



2015-2016 Winter Outlook

Markets Matter

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About NGSA

- Represents major producers and suppliers of domestic natural gas
 - Integrated and independent companies: 16 members
- Promotes benefits of competitive natural gas markets, resulting in reliable and efficient transportation and delivery, increased supply and demand
- Celebrating 50th Anniversary in 2015

Understanding the Symbols



Upward market pressure



Flat market pressure



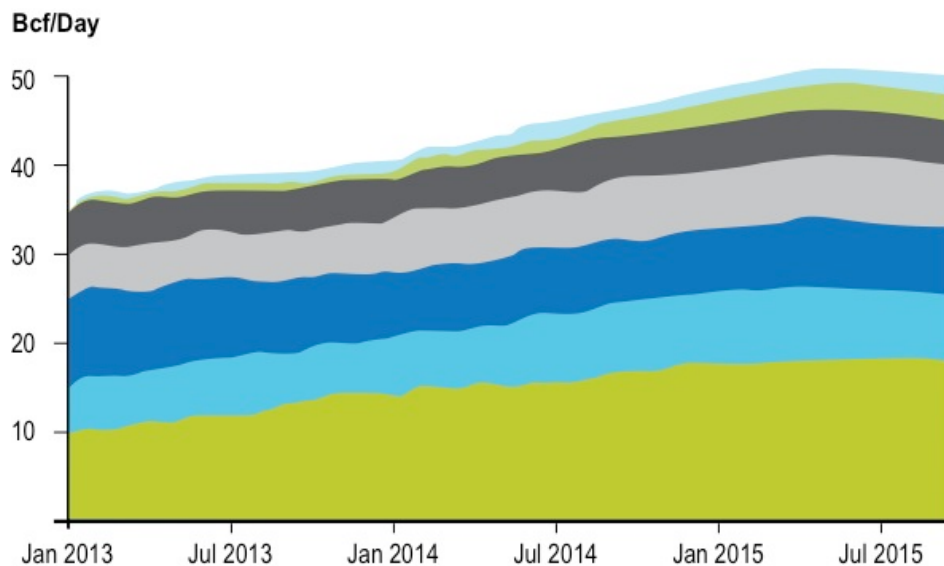
Downward market pressure

Last Year's Projection: How Did We Score?

Predicted	Actual	Score
▼	▼	☑

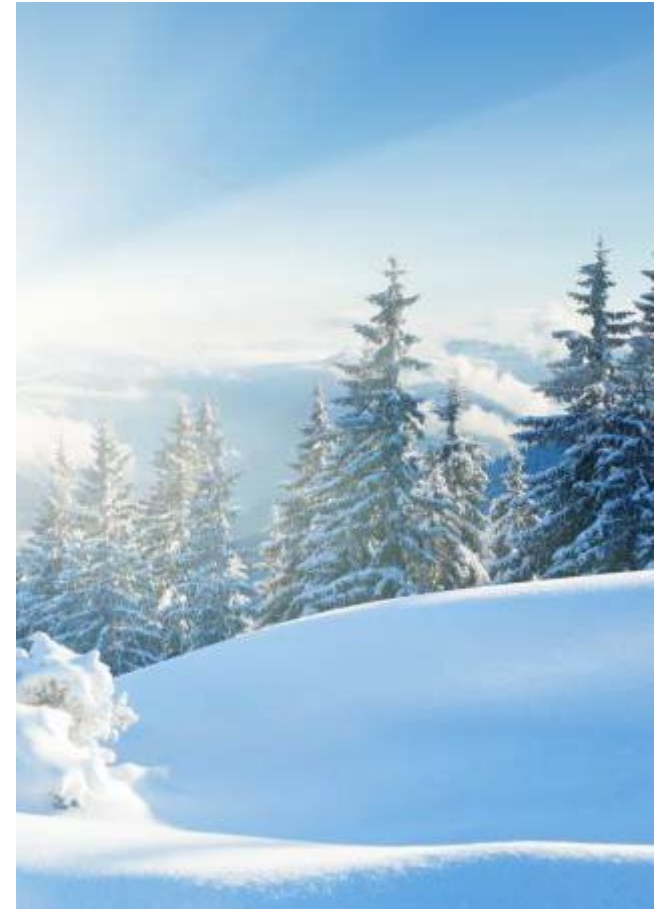
Key influence last winter: record production

Monthly production in 7 major shale plays: Jan 2013 – Sept 2015



2015-2016 Winter Outlook: **Outline**

- Looking ahead to Winter 2015-2016
 - Market pressure points:
 - Weather
 - Economy
 - Demand
 - Storage
 - Production
 - Wild card factors
 - Winter expectations
- Summary



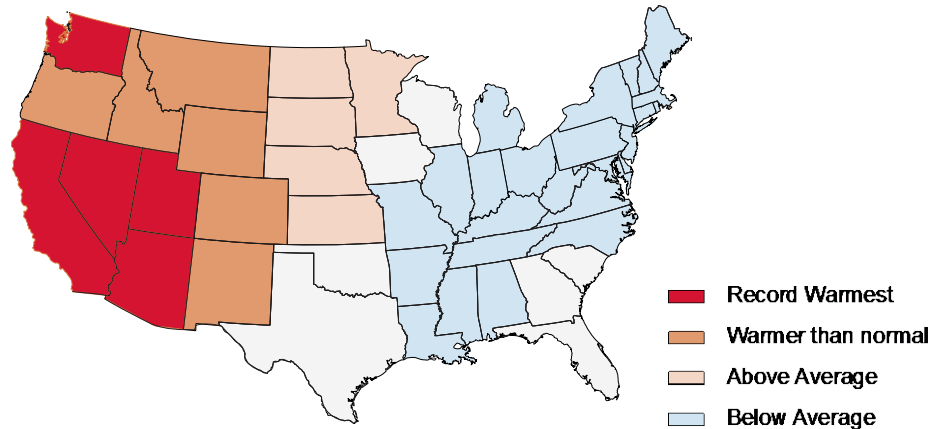
Demand: Winter Weather

Last Winter: Nov. – March
2014-2015 ACTUAL

This Winter
2015-2016 FORECAST

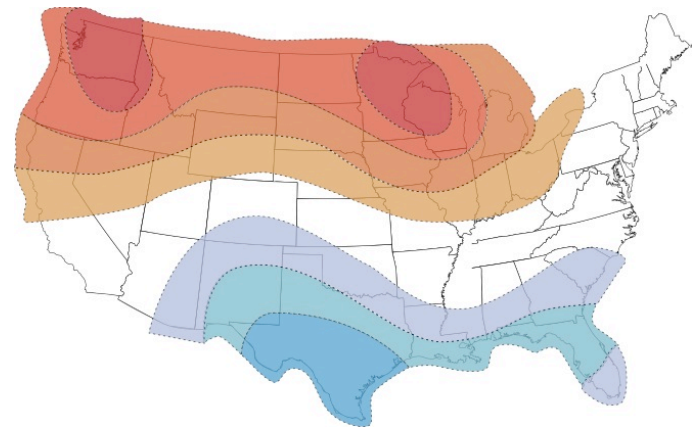
Actual season (NOAA):

5% warmer than previous winter and
4% colder than 30-year average



3,685 Heating degree days (NOAA)

7% warmer than last year,
3% warmer than 30-year average



3,432 Heating degree days

Winter-to-winter pressure
on natural gas prices



Demand: **Economy**

Winter Season Period-to-period change	Last Winter 2014-2015 ACTUAL	This Winter 2015-2016 FORECAST
Economy	Solid growth	Weaker growth
GDP growth	2.7%	2.5%
Unemployment rate	5.6%	5.2%
Manufacturing	3.3%	0.7%
CPI	0.6%	0.8%
Consumer Sentiment Index	92.6	94.2

**Winter-to-winter pressure
on natural gas prices**

Demand: Customer Demand

Winter Season Period-to-period change	Last Winter 2014-2015 ACTUAL	This Winter 2015-2016 FORECAST
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Customer Gas Demand

- Electric
- Industrial
- Residential/Commercial

91.5 Bcf/d

22.0 Bcf/d

22.6 Bcf/d

39.4 Bcf/d

90.2 Bcf/d

23.1 Bcf/d

22.8 Bcf/d

36.9 Bcf/d

Growth sector

Electric

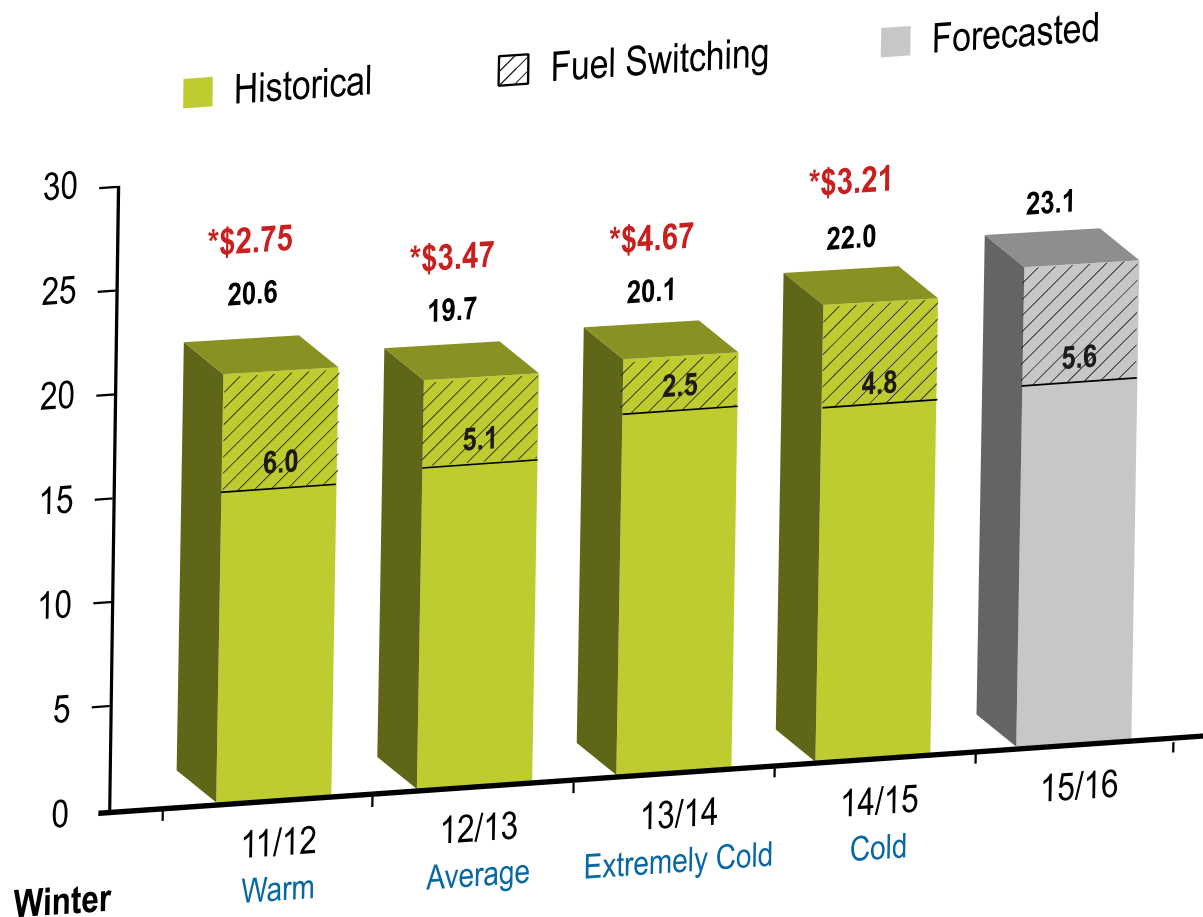
Electric
+ 5%

Winter-to-winter pressure
on natural gas prices



Focus On Electric Demand: Temporary Fuel Switching

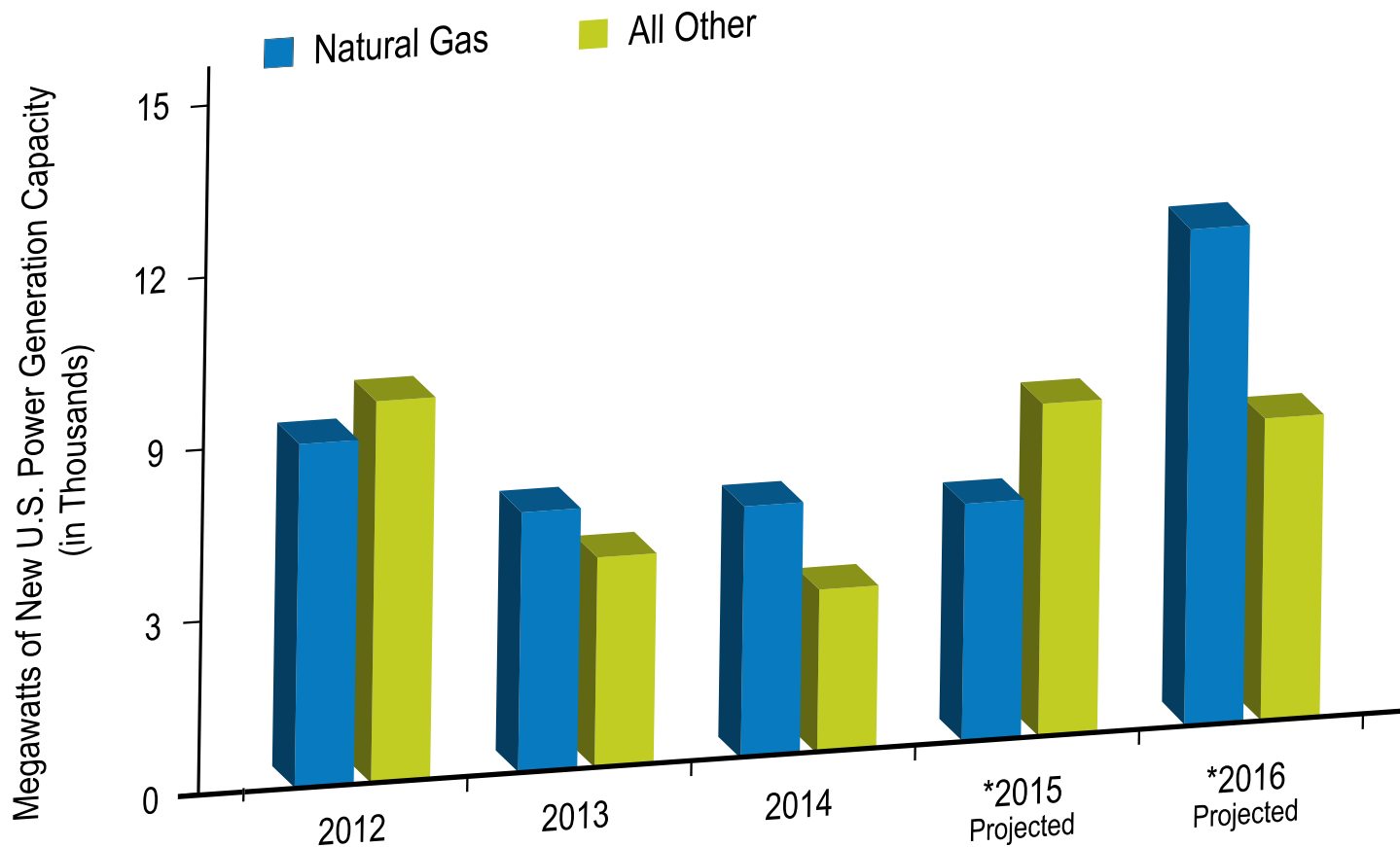
Temporary Seasonal Fuel Switching - Driven by Price



Focus On Electric Demand:

New Gas-fired Generation Counter-balances Warmer Winter

Building New Gas-fired Generation Dominates Fuel Choices



Focus On Industrial Demand: Natural Gas Spurring 66 Major Industrial Projects 2015–2020

\$117 Billion Investment to Build

Increase of 3.9 Bcf/d

51

New Projects

37 Petrochemical
11 Fertilizer
3 Steel

15

Expansions

11 Petrochemical
4 Fertilizer



Supply: Winter Storage

Winter Season Period-to-period change	Last Winter 2014-2015 ACTUAL	This Winter 2015-2016 FORECAST
End of injection season	3,590 Bcf	3,950 Bcf
Compared to 5-year average (Percent of total storage inventory)	91%	101%
New storage capacity	3 Bcf	Est. 10 Bcf

**Winter-to-winter pressure
on natural gas prices**



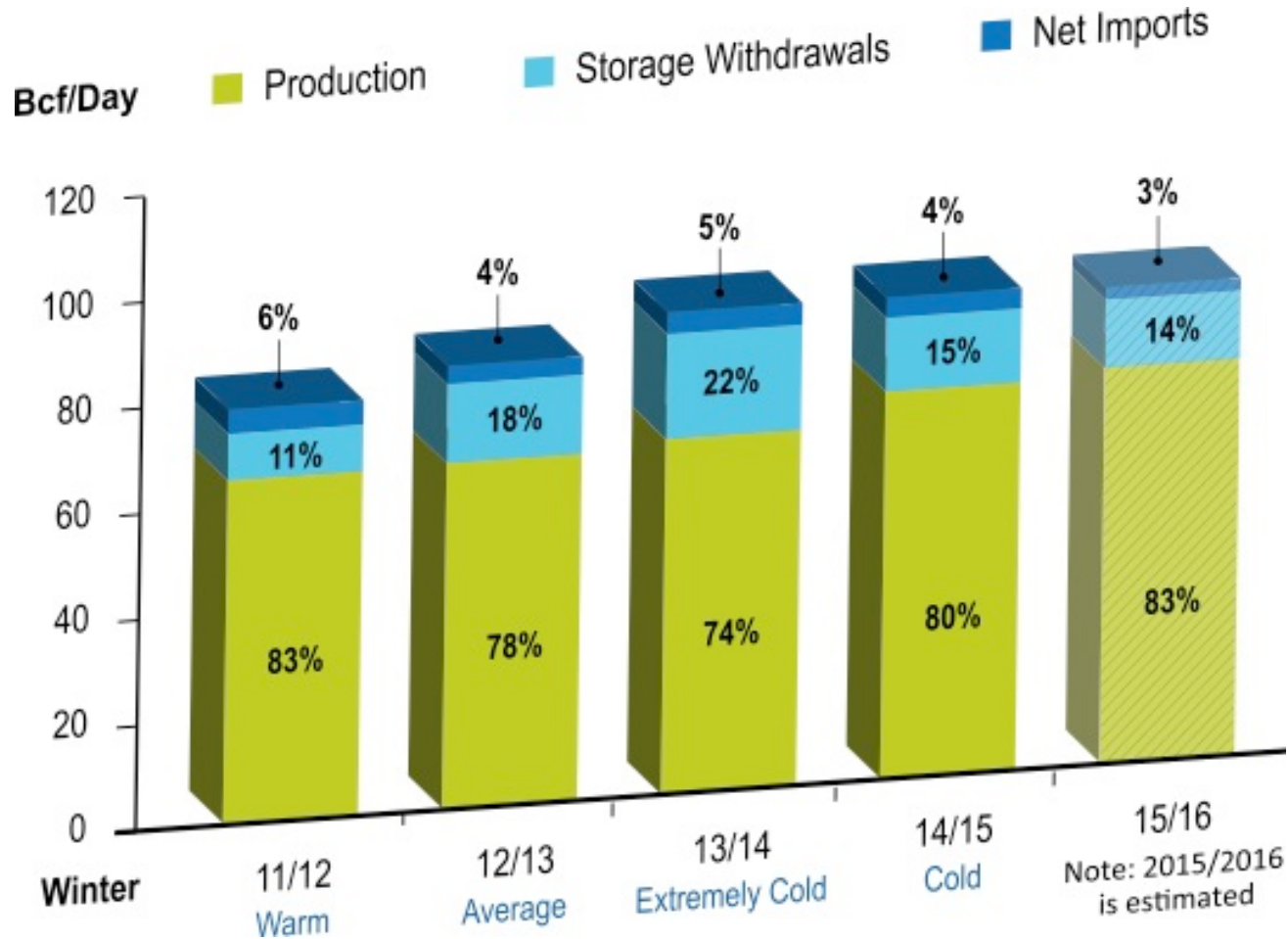
Supply: Winter Production

Winter Season Period-to-period change	Last Winter 2014-2015 ACTUAL	This Winter 2015-2016 FORECAST
Annual natural gas well completions (Lower 48)	7,253	4,870
Winter average production (Lower 48)	73.0 Bcf/d	74.4 Bcf/d
Canadian imports (net)	+ 5.7	+ 5.6
LNG imports (net)	+ 0.3	- 0.1
Mexican exports (net)	- 2.2	- 3.2

**Winter-to-winter pressure
on natural gas prices**



Focus On Supply Flexibility and Responsiveness: Record-setting Winter Production Continues; Storage Contributes



Winter Outlook: **Wild Cards**

- Unexpected cold – or warm – snaps
- Global economy impacts industrial growth
- Pipeline operational issues

This Season's Winter Outlook

Winter Season Period-to-period change	This Winter 2015-2016 FORECAST
Weather	∨
Economy	—
Overall demand	—
Storage	∨
Winter production	—
Winter-to-winter pressure on natural gas prices	—

Natural Gas Outlook: **Winter of Contrasts**

- Record winter supply
 - Efficiencies in drilling and production make wells more productive at lower cost
 - Pipeline infrastructure expansions provide greater flexibility
- Winter electric demand growth – despite forecast for warmer-than-average winter weather
 - Due to temporary fuel-switching and long-term structural shift
- Industrial demand buoyed by capacity expansions and new builds in petrochemical, fertilizer and steel sectors
- Storage inventory at or near record levels
- Overall, stable natural gas outlook for consumers



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