

The background of the slide is a photograph of several large, parallel industrial pipes, likely for natural gas, stretching into the distance. The scene is set at sunset or sunrise, with a warm, golden light illuminating the pipes and the sky. The pipes are supported by a metal structure, and the overall atmosphere is industrial and serene.

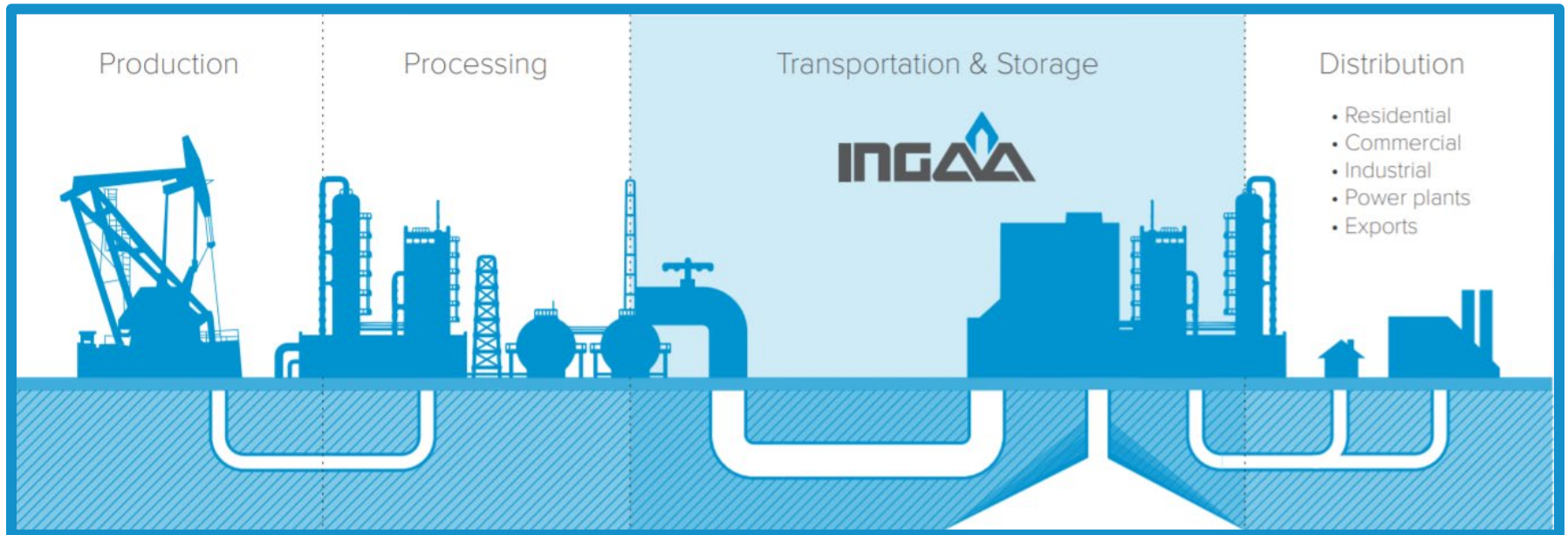
Obstacles to Addressing the United States' Pipeline Capacity Constraints

Joan Dreskin

Senior Vice President & General Counsel
Interstate Natural Gas Association of America

Who is INGAA?

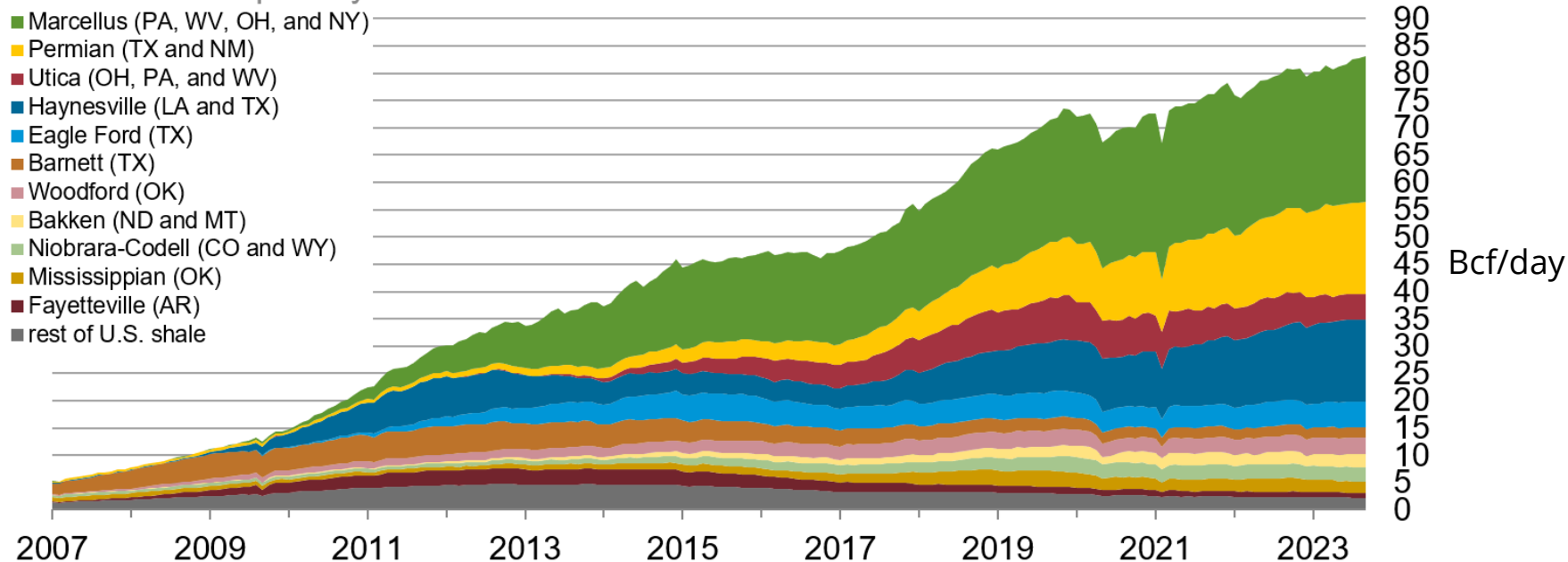
INGAA is the federally focused trade association for the interstate natural gas transmission pipeline industry. INGAA is made up of 26 members representing the vast majority of the interstate natural gas transmission system in the U.S. and Canada, operating almost 200,000 miles of pipeline.



Abundant Natural Gas Supply

Monthly dry shale gas production

billion cubic feet per day



Data source: Enverus

Note: EIA derived these tight oil estimates from Enverus state administrative data. Data are through September 2023. These data are not survey data. State abbreviations indicate the primary states where the plays are located. As of the October 2023 publication, EIA has improved its play and well identification methods, which has altered production volumes at various plays and has shifted classification of some wells from *tight* to other *non-tight* categories. Because EIA has changed the geologic model it uses to determine formation-level production of the three main oil-producing formations in the Permian Basin—Wolfcamp, Spraberry, and Bonespring—current and historical volume estimates have changed.

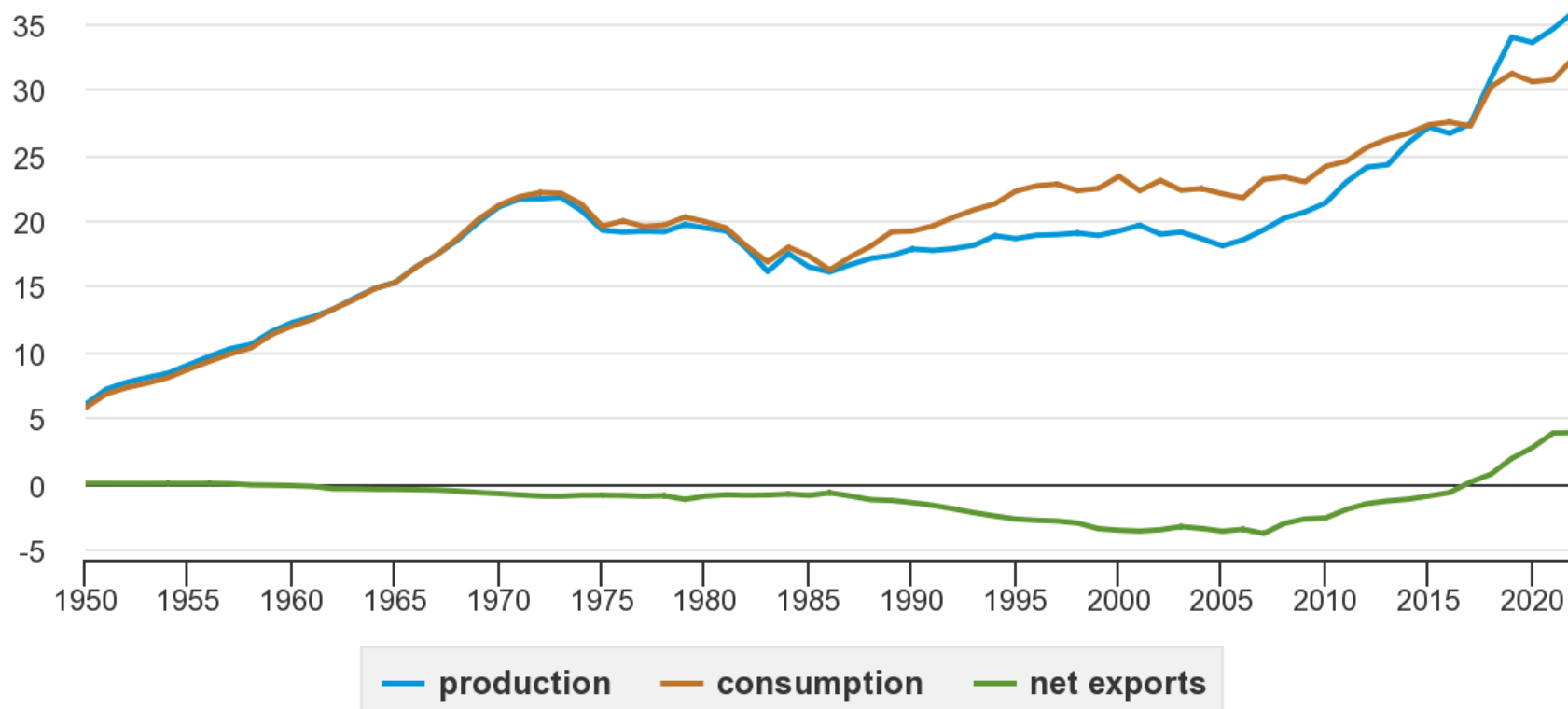


PA=Pennsylvania, WV=West Virginia, OH=Ohio, NY=New York, TX=Texas, NM=New Mexico, LA=Louisiana, OK=Oklahoma, ND=North Dakota, MT=Montana, CO=Colorado, WY=Wyoming, AR=Arkansas

Abundant Natural Gas Supply

U.S. natural gas consumption, dry production, and net exports, 1950-2022

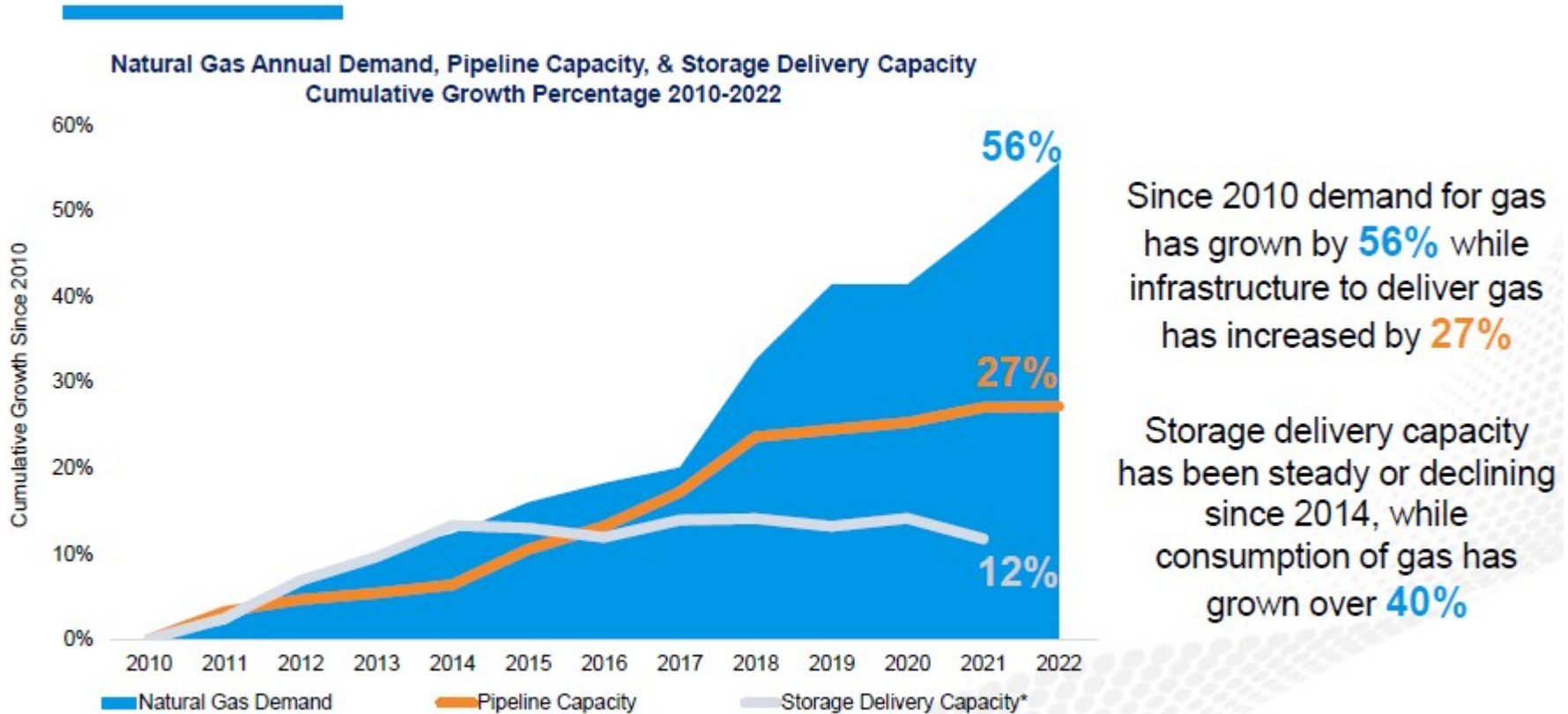
trillion cubic feet



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

Pipeline, Storage Capacity Not Keeping Up With Demand

The growing need for reliable infrastructure investment



Sources: S&P Global Commodity Insights and U.S. Energy Information Administration (EIA) *EIA 2022 storage delivery capacity not yet released

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Costly Legal and Regulatory Challenges Jeopardizing U.S. Critical Infrastructure

Impacts of Cancelled Interstate Natural Gas Pipeline Projects (2013—2021)



5B

CUBIC FEET

Additional natural gas capacity lost per day



25.5M

HOMES

Cancelled capacity could have helped serve 25.5M homes each day



\$11.23

BILLION

Lost investment due to permitting delays and challenges



40,000+

Total projected jobs lost, including union jobs

Reasons for Project Cancellations

- Costly legal challenges
- Inability to obtain state certifications/permits
- Lengthy schedule delays

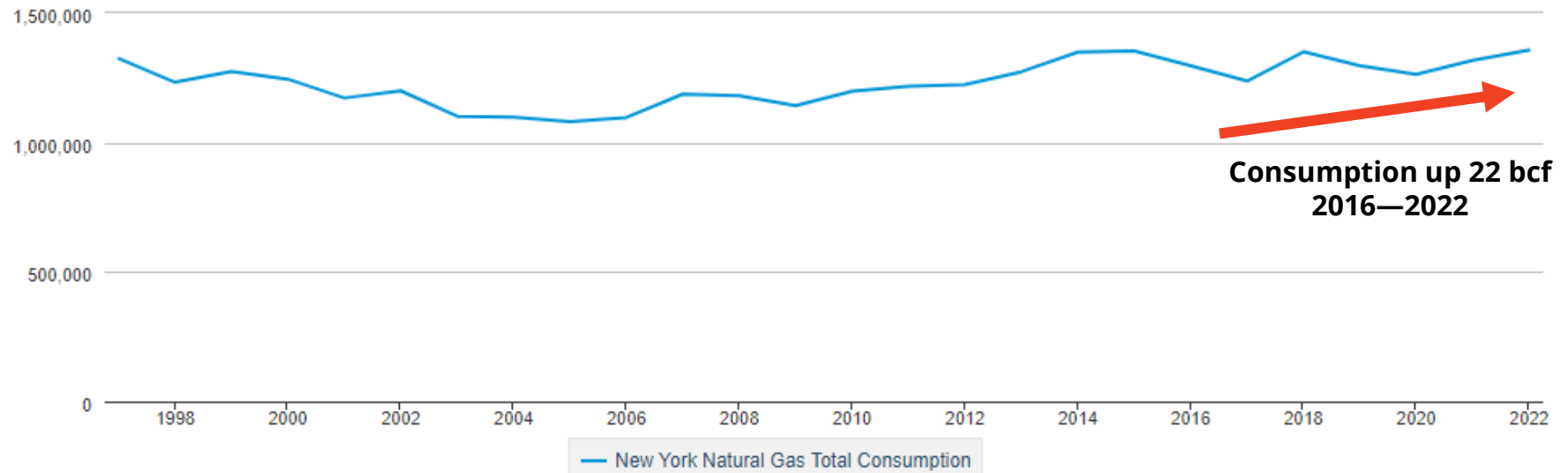
***Projects cancelled or deemed unviable after receiving their FERC Certificate due to permitting challenges include:** Atlantic Coast Pipeline, Constitution Pipeline, Northeast Energy Direct Pipeline, Northeastern Supply Enhancement, and PennEast Pipeline.

Bloomberg

Constitution Gas Pipeline Denied
Water Permit

New York Natural Gas Total Consumption

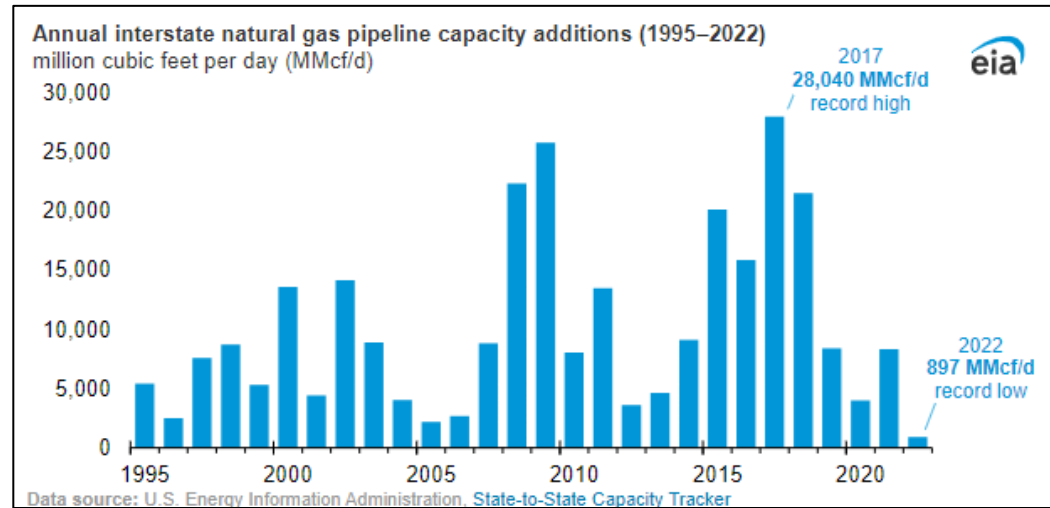
Million Cubic Feet



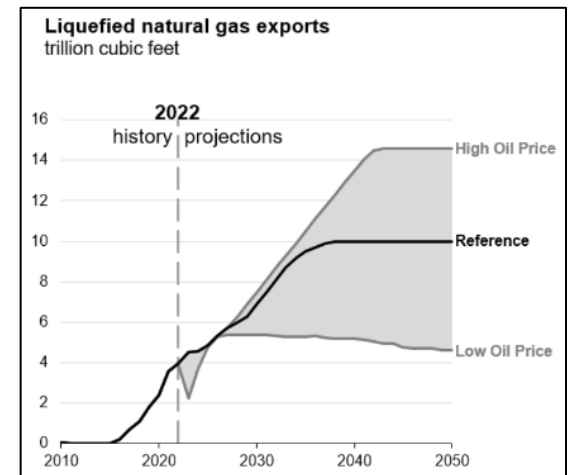
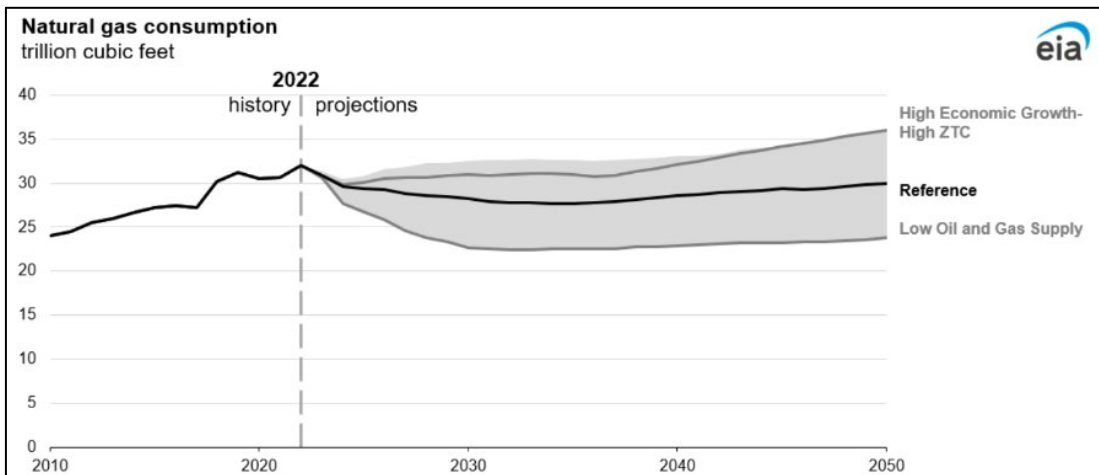
Data source: U.S. Energy Information Administration

Natural Gas Demand Remains High, Infrastructure Lags

2022 saw record low U.S. interstate natural gas pipeline additions...



Despite domestic demand and global exports remaining high through 2050.



Data source: U.S. Energy Information Administration, *Annual Energy Outlook 2023 (AEO2023)*

Note: Shaded regions represent maximum and minimum values for each projection year across the AEO2023 Reference case and side cases.

These Challenges Could Be Solved

The screenshot shows the ISO New England website. At the top left is the ISO New England logo. To the right is a search bar and a navigation menu with links for CALENDAR, LIBRARY, CAREERS, CONTACT US, SIGN UP, and SIGN IN. Below this is a dark navigation bar with links for About Us, Participate, Committees and Groups, System Planning, and Markets and Operations. The main content area has a breadcrumb trail: About Us > What We Do > In Depth. On the left is a sidebar menu with links for What We Do, We Are ISO New England, Our Three Critical Roles, Our History, and In Depth. The main article is titled 'Natural Gas Infrastructure Constraints'. It begins with the text: 'During the last few years, inadequate infrastructure to transport natural gas has at times affected the ability of natural-gas-fired plants to get the fuel they need to perform. This energy-security risk has become a pressing concern in New England, considering the region's reliance on natural gas for power generation.' To the right of the text is a circular illustration of a power plant with two tall smokestacks and a pipeline running through a green landscape. Below the illustration is the caption: 'The performance of the largest and most flexible sector of...'. Two callout boxes are overlaid on the bottom of the page. The left callout box is titled 'Access to Fuel Has Become Uncertain during Winter' and contains the text: 'During many recent winters, regional gas utilities have been using most, if not all, of the capacity on the pipelines that carry natural gas into New England. This is particularly true during very cold periods when heating demand is high. This leaves very little to no pipeline capacity for electric generators, which creates a number of concerns for the power system:'. It includes a bullet point: '■ Reliability risks: Because such a large and still growing quantity of the region's generating capacity uses natural gas (learn more at Key Stats—Resource Mix), its unavailability can...'. The right callout box is titled 'Pipeline Development Hasn't Kept Pace with Demand' and contains the text: 'Energy-security risks may be more acute in New England than in most other regions because New England is "at the end of the pipeline" when it comes to natural gas and the other fuels used most often to generate the region's power. New England has no indigenous fossil fuels and therefore, fuels must be delivered by pipeline, ship, truck, or barge from distant places. Additionally, the natural gas pipeline system within New England is...'. The page footer includes the INGA logo and the number 9.

FERC & Permitting Challenges



Commissioner Phillips



Commissioner Danly
Departure expected at the end of 2023



Commissioner Clements



Commissioner Christie



Other Permitting Challenges

The Biden Administration has adopted an all-of-government approach to addressing climate change. As a result, agencies other than FERC have taken actions which significantly increase pipeline risk.



CEQ Regulations



Clean Water Act 401

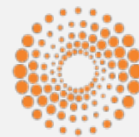


Clean Air Act

Mountain Valley Pipeline Illustrates Challenges

AP

Supreme Court allows construction to resume on the Mountain Valley Pipeline



REUTERS

Equitrans Midstream reaches agreement with US regulator for Mountain Valley Pipeline

The Washington Post

Mountain Valley Pipeline construction resumes in Virginia



UTILITY DIVE

Mountain Valley Pipeline delayed; cost rises to \$7.2B

Bloomberg

Manchin Vows Mountain Valley Pipeline Completion After Delays Announced



Permitting reform



FERC

- Full complement of commissioners
- Support need for infrastructure projects



Public messaging

- Continued need for natural gas
- Role of natural gas in our energy future