

NATURAL GAS MARKETS IN AN EVOLVING ENERGY LANDSCAPE



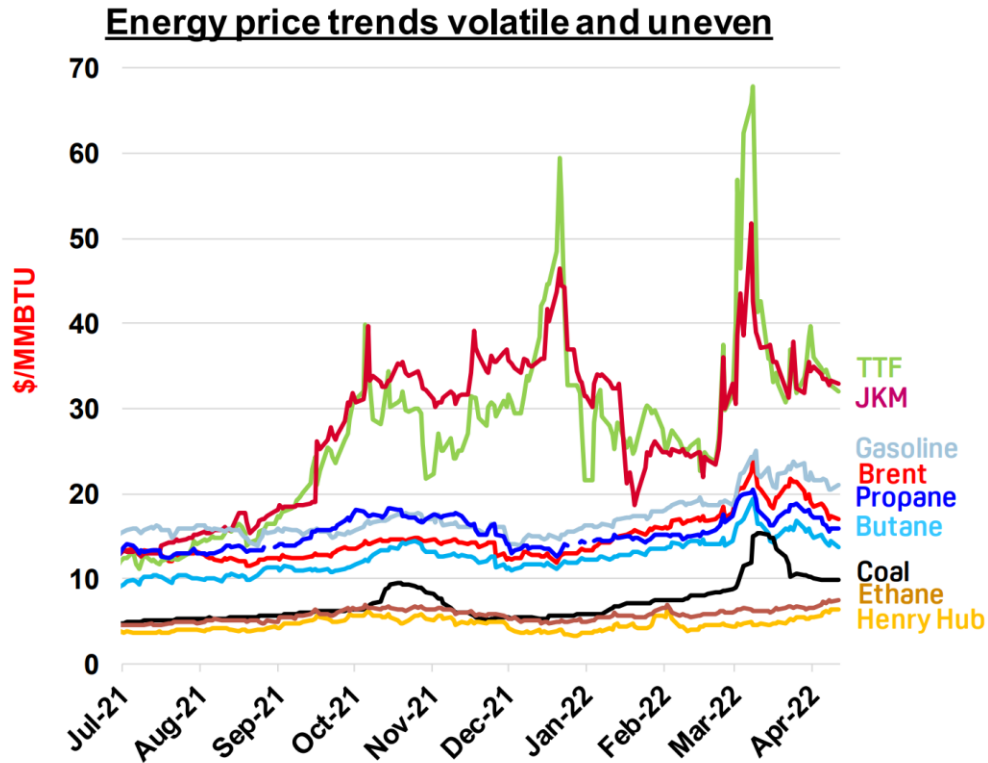
The American Gas Association (AGA) represents companies delivering natural gas safely, reliably, and in an environmentally responsible way to help improve the quality of life for their customers every day. AGA's mission is to provide clear value to its membership and serve as the indispensable, leading voice and facilitator on its behalf in promoting the safe, reliable, and efficient delivery of natural gas to homes and businesses across the nation.

Committed to utilizing America's abundant, domestic, affordable and clean natural gas to help meet the nation's energy and environmental needs.

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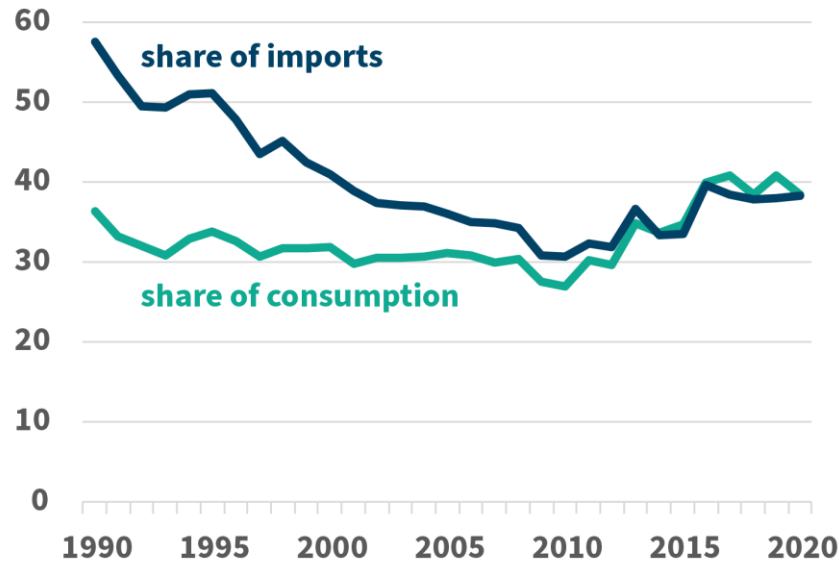
US natural gas prices are relatively stable and present sharp contrast with Europe and Asia



Declines in EU natural production has meant growing reliance on Russian imports

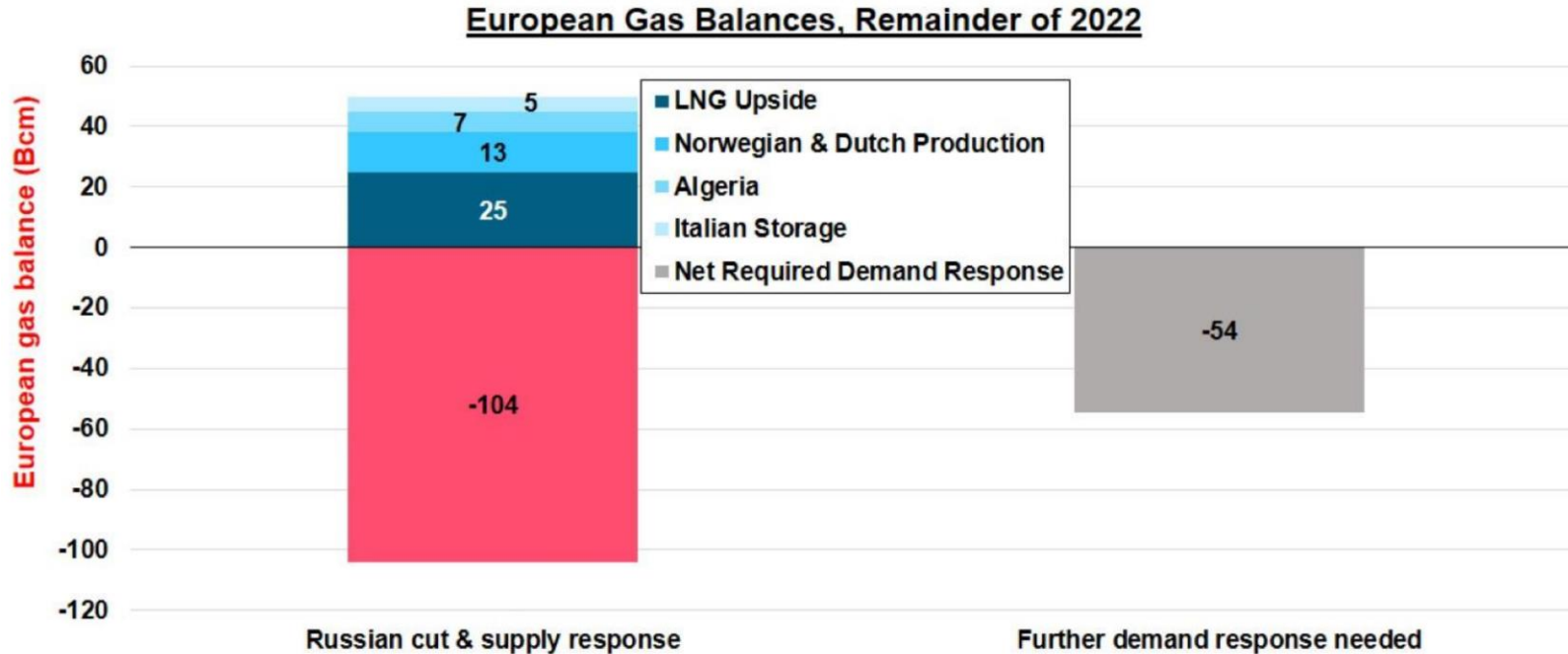
Europe's reliance on **Russian** natural gas

percent of Russian gas in the European Union (EU-27)



Source: Eurostat, Imports of natural gas by partner country [NRG_TI_GAS], Supply, transformation and consumption of gas [NRG_CB_GAS].

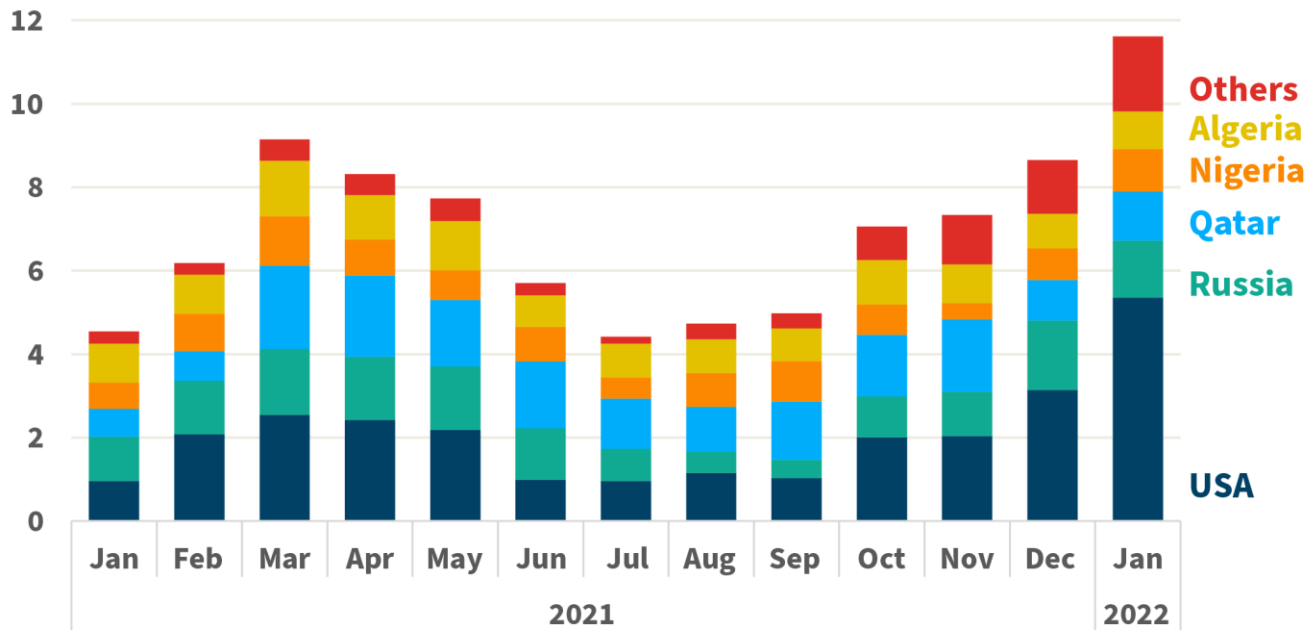
Russia is largest source of Europe's natural gas. If flows were cut, despite significant response, Europe still left short



US playing an outsized role in serving European gas demand

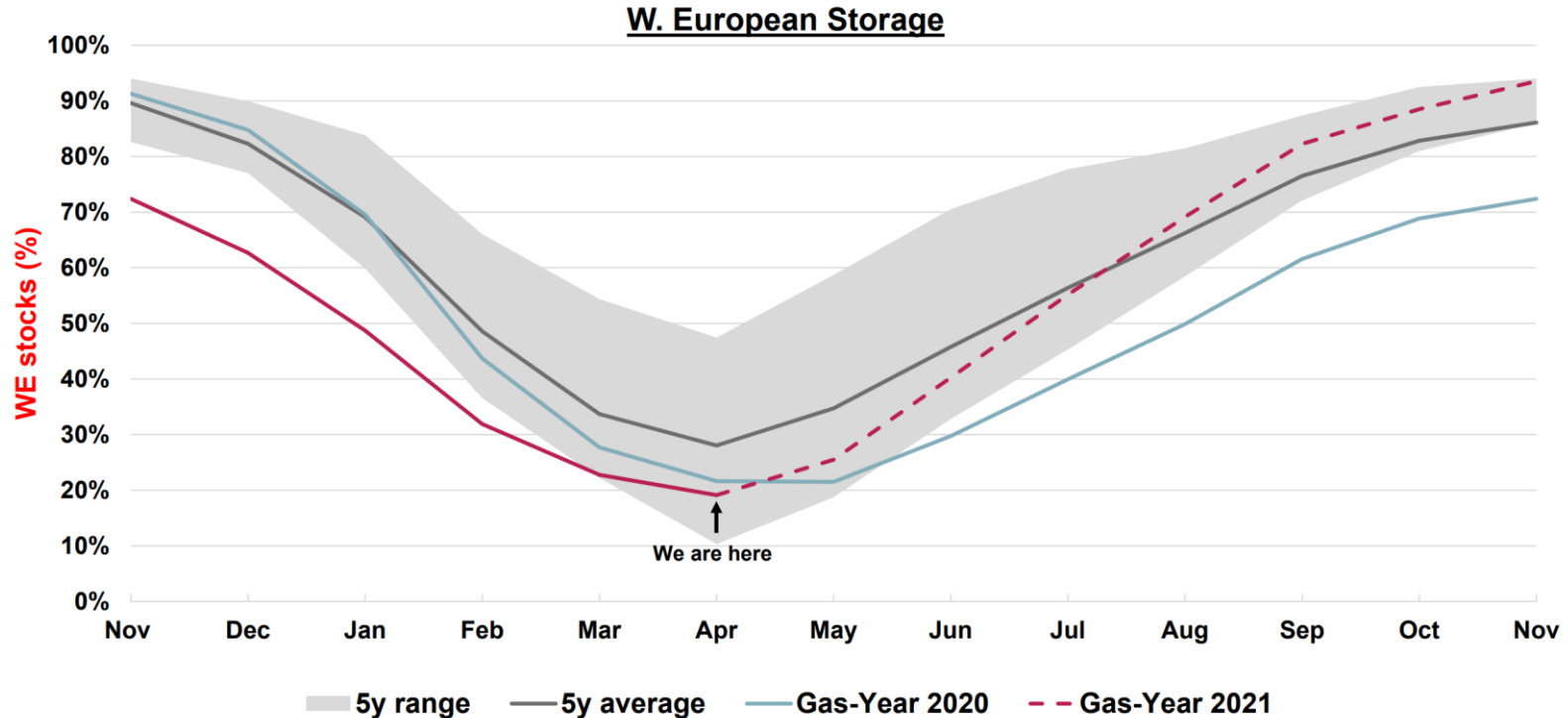
European LNG imports by source

million tons of LNG

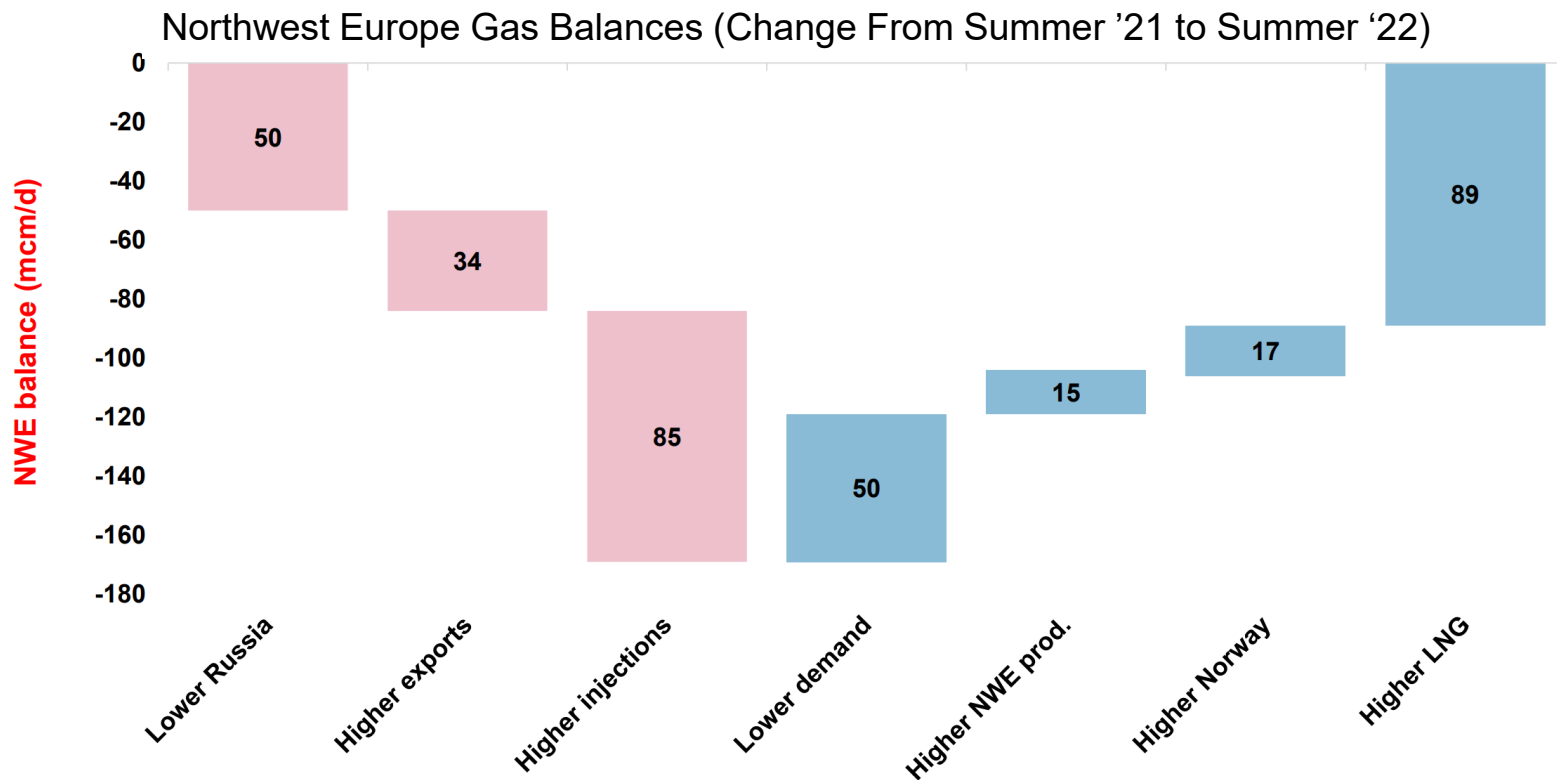


Source: Kpler LNG Service (data downloaded on February 1, 2022).

European natural gas storage is rebuilding



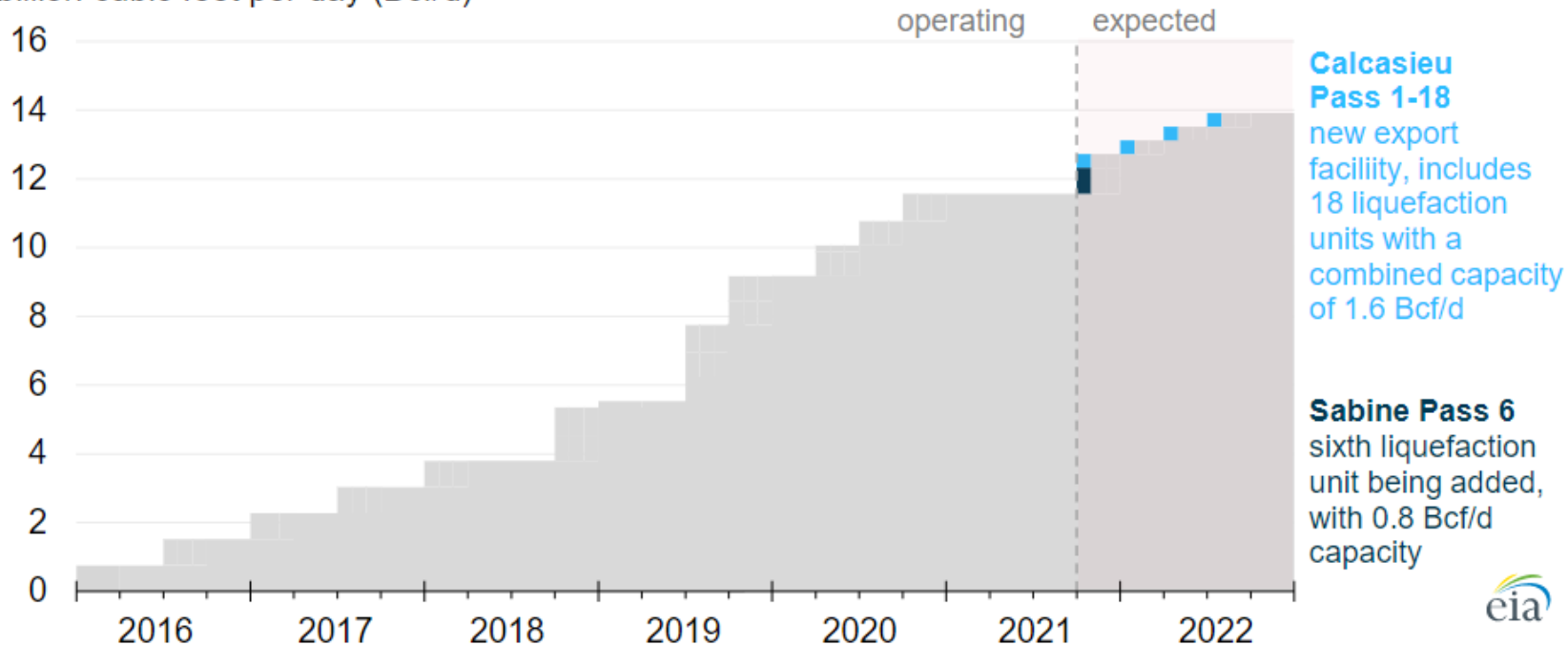
LNG imports will help balance the European gas market this summer



More LNG export capacity online in 2022. Next major project not due until 2024.

U.S. quarterly liquefied natural gas peak export capacity (2016–2022)

billion cubic feet per day (Bcf/d)



Source: U.S. Energy Information Administration, [database of U.S. LNG export facilities](#)

At home, natural gas futures are trading above recent history

Natural Gas Prices Prompt-Month Futures at Henry Hub

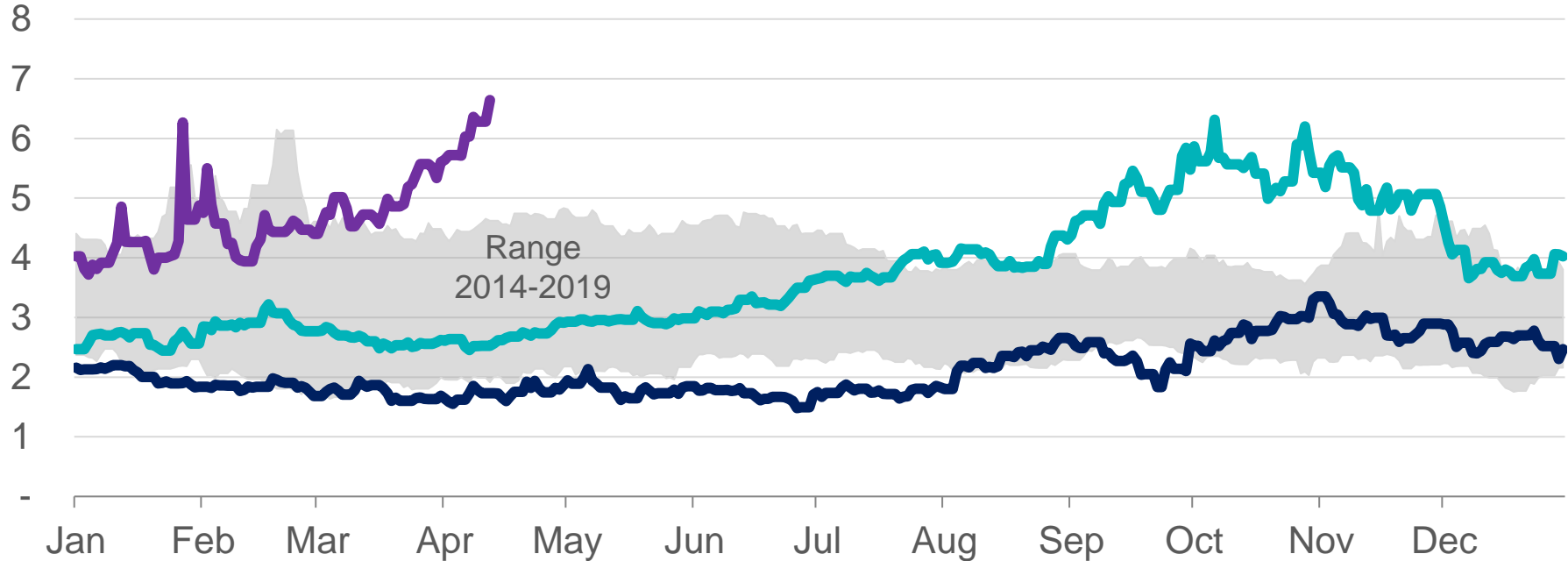
\$/MMBtu

Range 2014-2019

2020

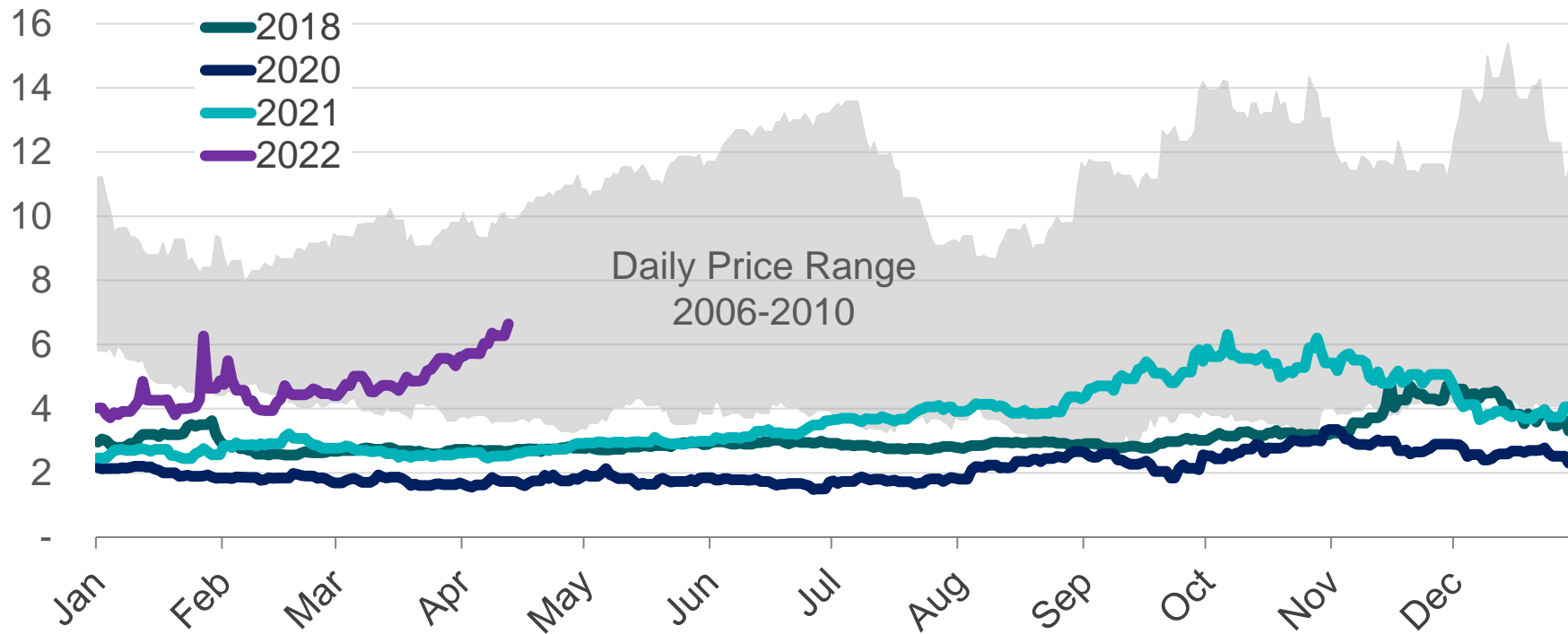
2021

2022



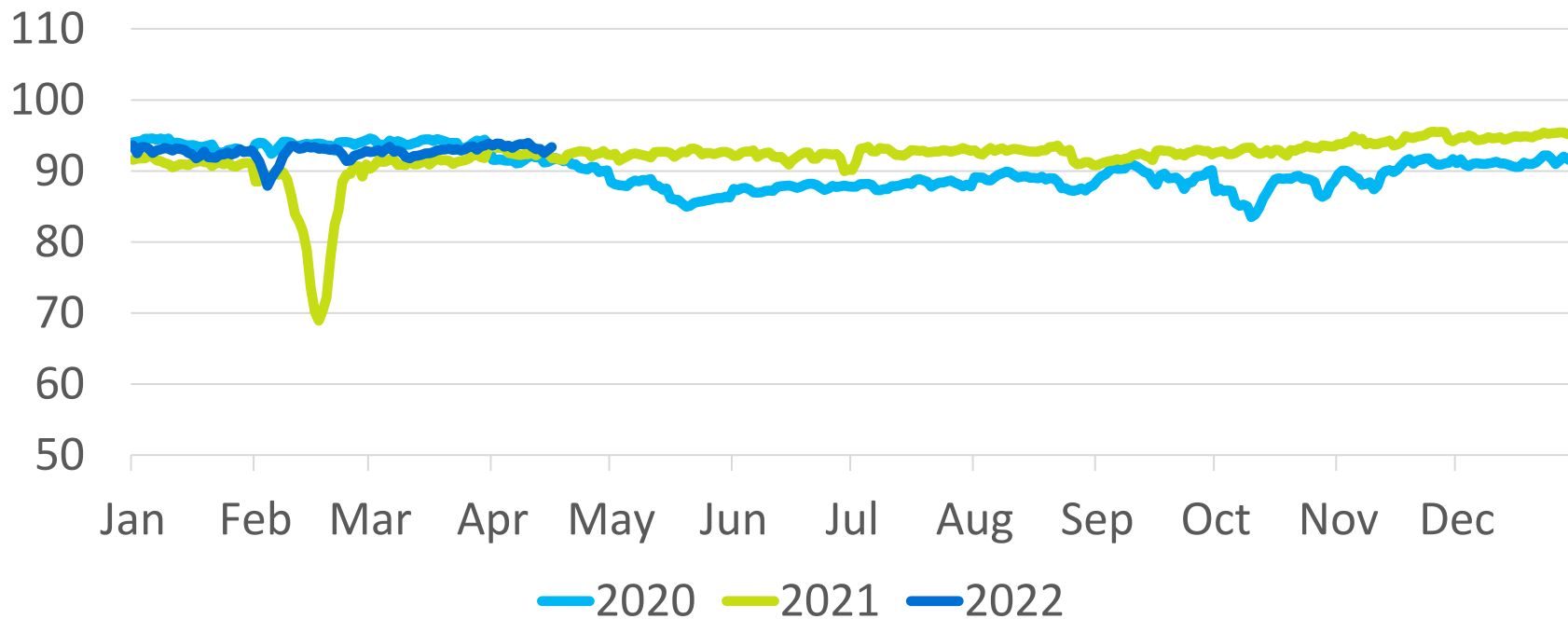
Within a larger span of history, prices remain low and stable

Daily Prompt-Month Futures at Henry Hub (\$/MMBtu)

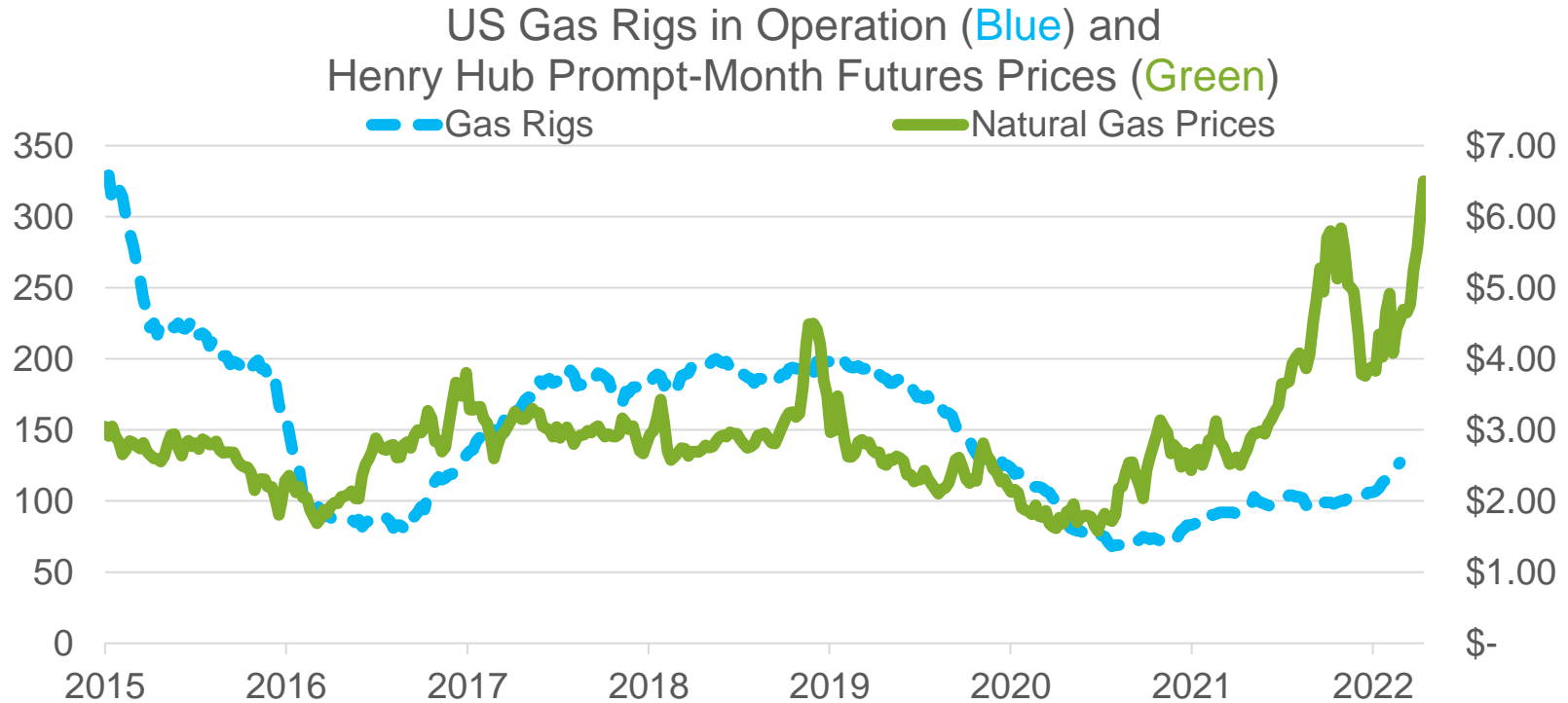


Natural gas production is elevated relative to 2021.

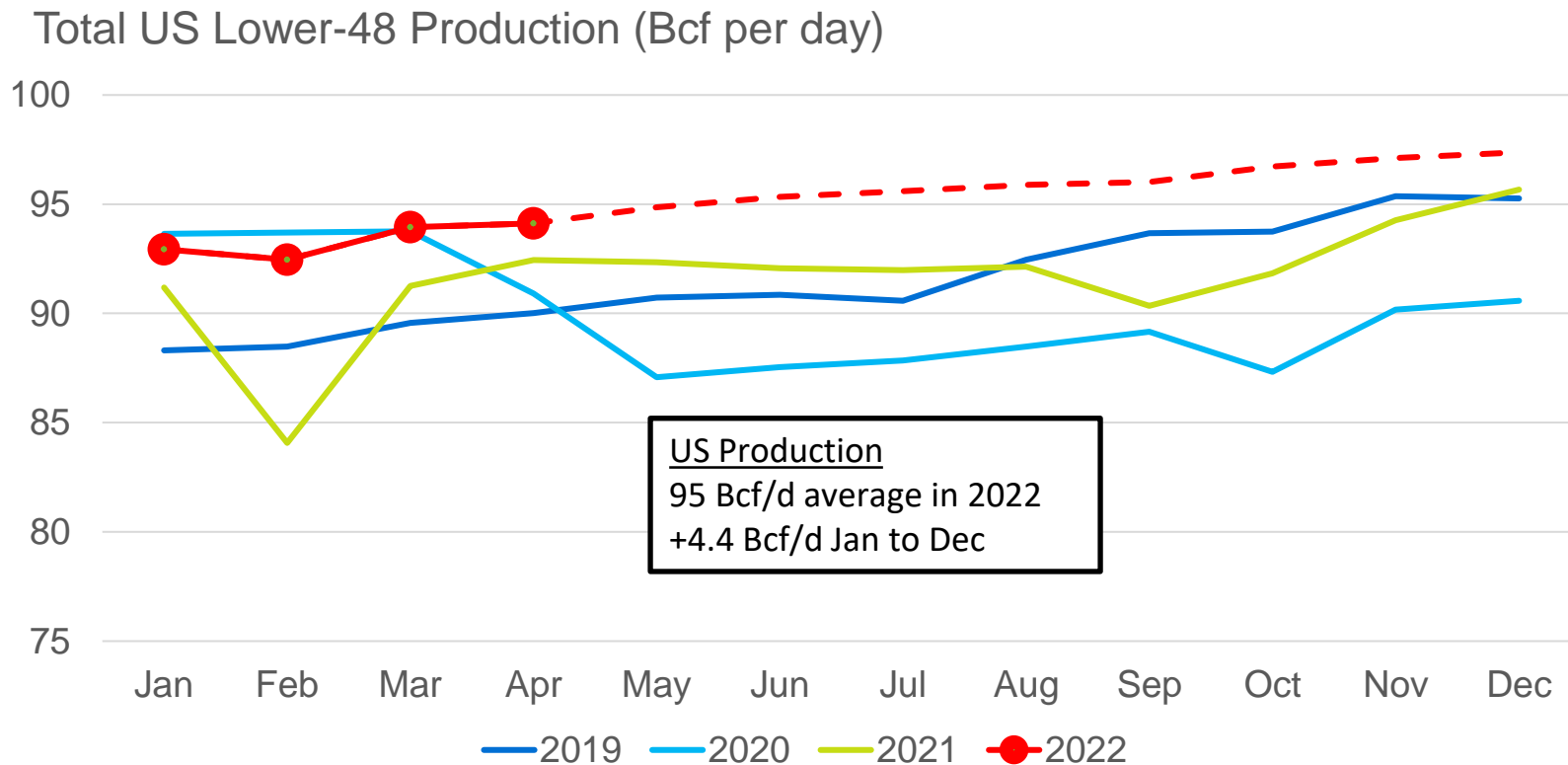
Lower-48 Natural Gas Production (Bcf per day)



During the past year, as natural gas prices recovered, the resumption of gas drilling activity was muted, but has picked up

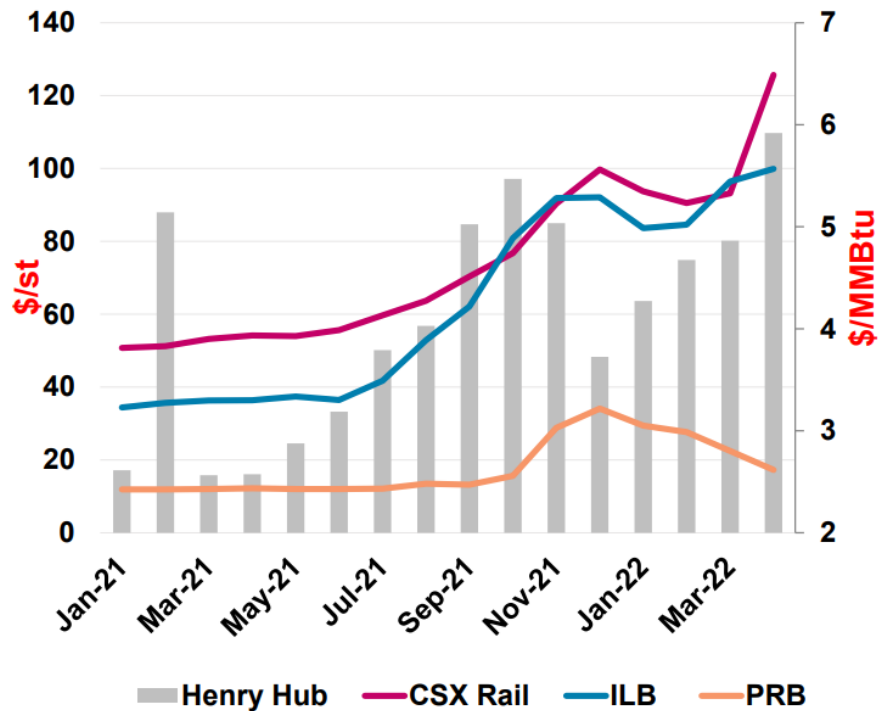


Production expected to grow

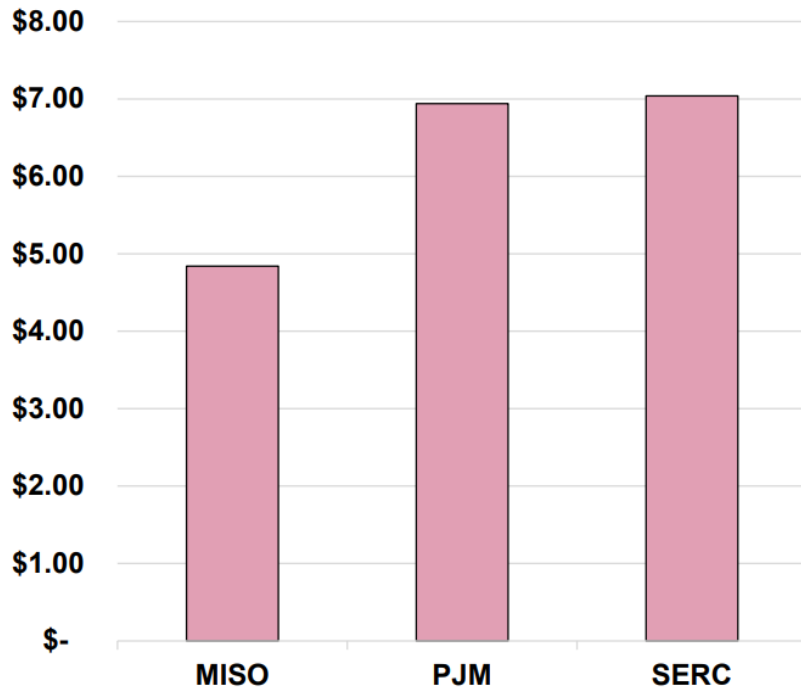


Higher coal prices means natural gas prices need support to induce gas-to-coal switching

Regional coal prices versus Henry Hub

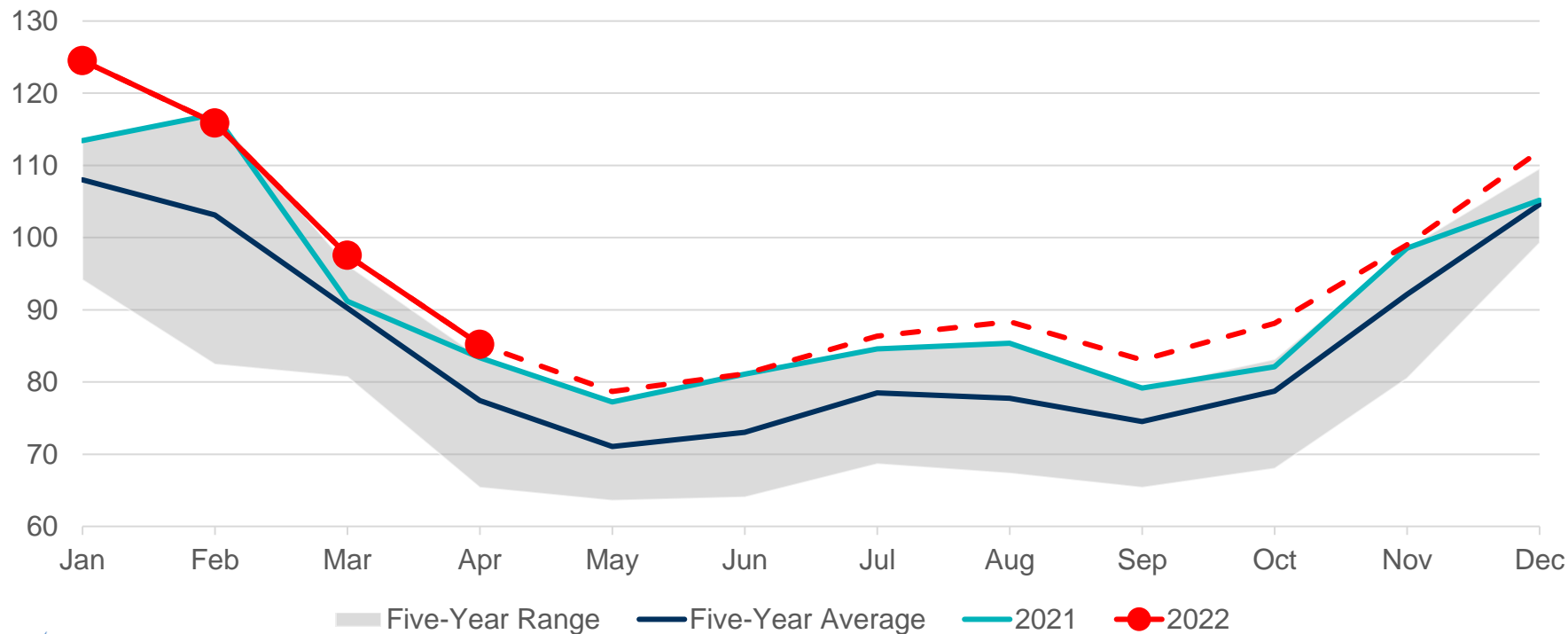


Implied regional coal blend gas switching price



LNG Exports and domestic end uses contribute to higher demand

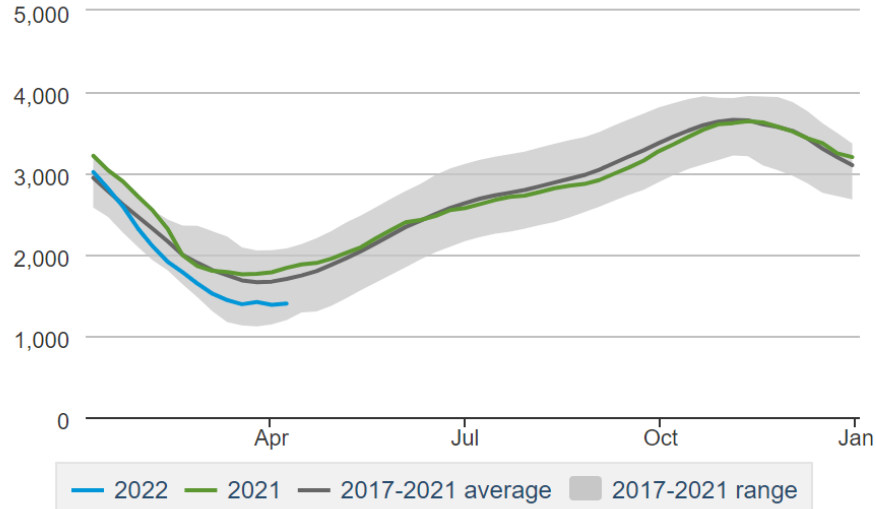
US Lower-48 Demand (Bcf per day)



US storage inventories ended March at 1.4 Tcf. EIA forecasts storage at 3.5 Tcf by October, below 2021 levels.

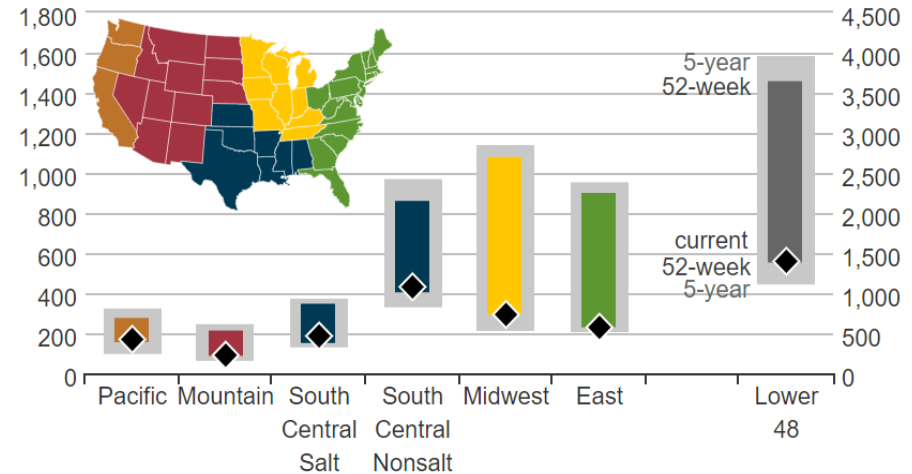
Lower 48 weekly working gas in underground storage

billion cubic feet



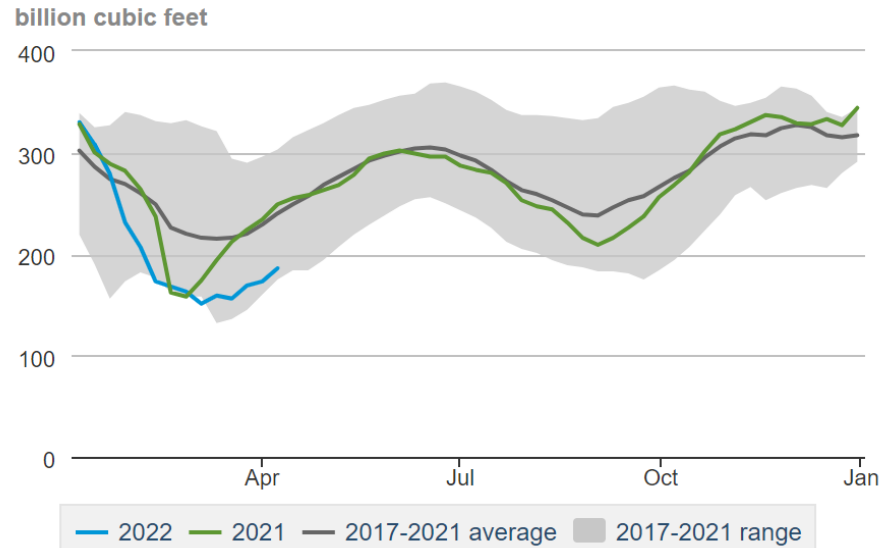
Underground working natural gas storage summary as of April 8, 2022

billion cubic feet

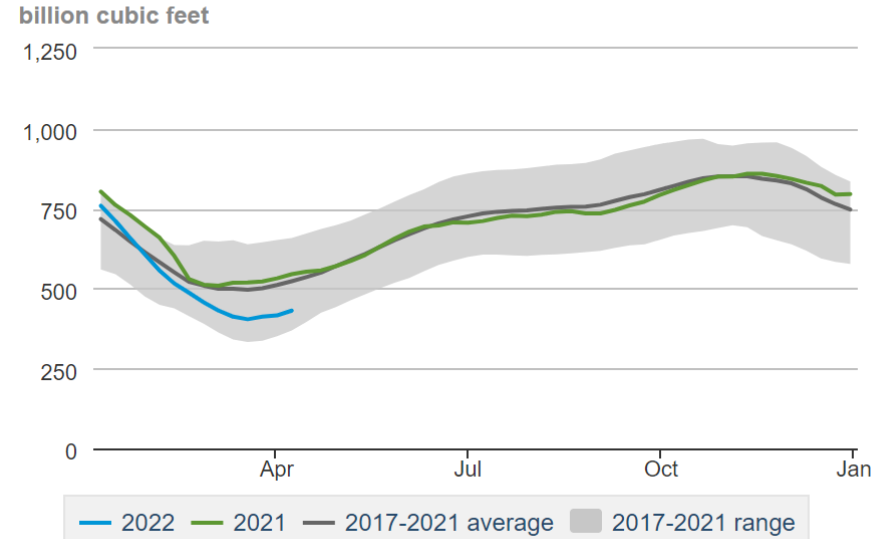


Storage inventories, which began the winter below average, remain at the bottom range of the five-year average.

South Central Salt region weekly working gas in underground storage

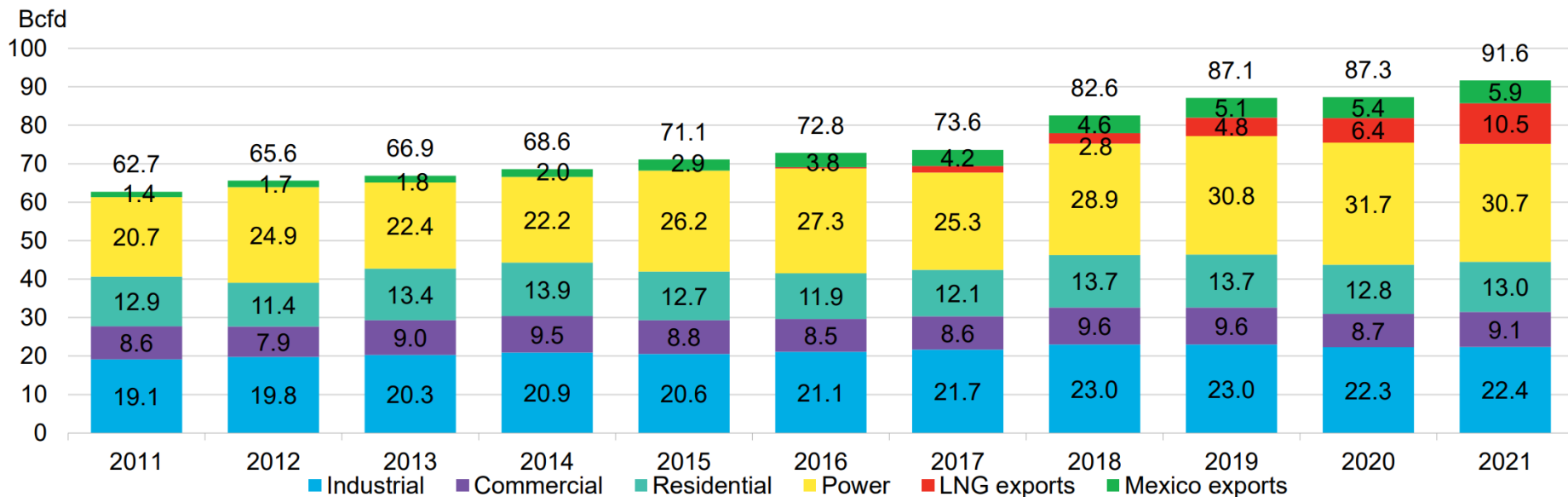


South Central Nonsalt region weekly working gas in underground storage

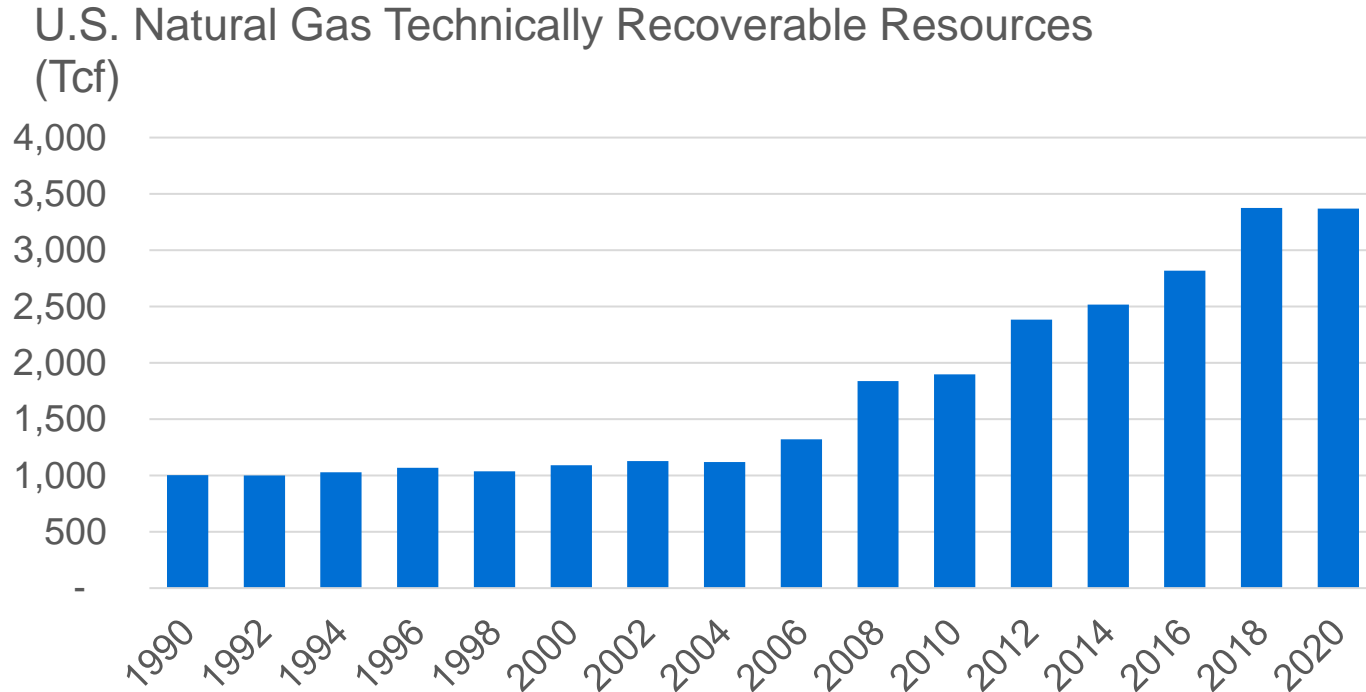


US natural gas demand continues to grow in 2021, driven by exports

U.S. natural gas demand by end use

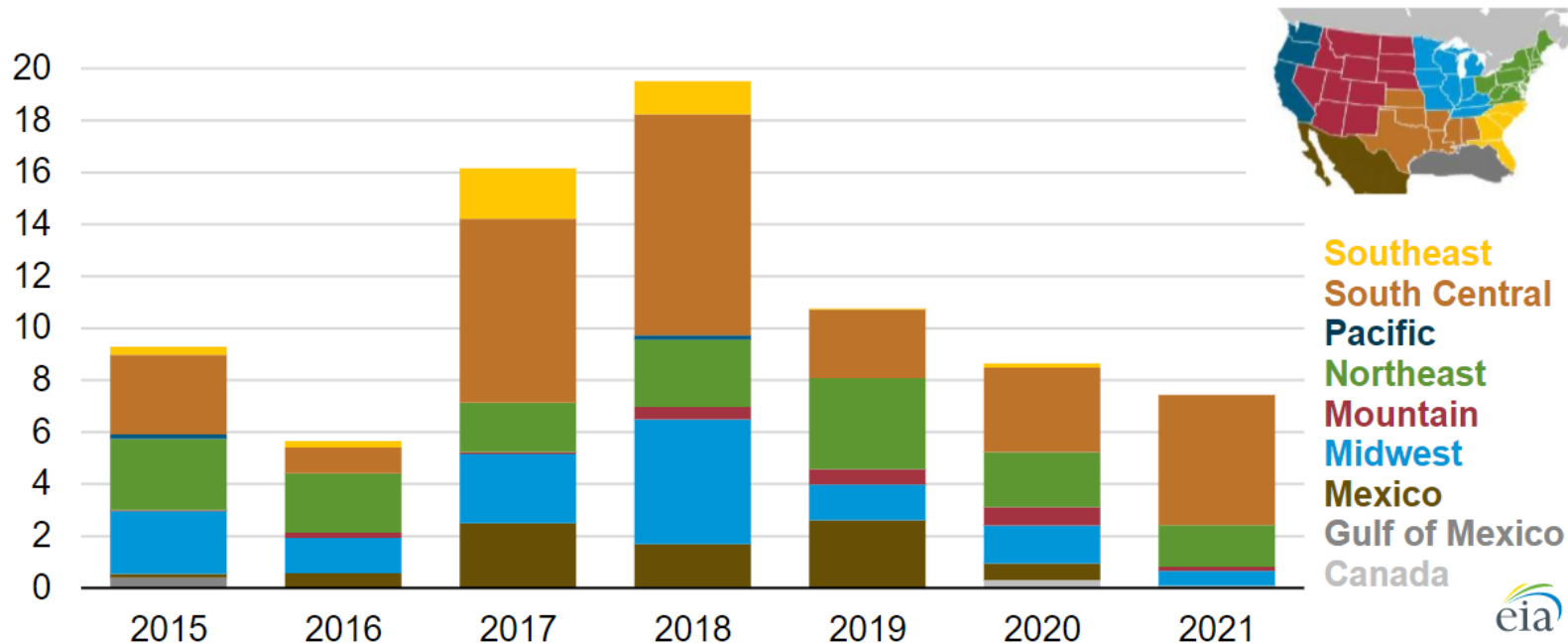


**Futures supply growth is unlikely to be limited by geology.
Potential future supply of natural gas is at a record high.**



Natural gas interstate pipeline capacity additions decrease in 2021

Interstate and international interconnection pipeline capacity additions by region (2015–2021)
billion cubic feet per day

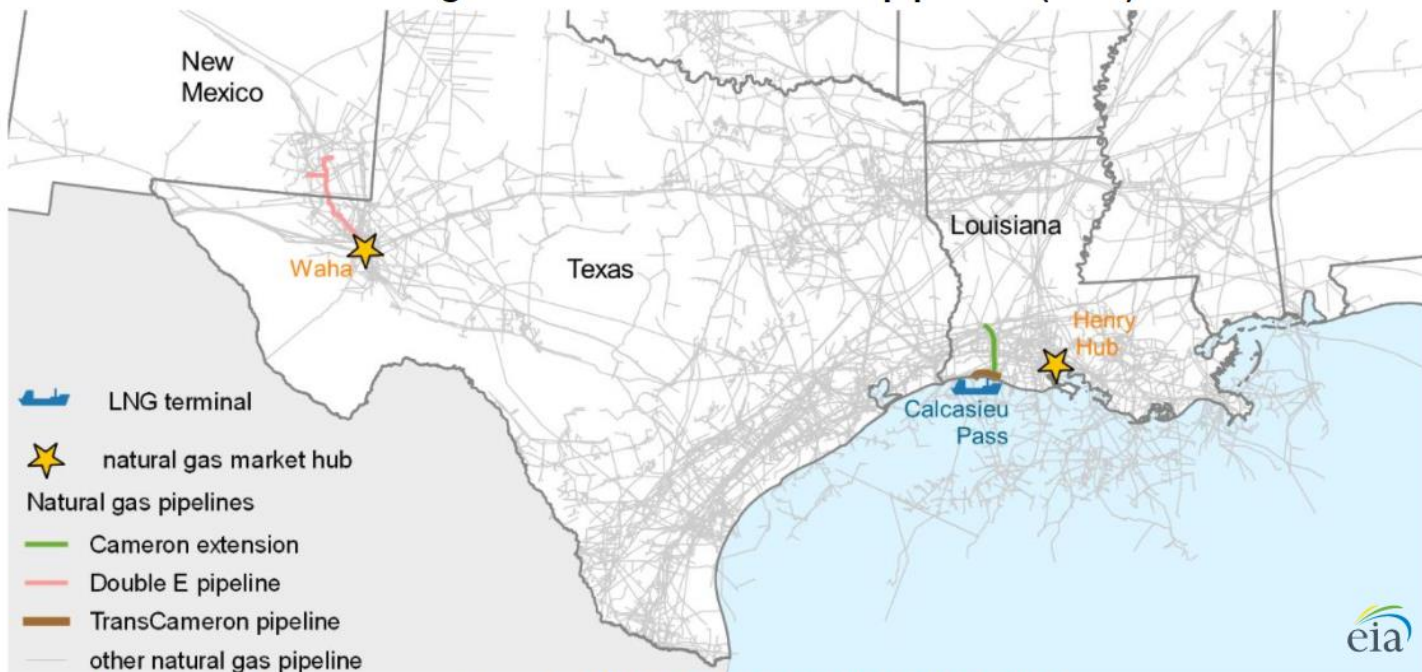


Source: U.S. Energy Information Administration, [Natural Gas Pipeline Projects Tracker](#)

Note: We consider only pipeline projects under Federal Energy Regulatory Commission jurisdiction as interstate capacity.

More than two-thirds of new interstate pipeline capacity was within Texas or Gulf Coast markets during 2021

U.S. South Central natural gas infrastructure and new pipelines (2021)

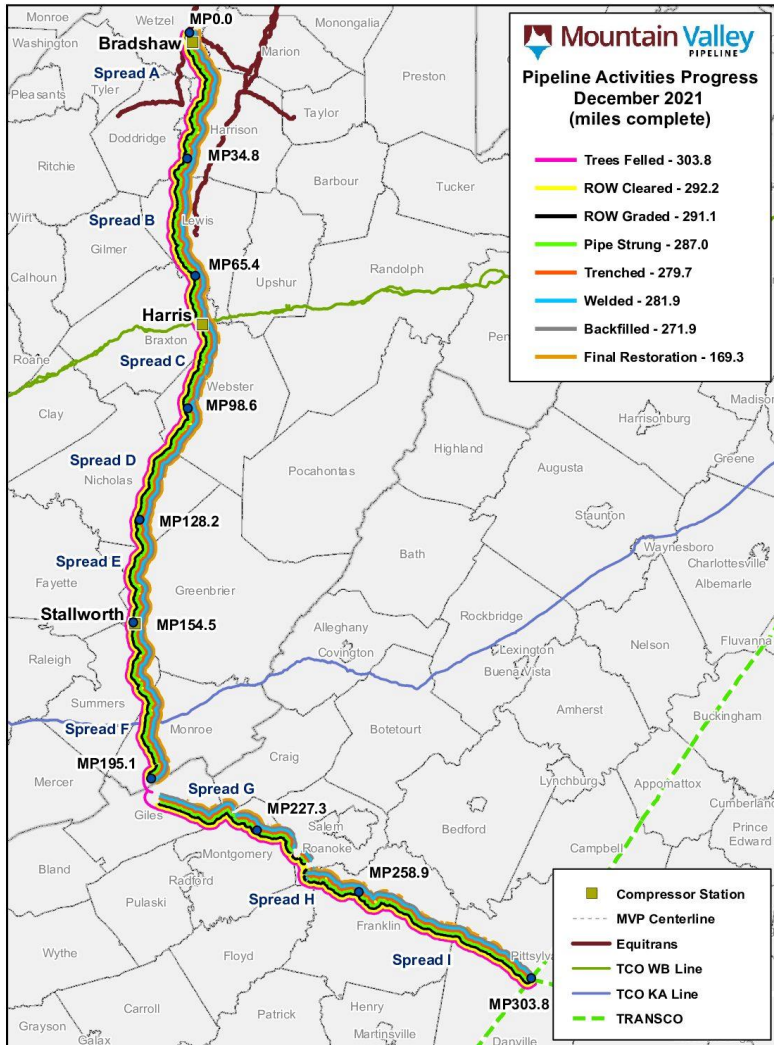


Source: U.S. Energy Information Administration, [Natural Gas Pipeline Projects Tracker](#)

Continued challenges to build new major projects

Mountain Valley Pipeline

- 94% complete but remains stalled
- Permits vacated by 4th Circuit
- No longer has in-service date
- Production increases may be limited due to downstream constrains



FERC issues new policy statements – now “DRAFT”

- **Certification of New Interstate Natural Gas Facilities**
 - Updated factors in assessing the public convenience and necessity
- **Interim Policy Statement to Consider GHG Emissions Related to Natural Gas Infrastructure Projects**
 - Quantifying GHG Emissions and Determining Significance
 - Specifies 100,000 metric tons per year CO₂ as having a “significant impact on the environment”
- Result: It will be more difficult to receive FERC approval for pipeline projects

Questions?