





1

### Understanding the Symbols


---


 Upward market pressure

---

 Flat market pressure

---

 Downward market pressure

 2019 SUMMER OUTLOOK | 2

2

## 2019 Summer Outlook: Outline

- Looking ahead to Summer 2019
  - Market pressure points:
    - Weather
    - Economy
    - Demand
    - Storage
    - Production
  - Wild card factors
  - Summer expectations
- Summary

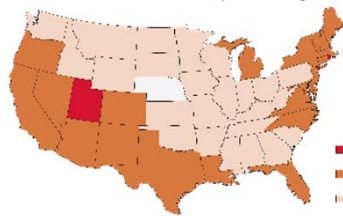


3

## Demand: Summer Weather

**LAST SUMMER**  
2018 (April-October) Actual

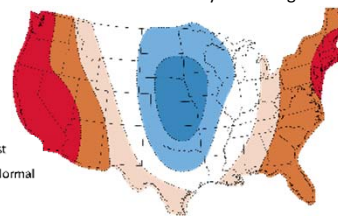
**ACTUAL SEASON (NOAA):**  
11% warmer than previous summer and  
20% warmer than 30-year average



1,477 Cooling degree days (NOAA)

**THIS SUMMER**  
2019 Forecast

**FORECAST:**  
14% cooler than last summer,  
3% warmer than 30-year average



1,272 Cooling degree days

**Summer-to-summer pressure  
on natural gas prices**



4

## Demand: Economy

SUMMER SEASON Period-to-period change	LAST SUMMER 2018 Actual	THIS SUMMER 2019 Forecast
Economy	Solid growth	Steady growth
GDP Growth	2.9%	2.5%
World GDP Growth	3.0%	2.8%
Unemployment Rate	3.9%	3.6%
Manufacturing	2.5%	1.1%
CPI	2.7%	2.3%
Consumer Sentiment Index	98.2	97.7

Summer-to-summer pressure  
on natural gas prices



2019 SUMMER OUTLOOK | 5

Data Source: IHS Markit Macroeconomic Advisers, May 2019

5

## Demand: Customer Demand

SUMMER SEASON Period-to-period Change	LAST SUMMER 2018 Actual	THIS SUMMER 2019 Forecast
<b>Customer Gas Demand</b>	<b>79.6 Bcf/d</b>	<b>82.1 Bcf/d</b>
▪ Electric	32.1 Bcf/d	31.3 Bcf/d
▪ Industrial	21.5 Bcf/d	22.1 Bcf/d
▪ Residential/Commercial	11.9 Bcf/d	11.0 Bcf/d
▪ Pipeline exports - Mexico	4.7 Bcf/d	5.5 Bcf/d
▪ LNG exports (net)	3.3 Bcf/d	6.0 Bcf/d
Change from previous year	+13.4 %	+ 3.1 %
Growth sector	Electric + 16.3%	Exports + 44%

Summer-to-summer pressure  
on natural gas prices

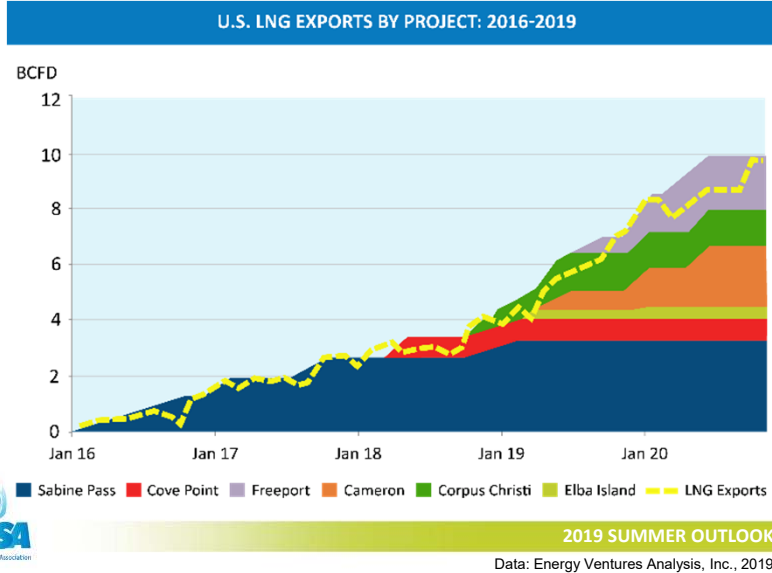


2019 SUMMER OUTLOOK | 6

Data Source: Energy Ventures Analysis, Inc.

6

## Demand: U.S. LNG Exports Grow as Projects Come Online 2016-2020



7

## Focus: Industrial Demand Peak Growth Phase Natural Gas Spurring 80 Major Industrial Projects 2015–2023

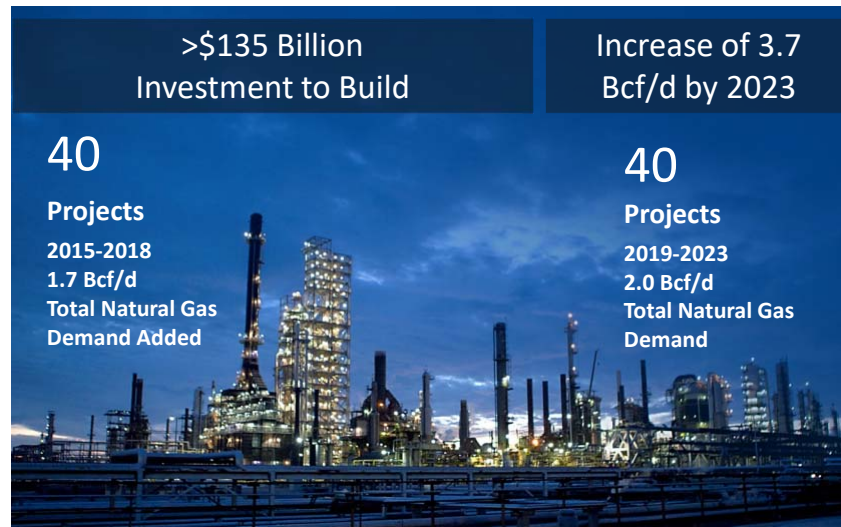


Photo courtesy: Chevron U.S.A. Inc., 2017 (Pascagoula)

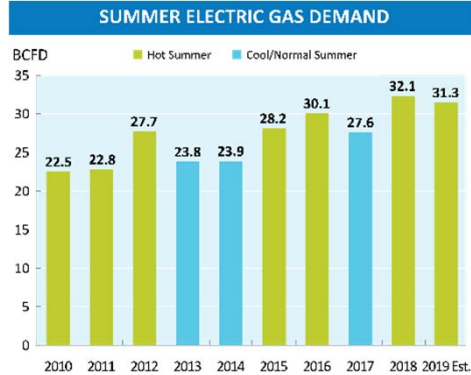
Data Source: Energy Ventures Analysis, May 2019

8

## Power Sector: Increased Natural Gas Burn Due to Permanent Structural Change & Some Temporary Price-driven Switching

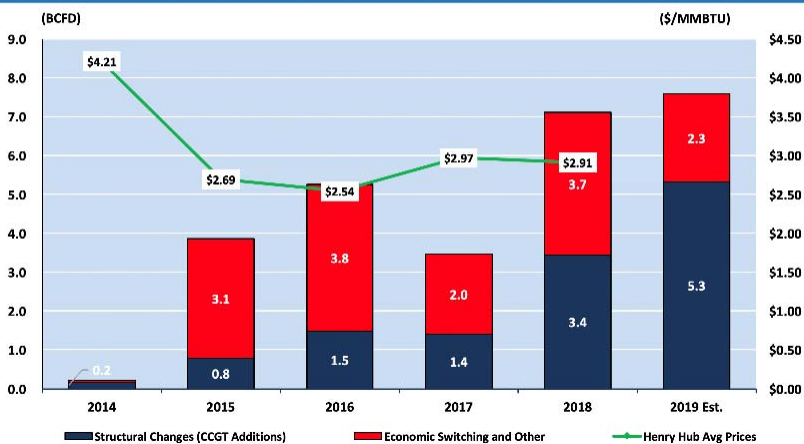
### Substantial Summer Electric Demand Projected

- Strong structural growth this summer
  - Additional 6.1 GW of new natural gas capacity added
- Less temporary economic switching to natural gas
  - The most inefficient coal plants have already retired
  - New wind (11.3 GW) and solar (4.6 GW) acquiring some load



## Electric Demand for Natural Gas in Focus: 2019 Permanent Structural Growth Outpaces Temporary Economic Switching

### WEATHER ADJUSTED SUMMER POWER BURN INCREASE FROM 2013 BASE YEAR



## Demand: Summer Storage

SUMMER SEASON Period-to-period Change	LAST SUMMER 2018 Actual	THIS SUMMER 2019 Forecast
Season starting point	1,391 Bcf	1,130 Bcf
Average weekly injections	60 Bcf	85 Bcf
End of injection season	3,247 Bcf	3,745 Bcf Projected

Summer-to-summer pressure  
on natural gas prices



11

## Supply: Summer Production – RECORD PRODUCTION

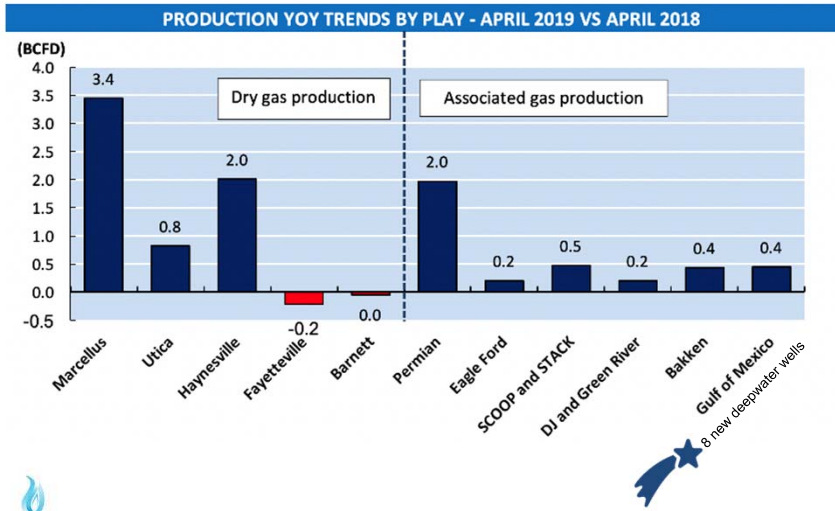
SUMMER SEASON Period-to-period change	LAST SUMMER 2018 Actual	THIS SUMMER 2019 Forecast
Summer average production (Lower 48)	82.6 Bcf/d	89.4 Bcf/d
Canadian imports (net)	5.4 Bcf/d	4.7 Bcf/d

Summer-to-summer pressure  
on natural gas prices



12

## Focus on Supply: Diverse Production April 2018-April 2019 Dry & Associated Gas Increase Including 8 Major Deepwater Projects

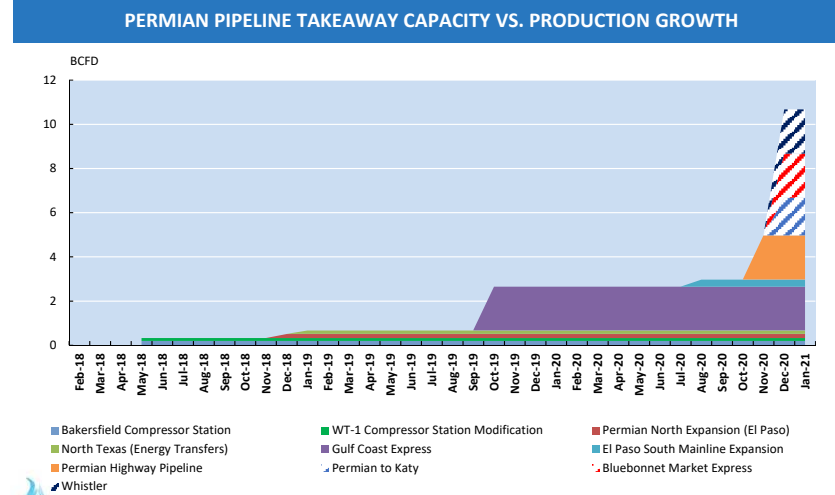


2019 SUMMER OUTLOOK | 13

Data Source: Energy Ventures Analysis, Inc.

13

## Focus on Supply: New Takeaway Capacity 2019-2020 Brings Long-awaited Relief to Permian



2019 SUMMER OUTLOOK | 14

Data Source: Energy Ventures Analysis, Inc.

14

## Summer Outlook: Wild Cards

- Hurricane activity
- Tariff impact on industrial sector
- Stable market provides buffer from most wild cards



## This Season's Summer Outlook

SUMMER SEASON Period-to-period Change	THIS SUMMER 2019 Forecast
Weather	∨
Economy	—
Overall demand	—
Storage	∧
Summer production	∨
Summer-to summer pressure on natural gas prices	—





## Natural Gas Outlook: Summer of Flexibility

- Huge production growth
  - Associated gas significant contributor due to value of oil, NGLs
  - Efficiencies in drilling and production make wells more productive at lower cost
  - Pipeline infrastructure expansions provide greater deliverability
  - Deepwater projects contribute to overall supply diversity
- Summer (April-October) demand growth
  - Driven by exports and new industrial projects
  - Moderated by more normal summer temperatures impact on electric and residential/commercial sectors
- Exports provide growth, stability to market
  - Welcome outlet for strong production
- Overall, stable natural gas outlook for consumers and a diverse market for producers



## About NGSA

- Represents major producers and suppliers of domestic natural gas
  - Integrated and independent companies: 14 members
- Promotes benefits of competitive natural gas markets, reliable and efficient transportation and delivery, benefiting customers and suppliers of natural gas
- Only Washington, D.C. natural gas association with a dedicated focus on downstream gas industry issues
- Includes the Center for LNG



