April 22, 2015
Milford, MA

Northeast Gas Association

Regional Gas Market Update

Presentation to:

ISO-NE Planning Advisory Committee

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Northeast Gas Association

NGA'S ANTITRUST COMPLIANCE PROCEDURES

Adopted by the NGA Board of Directors on June 4, 2003

Objective

The Northeast Gas Association (NGA) and its member companies are committed to full compliance with all laws and regulations, and to maintaining the highest ethical standards in the way we conduct our operations and activities. Our commitment includes strict compliance with federal and state antitrust laws, which are designed to protect this country's free competitive economy.

Responsibility for Antitrust Compliance

Compliance with the antitrust laws is a serious business. Antitrust violations may result in heavy fines for corporations, and in fines and even imprisonment for individuals. While NGA's attorneys provide guidance on antitrust matters, you bear the ultimate responsibility for assuring that your actions and the actions of any of those under your direction comply with the antitrust laws.

Antitrust Guidelines

In all NGA operations and activities, you must avoid any discussions or conduct that might violate the antitrust laws or even raise an appearance of impropriety. The following guidelines will help you do that:

- ***Do*** consult counsel about any documents that touch on sensitive antitrust subjects such as pricing, market allocations, refusals to deal with any company, and the like.

Continued on NGA web site…

http://www.northeastgas.org/about-nga/antitrust-guidelines

Issues

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- The Recent Winter
- Natural Gas Supply Trends
- Proposed Regional Infrastructure

Winter Summary

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- Consistent throughput, esp. Jan-Feb-Mar. 2015
- High demand on system infrastructure
- Good system performance, from pipelines, LNG importers, local gas utilities
- For New England gas utilities, new regional sendout record set on Feb. 15, 2015 at approx. 3.95 Bcf.
- Spot price volatility in region but only half the levels of 2013/14
- NGA Gas Supply Task Force in place during winter and communicated with 3 Northeast ISOs and state agencies, but no actions required.

New England Gas Utilities Set New Sendout Record, 2-15-15

- **Gas LDC sendout of 3.95 Bcf on Feb. 15, 2015 – new record**
- Gas LDC design day for this winter was 4.3 Bcf, reflecting system growth
- 2013/14 winter design day collectively was 4 Bcf

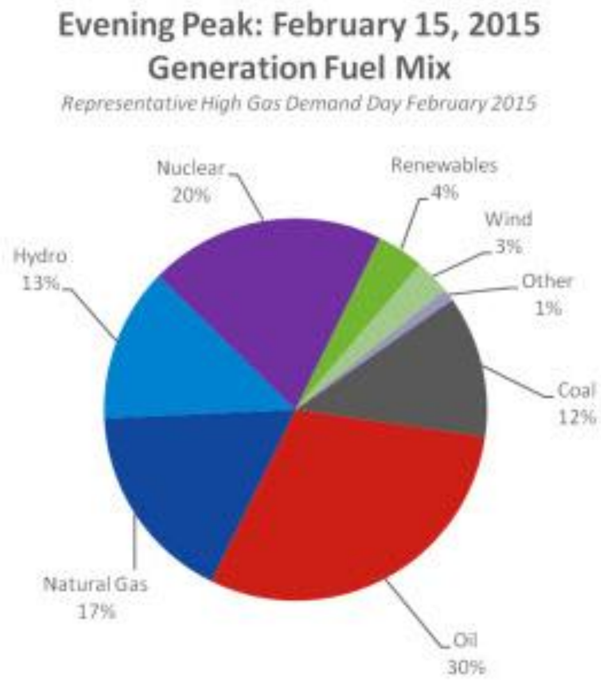

Chart: ISO-NE, 3-15

Spot Price Less Volatile than Last Winter – *but still volatile*

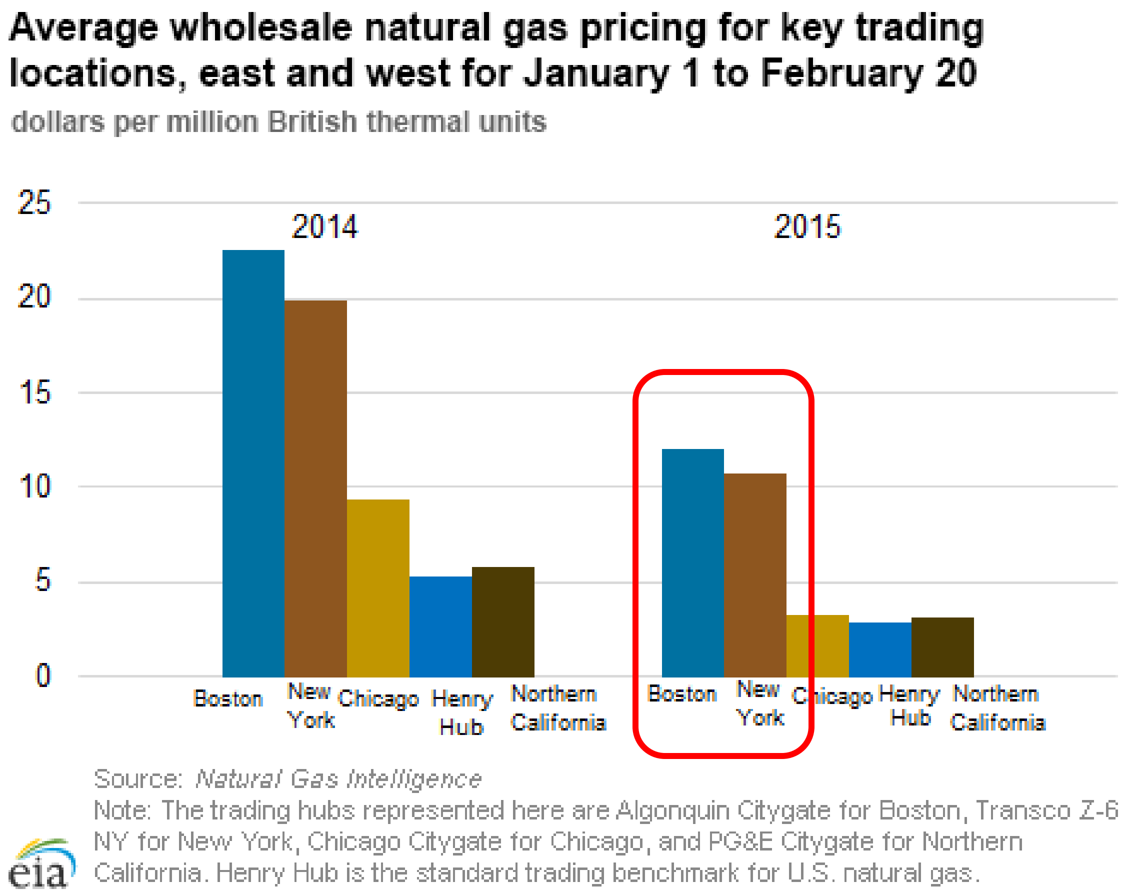

Chart: U.S. EIA, February 2015

New Records for Pipeline Throughput: AGT

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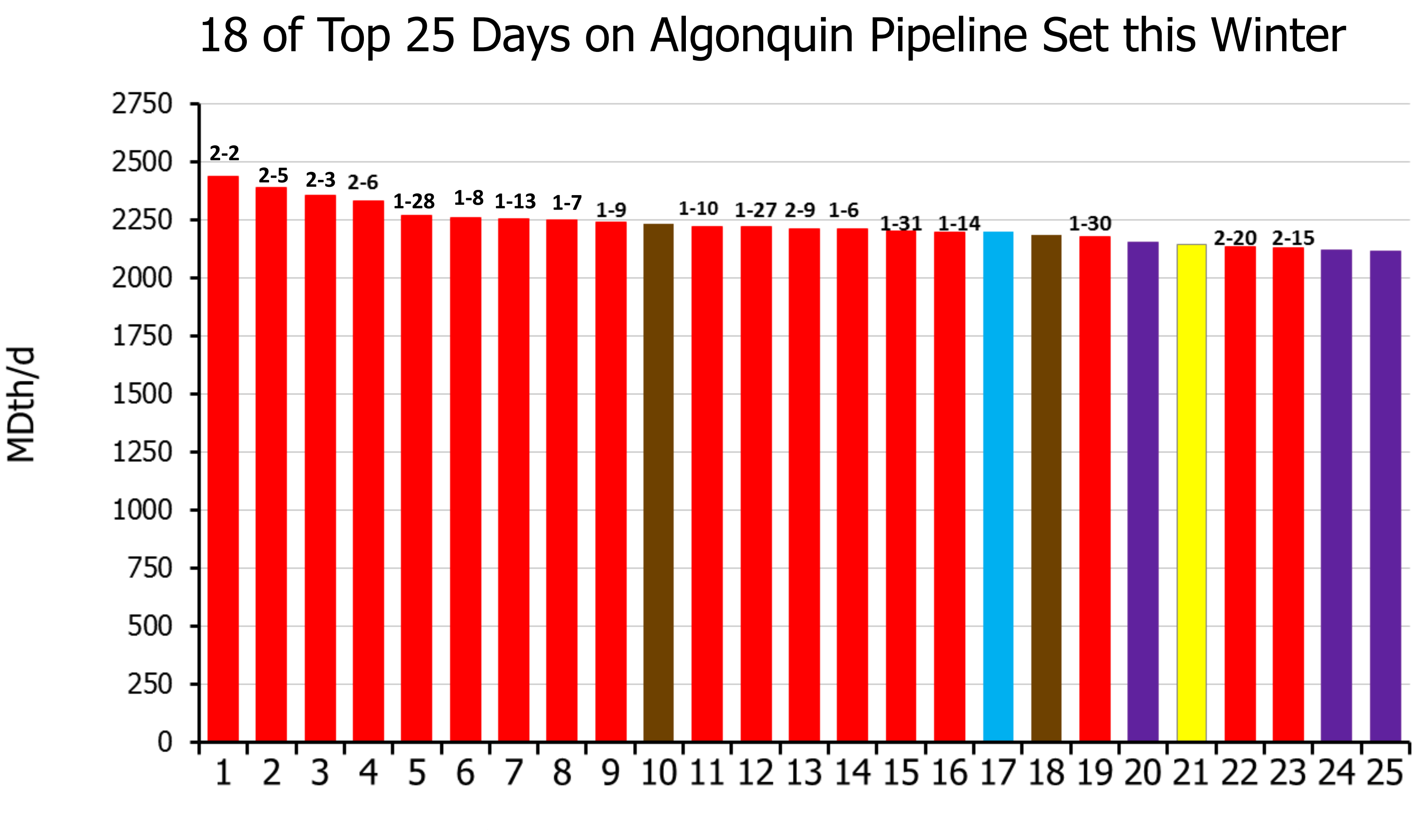

Chart: Spectra Energy

7 of Top 10 Delivery Days This Winter: IGT

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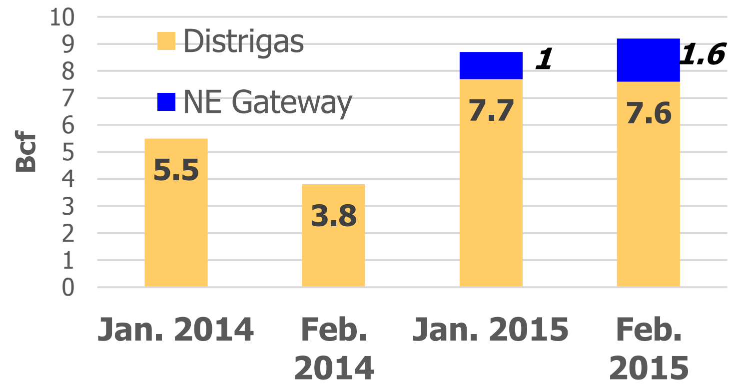
	Location	Dt/d	Date
Supply	Waddington	**1,221,160**	2/6/15
Supply	Brookfield	422,959	10/13/14
Supply	Waddington/Brookfield	**1,544,556**	3/5/15
TGP	Wright TGP	407,396	1/16/13
TGP	Wright & Shelton TGP	480,974	1/17/13
NYF System	South Commack	**562,789**	2/17/15
NYF System	Hunts Point	356,830	1/20/09
NYF System	Northport/South Commack/Hunts Point	860,927	2/7/10
	D/S of Milford Compressor Station	912,185	1/12/10
	Total Physical Deliveries – All Meters	**1,534,051**	3/5/15

Source: Iroquois

More LNG Entered the Market

- Increased volumes this winter – drawn by strong regional prices (and low world prices)
- Distrigas imported **15.3 Bcf in Jan.-Feb. 2015** compared to 9.3 Bcf in Jan.-Feb. 2014.
- Canaport delivered **15 Bcf in Jan.-Feb. 2015** compared to 10 Bcf in Jan.-Feb. 2014.
- Excelerate's Northeast Gateway, offshore Gloucester, MA, had first delivery in over 4 years, delivering **2.6 Bcf** in Jan-Feb
- Capacity constraints continue on pipelines from Marcellus, so "east-end LNG" proved valuable to system stability this winter.



Source: U.S. Dept. of Energy, April 2015

Photo: Distrigas

Changing Role for LNG & Canadian Imports

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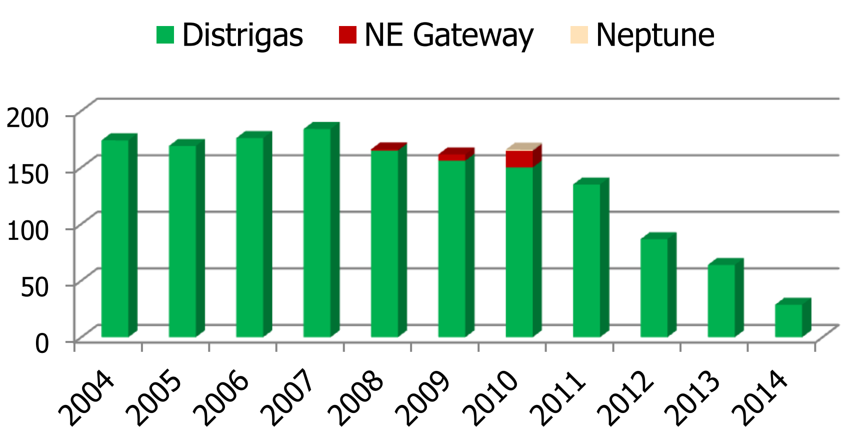
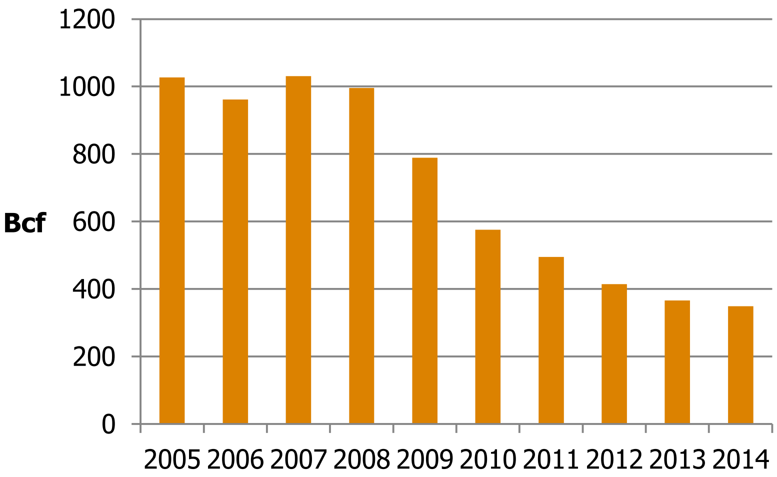
- Both LNG and supplies from Canada remain important for supply diversity and winter peaks but changing market share in recent years with advent of Marcellus

LNG Imports by New England-Based Terminals, (Bcf/yr), 2004-14



Source: U.S. Dept. of Energy/Office of Fossil Energy, 2-15

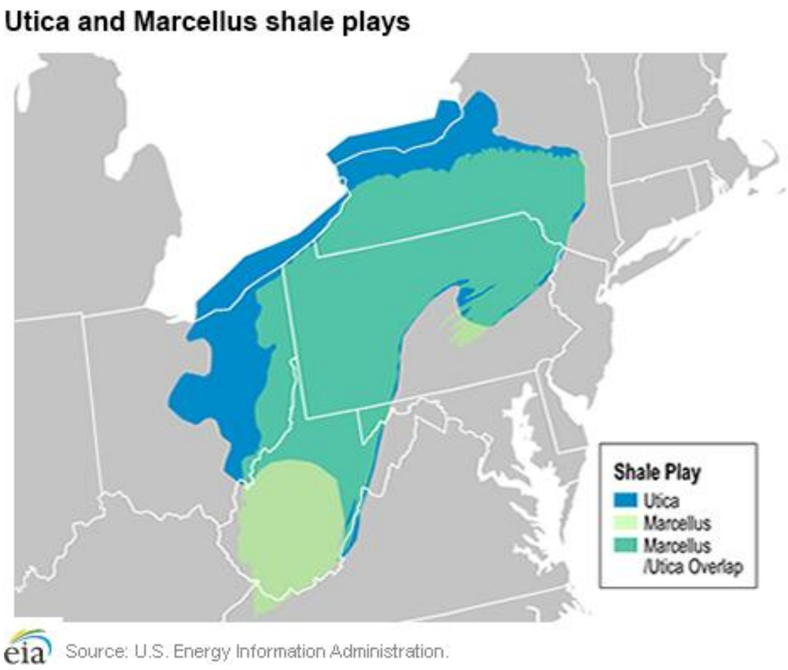
Canadian Natural Gas Exports to Eastern U.S., 2005-14

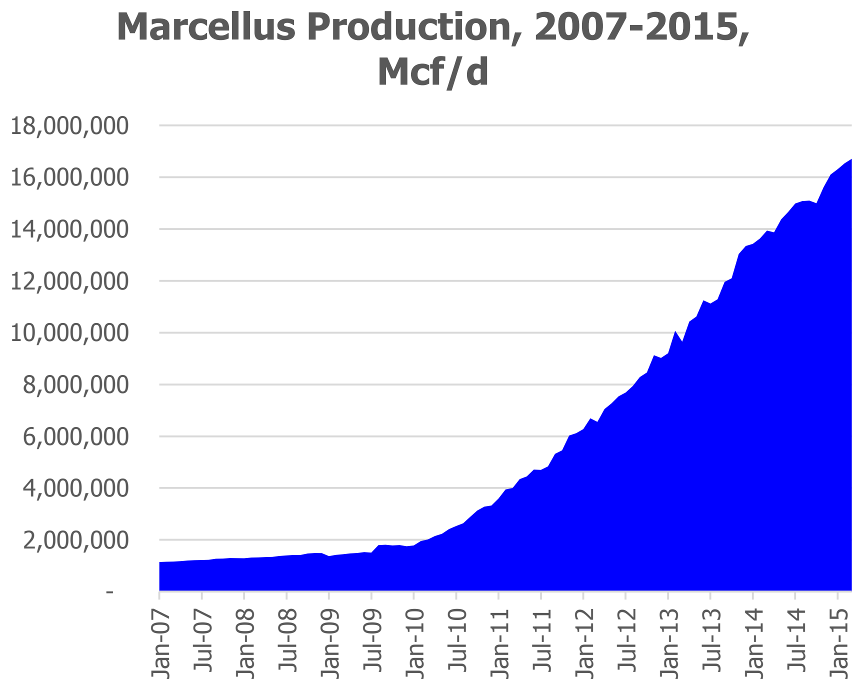


Source: National Energy Board, Canada

Natural Gas Supply Trends

Marcellus Shale Production





Source: U.S. EIA, 7-14

Source: U.S. EIA, 3-15

Marcellus: Largest U.S. Gas Resource Base

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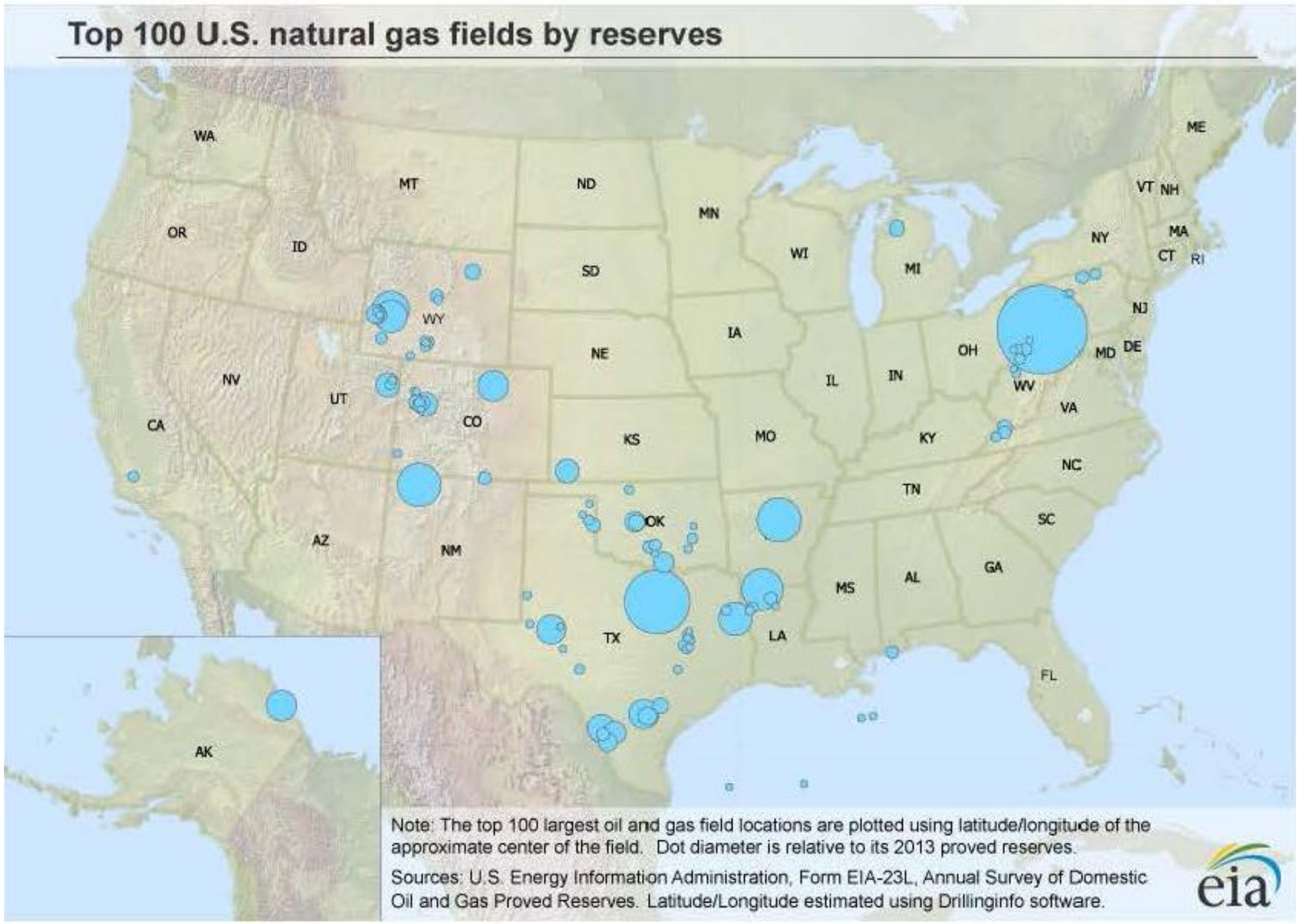
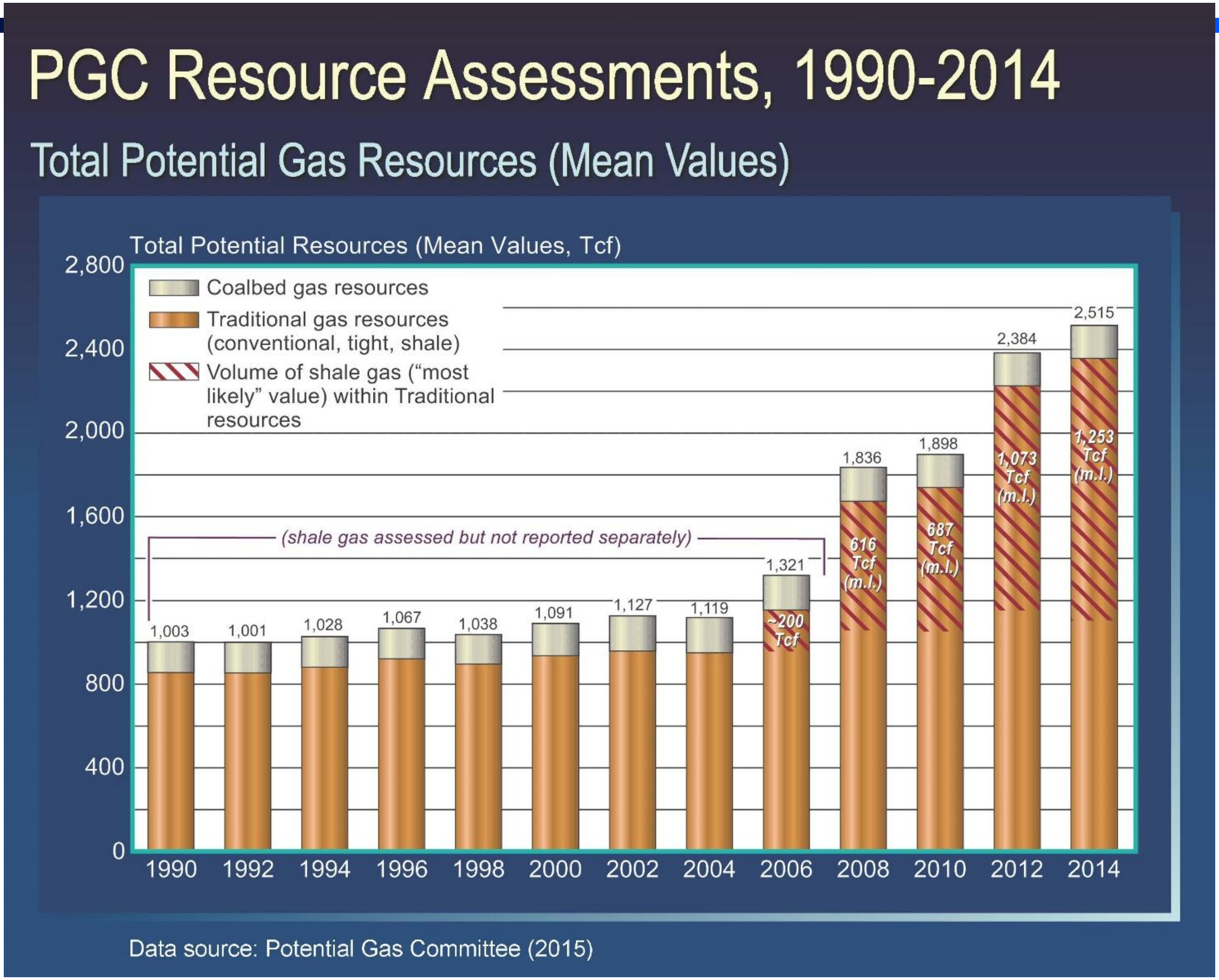


Source: U.S. EIA, 4-15

Growing U.S. Resource Base

– *due to increased share for shale*



Source: Potential Gas Committee, 4-8-15

Resource Base by Region

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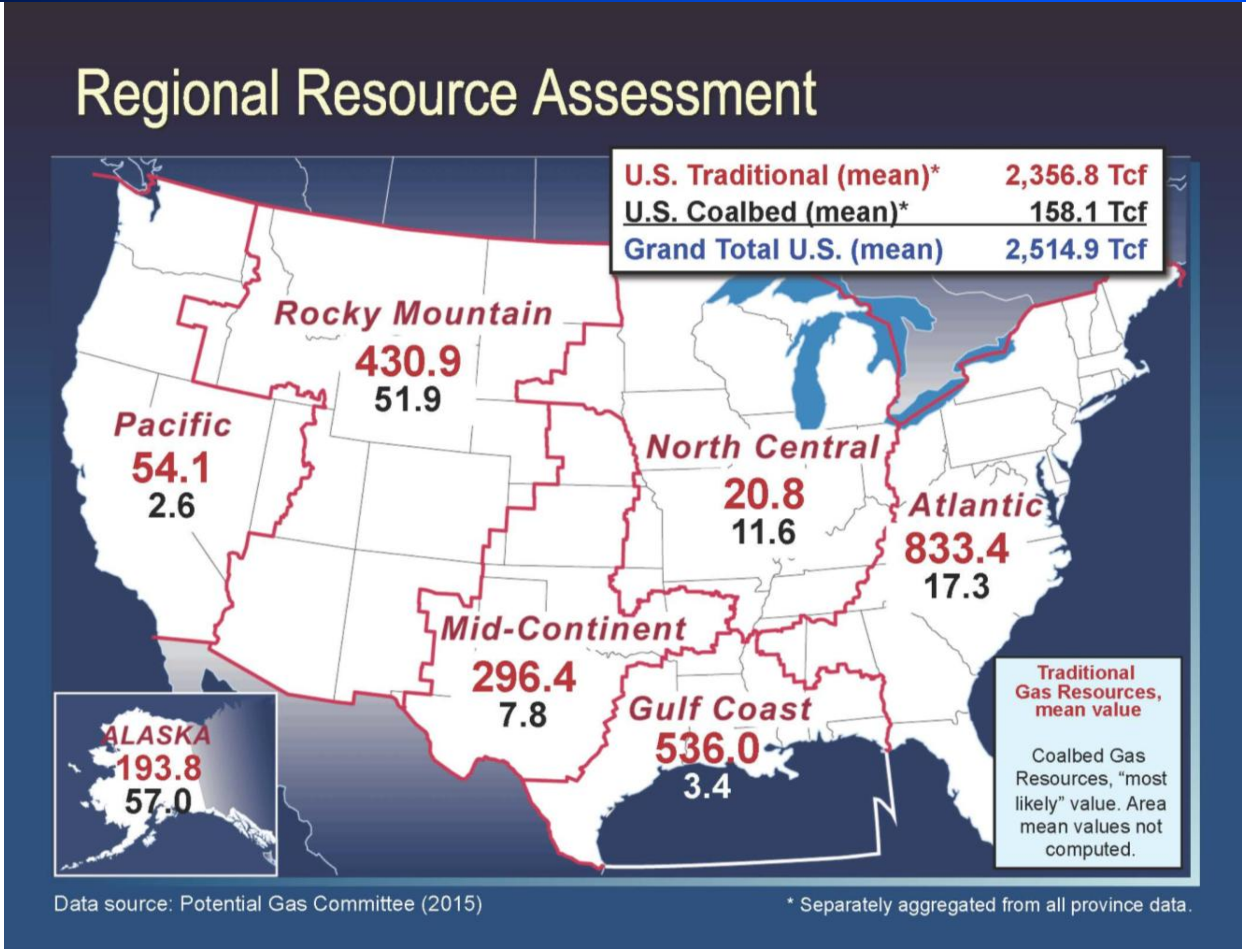

Source: Potential Gas Committee, 4-8-15

Current Storage Levels, Post-winter

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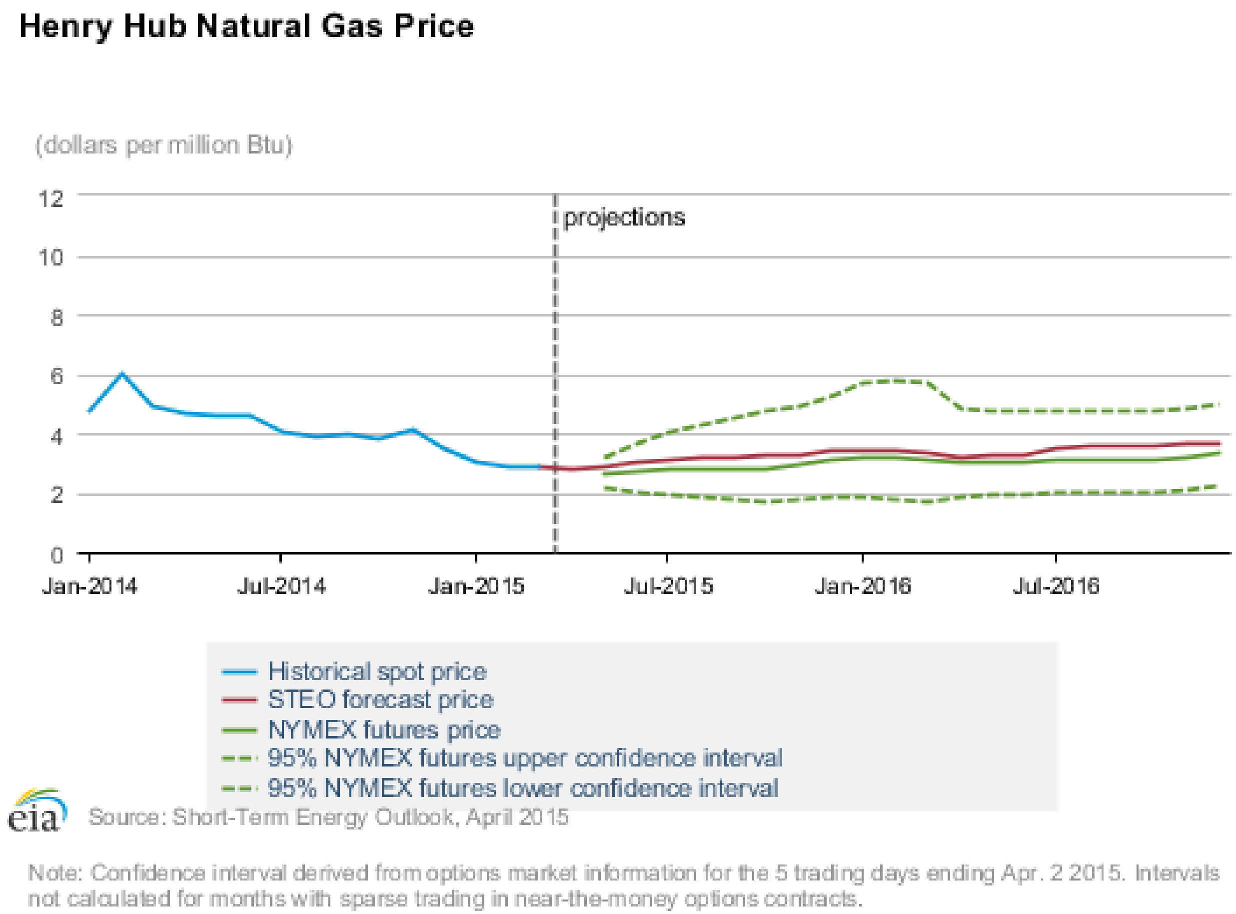
	As of 4-10-15	As of 4-10-14
U.S. Total (Bcf)	1,539	847
5-year average	*1,684 (-9%)*	*1,684 (-50%)*
East U.S. only	519	310
5-year average	*700 (-26%)*	*700 (-56%)*

Source: U.S. EIA, April 2015

Short-Term Price Outlook: EIA



Source: U.S. EIA, April 2015

Proposed Infrastructure

Proposed Pipeline Projects

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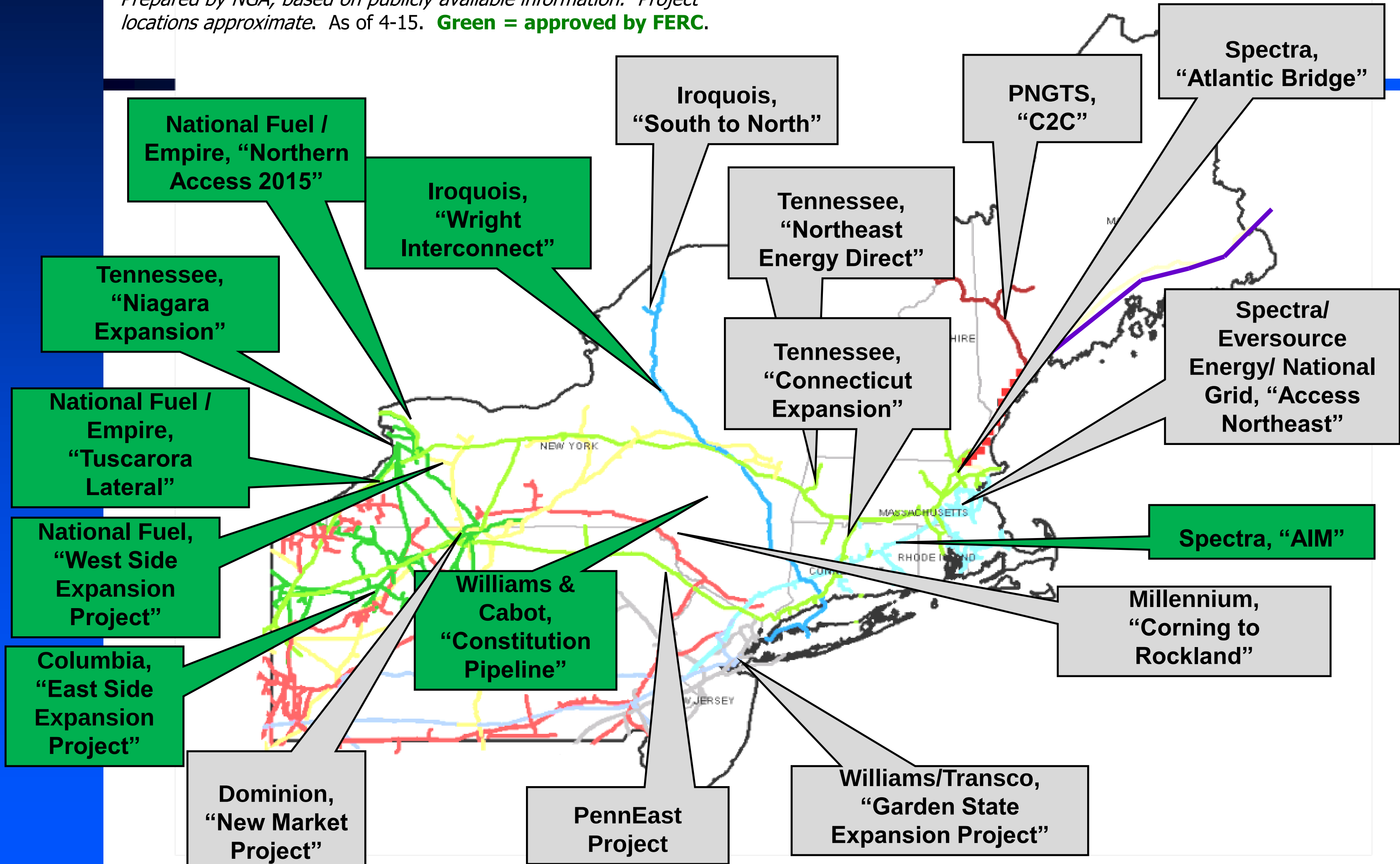
Prepared by NGA, based on publicly available information. Project locations approximate. As of 4-15. **Green = approved by FERC**.



Constitution Pipeline / Wright Interconnect Project

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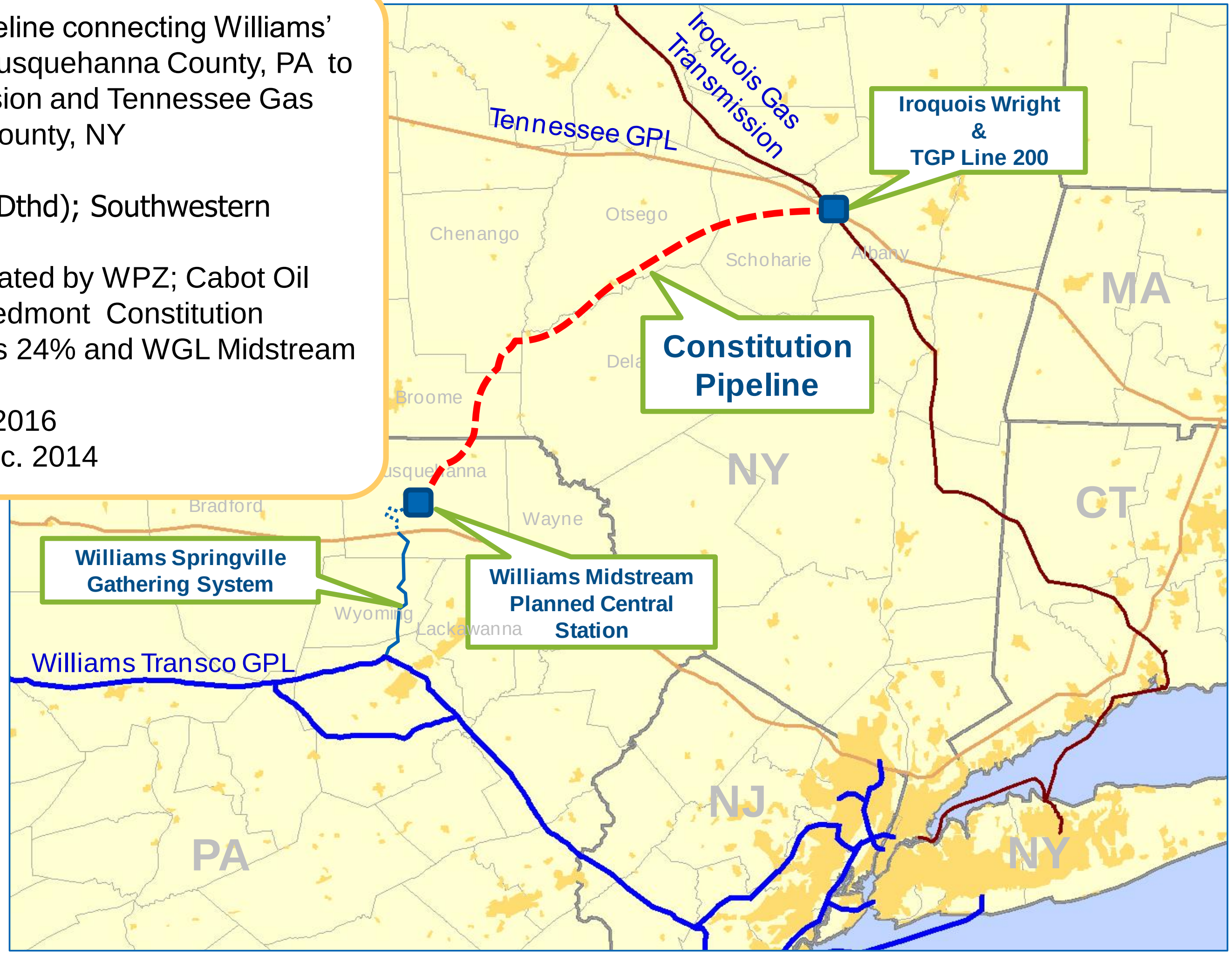
- A 125-mile, 30-inch pipeline connecting Williams' Midstream System in Susquehanna County, PA to Iroquois Gas Transmission and Tennessee Gas Pipeline in Schoharie County, NY
- Capacity: 650 MDth/d
- Shipper: Cabot (500 MDthd); Southwestern Energy (150 MDthd)
- Owned (41%) and operated by WPZ; Cabot Oil and Gas owns 25%, Piedmont Constitution Pipeline Company owns 24% and WGL Midstream owns 10%
- Target in-service date: 2016
- Approved by FERC, Dec. 2014



Algonquin Incremental Market (AIM) Project: Spectra Energy

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Project Scope:

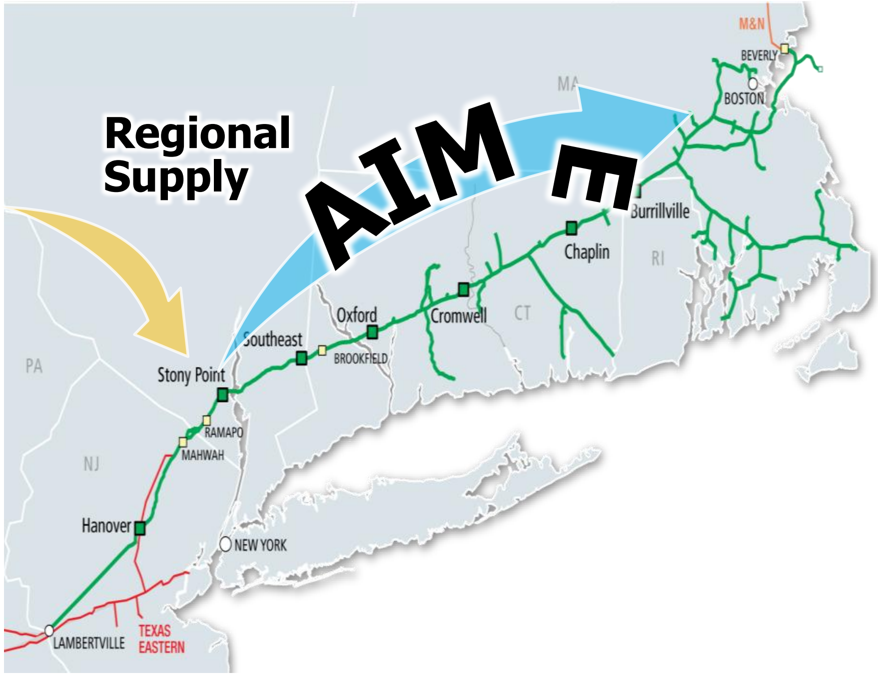
- Providing 342 MMcf/d of additional capacity to move Marcellus production to Algonquin City Gates

Customers:

- UIL Holdings
- Eversource Energy
- National Grid
- NiSource
- City of Middleborough, MA
- City of Norwich, CT

Project Status:

- Received FERC certificate, Mar. 3, 2015
- Commence construction 2Q15
- In-service 2H16



Map and info: Spectra Energy

Connecticut Expansion Project: Kinder Morgan / TGP

Project Scope:

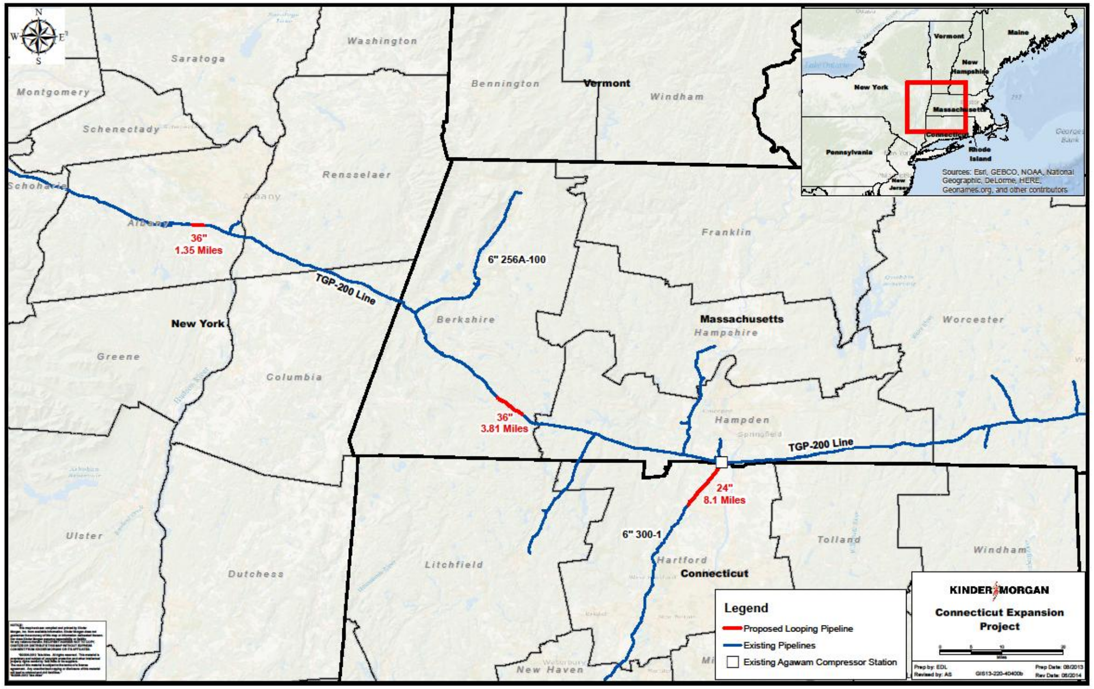
- Providing 72 MMcf/d of additional capacity to meet utility demand

Customers:

- UIL Holdings (CT Natural Gas & Southern CT Gas)
- Eversource (Yankee Gas)

Project Status:

- Filed for FERC Certificate
- Proposed Construction Start Date
  - November 2015
- Proposed In-Service Date
  - November 2016



Source: Kinder Morgan

PNGTS's Expansion Projects

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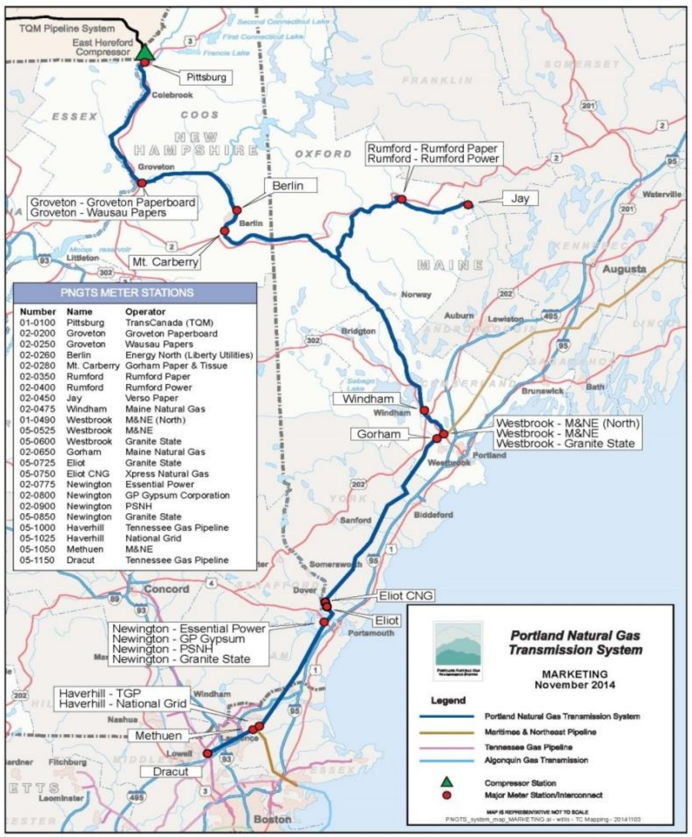

- **C2C - Moving Ahead**
  - C2C Open Season opportunity closed 2/27/15
  - In Contract negotiations now
    - » Volumes TBD
  - Nov 2017 Start Date
- **Next Project**
  - Late 2015, early 2016
  - May involve build
    - » Depends on volume interest
  - November 2018 Start Date
  - Discussions with interested parties

Map and info: Portland Natural Gas Transmission

Iroquois' "SoNo Project"

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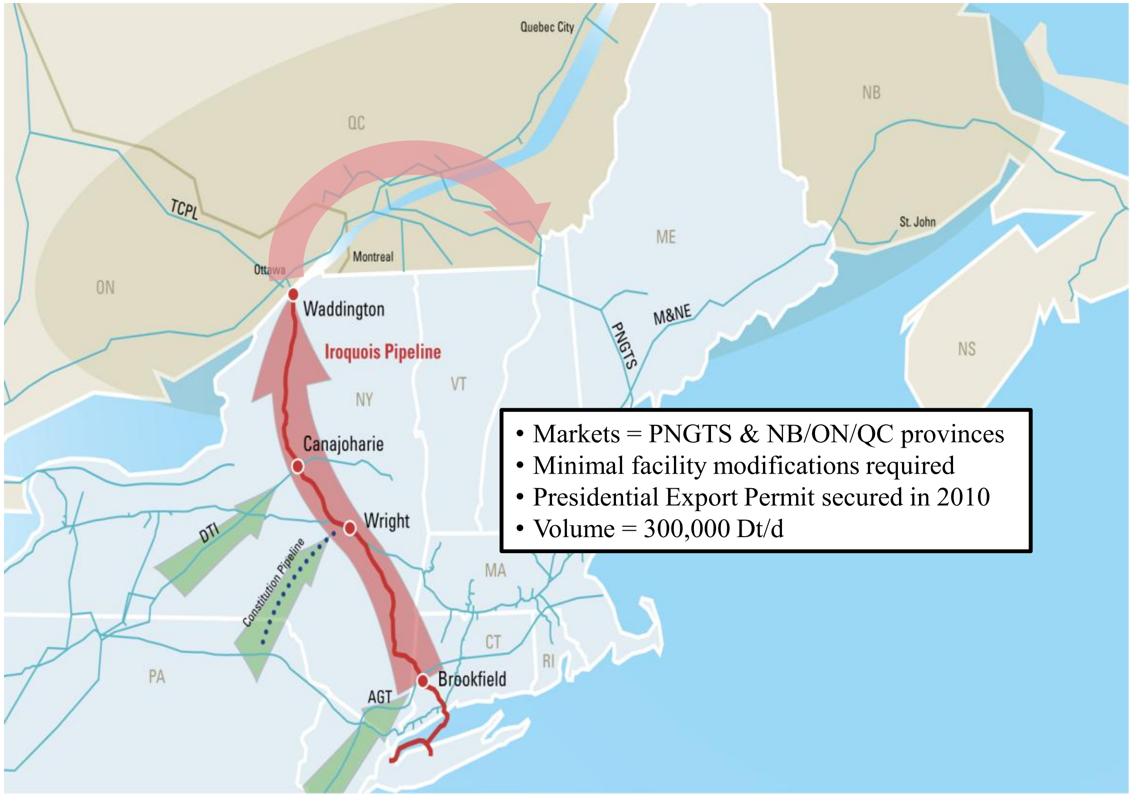
Iroquois' SoNo Project *(Mainline Flow Reversal)*



Map and info: Iroquois Gas Transmission

Atlantic Bridge Project: Spectra Energy

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Location: New England and Maritime Provinces

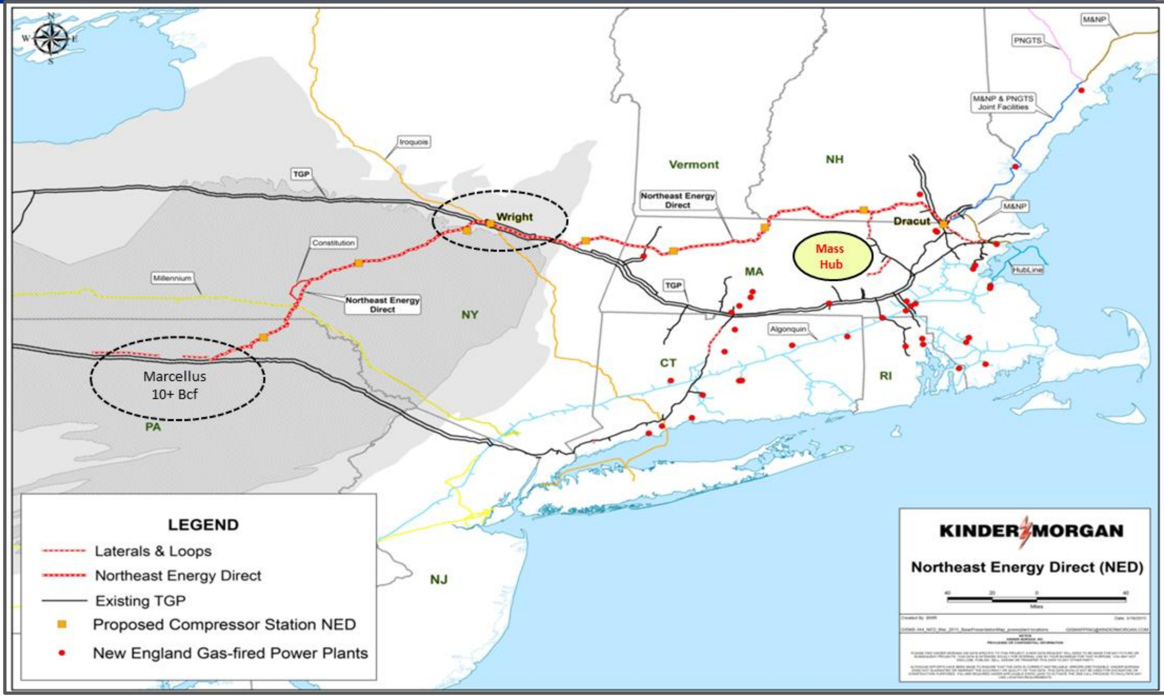
Capacity: 220,000 dekatherms of natural gas per day

In-Service Date: November 2017; in pre-filing process with FERC

Map and info: Spectra Energy

Northeast Energy Direct Project: Kinder Morgan / TGP

Project Scope:
- Scalable from 1.2 to 2.2 Bcf/d connecting NE gas and electric generation markets to incremental, abundant, low-cost Marcellus supplies
- Increases TGP's ability to serve its existing 5,079 MW of power customers and serve new customers behind AGT & TGP
- 91% mainline co-located in existing corridors
- Ideally suited to serve Mass Hub and increase reliability
- Provides EDC with rate certainty
- EDC volumes add to well defined project with customer commitments (~500,000 Dth/d of Anchor Shipper agreements)
- NED is critical component to any regional energy solution



Project Status:
- Filed for FERC Pre-Filing – November 2014
- Planned FERC filing – September 2015
- Proposed Construction Start Date – January 2017
- Proposed In-Service Date – November 2018

Map & text: Kinder Morgan

Access Northeast Project: Spectra Energy, Eversource Energy, National Grid

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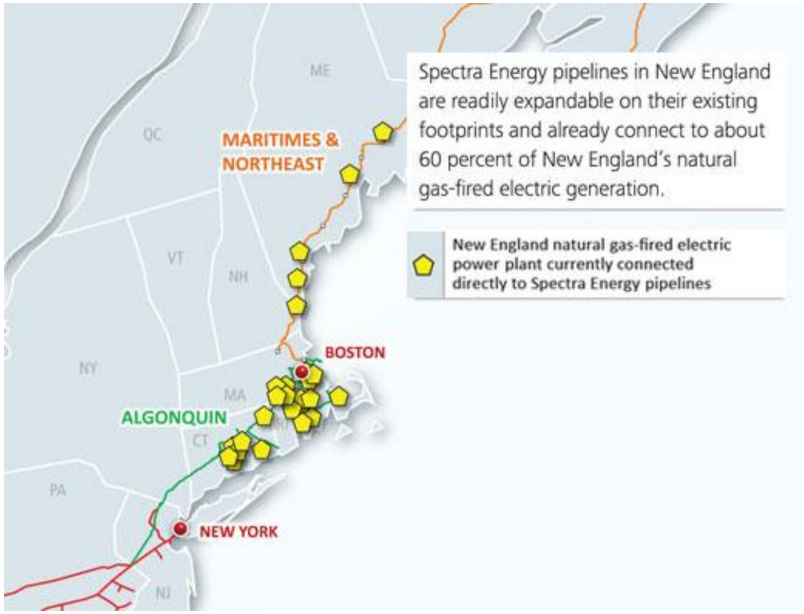
Project Scope:
The gas pipeline expansion project will enhance the Algonquin and Maritimes pipeline systems and market area storage assets in New England to deliver up to one billion cubic feet of natural gas per day for electric generation markets. Alliance with Iroquois Gas Transmission announced, 12-14.

Proposed in-service:
November 2018



Map and info: Spectra Energy

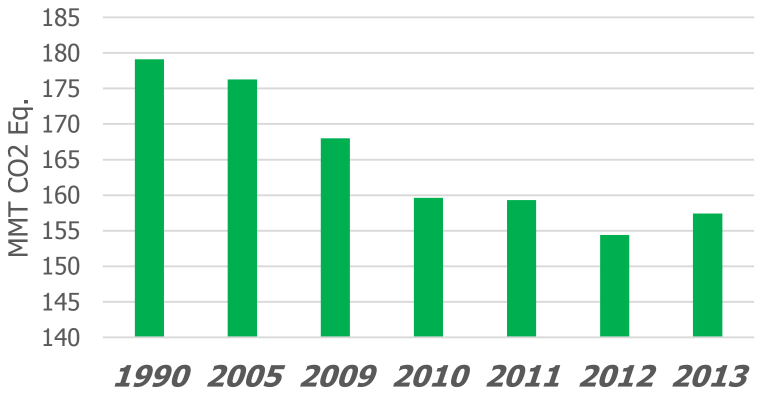
Regulatory Initiatives

Carbon & Methane Emissions

- June 2014: U.S. EPA's "Clean Power Plan"
  - *Proposed rule to cut carbon emissions from existing power plants*

- Jan. 2015: Obama Administration announced plan to cut methane emissions – proposed rule to be introduced this year
  - *Among goals is to "reduce leaks from well sites, gathering and boosting stations, and compressor stations…"*

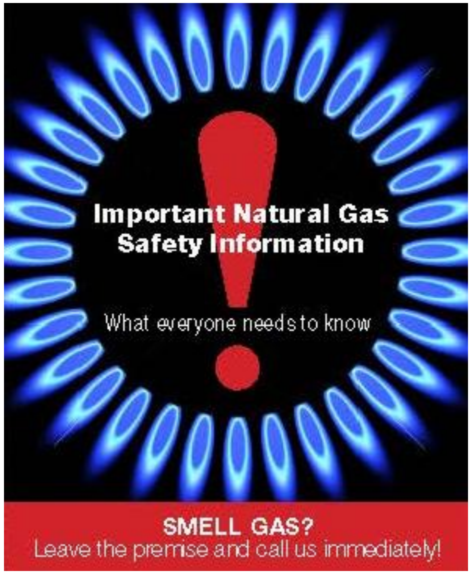
Methane (CH_4) Emissions, U.S. Natural Gas Systems, 1990-2013



Source: U.S. EPA Annual Greenhouse Gas Inventory, Apr. 2015

Methane emissions from U.S. natural gas systems have declined by 12% since 1990, according to EPA's latest annual data released in Apr. 2015

System Safety



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Questions?