

# **OE ENERGY MARKET SNAPSHOT**

## **National – Data Through March 2015**

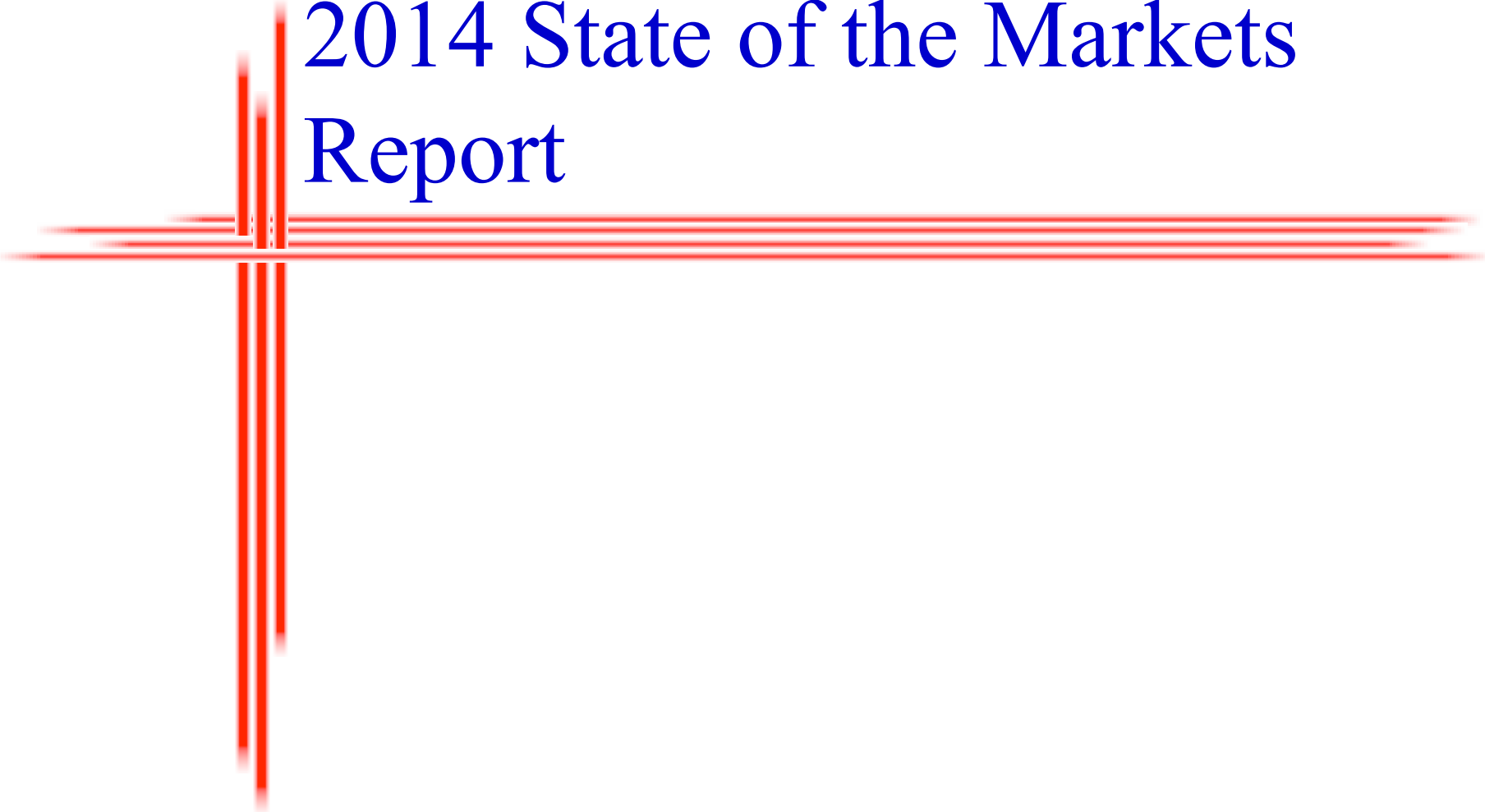
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Office of Enforcement  
Federal Energy Regulatory Commission  
April 2015

# Agenda

- 2014 State of the Markets
- National Slides
- Infrastructure Report

# 2014 State of the Markets Report

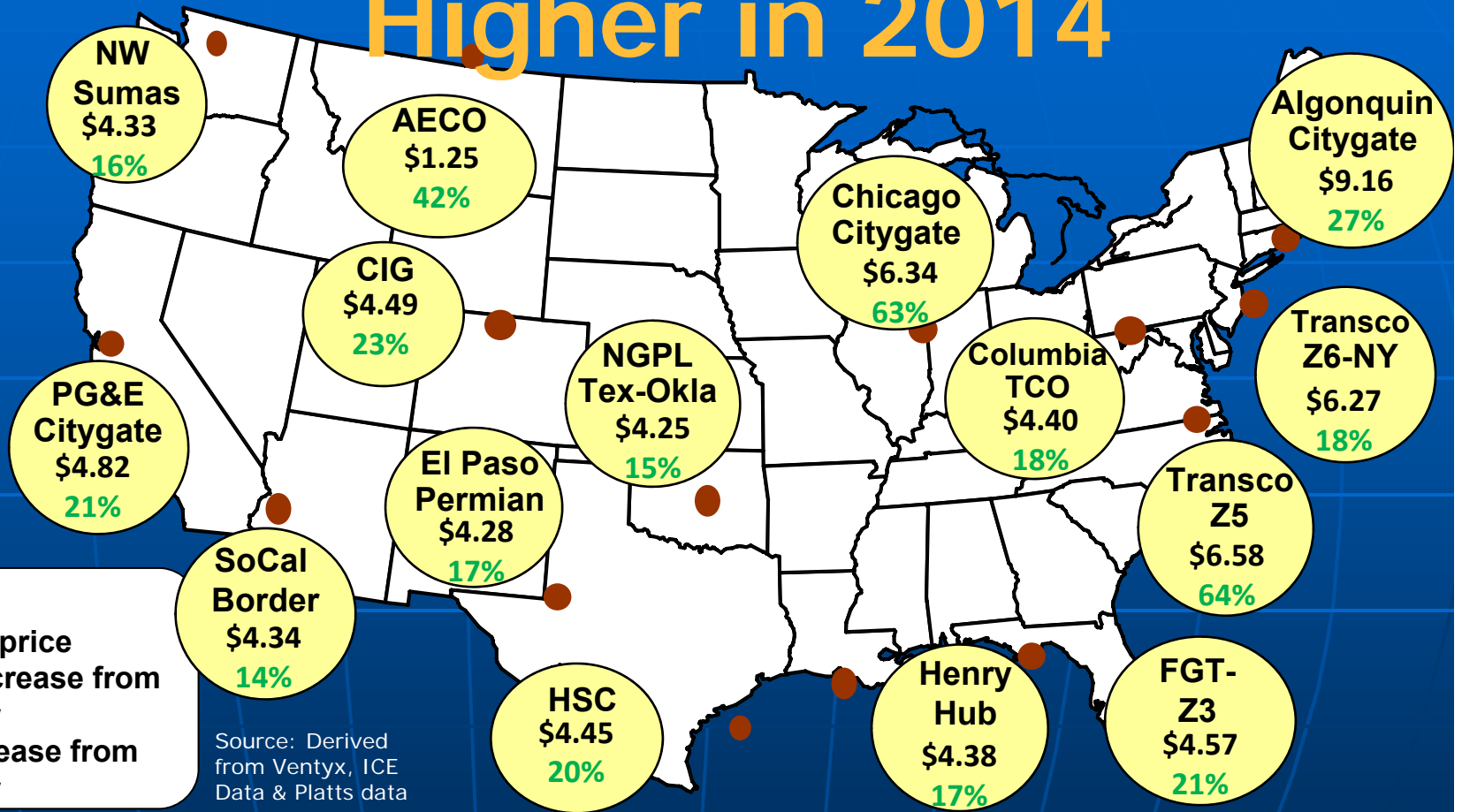


# State of the Markets Highlights

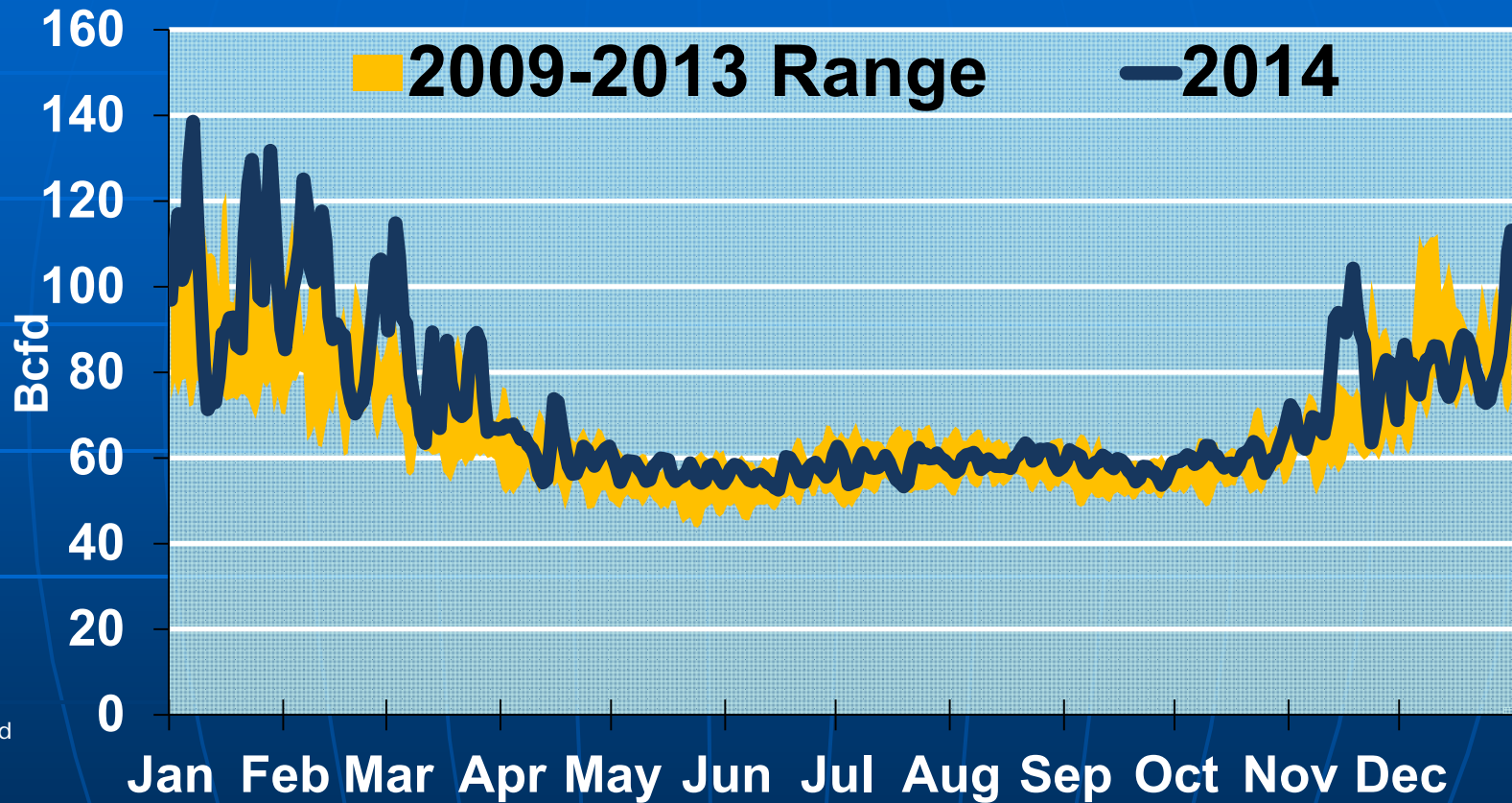
- Extreme temperatures early in 2014 had lasting impacts
- Natural gas prices decline through the year, while oil prices plunge
- Natural gas production reaches new records and storage recovers
- Northeast natural gas prices disconnect from Henry Hub
- Organized markets continue to evolve: California ISO launches EIM, SPP begins DAY 2 Market, and Entergy joins MISO
- RTOs and utilities adjust to changing resource mix
- Markets performed well in early 2015 despite extreme weather



# Average NG Spot Prices Higher in 2014

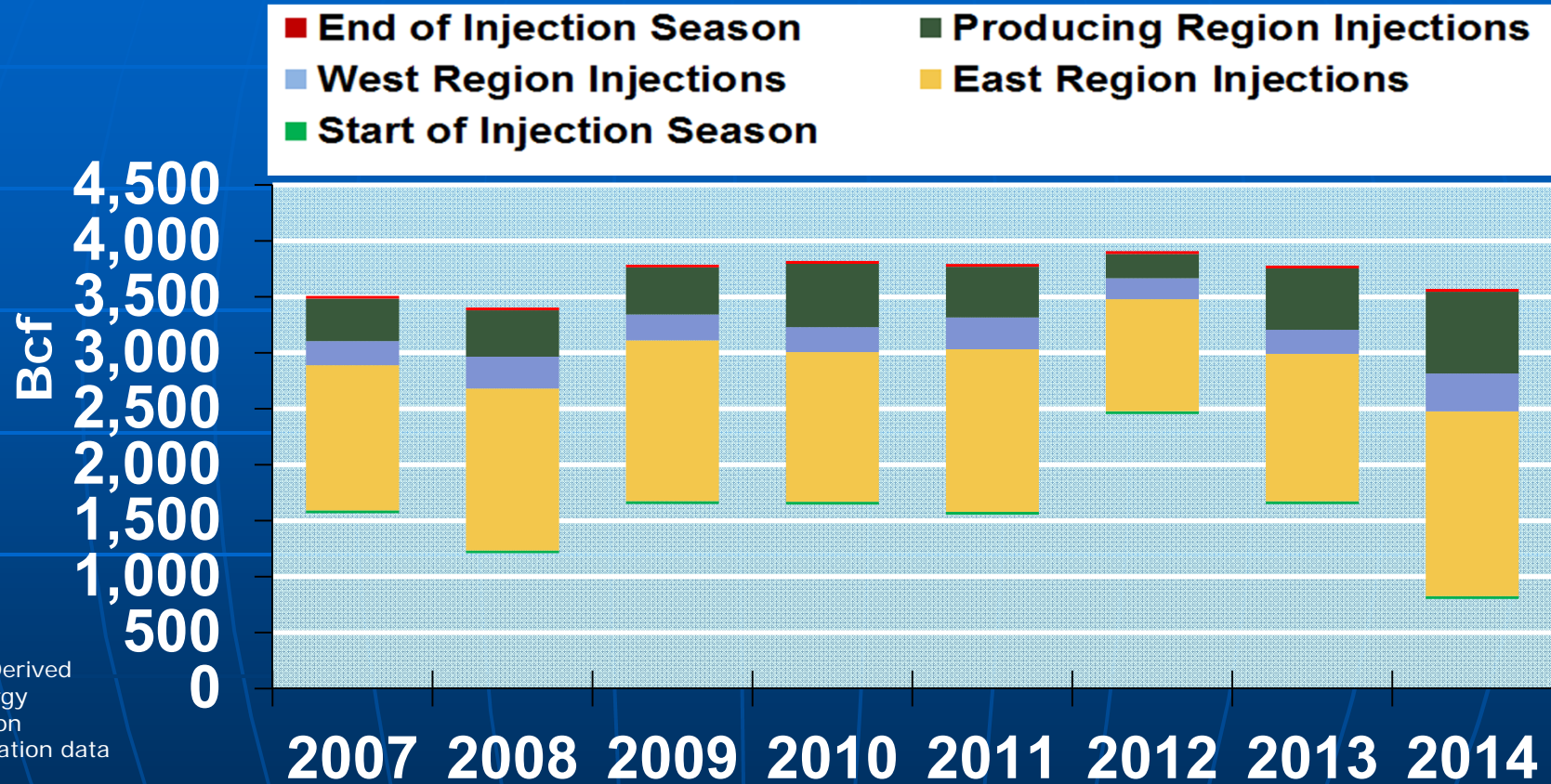


# U.S. NG Demand Sets New Record



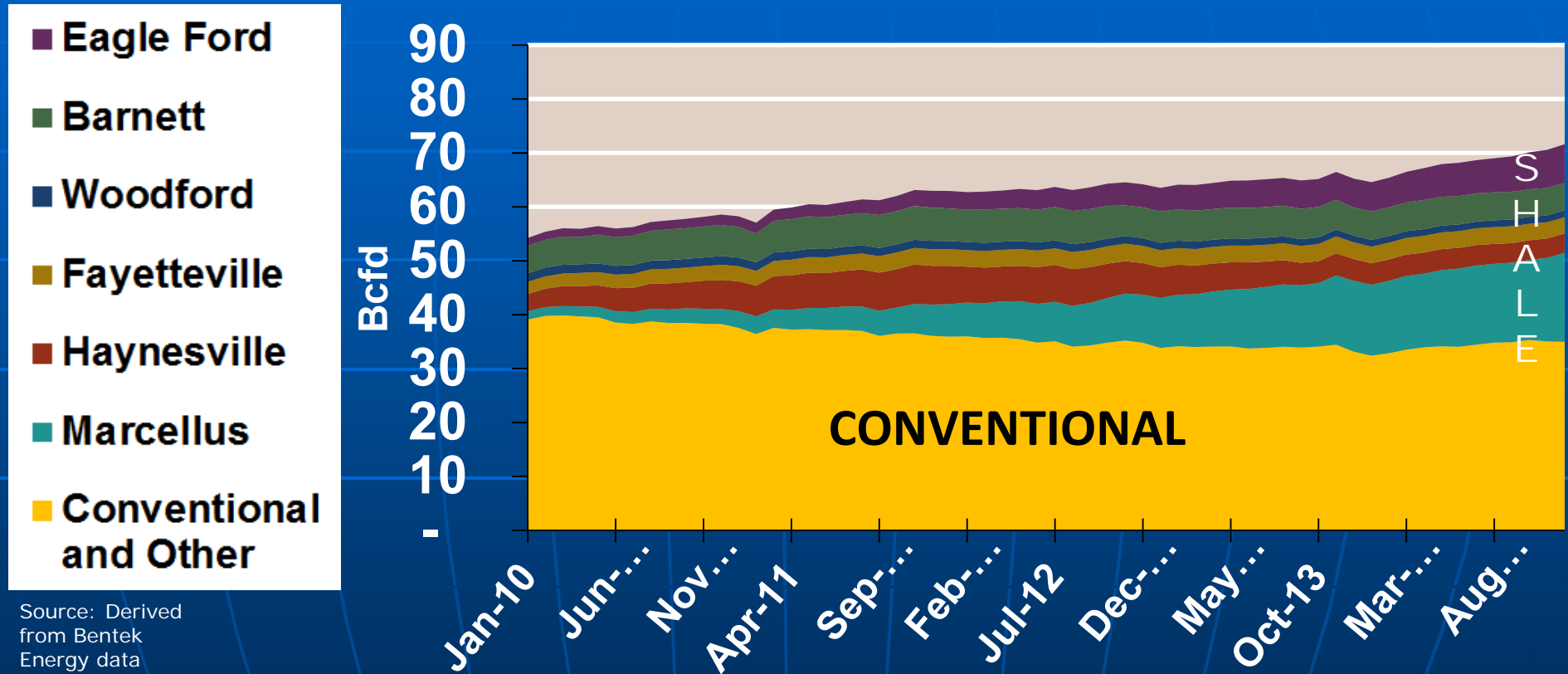
Source: Derived from Bentek Energy data

# Record Injections Replenished NG Storage



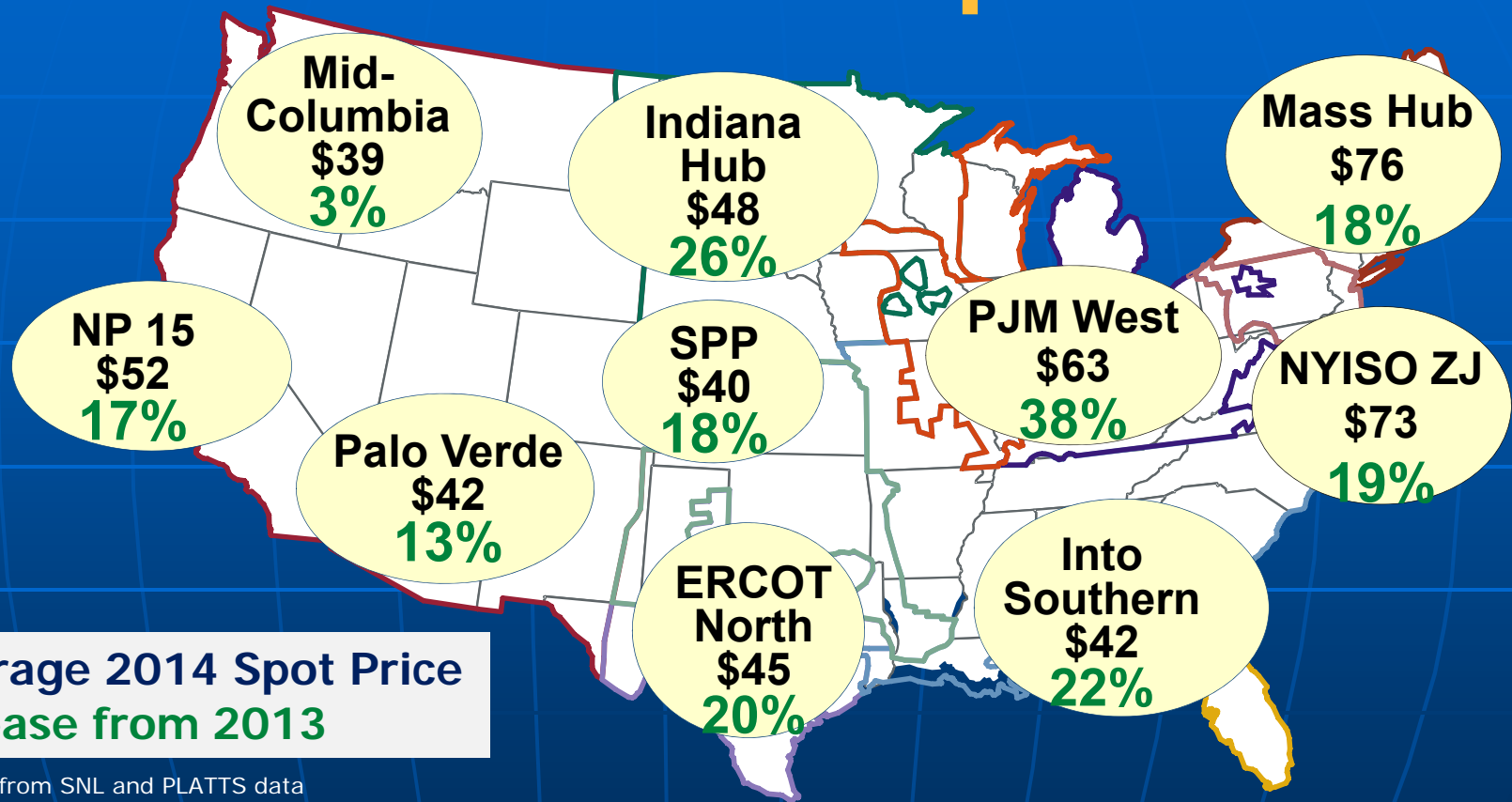
Source: Derived from Energy Information Administration data

# NG From Shale Drives 2014 Production Records

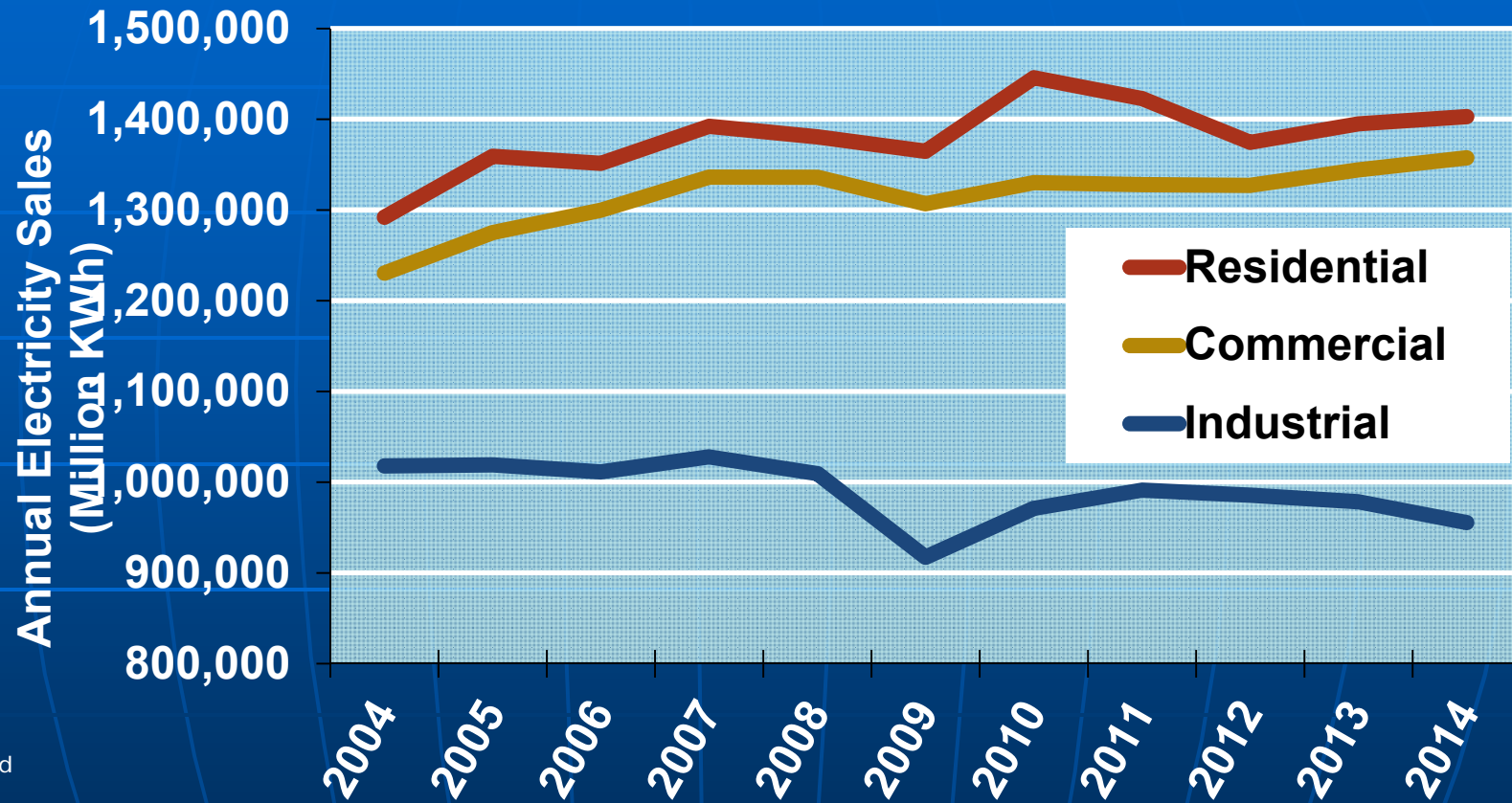


Source: Derived from Bentek Energy data

# On-Peak Day-Ahead 2014 Electric Spot Prices



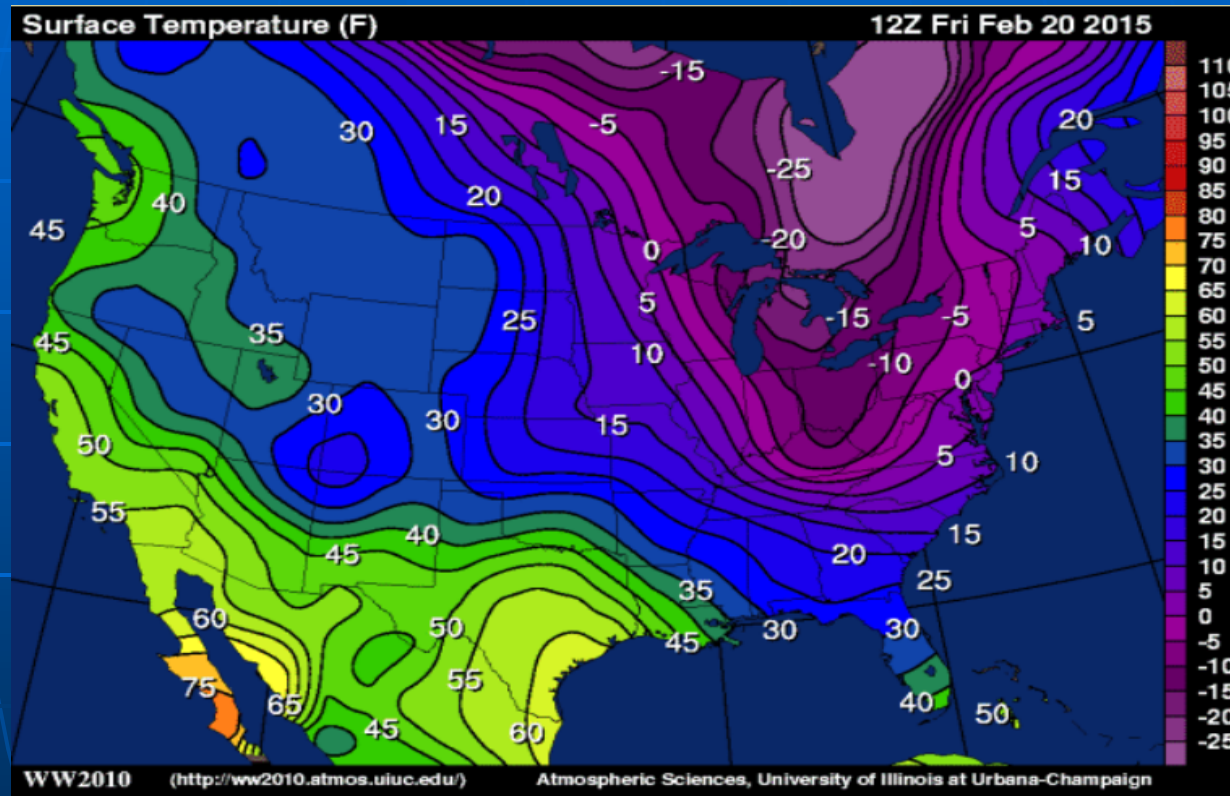
# Electricity Demand Flat in 2014



Source: Derived  
from EIA data



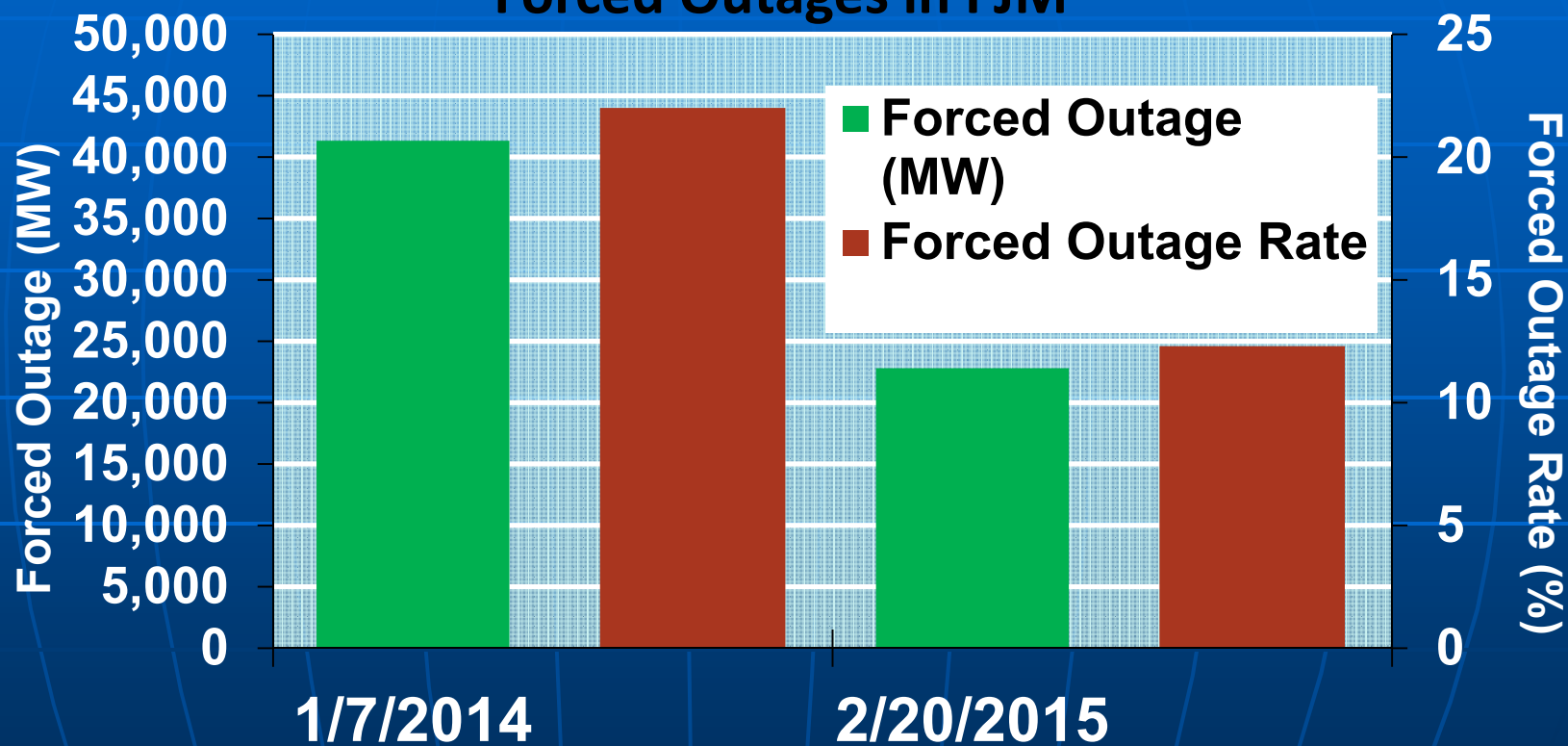
# Extreme Weather Tests Energy Markets in 2015



Source: The University  
of Illinois WW2010  
Project

# Market Readiness Moderates Weather Impact

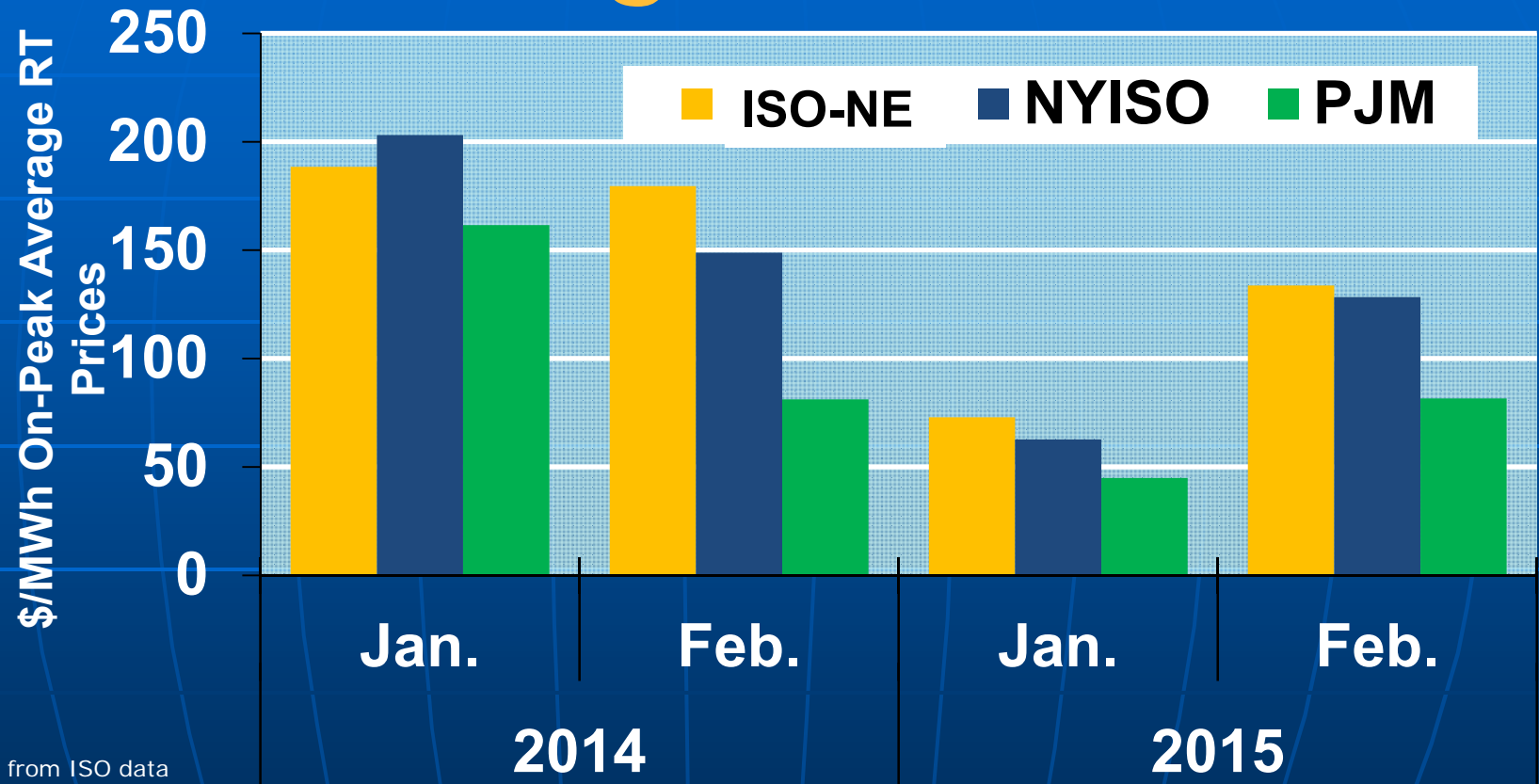
## Forced Outages in PJM



Source: Derived from PJM data

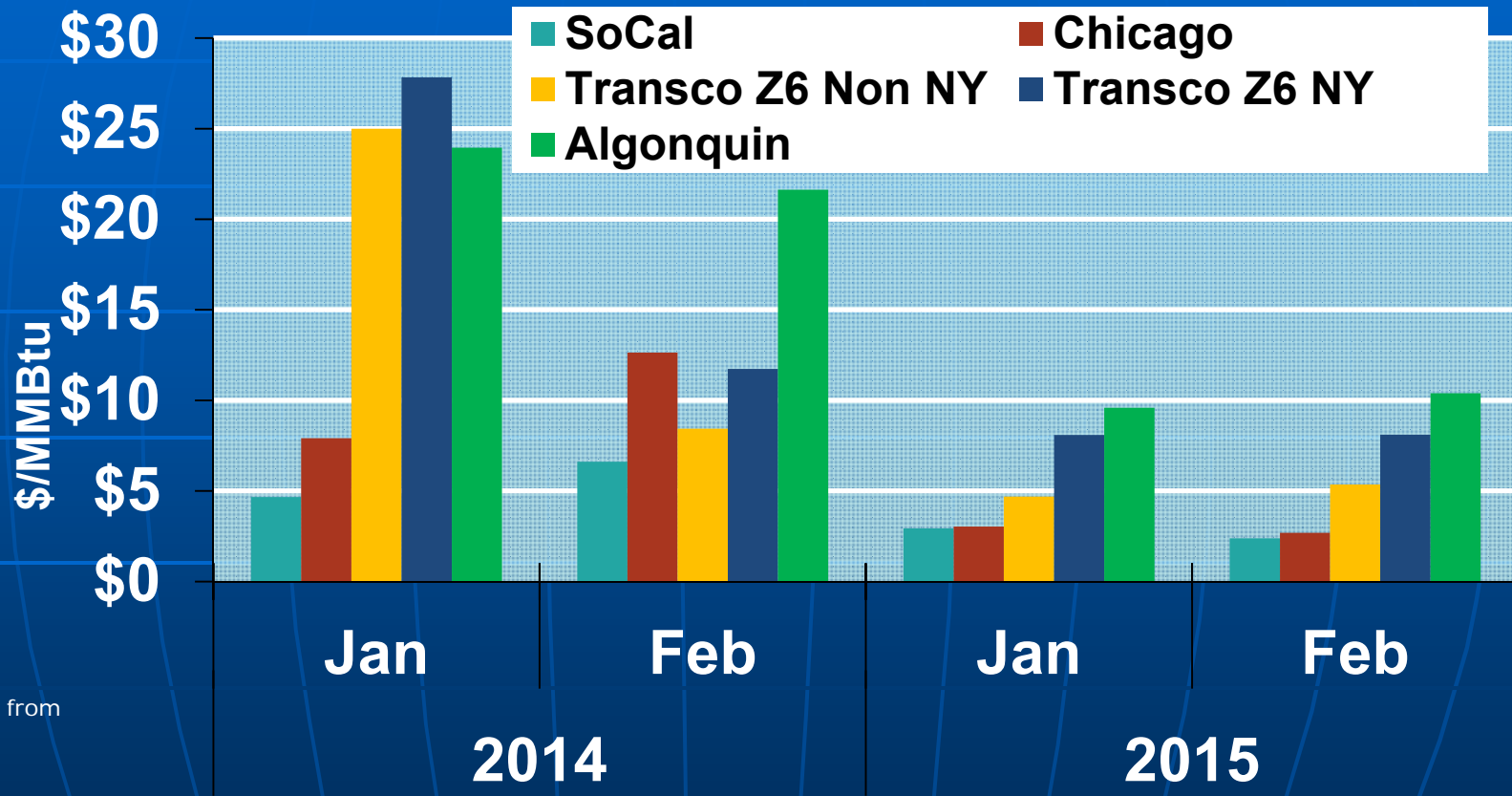


# Markets Perform well During 2015 Winter



Source: Derived from ISO data

# Winter 2015 NG Prices Lower than in 2014



Source: Derived from Intercontinental Exchange data

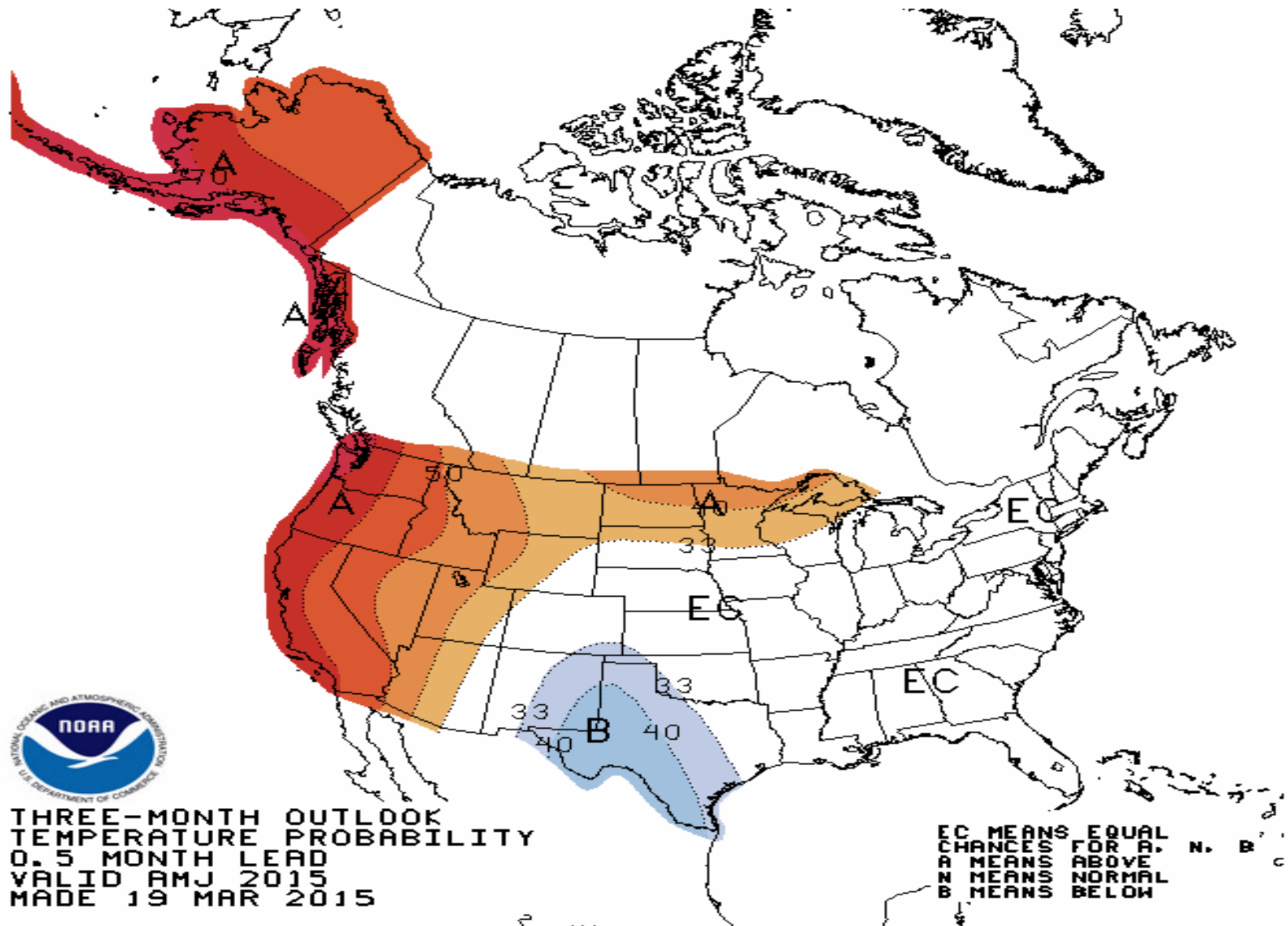
# 2015 State of the Markets Report

<http://www.ferc.gov/market-oversight/reports-analyses/st-mkt-ovr/2014-som.pdf>

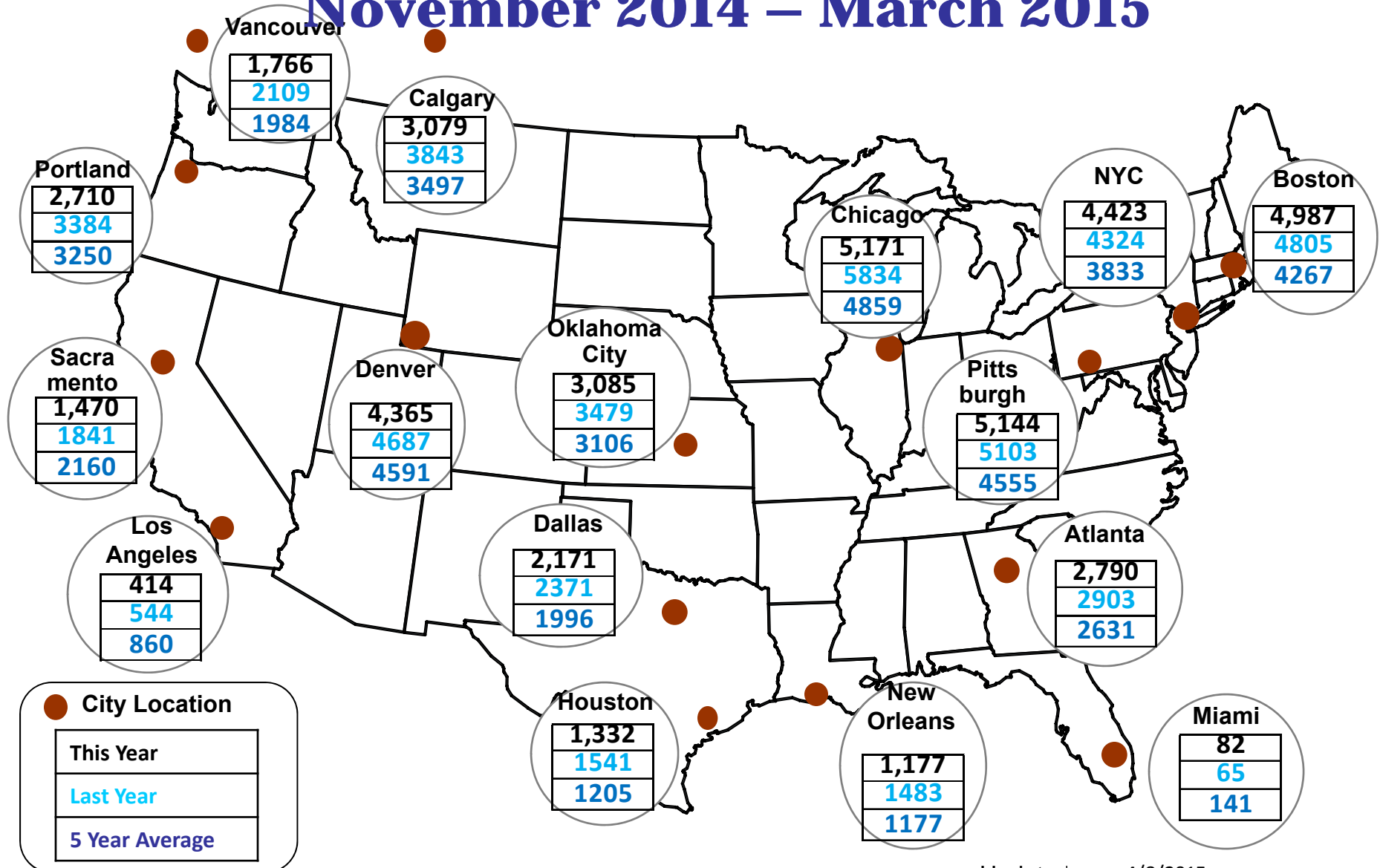


# National Slides

## NOAA Apr 2015 Through Jun 2015 Outlook



# Cumulative HDDs by City November 2014 – March 2015

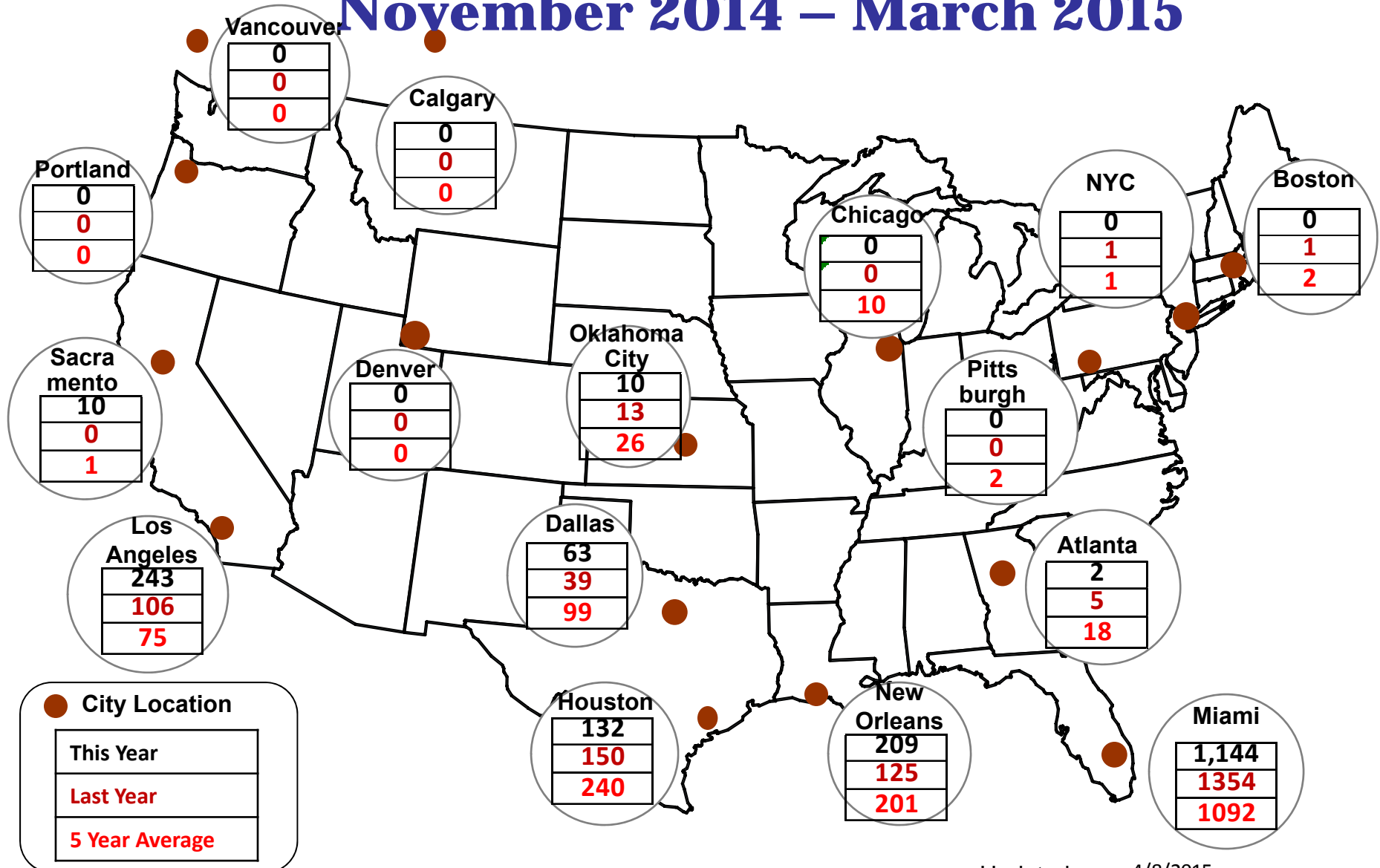


Source: Bloomberg Weather (summed daily)

Updated 4/8/2015

# Cumulative CDDs by City

## November 2014 – March 2015

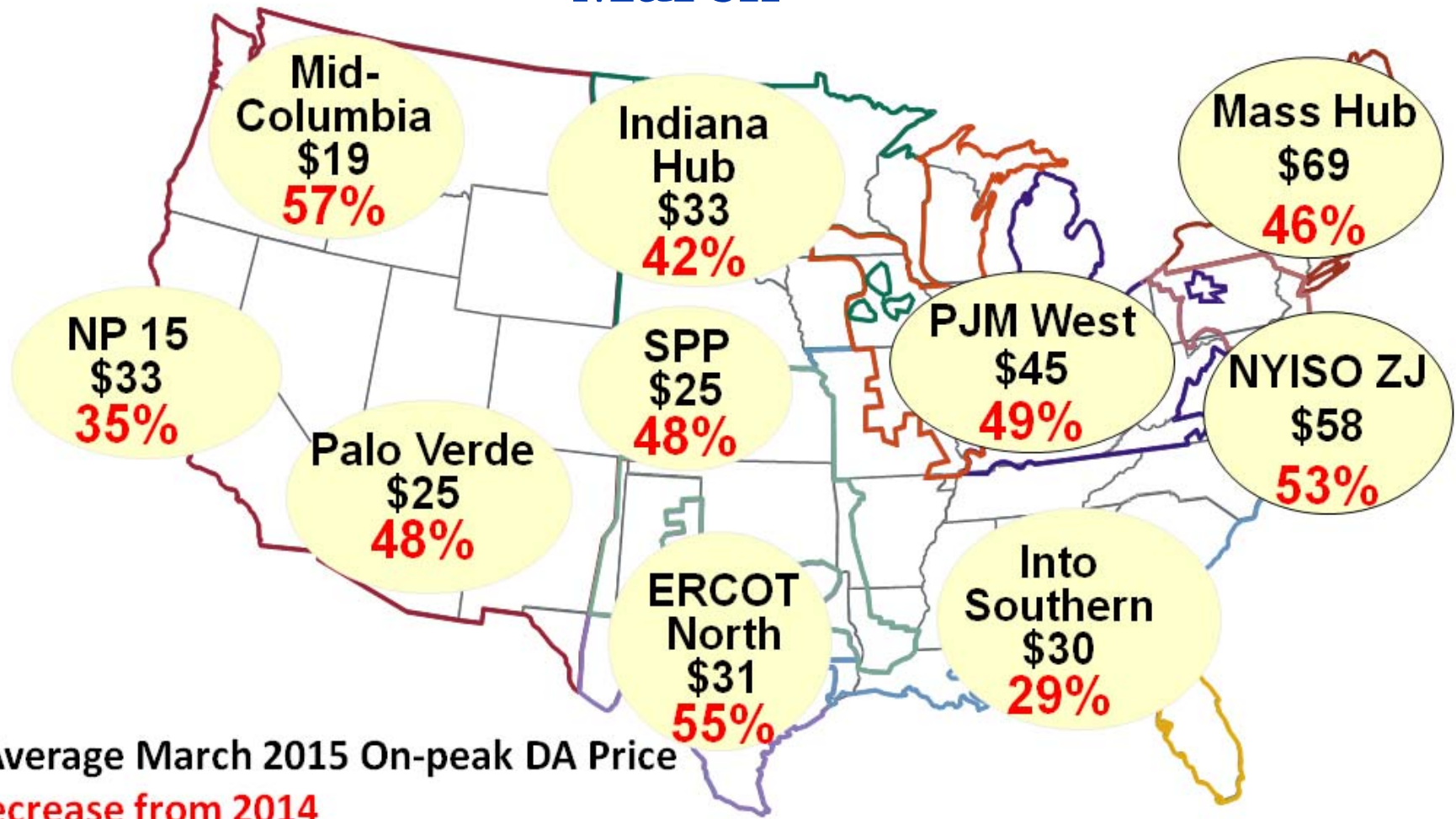


Source: Bloomberg Weather (summed daily)

Updated 4/8/2015



## Spot Power Prices Average Monthly (\$/MWh) March



\$ = Average March 2015 On-peak DA Price

% Decrease from 2014

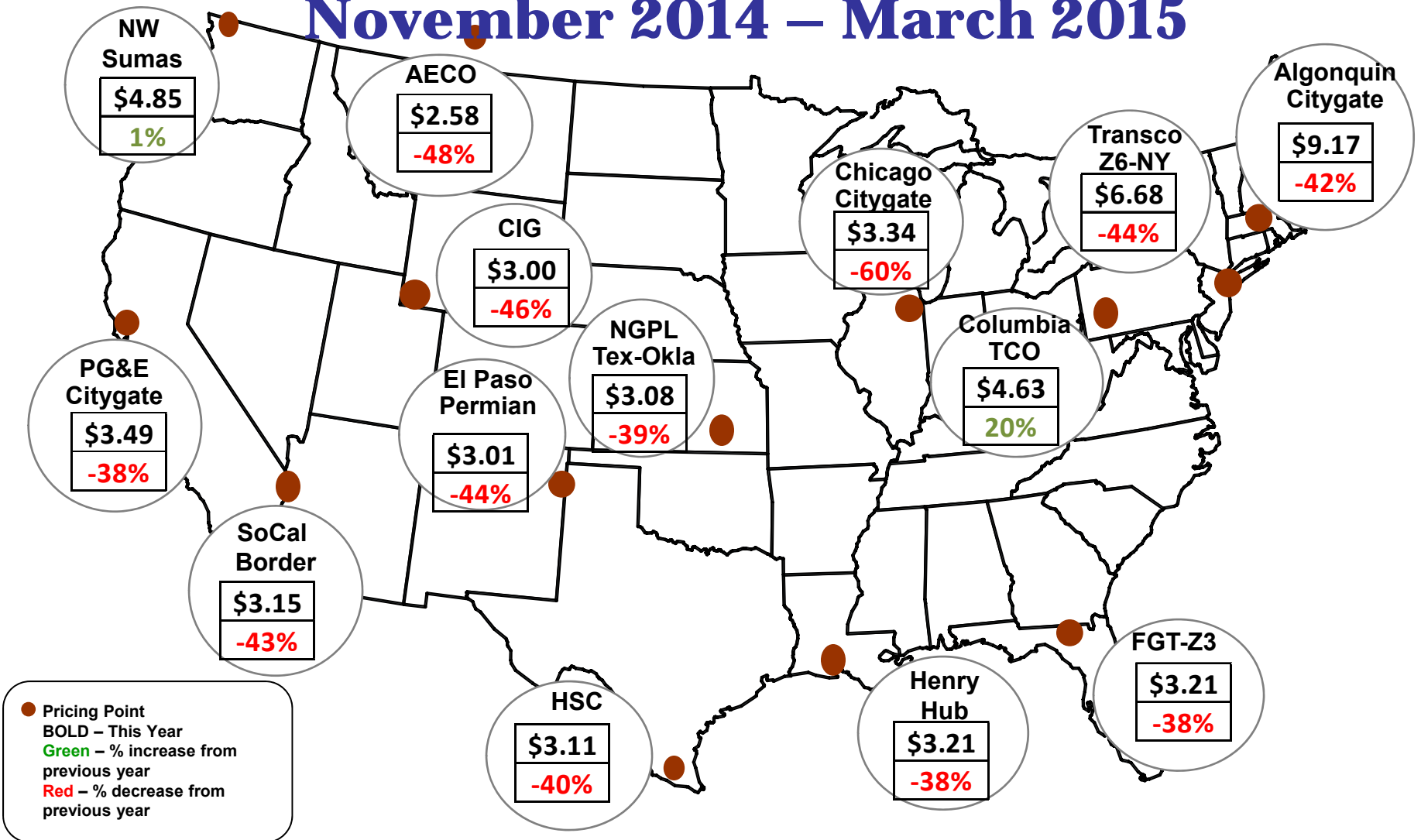
Source: Derived from ISO/RTO and SNL Data



# Spot Natural Gas Prices

## Average (\$/MMBtu)

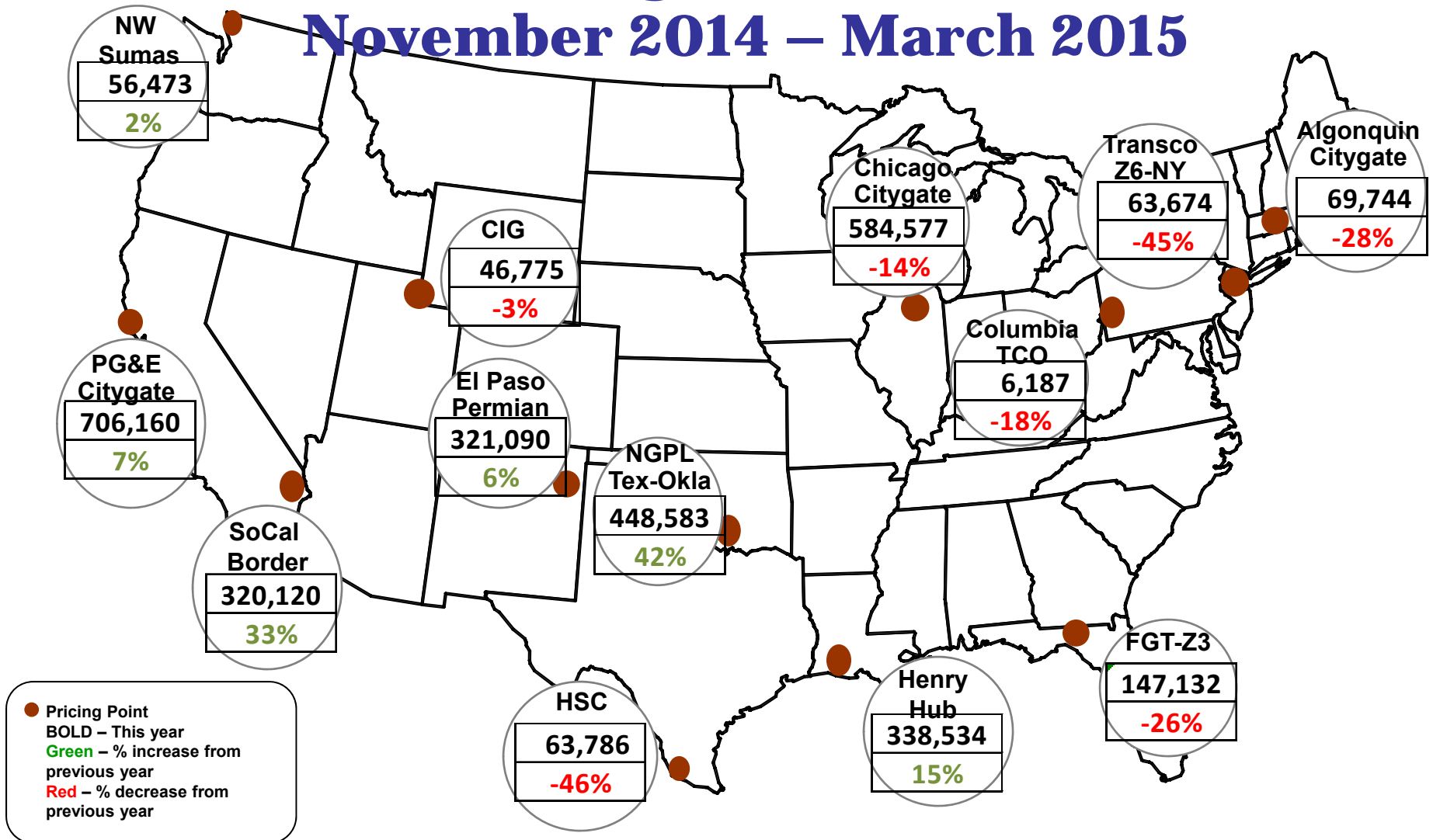
### November 2014 – March 2015



Source: ICE

Updated 4/8/2015

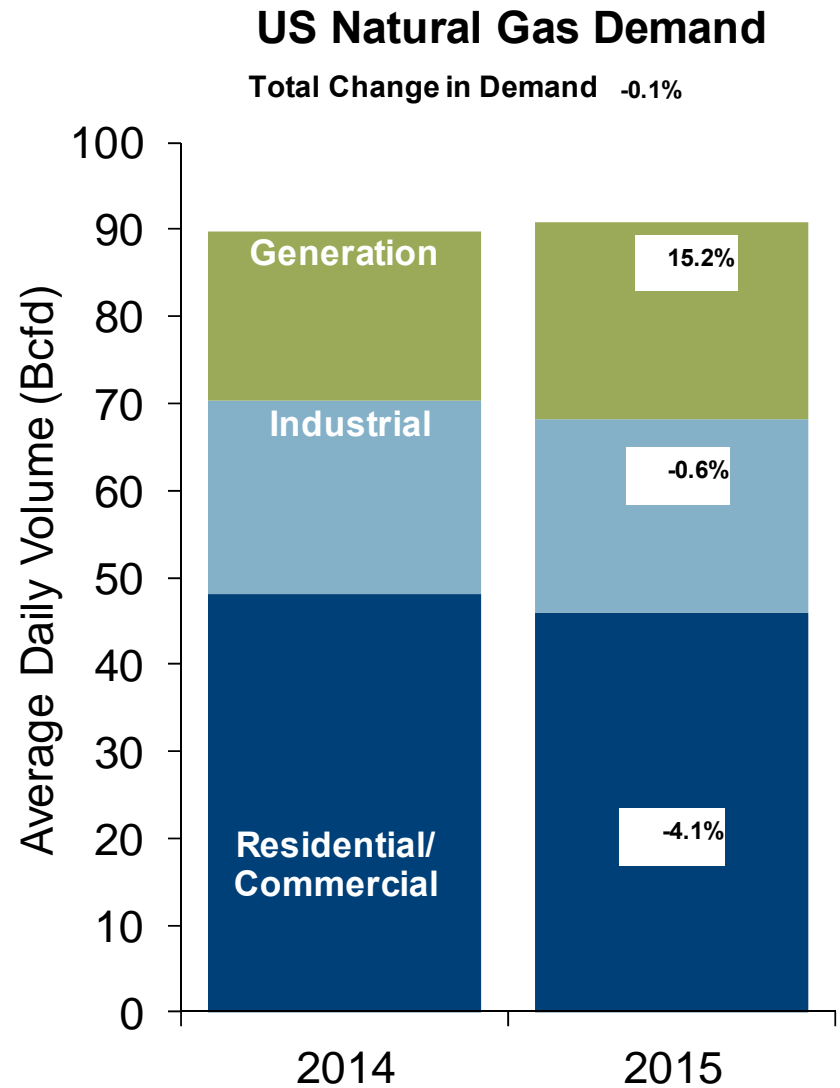
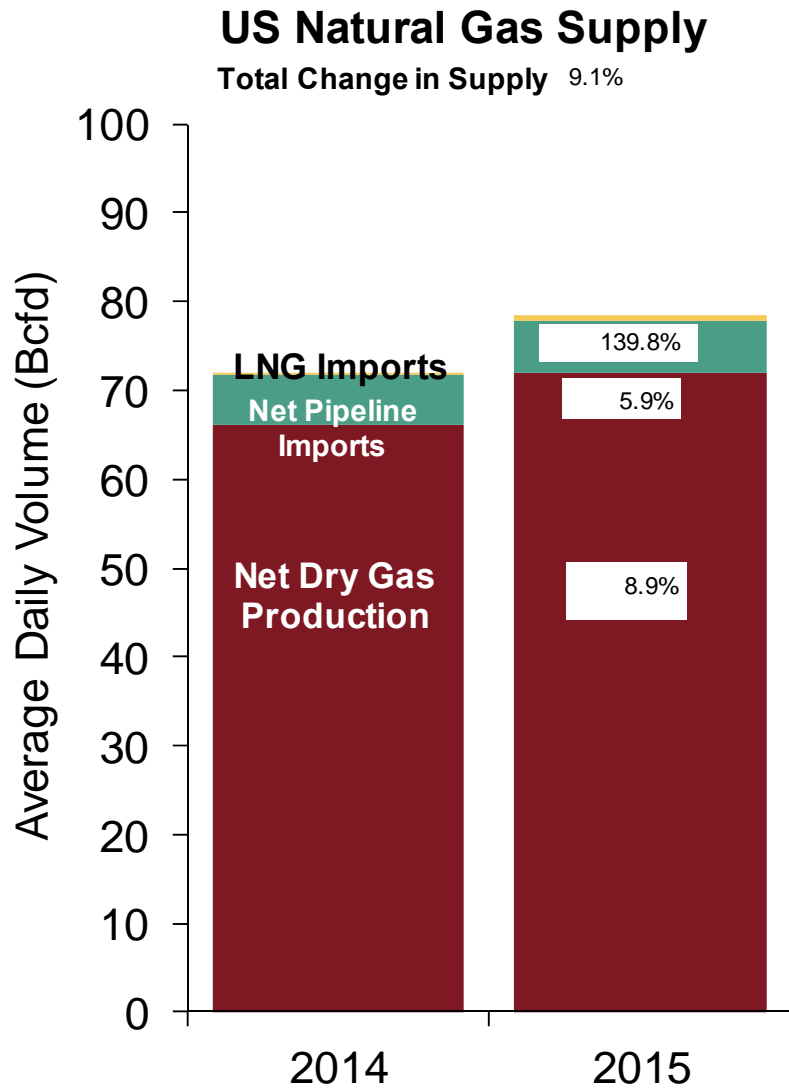
# Spot Natural Gas Trading Volumes Average (MMBtus) November 2014 – March 2015



Source: ICE

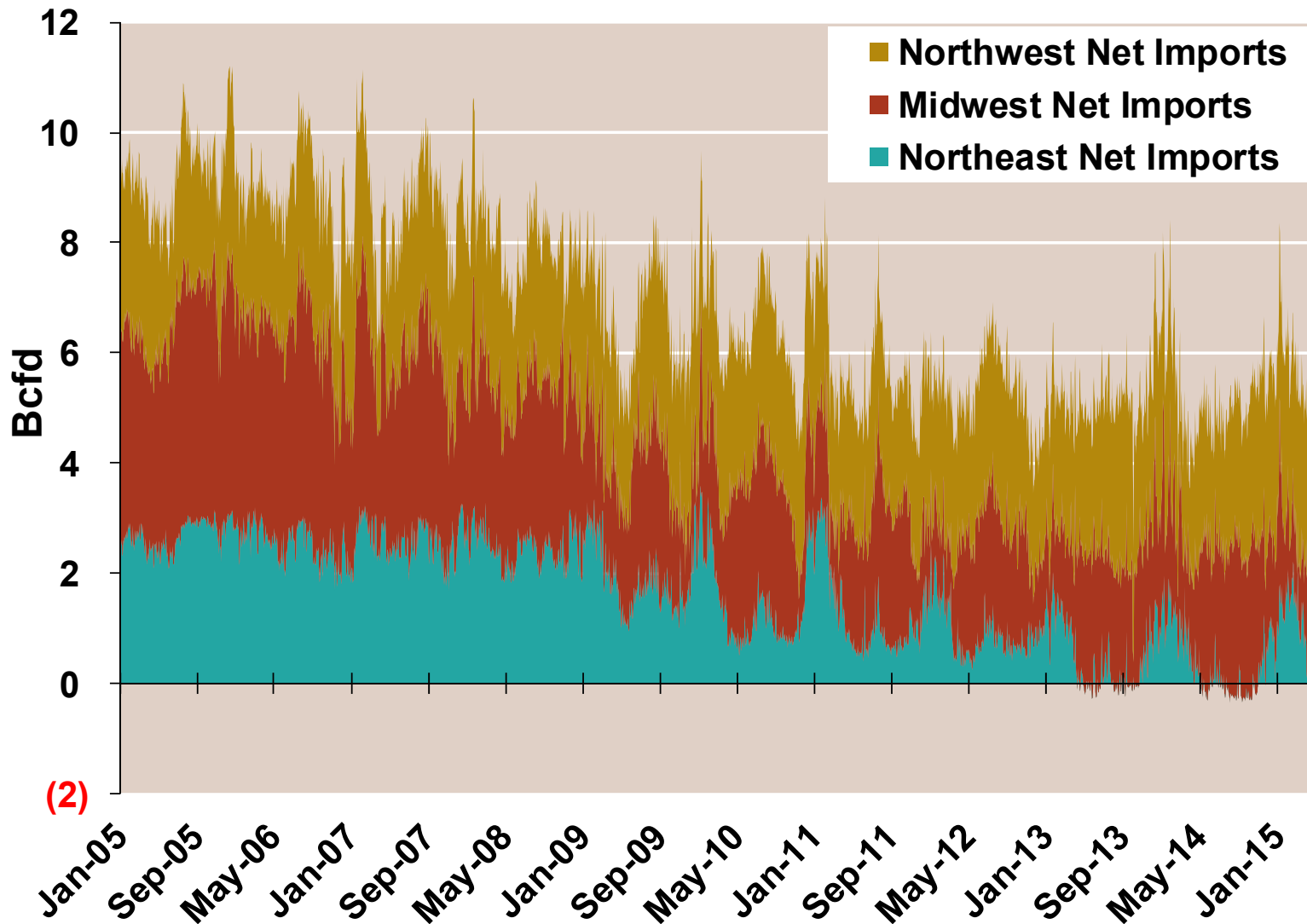
Updated 4/8/2015

## U.S. NG Supply and Demand Year to Date - Mar 2014 vs. Mar 2015

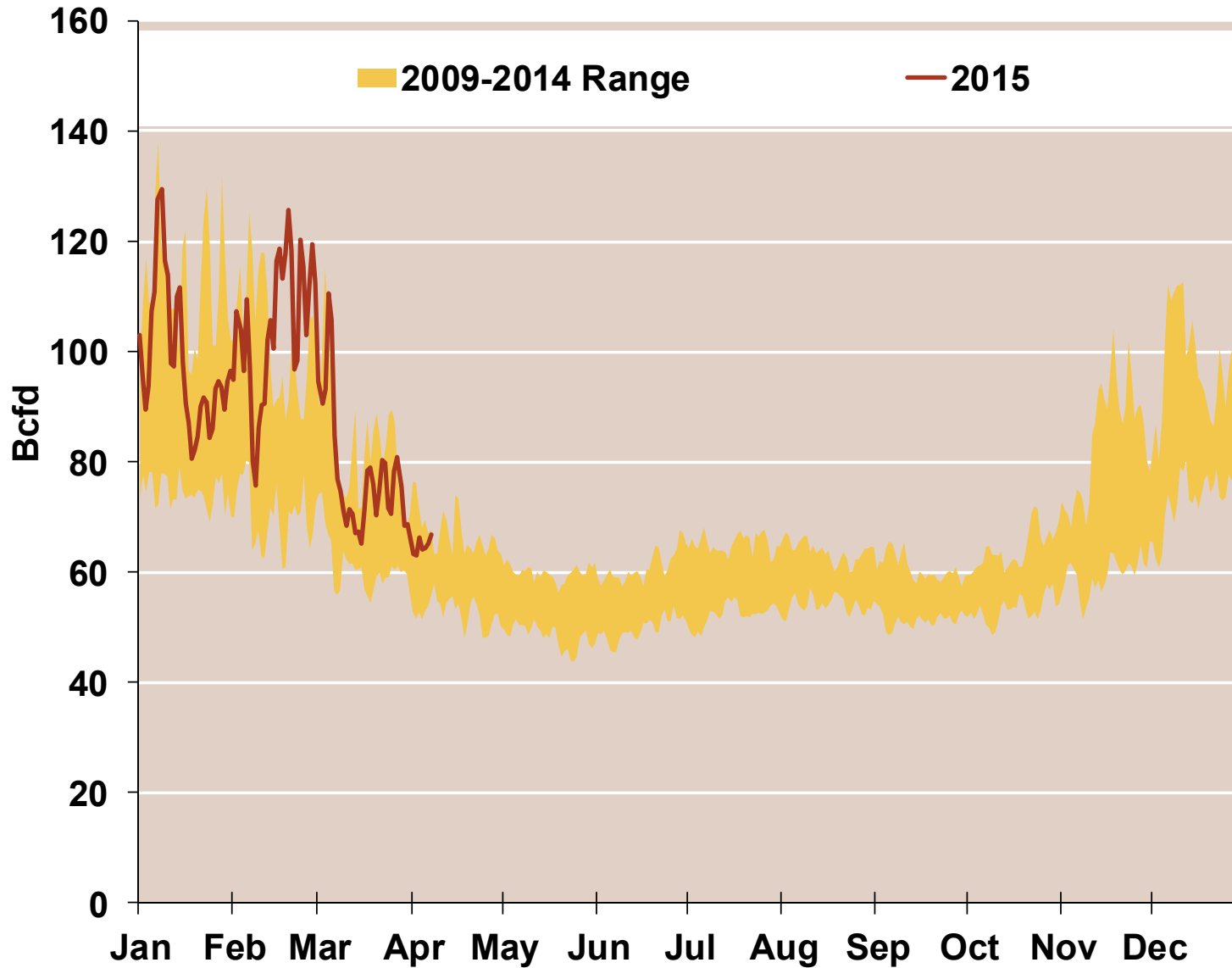


Note: Balance includes all amounts not attributable to other categories.  
 Source: Derived from *Bentek Energy* data

### Regional Imports from Canada



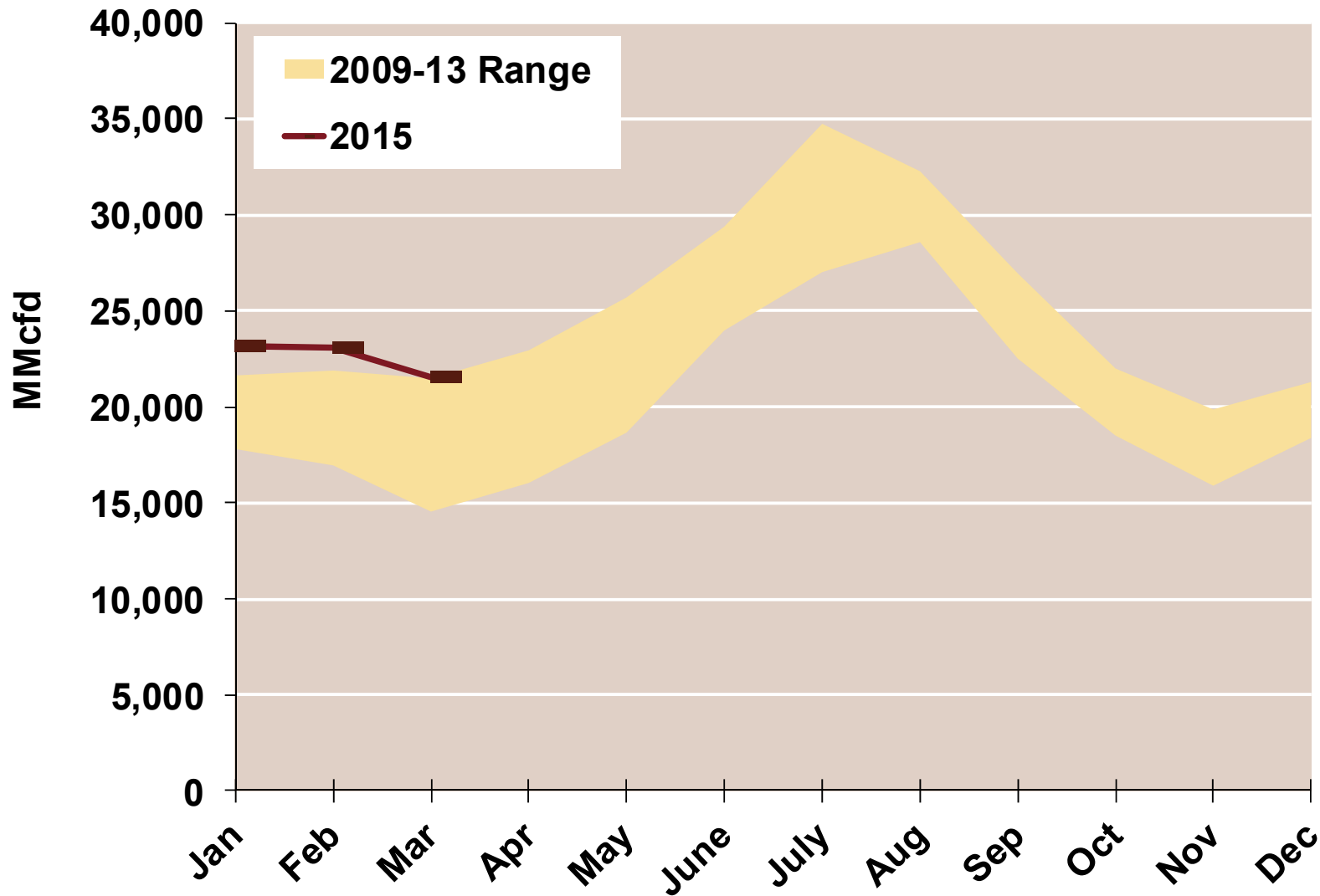
### Total U.S. Natural Gas Demand All Sectors



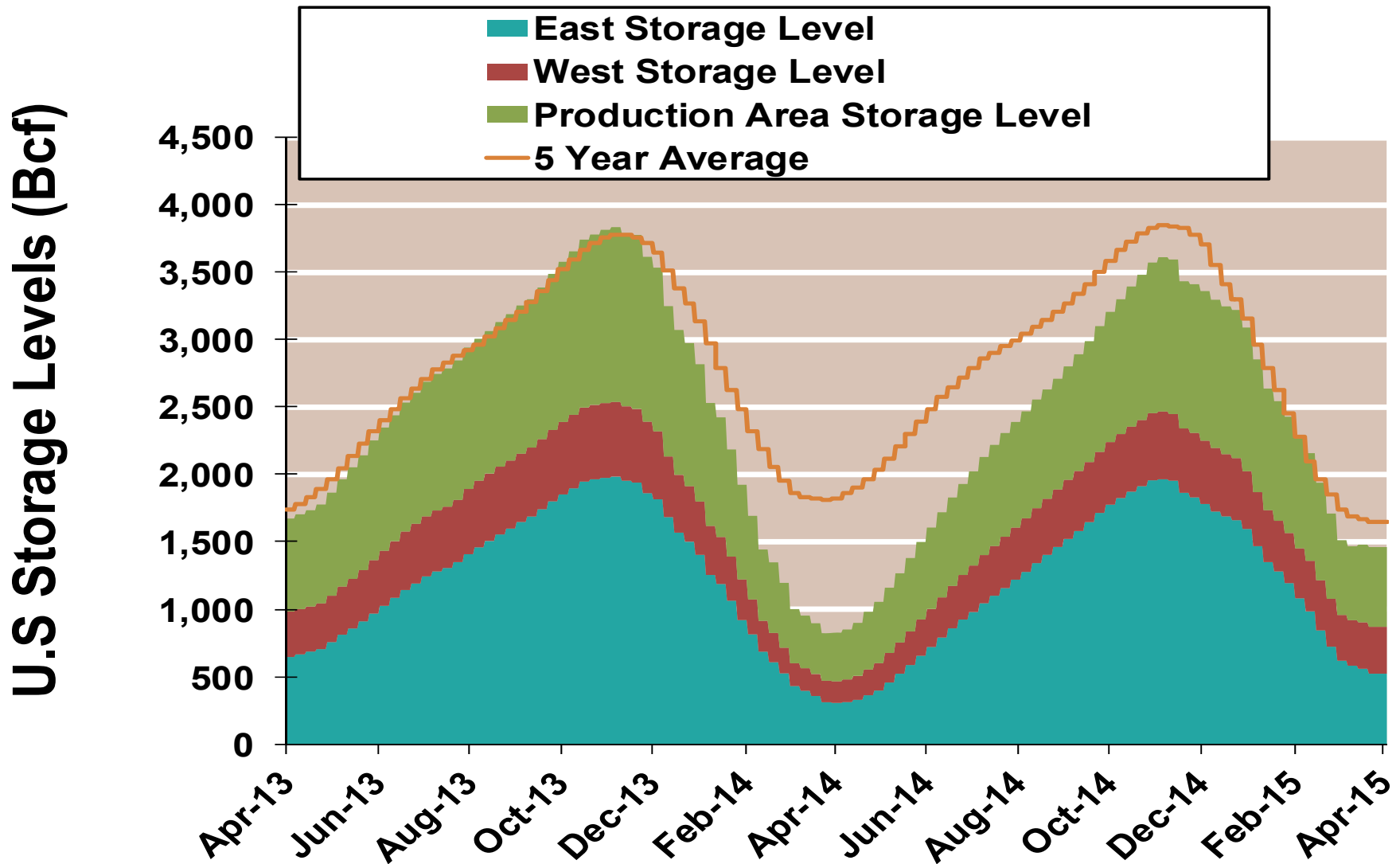
Source: Derived from *Bentek Energy* data, derived from interstate pipeline flow and modeled data.

Updated: April 2014

## U.S. Natural Gas Consumption for Power Generation



### EIA National Storage Inventories by Region

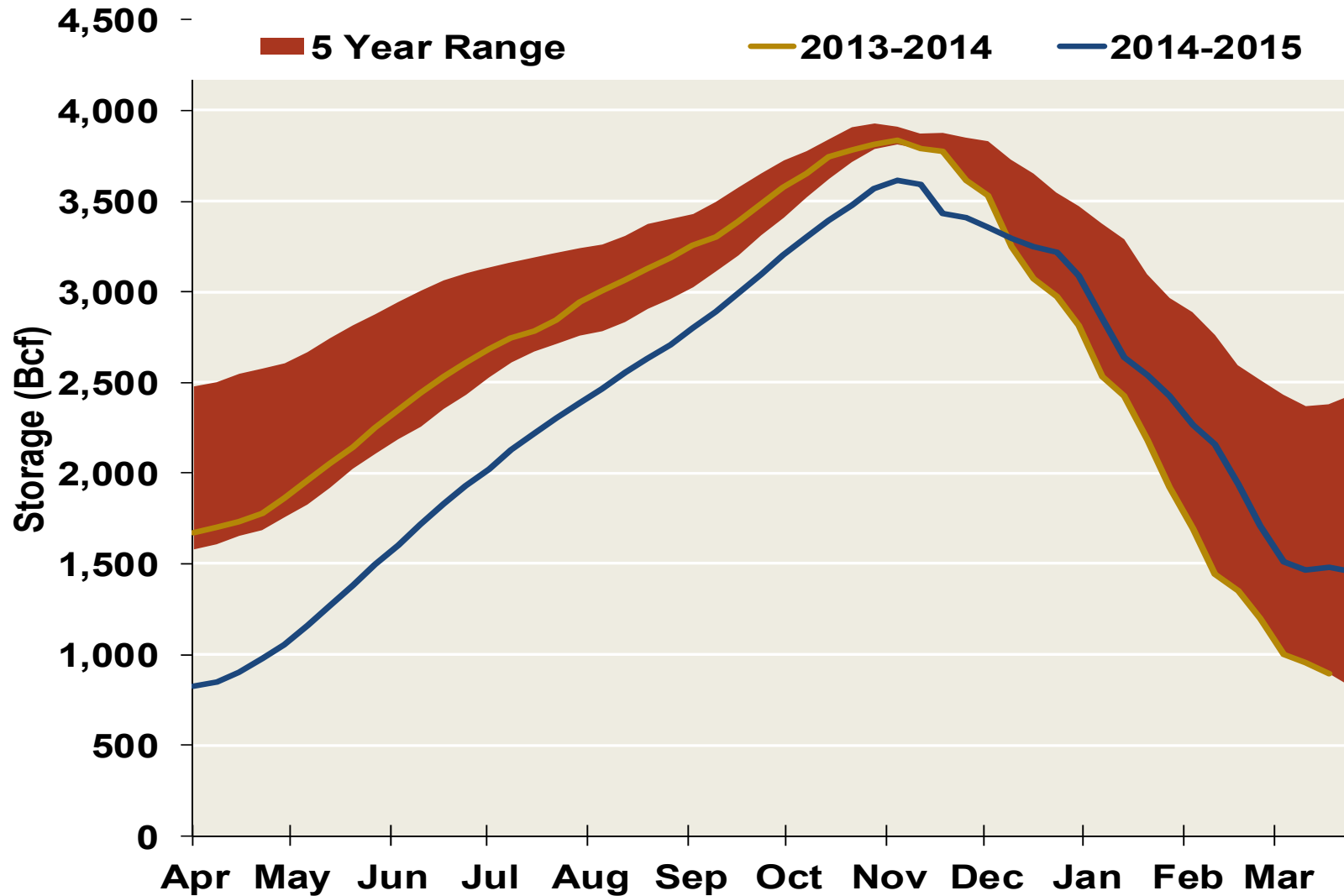


Notes:

Source: Derived from Bloomberg Data

Updated 4/8/2015

### EIA National Storage Inventories



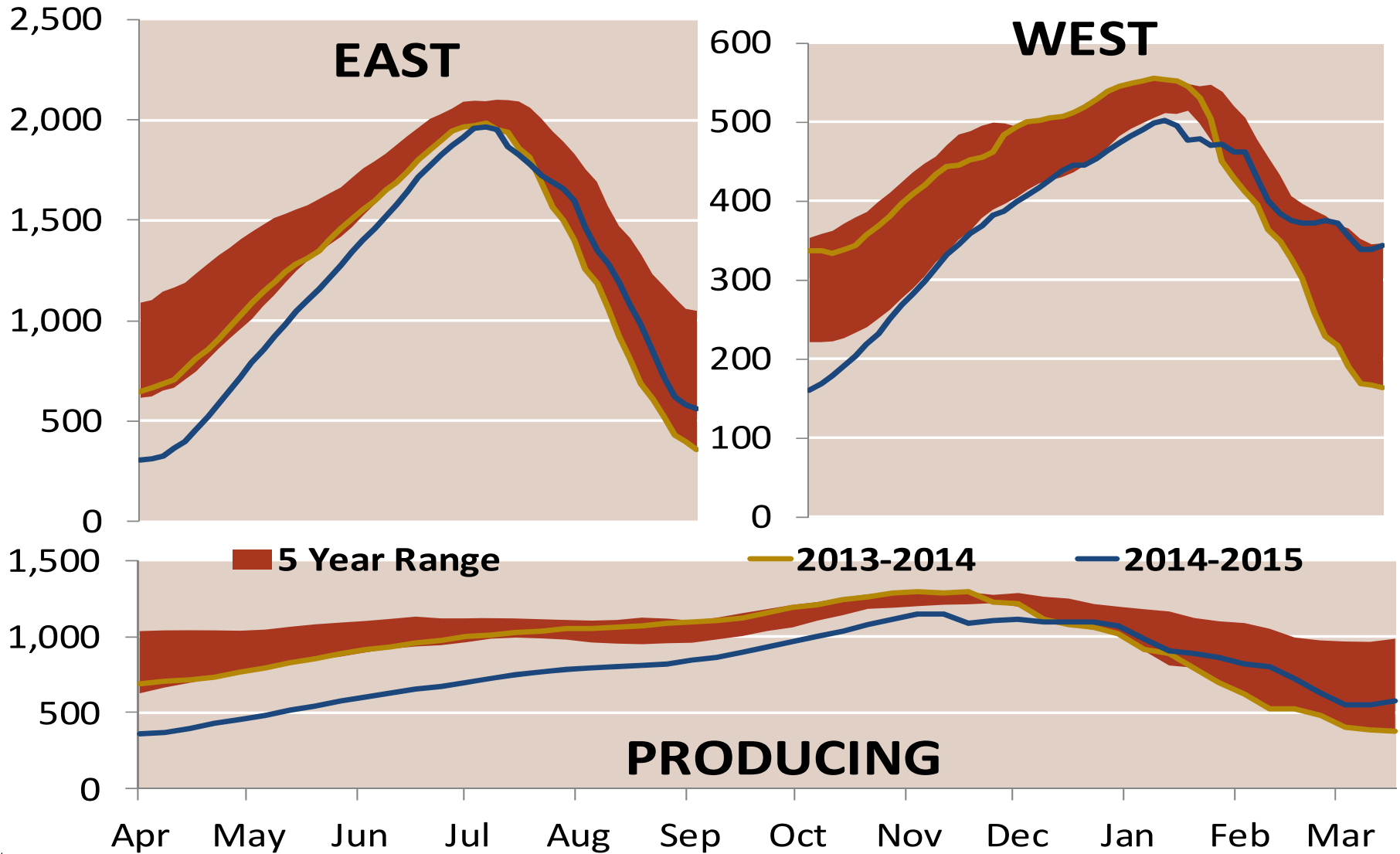
Notes:

Source: Derived from Bloomberg Data

Updated 4/8/2015



### EIA Regional Storage Inventories

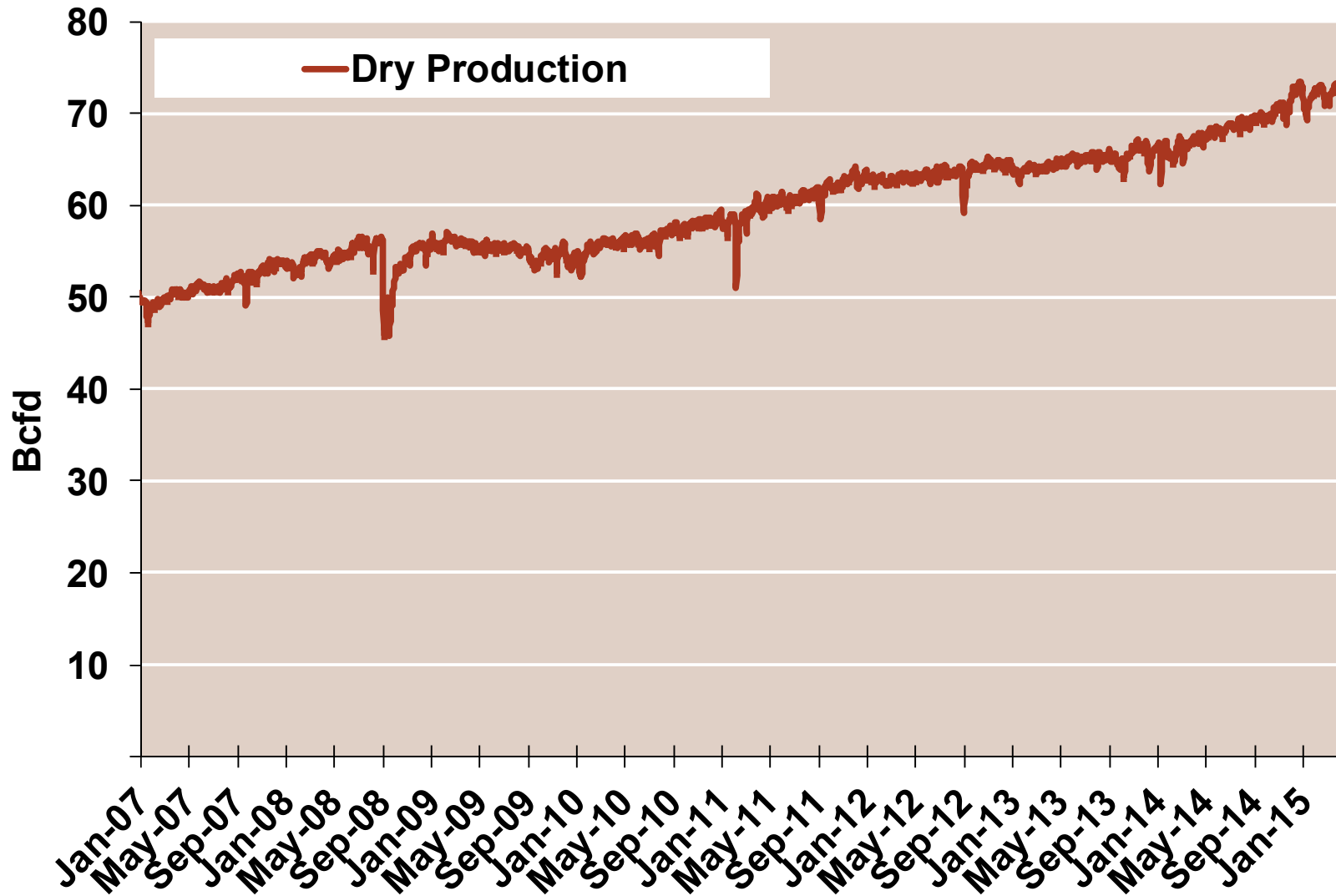


Not

Source: Derived from Bloomberg Data

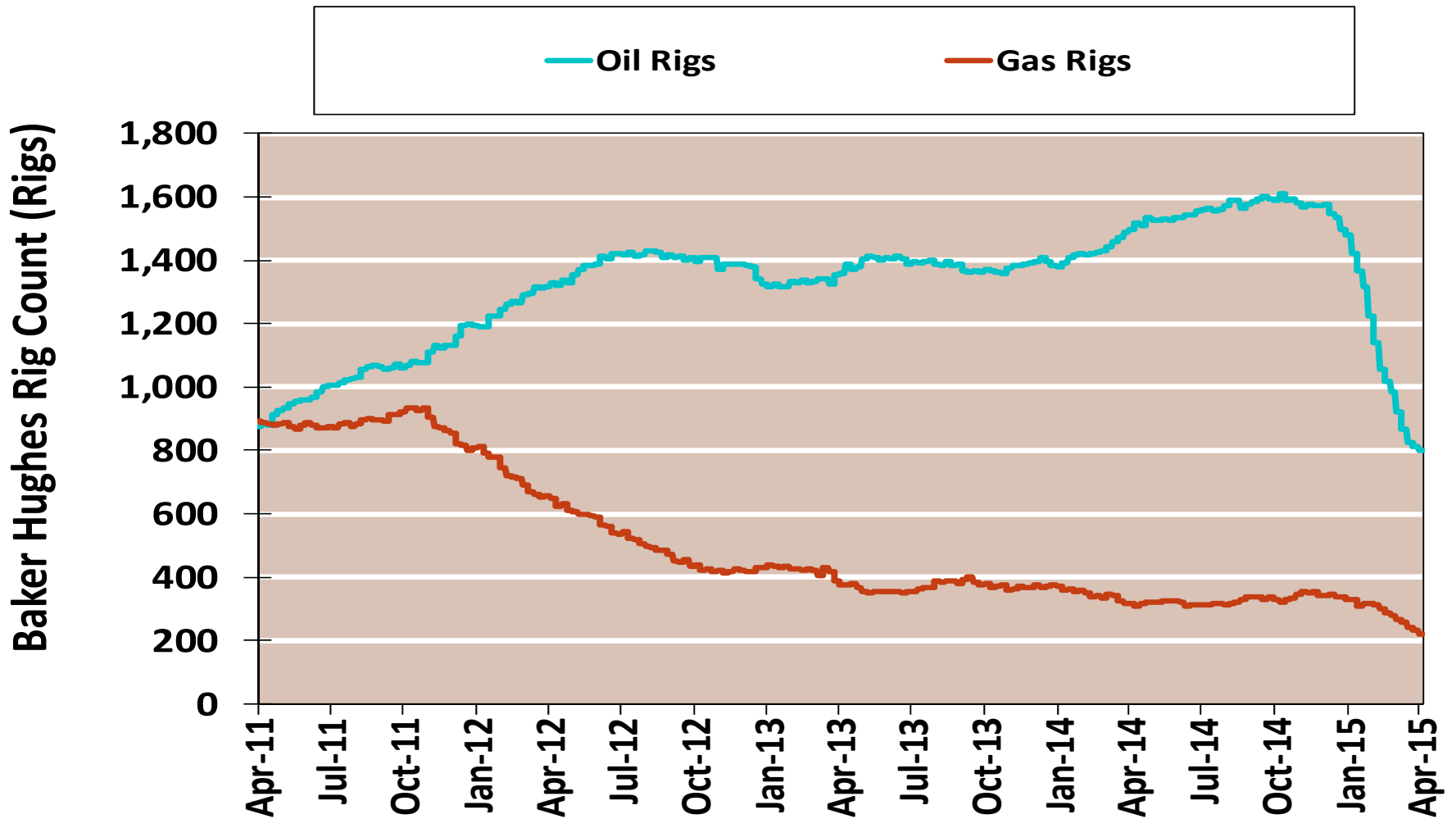
Update 4/8/2015

### Monthly U.S. Dry Gas Production – Lower 48 States



Note: Prior to July 2010, chart was derived from a combination of EIA and Bentek Energy data  
Source: Derived from Bentek Energy data

### Rigs by Type

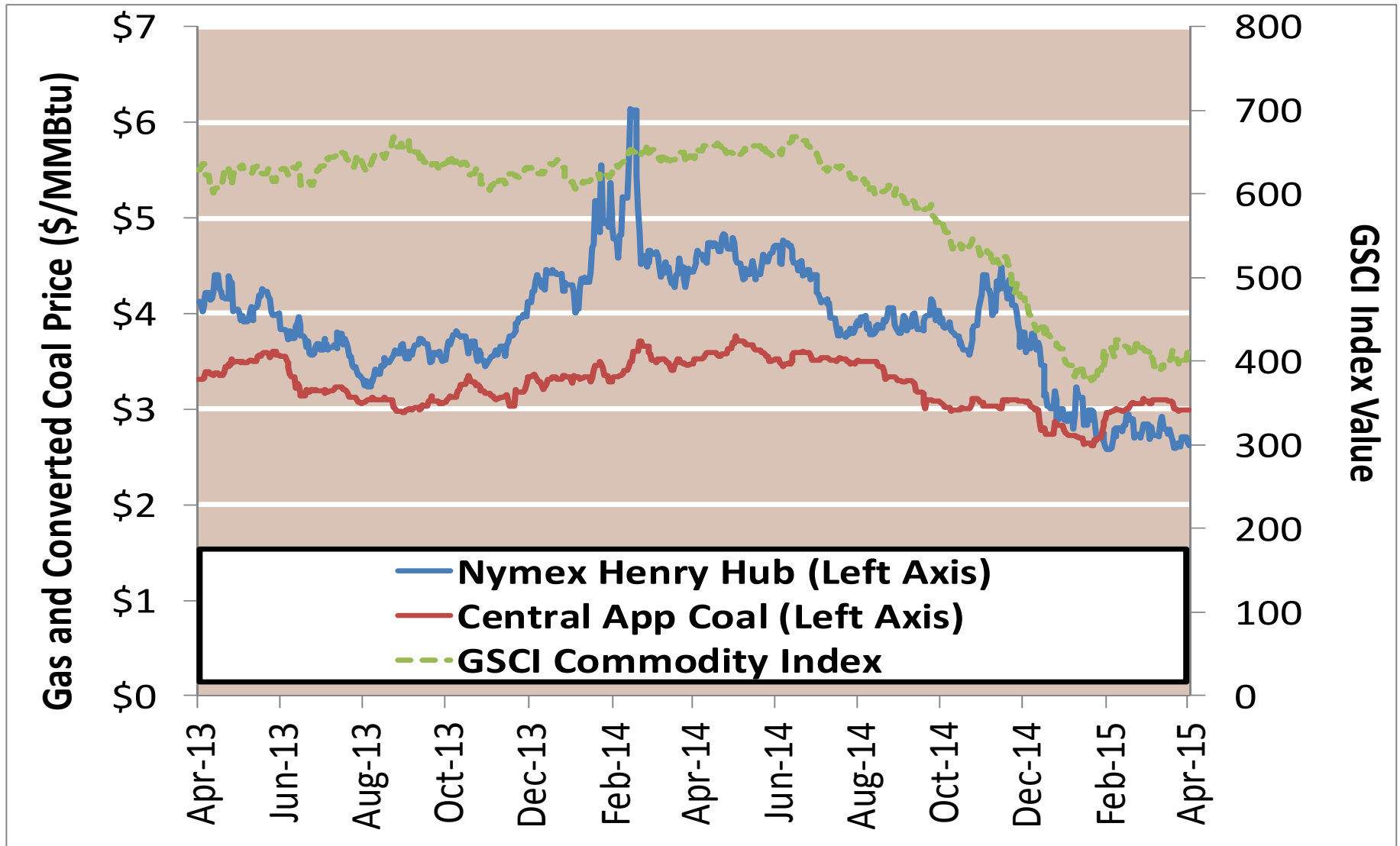


Notes:

Source: Derived from Bloomberg data

Updated 4/8/2015

### Gas vs Coal

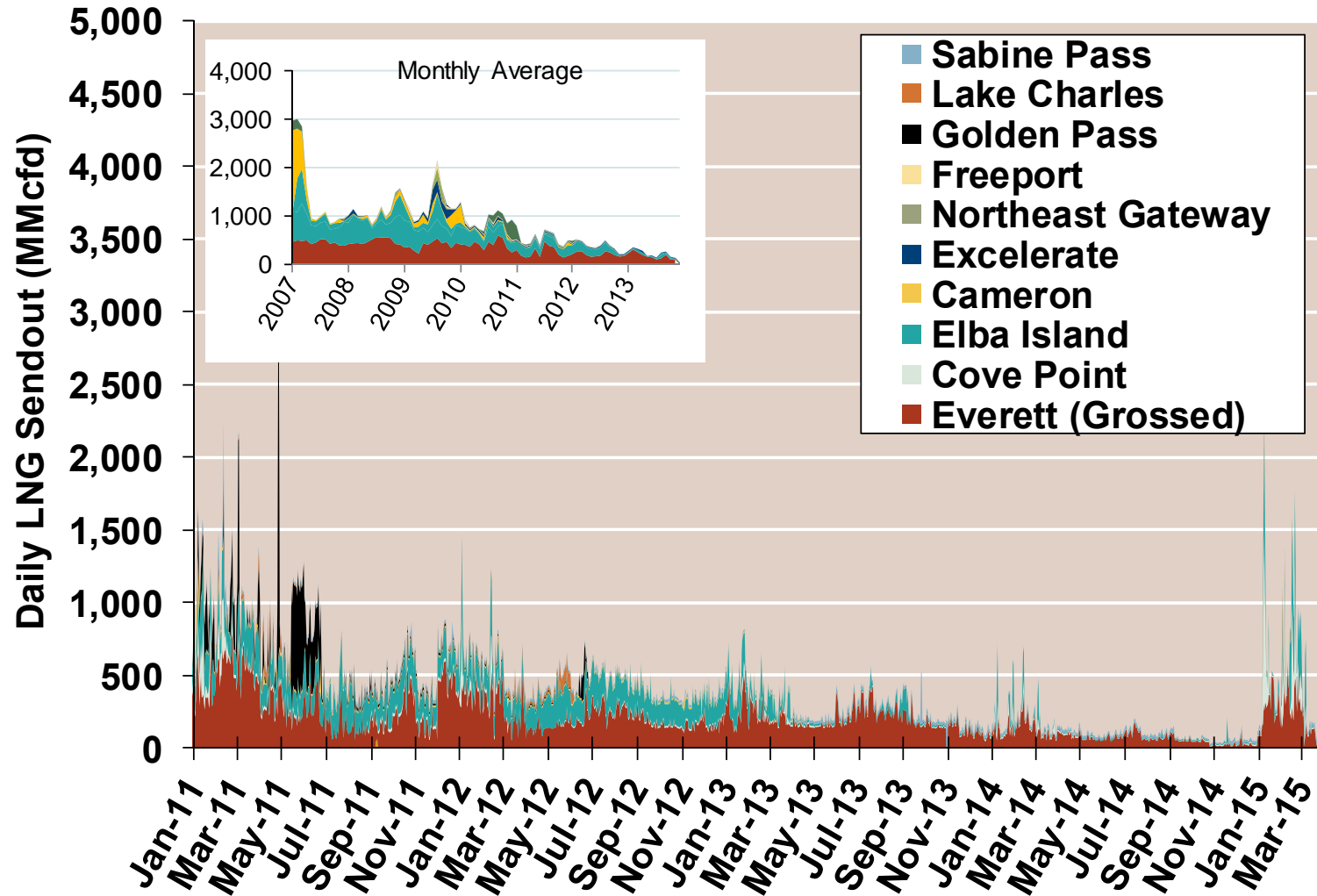


Notes:

Source: Derived from Bloomberg data

Updated 4/8/2015

## Daily Gas Sendout from Existing U.S. LNG Facilities



Notes: Everett data includes flows onto the AGT and TGP interstate lines, plus estimates of flows to the Mystic 7 power plant, Keyspan Boston Gas, and LNG trucked out of the terminal. Excludes flows to the Freeport LNG which flows via intrastate pipelines and flows to the Mystic 8 and 9 power plants.

Source: Derived from *Bentek Energy* data

Updated: October 2014

## World LNG Estimated March 2015 Landed Prices

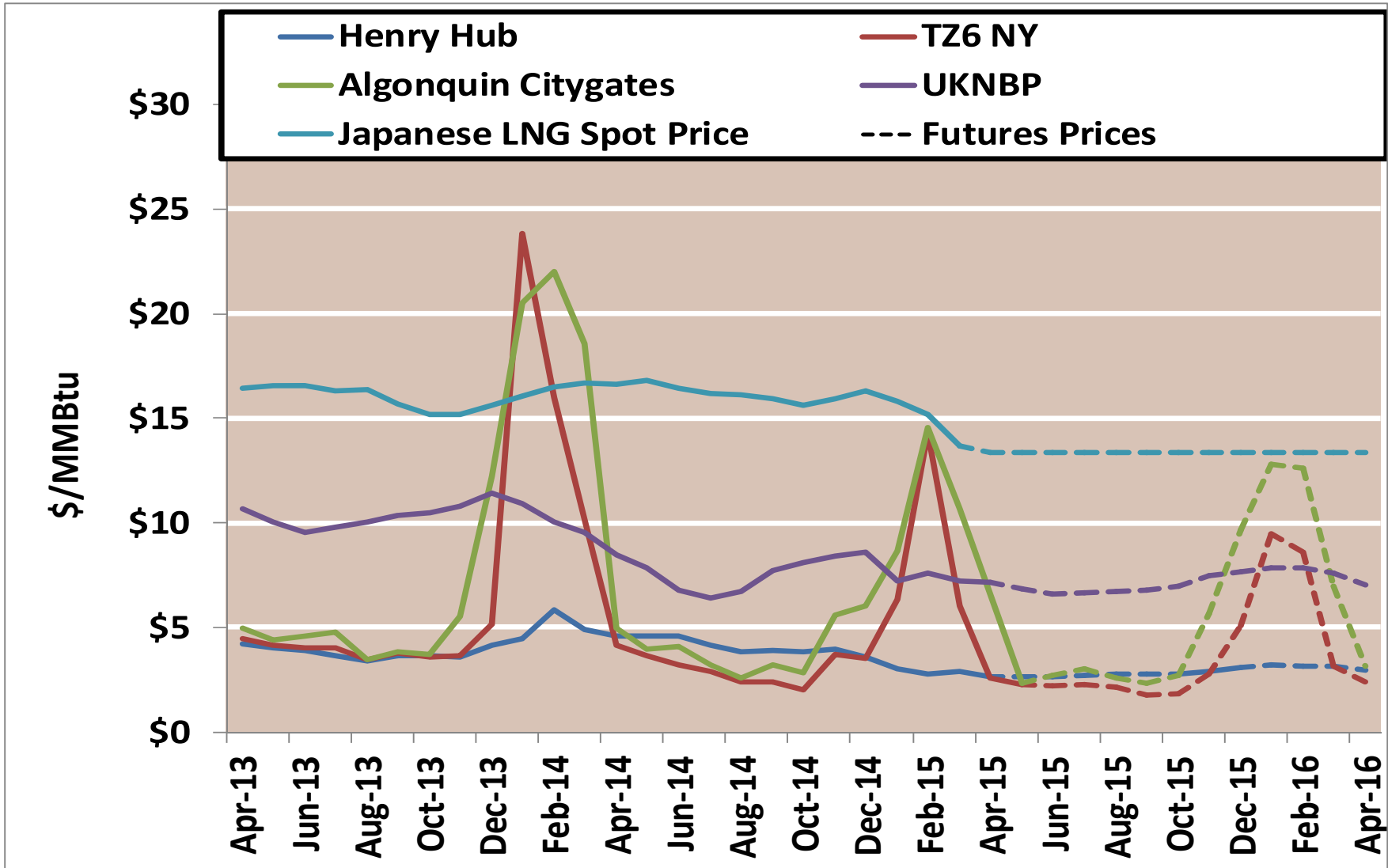


Source: *Waterborne Energy, Inc.* Data in \$US/MMBtu

Note: Includes information and Data supplied by IHS Global Inc. and its affiliates ("IHS"); Copyright (publication year) all rights reserved.

Updated April 2014

## Historical and Future World Gas Prices

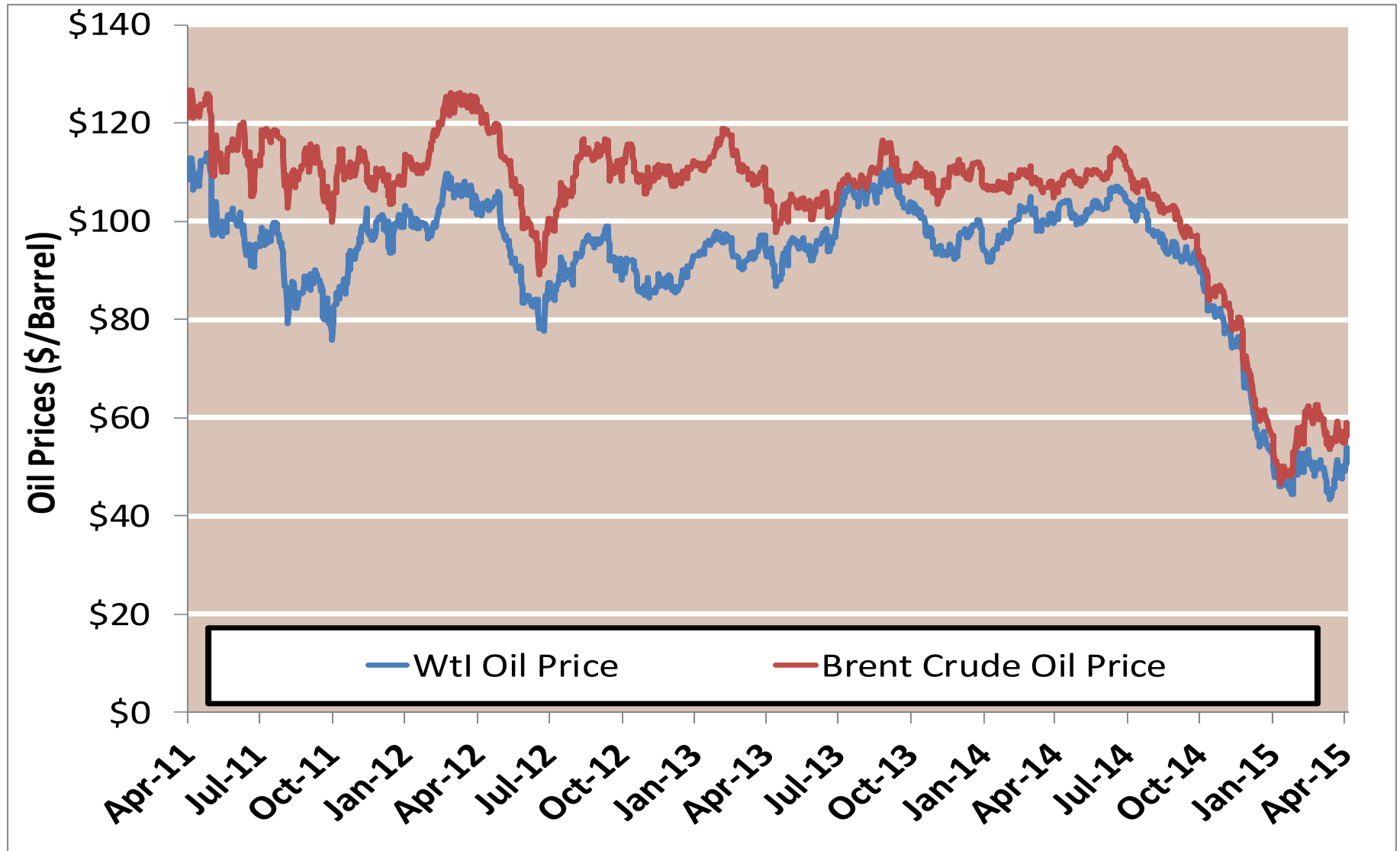


Notes:

Source: Derived from Bloomberg data

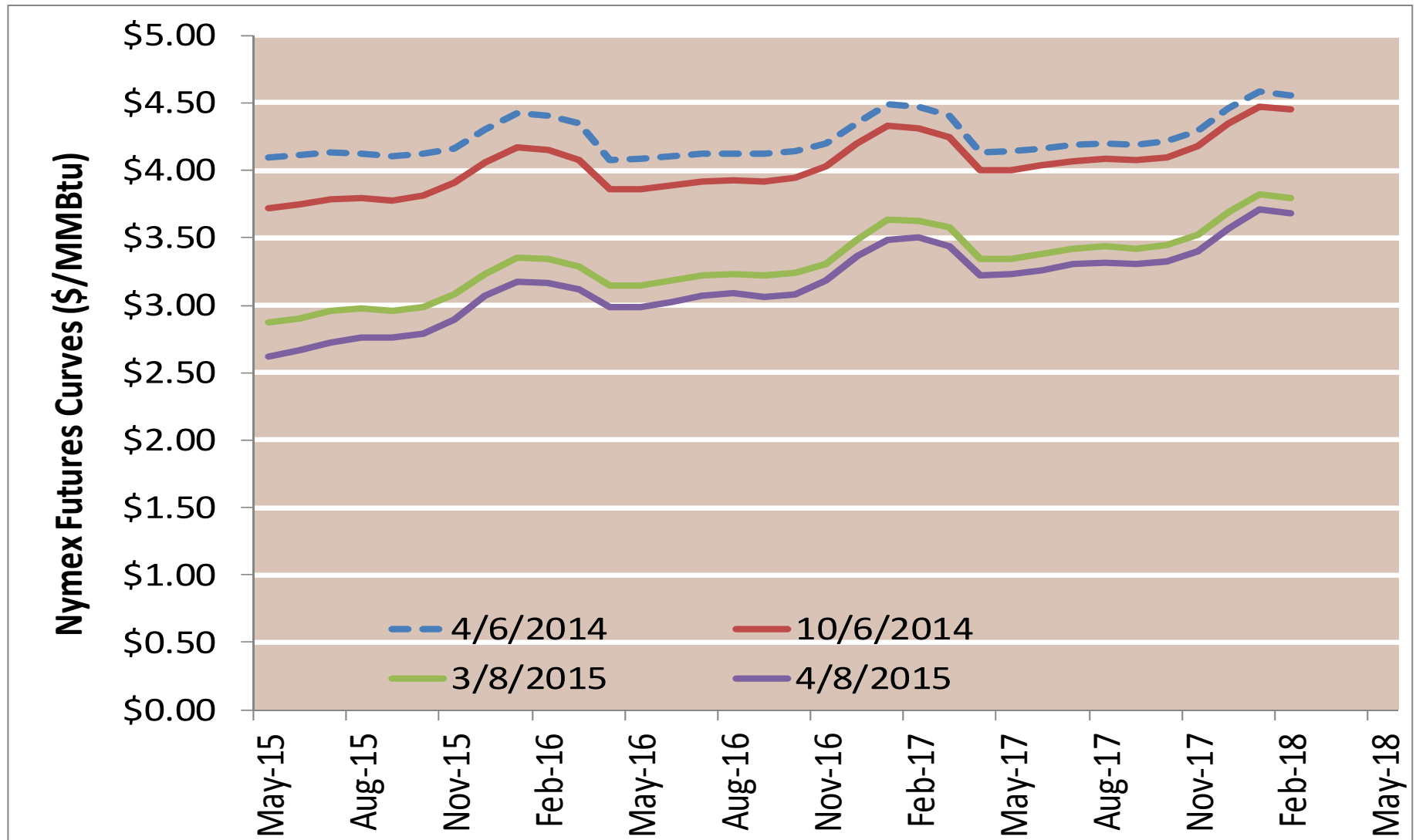
Updated 4/8/2015

### WTI vs Brent Crude Oil Price





## Nymex Futures Curves





# Infrastructure Report

# Natural Gas Highlights

## Natural Gas Activities in March 2015

Status	No. of Projects	Storage Capacity (Bcf)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
<b>Pipeline</b>						
Placed in Service	3			529.0	21.7	21,500
Certificated	5			864.0	101.4	90,554
Proposed	13			12,409.0	684.2	694,996
<b>Storage</b>						
Placed in Service	1	1.7	0.0			0
Certificated	0	0.0	0.0			0
Proposed	0	0.0	0.0			0
<b>LNG (Import &amp; Export)</b>						
Placed in Service	0	0	0			0
Certificated (Import/Export)	0	0	0			0
Proposed (Export)	4	37.90	6,320			0

# Electric Generation Highlights

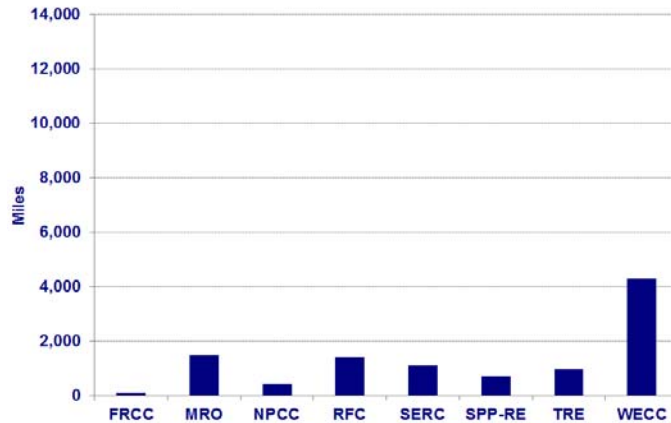
## New Generation In-Service (New Build and Expansion)

Primary Fuel Type	March 2015		January – March 2015 Cumulative		January – March 2014 Cumulative	
	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	0	0	0	0	0	0
Natural Gas	2	176	5	302	7	159
Nuclear	0	0	0	0	0	0
Oil	0	0	0	0	1	1
Water	1	21	1	21	2	7
Wind	1	98	8	647	16	633
Biomass	0	0	0	0	20	72
Geothermal Steam	0	0	1	45	3	30
Solar	0	0	30	214	69	680
Waste Heat	0	0	0	0	1	40
Other	0	0	0	0	3	1
<b>Total</b>	<b>4</b>	<b>295</b>	<b>45</b>	<b>1,229</b>	<b>122</b>	<b>1,623</b>

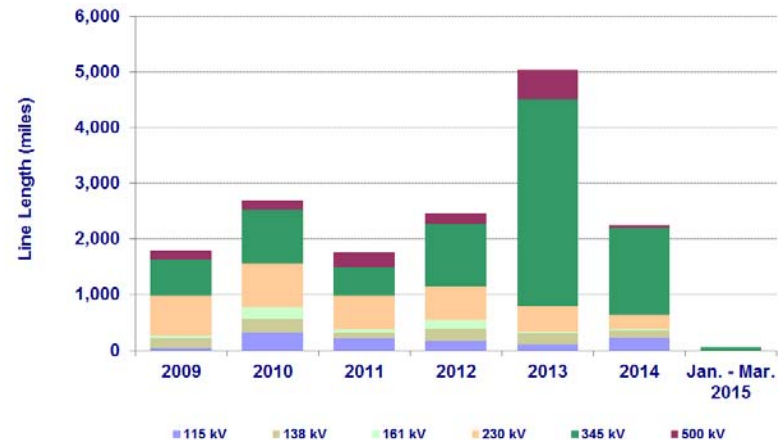
# Electric Transmission Highlights

Voltage (kV)	Transmission Projects Completed				Proposed Transmission Projects In-Service by March 2017	
	March 2015	March 2014	January – March 2015 Cumulative	January – December 2014 Cumulative	High Probability of Completion	All
	Line Length (miles)					
≤230	5.0	44.0	5.0	642.9	4,050.3	7,383.9
345	0.0	64.8	58.7	1,547.8	3,318.7	5,579.5
500	0.0	0.0	0.0	62.0	3,175.3	9,403.6
Total U.S.	5.0	108.8	63.7	2,252.7	10,544.3	22,367.0

Transmission Projects with a High Probability of being completed by March 2017



New Transmission Projects by Voltage



# Infrastructure Report

[Office of Energy Projects Energy Infrastructure Update](http://www.ferc.gov/legal/staff-reports.asp)

<http://www.ferc.gov/legal/staff-reports.asp>

(see “Energy Infrastructure” tab)