Natural Gas Supply Association

2022 SUMMER OUTLOOK

MARKETS MATTER

ngsa.org

Natural Gas Supply Association

Understanding the Symbols

^	Upward market pressure
—	Flat market pressure
v	Downward market pressure

Natural Gas Supply Association

2022 Summer Outlook: Outline

LOOKING AHEAD TO SUMMER 2022

Market Pressure Points

Economy | Weather | Demand | Production/Supply | Storage

Wild Card Factors

Summer Expectations

SUMMARY

Natural Gas Supply Association

Demand: Economy

Summer Season Period-to-period change	Last Summer 2021 Actual	This Summer 2022 Forecast
Economy	Strong recovery underway	Growth slows Inflation concerns
GDP Growth	8.6%	3.4%
World GDP Growth (annual)	6.1%	3.6%
Manufacturing	72%	77%
Unemployment rate	5.8%	3.6%
CPI	5.4%	7.0%
Consumer Sentiment Index	83	65

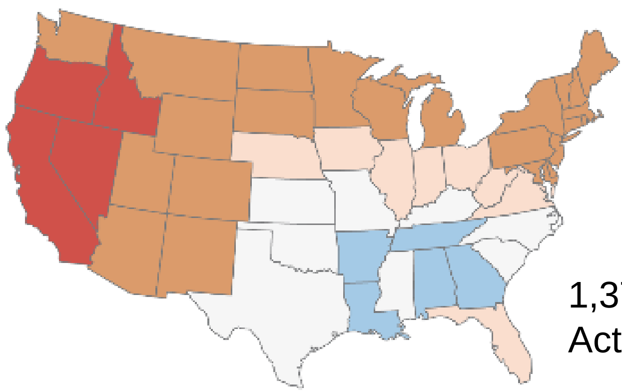
Summer-to-summer pressure on natural gas prices

Data Sources: : Moodys, Energy Ventures Analysis, Bureau of Labor Statistics, University of Michigan, Federal Reserve

Natural Gas Supply Association

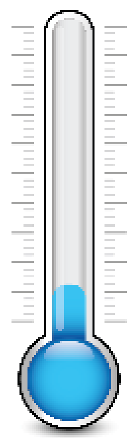
Demand: Summer Cooling Season Weather (April-October)

Last Summer | 2021 ACTUAL	This Summer | 2022 FORECAST
ACTUAL: 1,372 Cooling degree days *Same as the 10-year average*	**FORECAST:** 1,299 Cooling degree days 5% *cooler* than 2021 cooling season 5% *cooler* than 10-year average

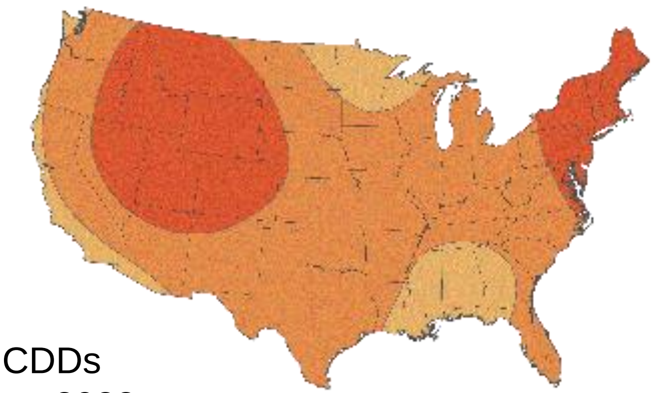


Record Warmest
Warmer Than Normal
Above Average
Below Average

1,372 CDDs
Actual 2021



1,299 CDDs
Forecast 2022



NOAA June-August forecast

Summer-to-summer pressure on natural gas prices

Data Source: National Oceanic and Atmospheric Administration, Energy Ventures Analysis.

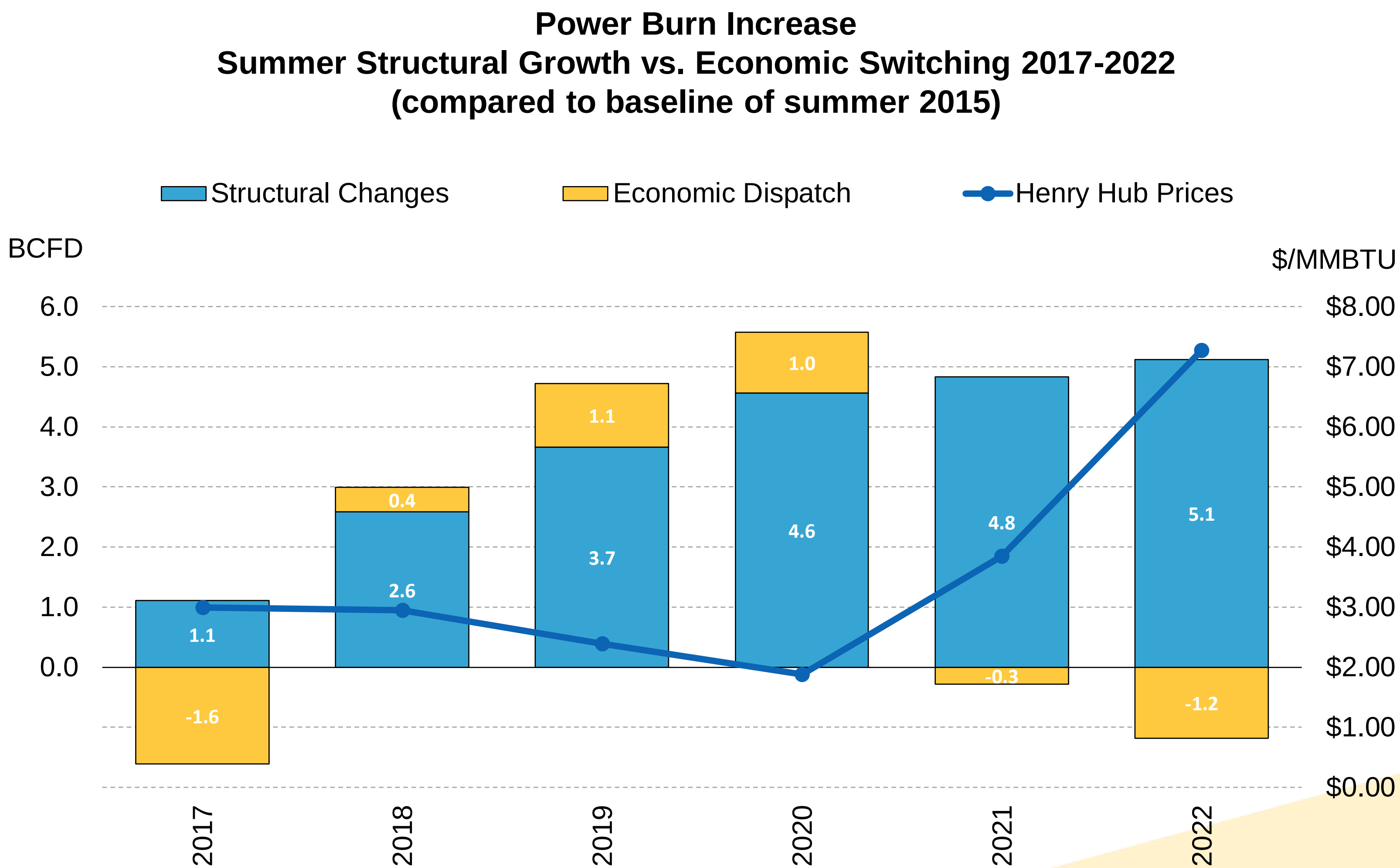
Natural Gas Supply Association

Demand: Customer Demand

Summer Season Period-to-period change	Last Summer 2021 ACTUAL	This Summer 2022 FORECAST	PREVIOUS 3-YEAR SUMMER AVERAGE
Domestic Demand			
▪ Power burn	33.0 Bcf/d	32.4 Bcf/d	33.4 Bcf/d
▪ Industrial	21.3 Bcf/d	22.0 Bcf/d	21.3 Bcf/d
▪ Residential/Commercial	11.2 Bcf/d	11.2 Bcf/d	11.4 Bcf/d
Subtotal	*65.5 Bcf/d*	*65.6 Bcf/d*	*66.1 Bcf/d*
Exports			
▪ Pipeline exports - Mexico	6.2 Bcf/d	6.7 Bcf/d	5.7 Bcf/d
▪ LNG exports	10.7 Bcf/d	12.7 Bcf/d	7.3 Bcf/d
Subtotal	*16.9 Bcf/d*	*19.4 Bcf/d*	*13.0 Bcf/d*
Total Natural Gas Demand*	**89.0 Bcf/d**	**91.7 Bcf/d**	**84.6 Bcf/d**
Growth sector		Exports Industrial	
Summer-to-summer pressure on natural gas prices		^	+ 3%

*includes "Lease, Plant and Pipeline Fuel"
Data Source: Energy Ventures Analysis.

Power Burn Growth: Structural Growth vs. Economic Switching



Data Source: Energy Ventures Analysis
Note: 2022 summer prices are NYMEX settlements as of 4/14/2022

Focus: Industrial Demand Peak Growth Phase

Natural Gas Spurring 22 Major Industrial Projects 2021-2024

$32 Billion Investment to Build	Increase of 1.0 Bcf/d by 2024

18 **New Projects**

14 Petrochemical
2 Steel
2 Fertilizer

3 **Expansions**

2 Fertilizer
1 Steel

1 **Re-start**

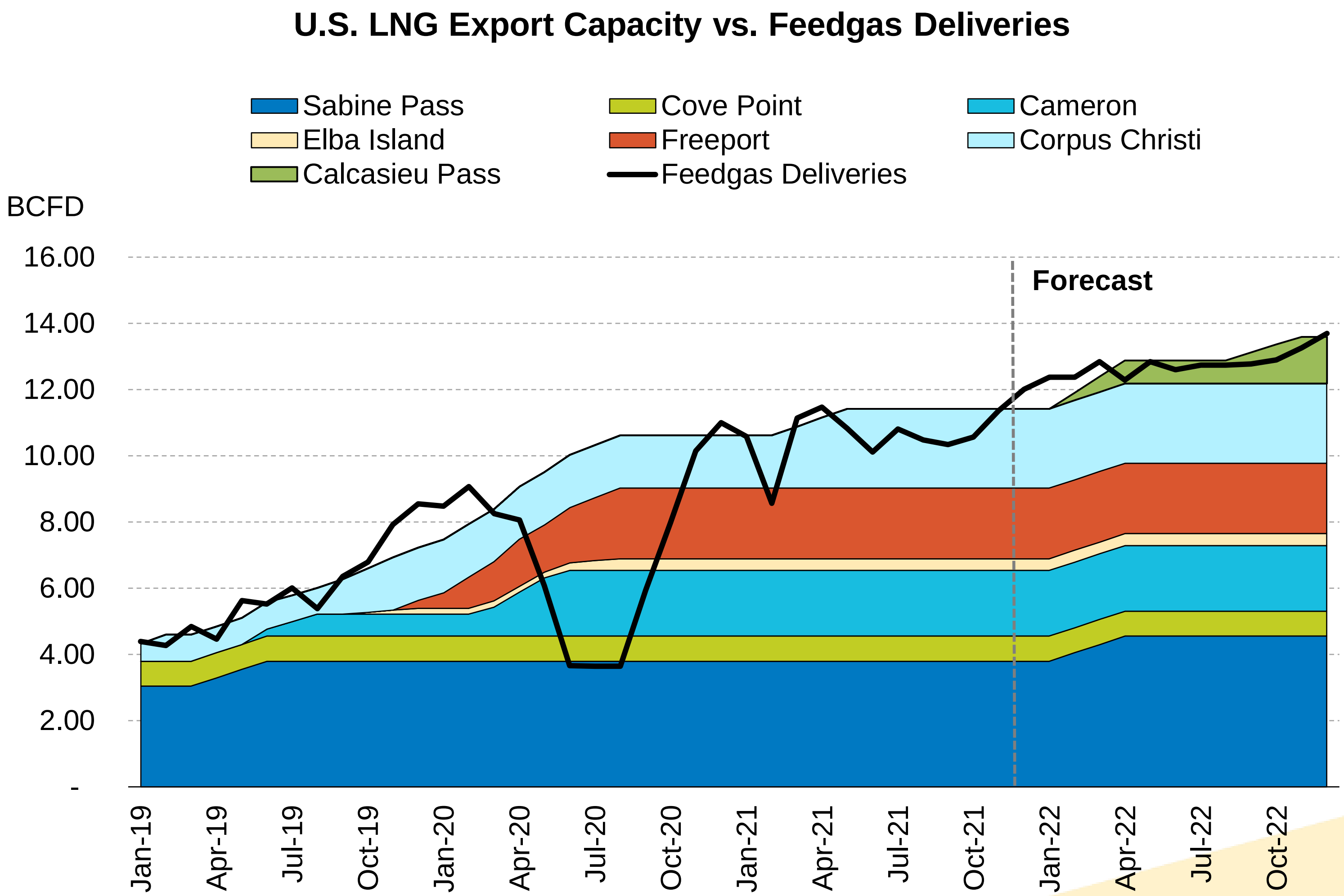
1 Steel

In addition to

53 **COMPLETED Projects** for additional $79 billion and 1.7 Bcf/d from 2016-2020

Data Source: Energy Ventures Analysis, September 2021
Photo Courtesy: Chevron U.S.A. Inc., 2017 (Pascagoula)

U.S. LNG Exports: Steady Growth Expected to Continue



Data Source: Energy Ventures Analysis, EIA

Natural Gas Supply Association

Supply: Summer Production and Imports

Summer Season Period-to-period change	Last Summer 2021 ACTUAL	This Summer 2022 FORECAST	3-YEAR SUMMER AVERAGE
Summer average production (Lower 48)	92.9 Bcf/d	96.6 Bcf/d	91.3 Bcf/d
Canadian imports (net)	4.8 Bcf/d	4.8 Bcf/d	4.4 Bcf/d
LNG imports	0.0 Bcf/d	0.1 Bcf/d	0.1 Bcf/d

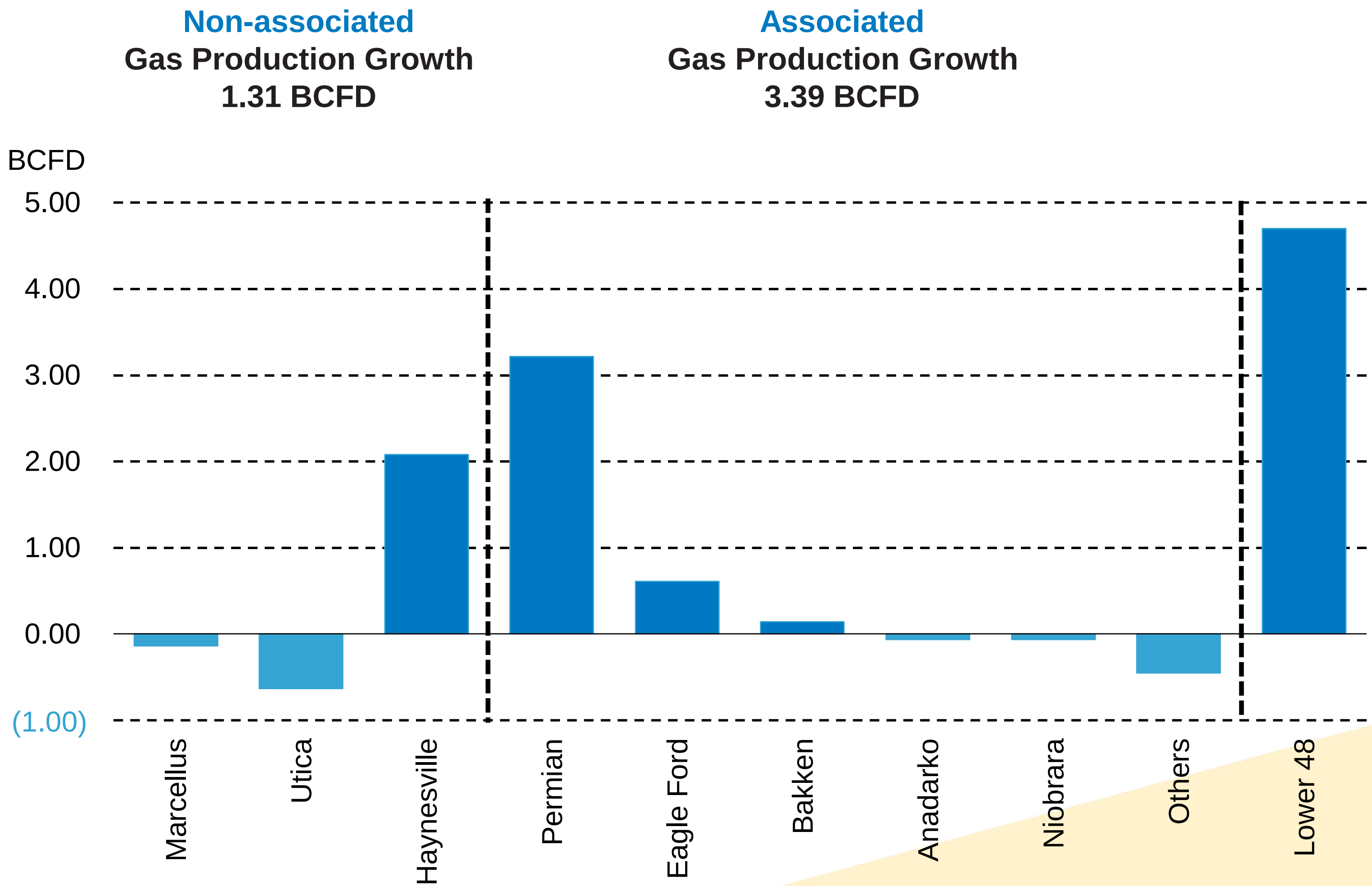
Summer-to-summer pressure on natural gas prices

Data Source: Energy Ventures Analysis.

Natural Gas Supply Association

Production Trends: Strong Growth from Associated Gas Bolstered by Modest Growth from Non-associated Gas

Production Growth by Basin, 2021 vs. 2020 (through August)

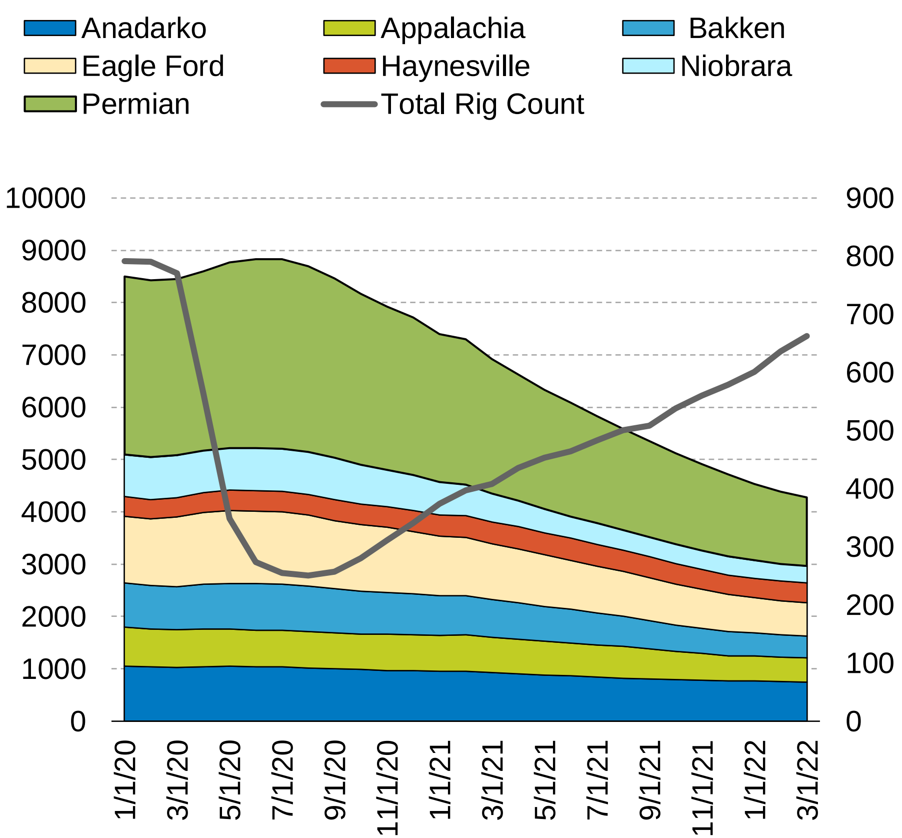


Data Source: EIA, Energy Ventures Analysis.

Natural Gas Supply Association

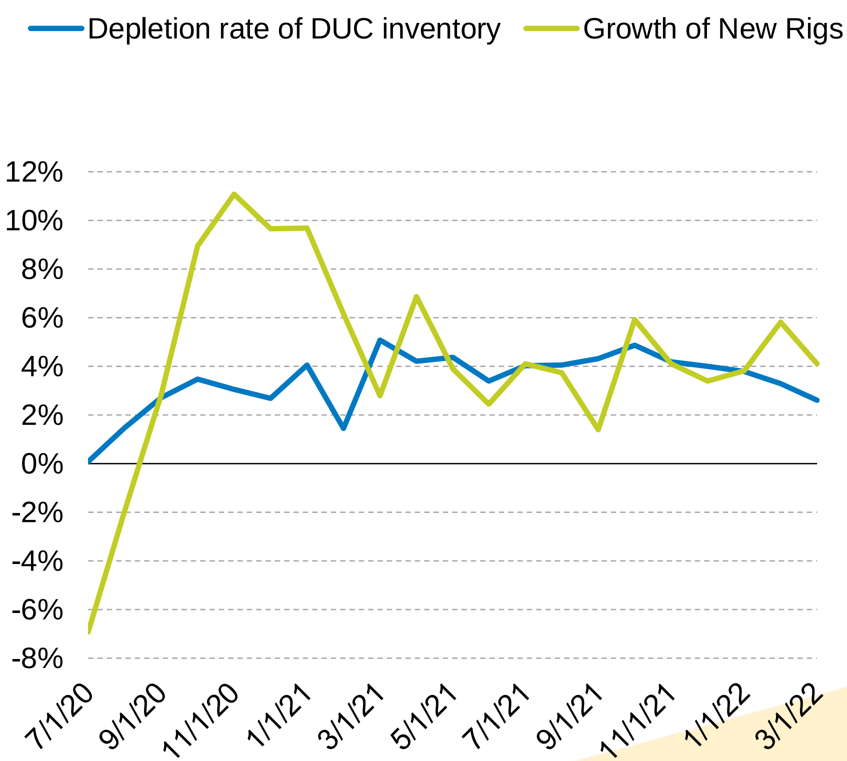
Production Growth Reflected by Rig Count Increase and Continued Steady Completion of "DUCs"

Drilling Uncompleted Wells (DUC) Inventory in Major U.S. Producing Areas



Data Source: EIA

New Gas Supply Source Growth Indicators: DUC vs Rig



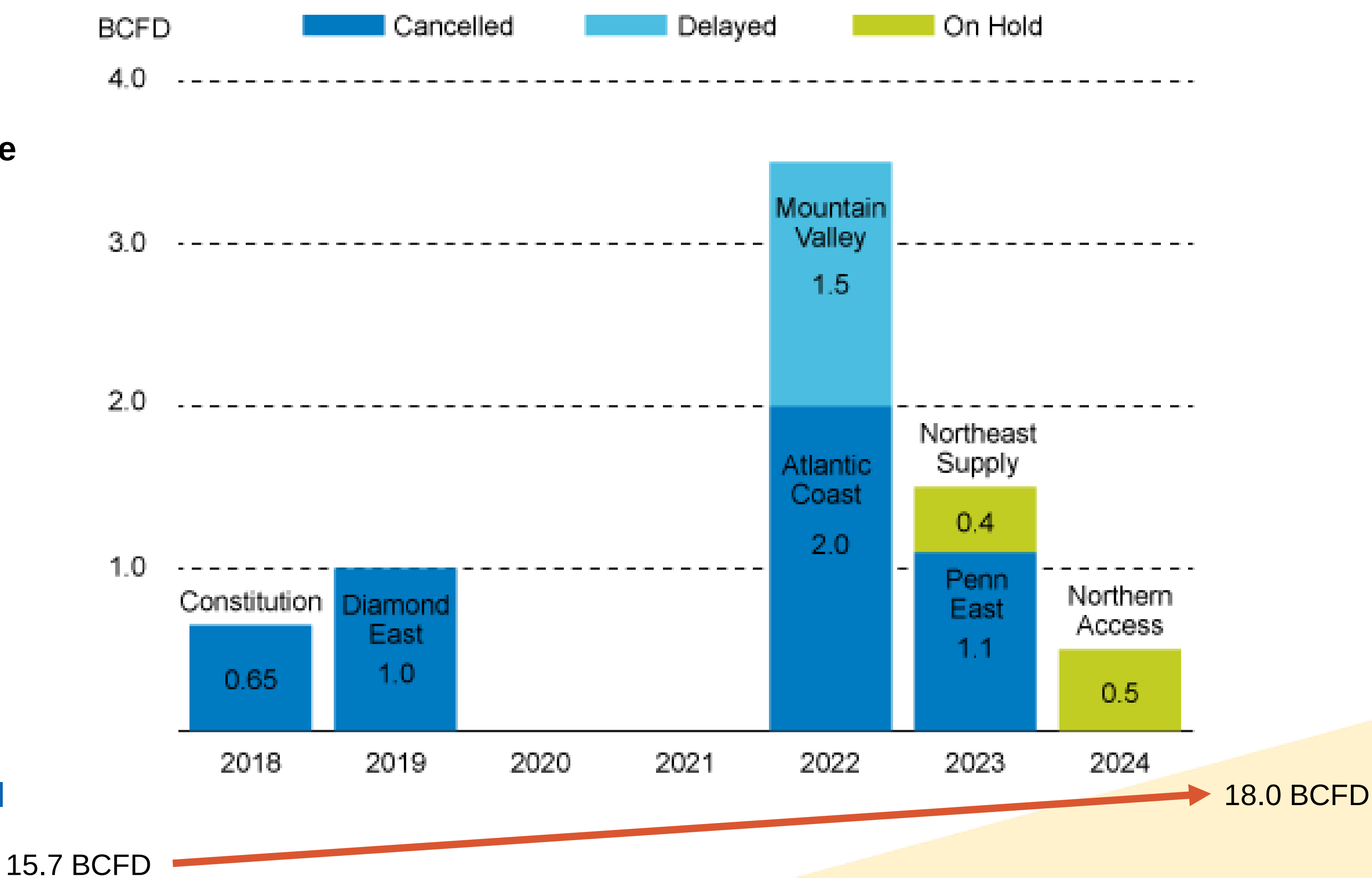
Data Source: EIA; Energy Ventures Analysis

Natural Gas Supply Association

Cancelled, Delayed Pipelines Reflect Difficulty of Siting Infrastructure in the Northeast

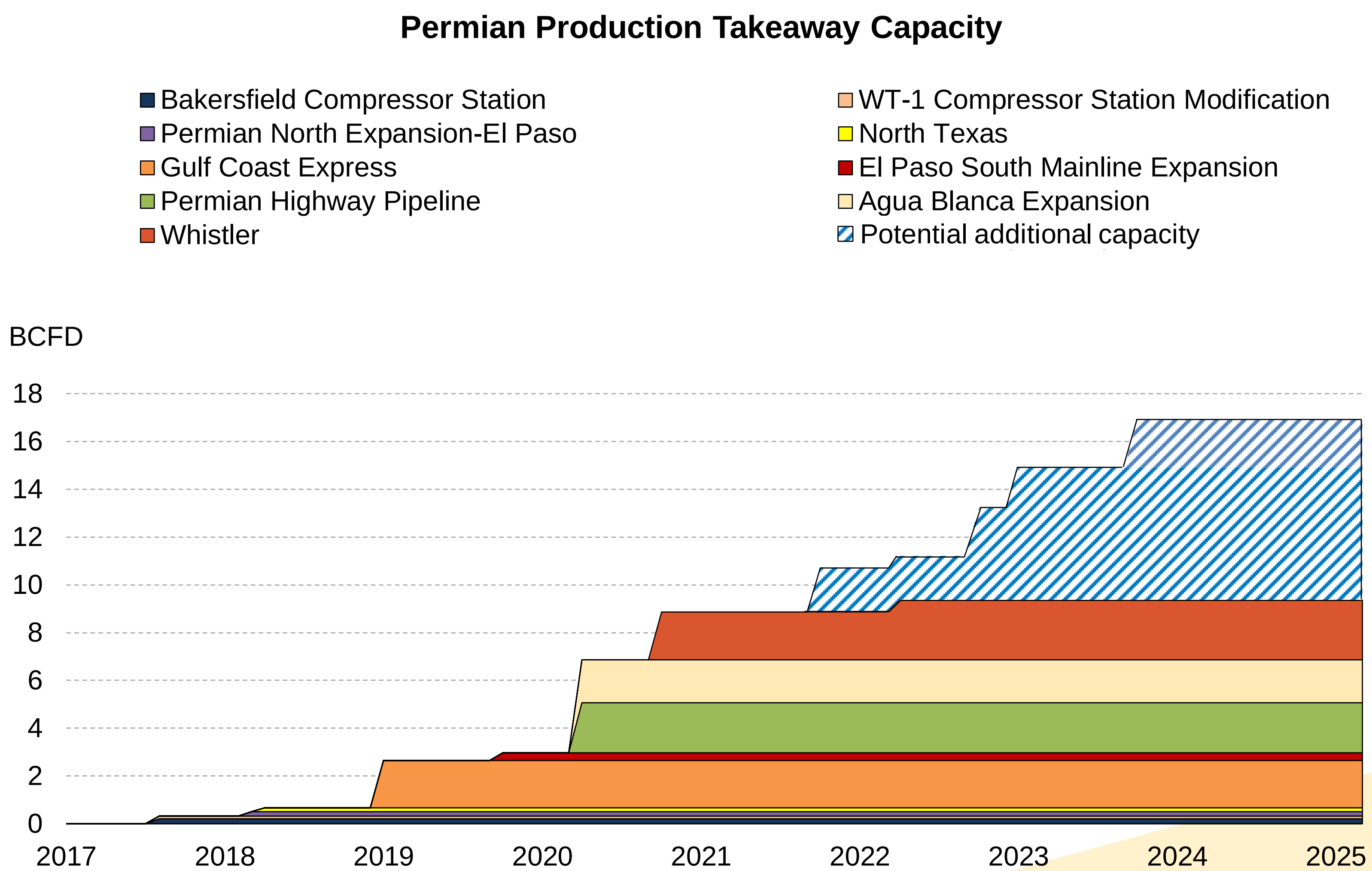
TOTAL OF 7.1 BCFD OF PIPELINE CAPACITY CANCELLED OR PUT ON HOLD IN NORTHEAST /MID-ATLANTIC SINCE 2018 – BUT ONLY 2.3 BCFD ADDED

Cumulative Proposed Capacity



Cumulative Operational Capacity

New Pipeline Capacity in Permian Has Improved Supply, Potential for More to Come



Data Source: OPIS PaintLogic, Energy Ventures Analysis.

Natural Gas Supply Association

Summer Storage

Summer Season Period-to-period change	Last Summer 2021 ACTUAL	This Summer 2022 FORECAST
Summer starting point	1,777 Bcf	1,382 Bcf
Average daily injections	8.6 Bcf/d	9.8 Bcf/d
End of injection season	3,634 Bcf	3,478 Bcf

Summer-to-summer pressure on natural gas prices

Data Source: Energy Information Administration and Energy Ventures Analysis.

Natural Gas Supply Association

Summer Outlook: Wild Cards

Global

Weather

COVID

Natural Gas Supply Association

This Season's Summer Outlook

Summer Season Period-to-period change	This Summer 2021-2022 FORECAST
Economy	−
Storage	↑
Weather	↓
Overall demand	↑
Summer supply	↓
Summer-to-summer pressure on natural gas prices	↑

Final Thoughts: Natural Gas Critical to Global Energy Security, Grid Reliability, Industrial Growth, Decarbonization

Production growth rising to challenge

- Production up 10% since summer 2020; up 4% since last summer
- DUCs enabling production to get to market faster as new drilling ramps up
- Regulatory uncertainties about infrastructure

Natural gas pivotal this summer

- Essential to power grid reliability and backstopping renewables
  - Coal retirements, delays in new renewable capacity, Western drought
- Critical to industrial customers to compete globally
- U.S. LNG indispensable to Europe and Asia for energy security, reliability, climate action

Natural Gas Supply Association

About NGSA

- Represents major producers and suppliers of domestic natural gas
  - Integrated and independent companies: 7 members
  - Founded in 1965
- Only national natural gas association representing producers and suppliers with a dedicated focus on downstream issues
- Promotes benefits of competitive natural gas markets
- Combined with the Center for LNG

Natural Gas Supply Association

Contact:

Daphne Magnuson
dmagnuson@ngsa.org
@natgas_ngsa
www.ngsa.org