacity for sales West
 - Beyond Jordan to the North

INFRASTRUCTURE

WINS, DRIVERS AND BENEFITS

- Investment value of near to mid-term midstream and downstream projects projected between \$51-67.5 billion
- Interesting political dimension/drivers – binding glue
 - Mubadala \$1 billion investor in Tamar field
 - ADNOC (with BP) offer to invest \$2 billion in NewMed Energy (paused)
 - Aramco?
- Solutions will boost economic growth, enhance security and political stability, and protect the environment
 - A single molecule can change the world

QUESTIONS?



"I think you should be more explicit here in step two."