NGSA

Natural Gas Supply Association

2016-2017 Winter Outlook

Markets Matter

www.ngsa.org

About NGSA

- Represents major producers and suppliers of domestic natural gas
  - Integrated and independent companies: 14 members
  - Founded in 1965
- Only DC-based natural gas association representing producers and suppliers with a dedicated focus on downstream issues
- Promotes benefits of competitive natural gas markets, resulting in reliable and efficient transportation and delivery, increased supply and demand
- Combined with the Center for LNG

Understanding the Symbols

^	Upward market pressure
—	Flat market pressure
⌄	Downward market pressure

Last Year's Projection: How Did We Score?

Predicted	Actual	Score

Key Factor:

Second Warmest Winter Heating Season on Record

Data Source: Energy Information Administration

2016-2017 Winter Outlook: Outline

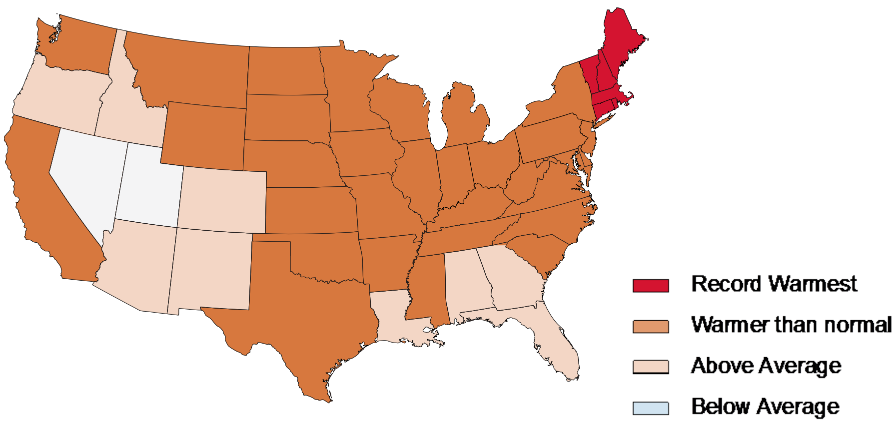
- Looking ahead to Winter 2016-2017
  - Market pressure points:
    - Weather
    - Economy
    - Demand
    - Storage
    - Production
  - Wild card factors
  - Winter expectations
- Summary

Demand: Winter Weather

Last Winter: Nov. – March 2015-2016 ACTUAL	This Winter 2016-2017 FORECAST

Actual season (NOAA):

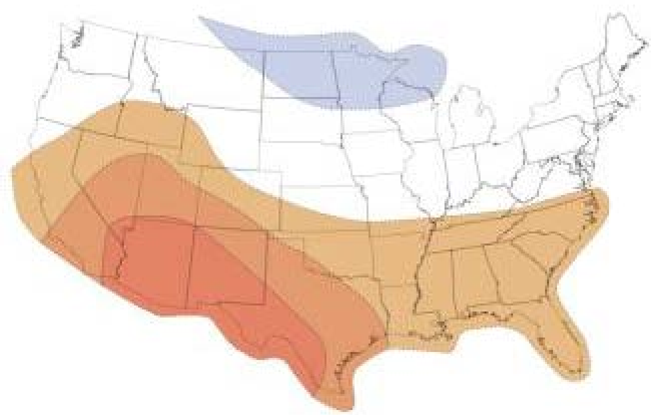
17% warmer than previous winter and
13% warmer than 30-year average



3,042 Heating degree days (NOAA)

Forecast:

12% *colder* than last year,
3% warmer than 30-year average



3,408 Heating degree days

Winter-to-winter pressure on natural gas prices

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Data Sources: National Oceanic and Atmospheric Administration, Energy Ventures Analysis

Demand: Economy

Winter Season Period-to-period change	Last Winter 2015-2016 ACTUAL	This Winter 2016-2017 FORECAST
Economy	Slow	Still sluggish
GDP growth	1.7%	2.1%
Unemployment rate	5.0%	4.9%
Manufacturing	0.2%	0.7%
CPI	0.7%	2.1%
Consumer Sentiment Index	91.4	91.9

Winter-to-winter pressure on natural gas prices

Data Source: IHS Economics

Demand: Customer Demand

Winter Season Period-to-period change	Last Winter 2015-2016 ACTUAL	This Winter 2016-2017 FORECAST
Customer Gas Demand*	**89.1 Bcf/d**	**92.3 Bcf/d**
▪ Electric	24.5 Bcf/d	21.2 Bcf/d
▪ Industrial	22.2 Bcf/d	22.9 Bcf/d
▪ Residential/Commercial	32.2 Bcf/d	36.2 Bcf/d
▪ Mexican exports	3.2 Bcf/d	4.0 Bcf/d
▪ LNG exports	NA	0.8 Bcf/d
Growth sector	Electric	Residential + 12%

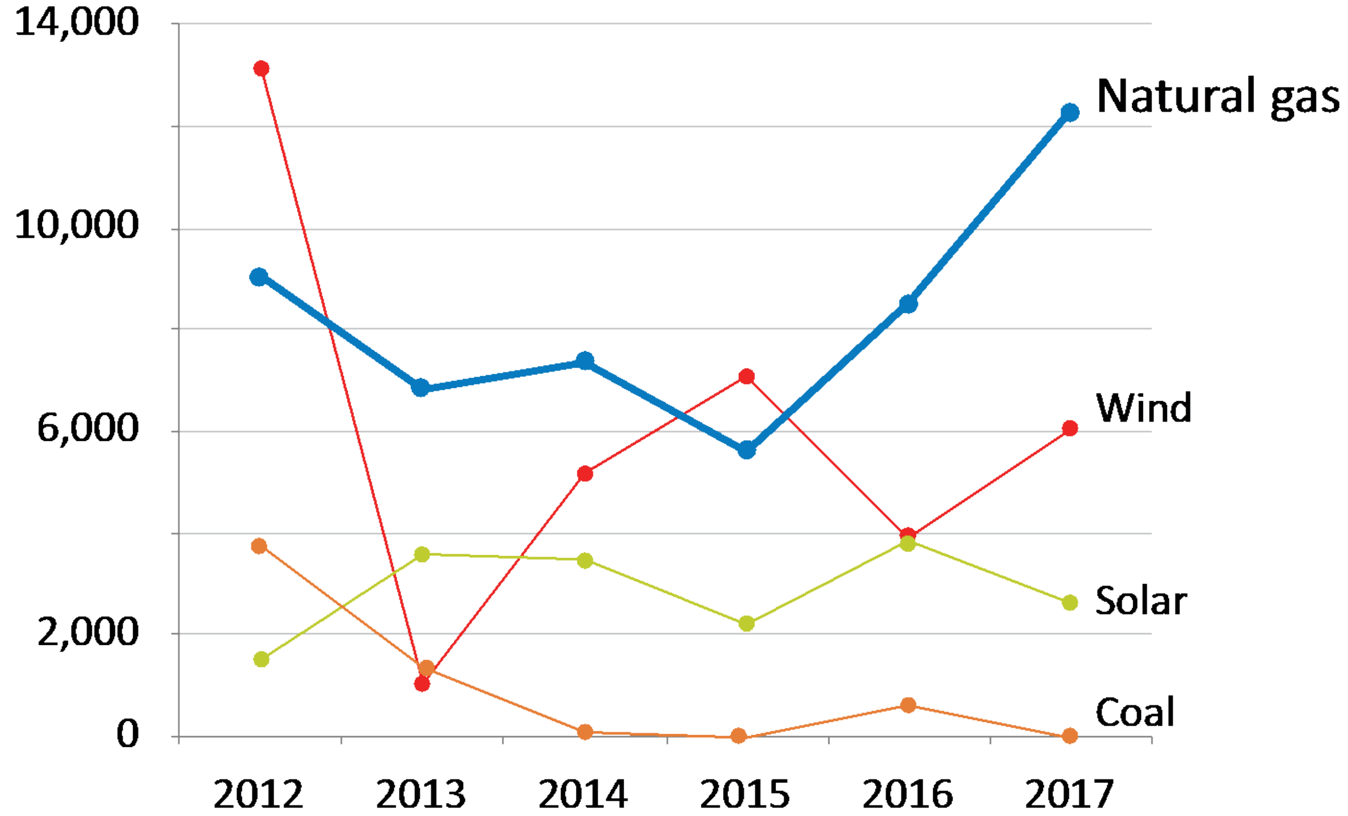
Winter-to-winter pressure on natural gas prices

*Includes "Lease, Plant and Pipeline Fuel"

Data Source: Energy Information Administration

Focus on New Electric Generation Capacity:

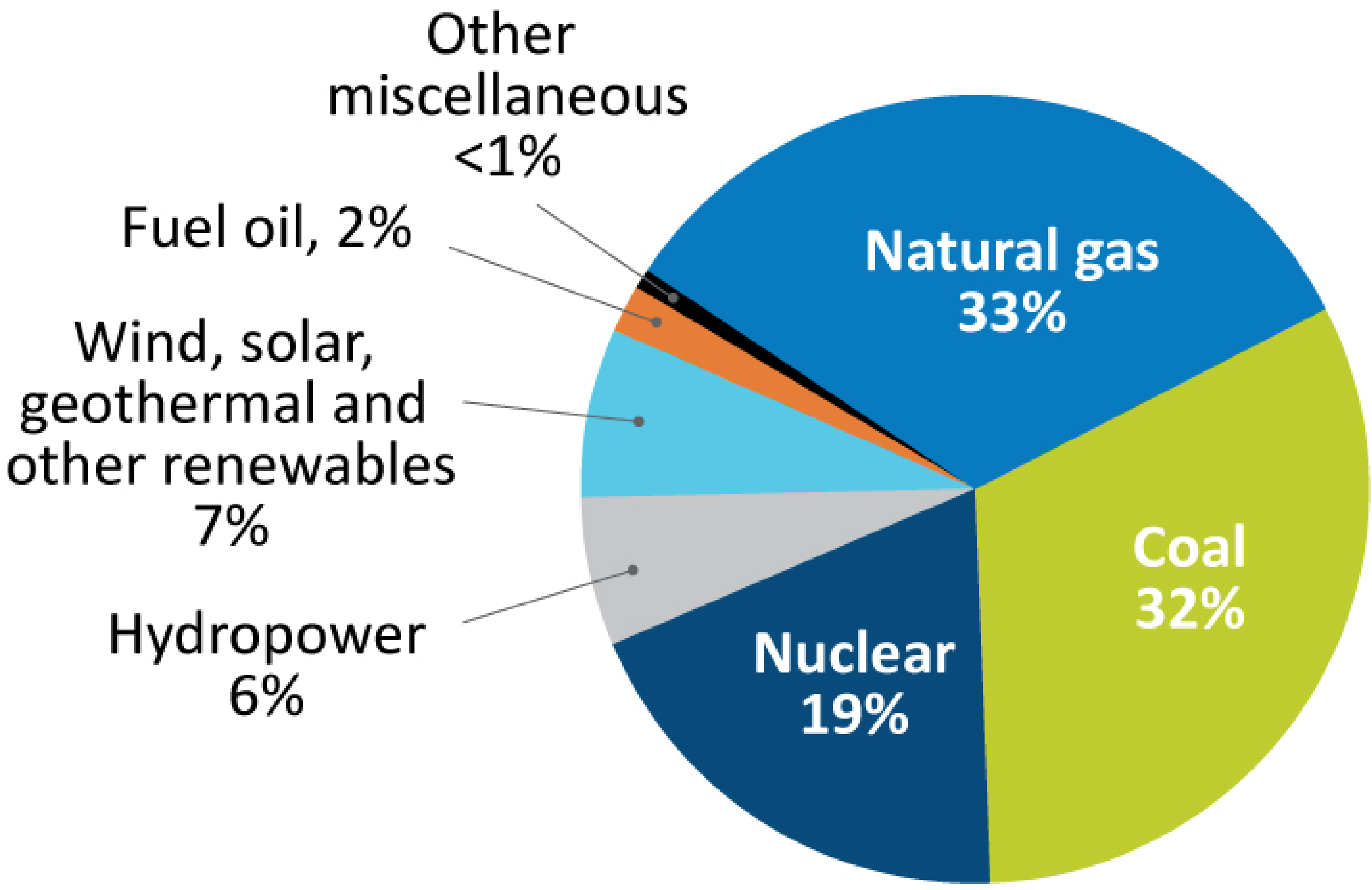
New Electric Generation Mostly Natural Gas; Renewables Also on Rise



*2016 and 2017 wind figures are conservatively estimated by EVA

Data Source: Energy Ventures Analysis

2015 Electricity Fuel Mix



Data Source: Edison Electric Institute, 2016. Industry Data and Analysis, Industry Data "2015 Fuel Mix."

Focus On Industrial Demand:

Natural Gas Spurring 71 Major Industrial Projects 2015–2021

Photo courtesy: Chevron U.S.A. Inc., 2015 (Pascagoula)

Data Source: Energy Ventures Analysis, June 2015

Supply: Winter Storage

Winter Season Period-to-period change	Last Winter 2015-2016 ACTUAL	This Winter 2016-2017 FORECAST
Start-of-winter inventory	3,950 Bcf	3,995 Bcf
Compared to 5-year average (Percent of total storage inventory)	1% greater	3% greater
New storage capacity	7 Bcf	Est. 0 Bcf

Winter-to-winter pressure on natural gas prices

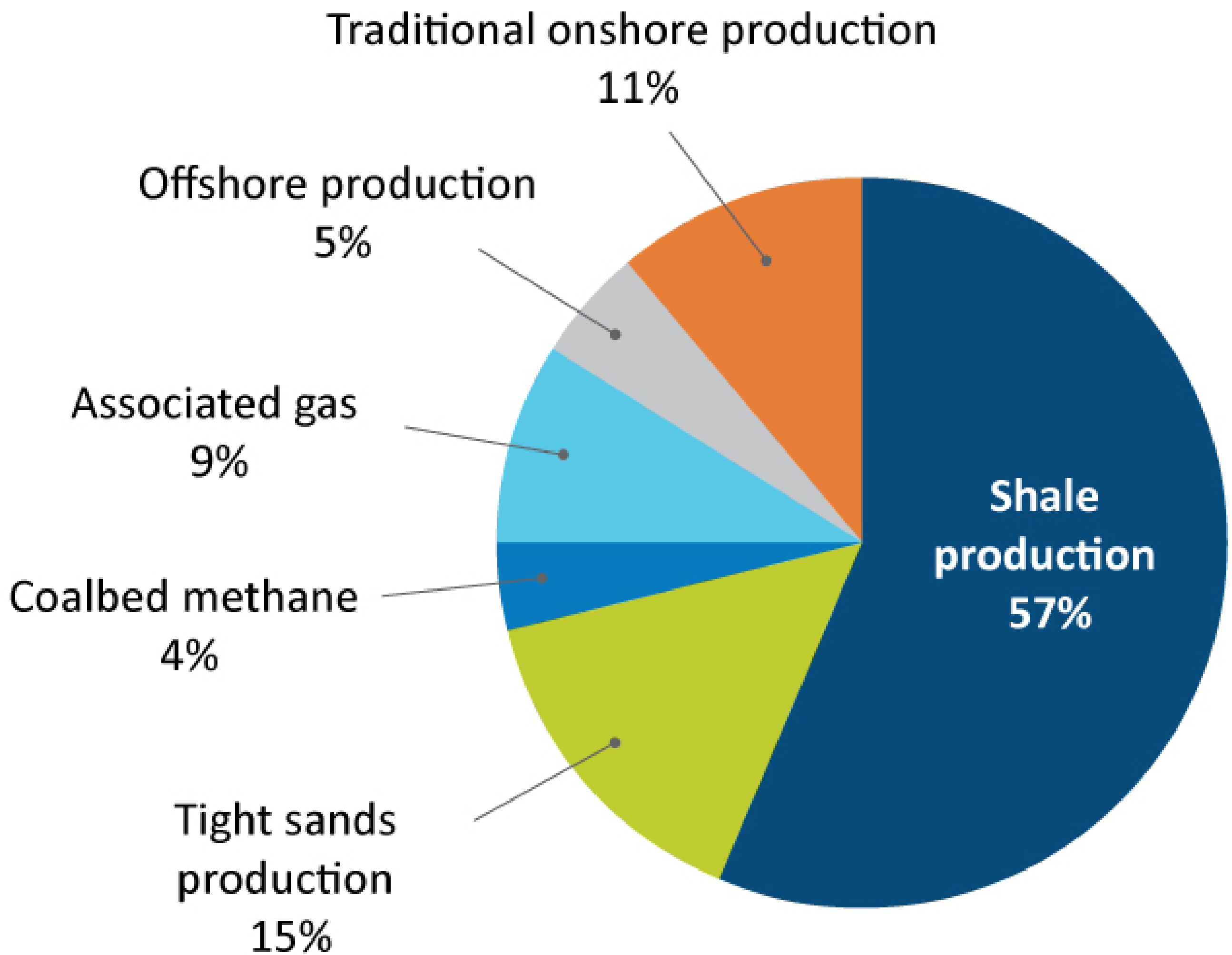
Data Sources: Energy Information Administration and Energy Ventures Analysis

Supply: Winter Sources

Winter Season Period-to-period change	Last Winter 2015-2016 ACTUAL	This Winter 2016-2017 FORECAST
Winter average production (Lower 48)	73.5 Bcf/d	73.0 Bcf/d
Canadian imports (net)	5.5 Bcf/d	5.5 Bcf/d
Winter-to-Winter pressure on natural gas prices		—

Data Source: Energy Ventures Analysis

Focus On Supply Flexibility and Responsiveness:
Winter Production From Shale and Diverse Sources



Winter Outlook: Wild Cards

This Season's Winter Outlook

Winter Season Period-to-period change	This Winter 2016-2017 FORECAST
Weather	^
Economy	—
Overall demand	^
Storage	—
Winter supply	—
Winter-to-winter pressure on natural gas prices	^

Natural Gas Outlook: Responsive, Flexible Gas Market

- Robust winter supply
  - Efficiencies in drilling and production continue to make wells more productive at lower cost
  - Diverse supply sources contribute to greater flexibility
  - Storage inventory forecast to reach record levels provides further flexibility

- Residential/commercial demand increases due to colder weather

- Industrial demand buoyed by new builds in petrochemical, fertilizer sectors

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