



# 2016 Summer Outlook

## Markets Matter

[www.ngsa.org](http://www.ngsa.org)

# About NGSA

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- Represents major producers and suppliers of domestic natural gas
  - Integrated and independent companies: 14 members
- Promotes benefits of competitive natural gas markets, resulting in reliable and efficient transportation and delivery, increased supply and demand
- Only Washington, D.C. natural gas association with a dedicated focus on upstream gas industry issues
- Combined with the Center for LNG in 2015

# Understanding the Symbols

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Upward market pressure

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Flat market pressure

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Downward market pressure

# Last Year's Projection: How Did We Score?

Predicted	Actual	Score
▼	▼	☑

## Key influence last summer: Ample production and high storage inventory

- Summer 2015 average production 4 Bcf/day higher than previous summer
- Storage entered injection season 73% higher than previous summer



# 2016 Summer Outlook: Outline

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



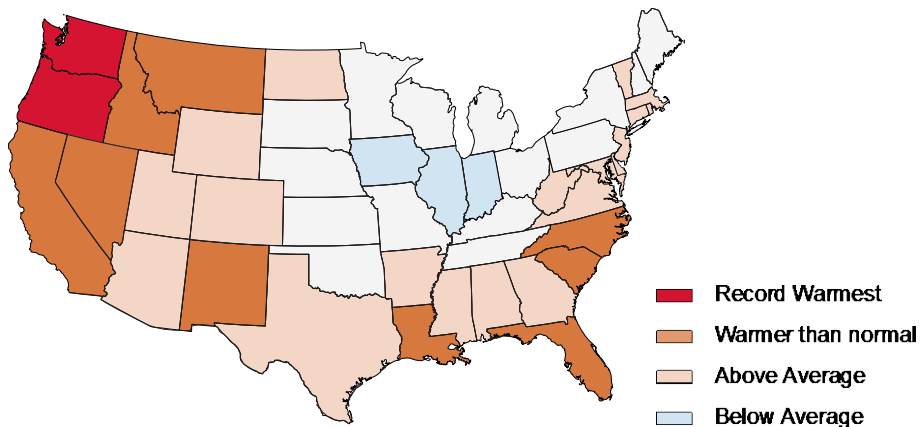
# Demand: Summer Weather

## Last Summer

2015 (April-October) ACTUAL

Actual season (NOAA):

10% warmer than summer 2014 and  
10% warmer than 30-year average



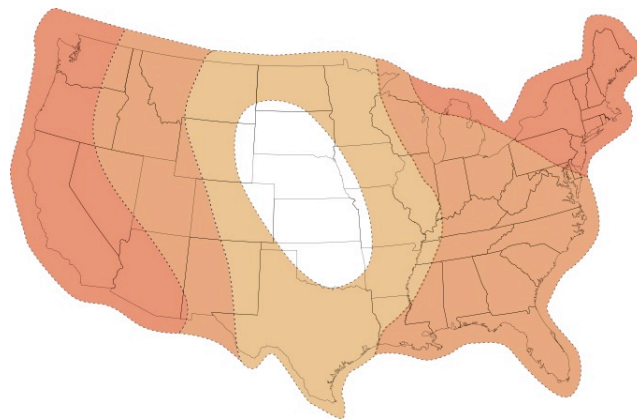
1,373 Cooling degree days (NOAA)

## This Summer

2016 FORECAST

Forecast:

3% cooler than last summer,  
8% warmer than 30-year average



1,339 Cooling degree days

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

# Demand: Economy

Summer Season Period-to-period change	Last Summer 2015 ACTUAL	This Summer 2016 FORECAST
Economy	Modest growth	Lackluster growth
GDP growth	2.4%	1.4%
Unemployment rate	5.3%	4.9%
Manufacturing	0.7%	-0.1%
CPI	0.1%	0.8%
Consumer Sentiment Index	92.5	91.3

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





# Demand: Customer Demand

Summer Season Period-to-period change	Last Summer 2015 ACTUAL	This Summer 2016 FORECAST
<b>Customer Gas Demand</b>	<b>65.1 Bcf/d</b>	<b>69.2 Bcf/d</b>
<ul style="list-style-type: none"> <li>■ Electric</li> <li>■ Industrial</li> <li>■ Residential/Commercial</li> </ul>	28.5 Bcf/d 19.5 Bcf/d 10.7 Bcf/d	31.6 Bcf/d 19.8 Bcf/d 11.0 Bcf/d
Change from previous year	+ 6 %	+ 6 %
Growth sector	Electric +18%	Electric + 11%

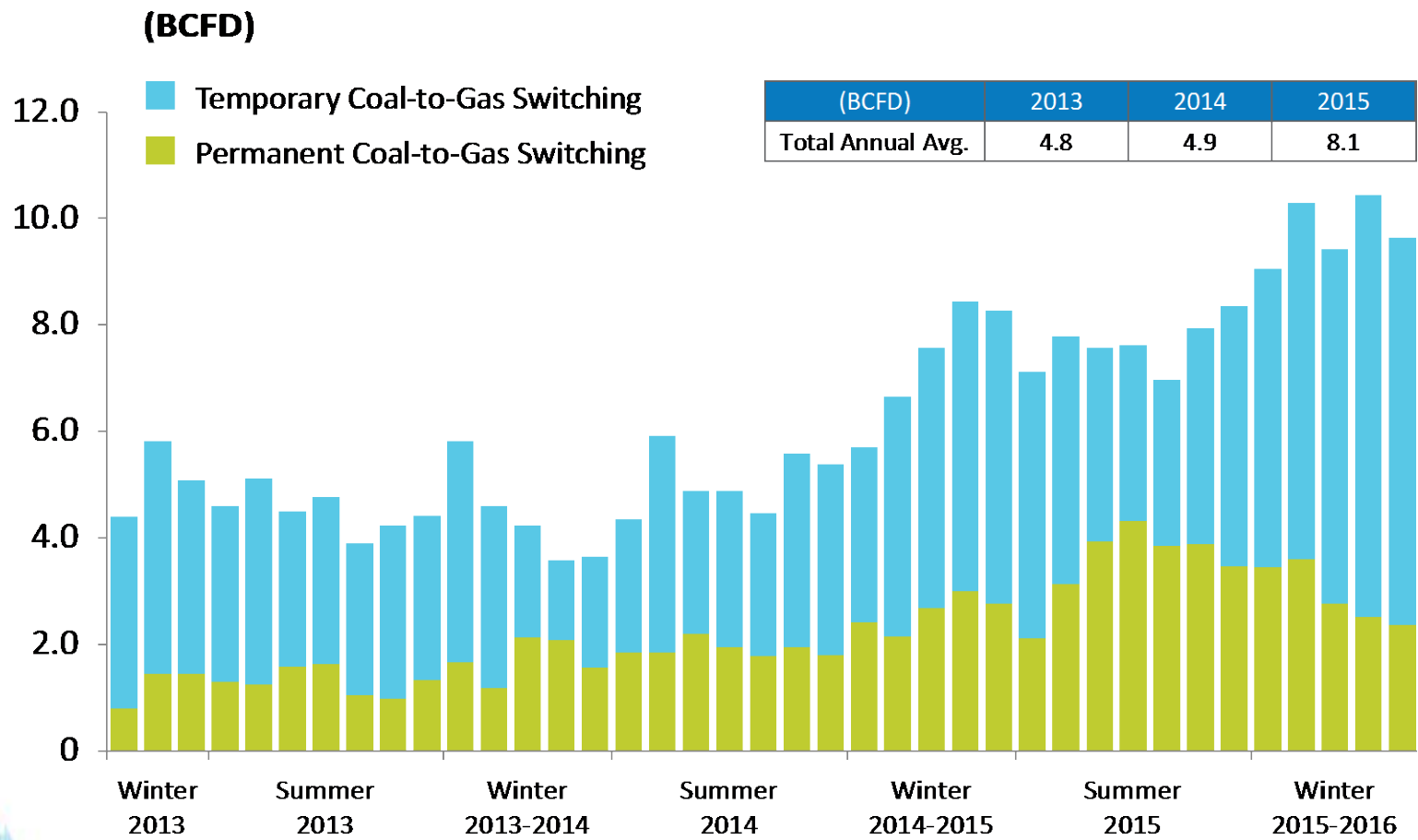
**Summer-to-summer pressure  
on natural gas prices**





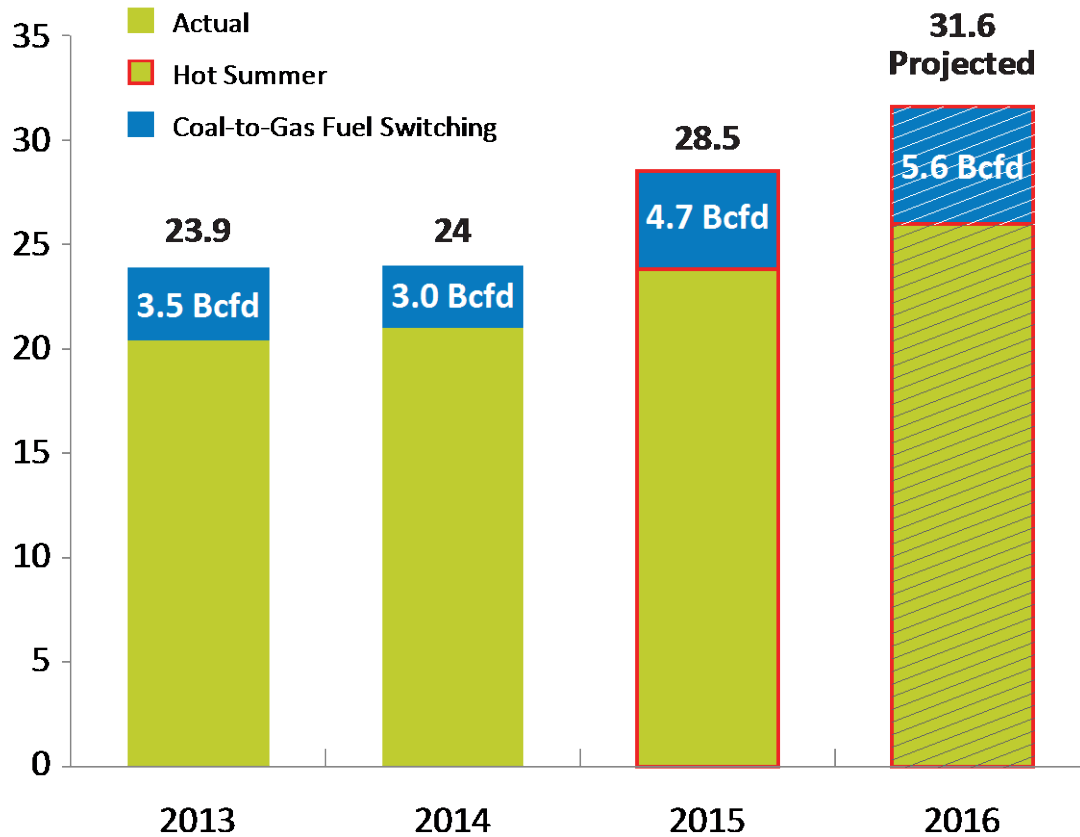
# Electric Demand:

## Coal-to-Gas Switching Driven by Permanent Structural Change *and* Temporary Price-driven Change



# Focus on Electric Demand:

## Temporary price-driven fuel switching this summer compared to recent summers



Note: 2015 was a very hot summer. Coal-to-gas switching in 2016 is forecasted.

# Focus On Industrial Demand:

Natural Gas Spurring 67 Major Industrial Projects 2015–2020

*Excludes \$17 Billion for the 39 additional projects built 2010-2014*

\$111 Billion Investment to Build

Increase of 4.1 Bcf/d

54

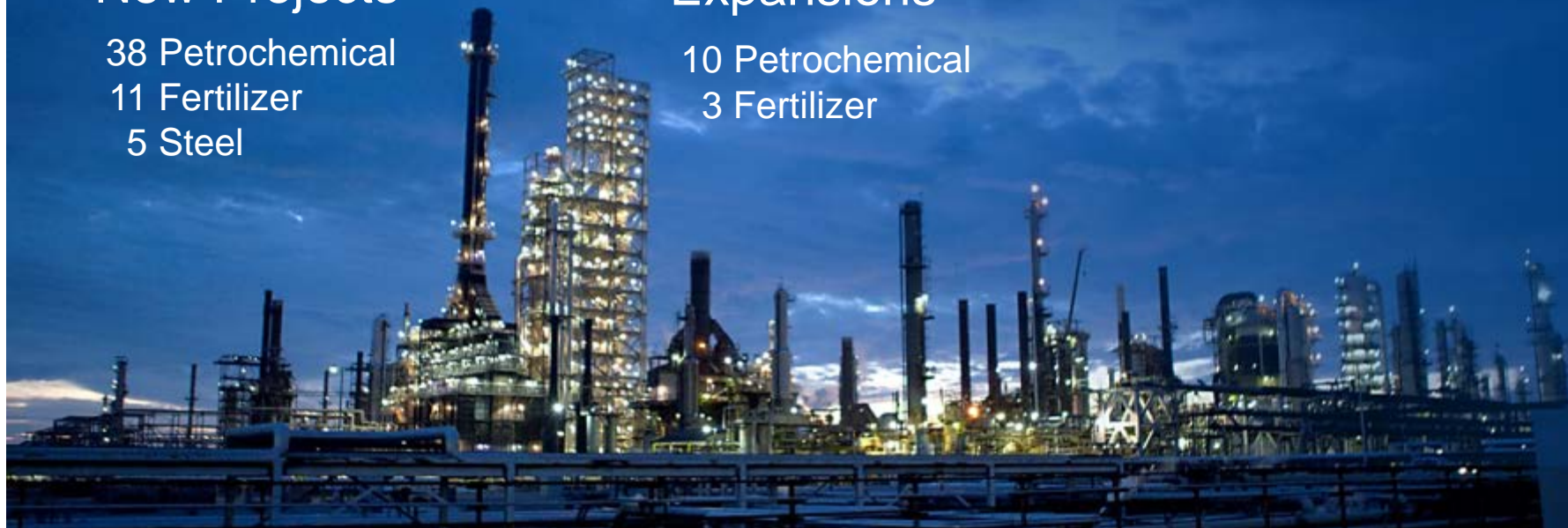
New Projects

38 Petrochemical  
11 Fertilizer  
5 Steel

13

Expansions

10 Petrochemical  
3 Fertilizer



# Demand: Summer Storage

Summer Season Period-to-period change	Last Summer 2015 ACTUAL	This Summer 2016 FORECAST
Season starting point	1,483 Bcf	2,478 Bcf
Average weekly injections	81 Bcf	44 Bcf
End of injection season	3,953 Bcf	3,875 Bcf projected

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



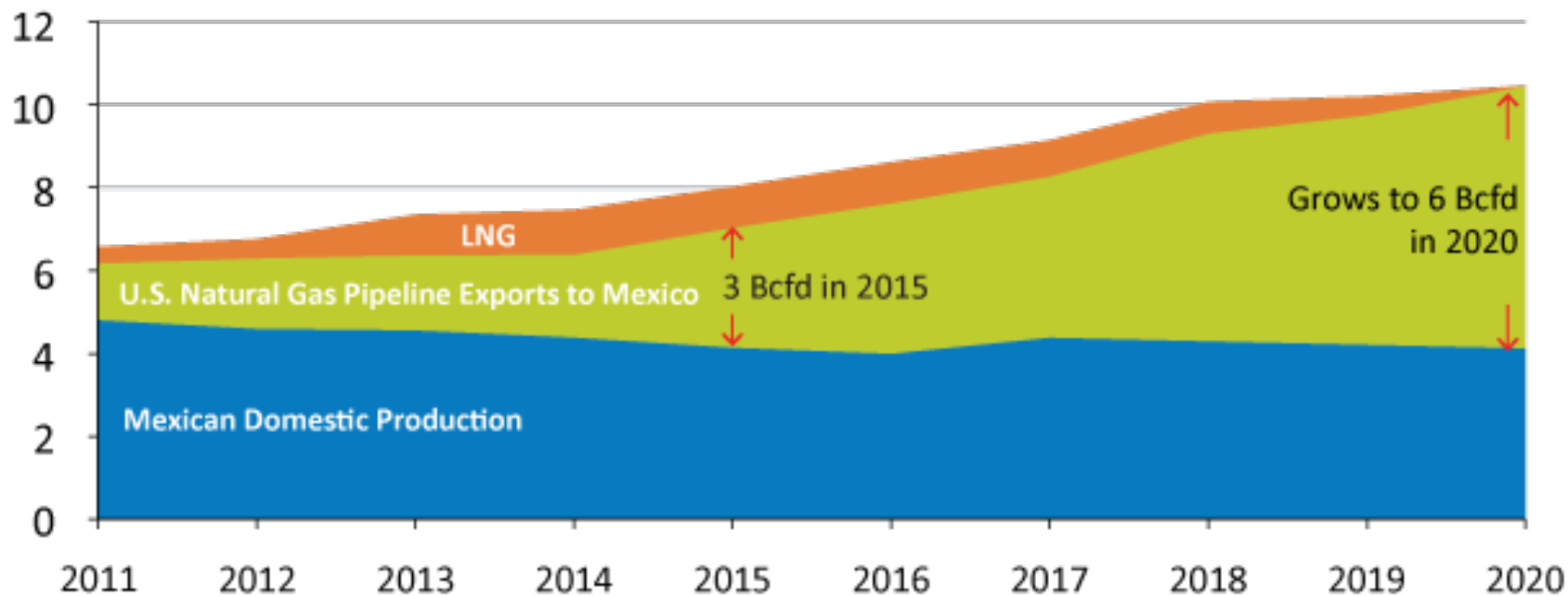
# Supply: Summer Production

Summer Season Period-to-period change	Last Summer 2015 ACTUAL	This Summer 2016 FORECAST
Summer average production (Lower 48)	74.6 Bcf/d	74.7 Bcf/d
Canadian imports (net)	5.1 Bcf/d	5.3 Bcf/d
LNG (net)	0.1 <i>Imports</i>	0.2 <i>Exports</i>
Mexican exports (net)	- 3.1	- 4.0

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



# Demand: Mexican demand for U.S. pipeline exports expected to double from 2015-2020



Note: Mexican natural gas supply sources 2011-2020.

# Summer Outlook: **Wild Cards**

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- Mixed forecasts on summer hurricane activity
- Stable market provides buffer from most wild cards





# This Season's Summer Outlook

Summer Season Period-to-period change	This Summer 2016 FORECAST
Weather	—
Economy	∨
Overall demand	∧
Storage	∨∨
Summer production	—
<b>Summer-to summer pressure on natural gas prices</b>	∨

# Natural Gas Outlook: Summer of Flexibility

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- Summer electric demand growth
  - Due to temporary fuel-switching and long-term structural shift
- Industrial demand grows slightly
  - Sluggish global demand for manufacturing products is offset by new builds in petrochemical, fertilizer and steel sectors
- Ample summer supply
  - Efficiencies in drilling and production make wells more productive at lower cost
  - Offshore wells and completion of drilled and uncompleted wells (DUCs) also sustain high levels of production
  - Pipeline infrastructure expansions provide greater flexibility
- Overall, stable natural gas outlook for consumers



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