

*October 7, 2014
Washington, D.C.*

Natural Gas Production And Demand Forecast

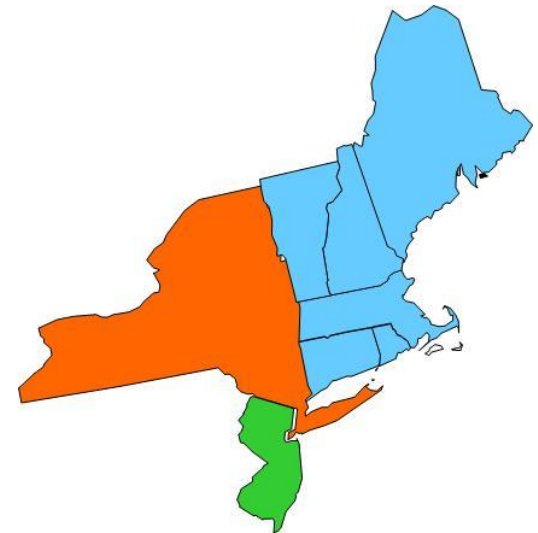
Presentation to:

EIA/NASEO Winter Outlook Conference

Thomas M. Kiley
Northeast Gas Association

About NGA

- ◆ Non-profit trade association
- ◆ Local gas utilities (LDCs) serving New York, New Jersey, and New England
- ◆ Several interstate pipeline companies
- ◆ LNG importers and LNG trucking companies
- ◆ Over 200 “associate member” companies, from industry suppliers and contractors to electric grid operators
- ◆ www.northeastgas.org





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.

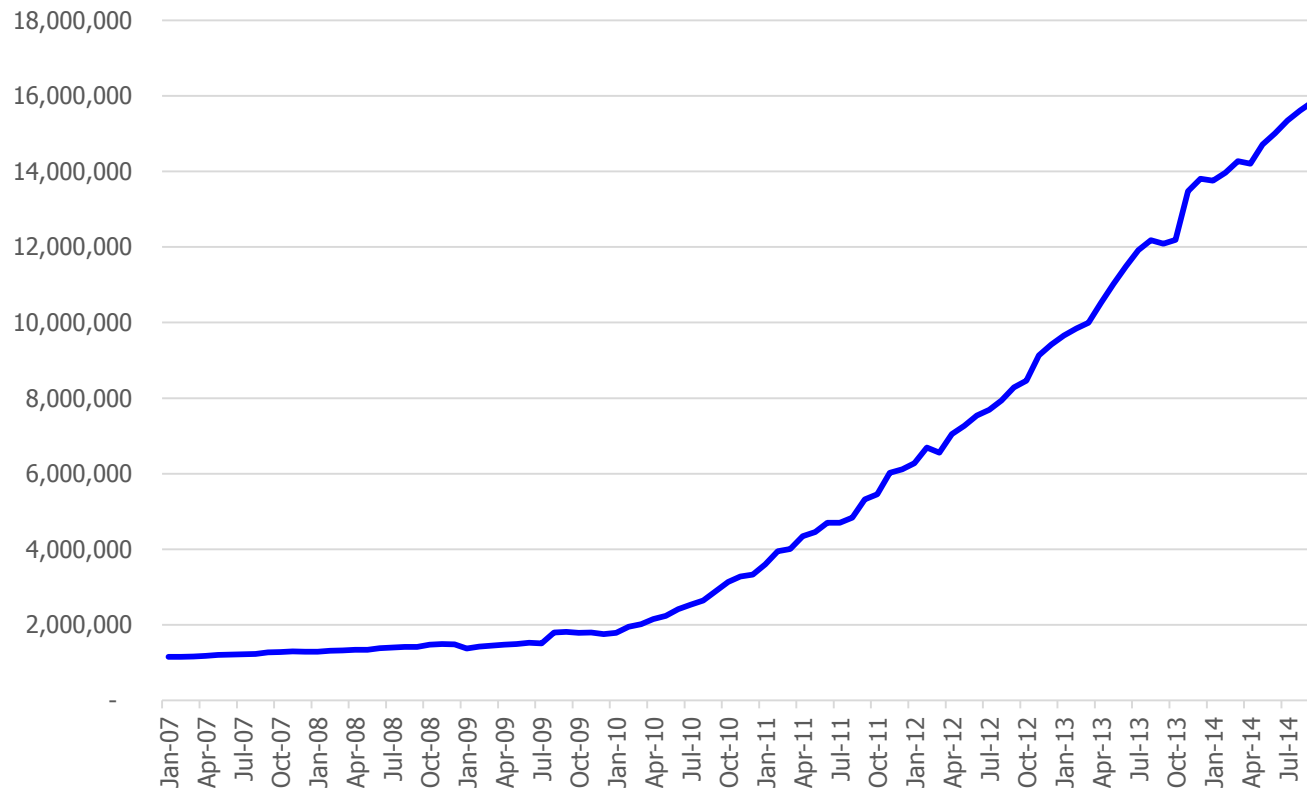
Continued on NGA web site...

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

Marcellus Shale Production: Rapid, Sustained Rise



Marcellus Natural Gas Production, 2007-14



Source: U.S. EIA, 9-14

Demand: Growth Shaped by Price Advantage

Price Difference Between Natural Gas and Heating Oil, Mid-Atlantic

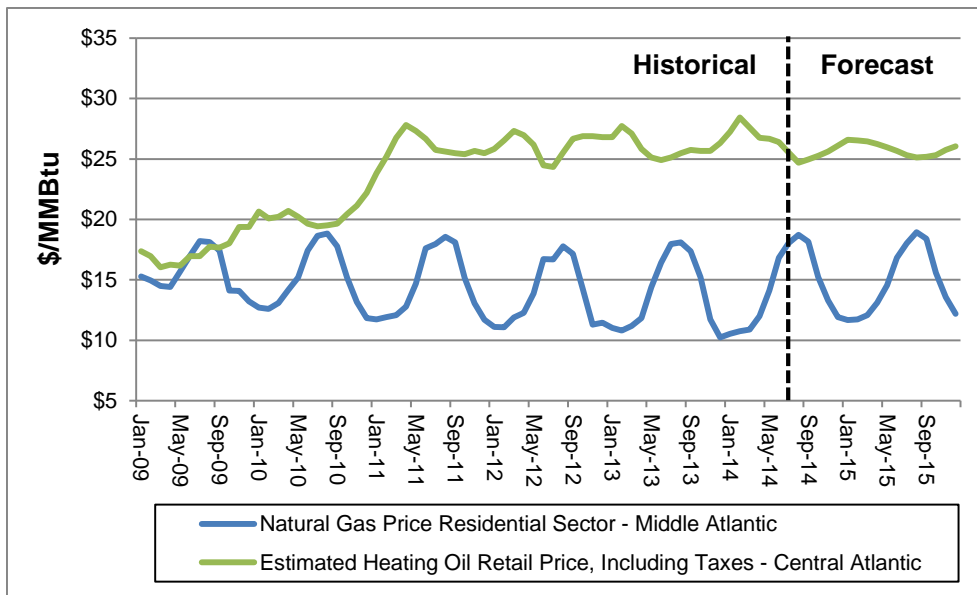


Chart: Sussex Economic Advisors, derived from EIA data, 9-14

Percent of Homes, Main Heating Fuels, Northeast 2005-2013

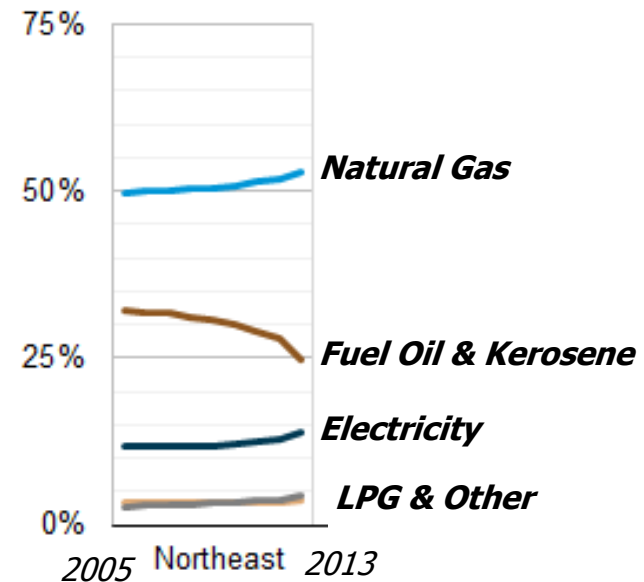


Chart: U.S. EIA, 9-14

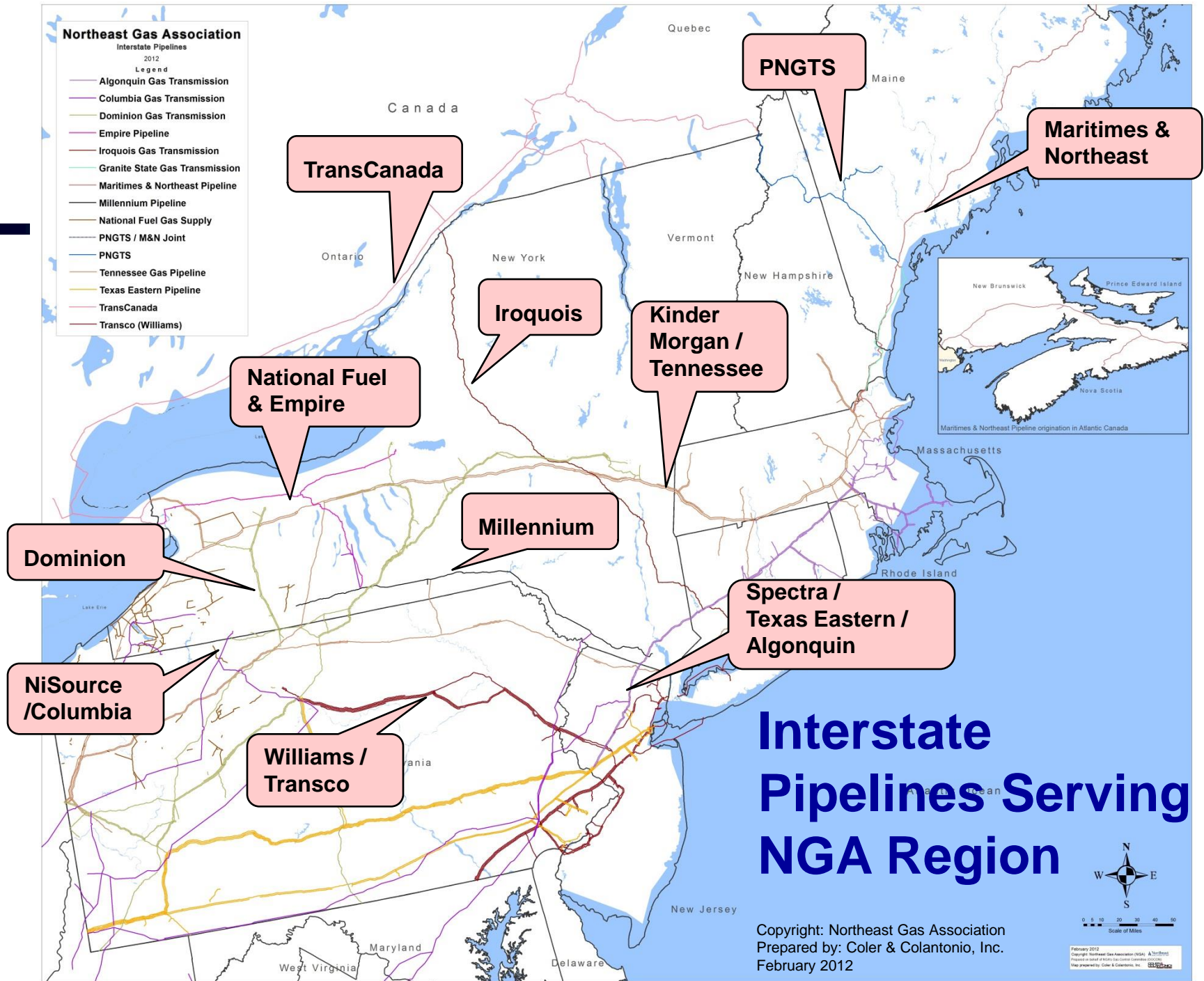
Northeast Gas Association

Interstate Pipelines

2012

Legend

- Algonquin Gas Transmission
- Columbia Gas Transmission
- Dominion Gas Transmission
- Empire Pipeline
- Iroquois Gas Transmission
- Granite State Gas Transmission
- Maritimes & Northeast Pipeline
- Millennium Pipeline
- National Fuel Gas Supply
- PNGTS / M&N Joint
- PNGTS
- Tennessee Gas Pipeline
- Texas Eastern Pipeline
- TransCanada
- Transco (Williams)



Interstate Pipelines Serving NGA Region

Copyright: Northeast Gas Association (NGA)
Prepared by: Coler & Colantonio, Inc.
February 2012

Role of LNG

- ◆ LNG is key to meeting peak day demand in the region – especially New England
- ◆ Two LNG import terminals are operating
- ◆ LDCs in NE, NY, NJ utilize LNG for peak-shaving



Distrigas facility, part of GDF SUEZ NA



Canaport LNG. Photo courtesy of Repsol

Utility Supply Planning

- ◆ Gas utilities, (“LDCs”), use portfolio of supply resources to meet winter demand
- ◆ Underground storage available in NY & PA
- ◆ LNG and some propane serve as local peak-shaving

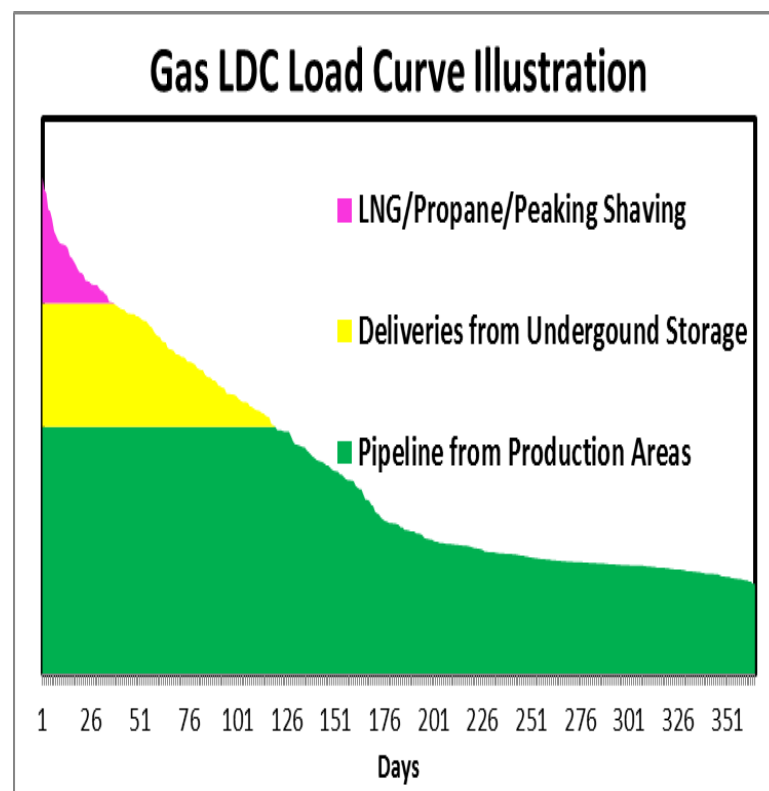
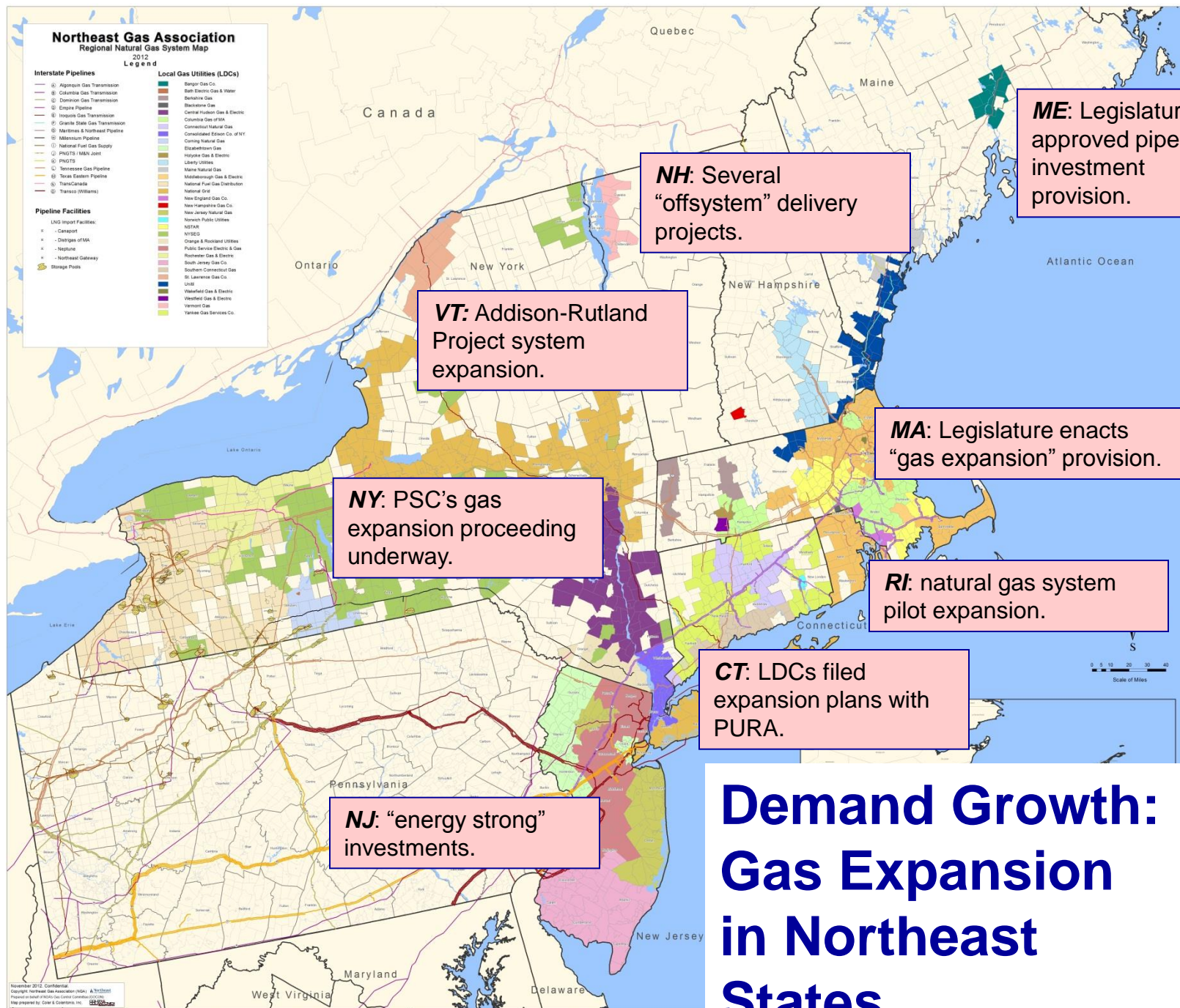


Chart: Northeast Utilities



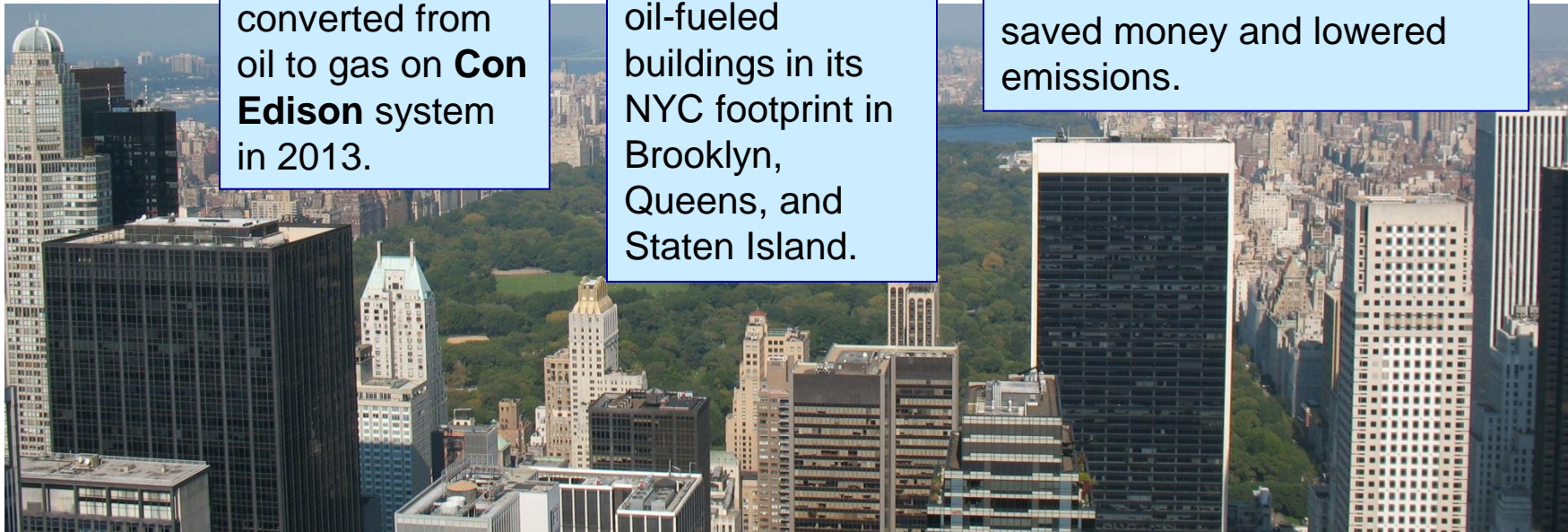
New York City: Growing Conversion Market

PlaNYC phasing out the use of #4 and #6 oil in city buildings.

About 1,300 city buildings converted from oil to gas on **Con Edison** system in 2013.

National Grid has converted or is in the process of converting 537 heavy (#6 & #4) oil-fueled buildings in its NYC footprint in Brooklyn, Queens, and Staten Island.

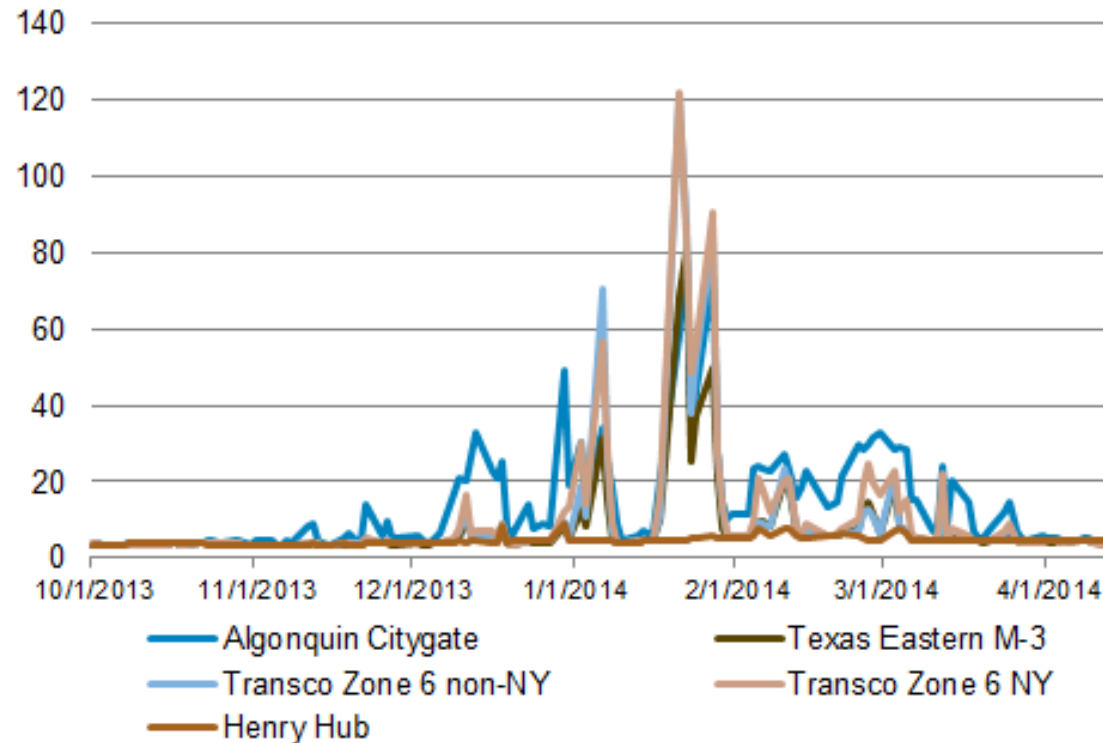
Last fall, the Mayor's Office announced the city's air was the cleanest in 50 years – and noted that “the expansion of the regional natural gas supply and local gas distribution infrastructure” had saved money and lowered emissions.



Northeast Spot Prices: New heights in winter

Northeastern and Mid-Atlantic prices, winter 2013-2014

dollars per MMBtu



 Source: *Natural Gas Intelligence*

Chart: U.S. Energy Information Administration (EIA), 4-14

Days with Zero Interruptible Capacity

(Algonquin Gas Transmission)

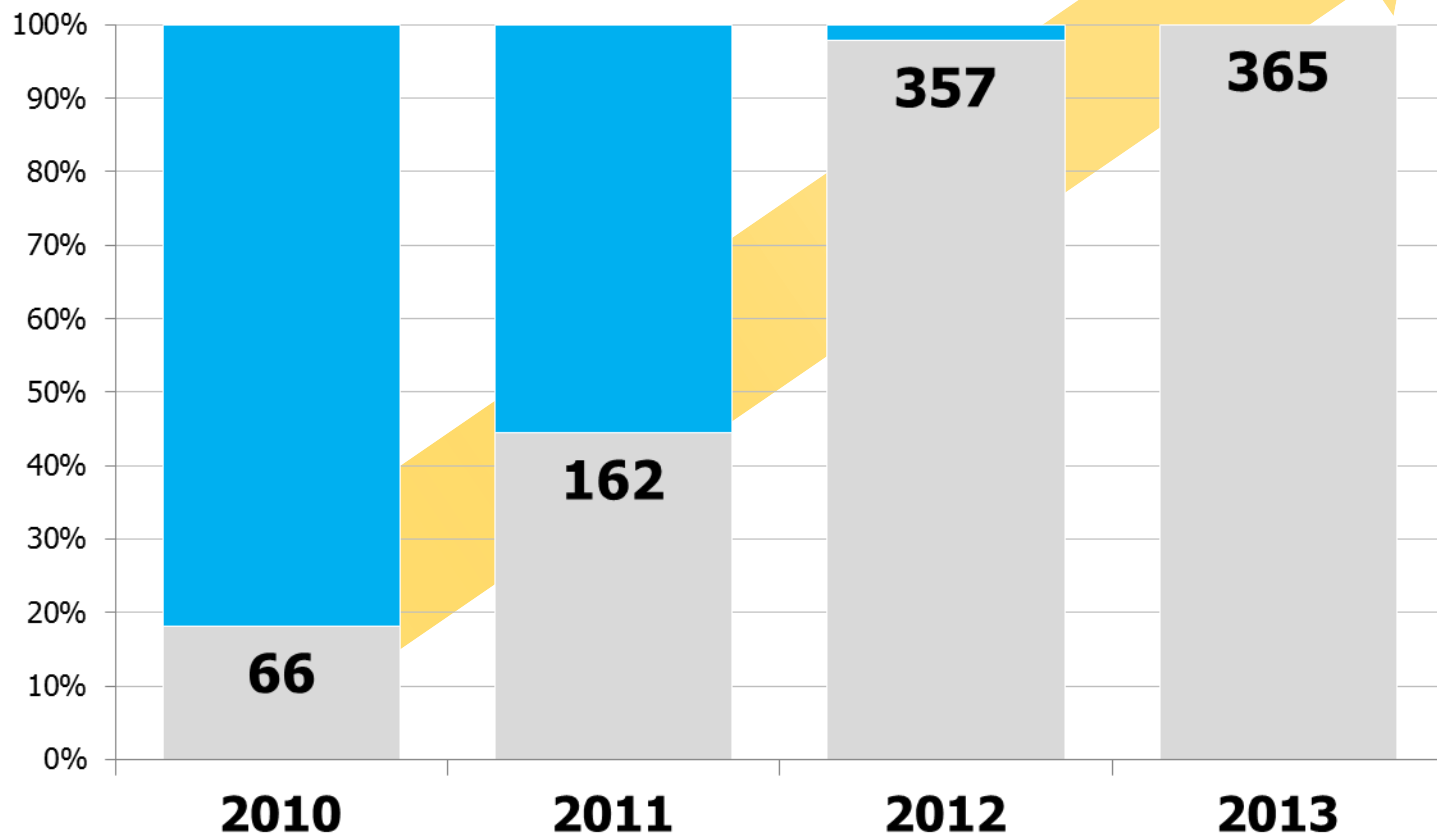


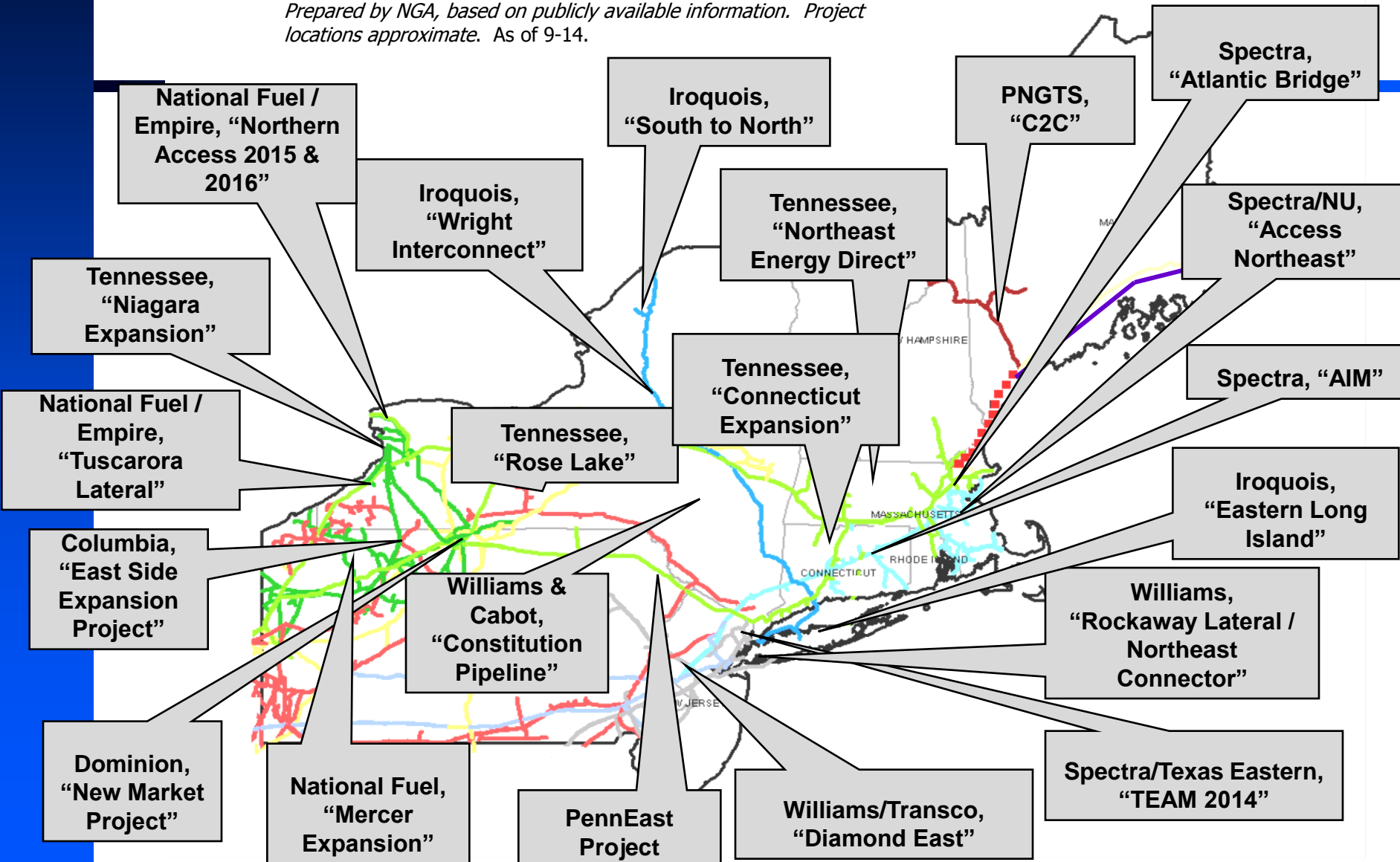
Chart: Spectra Energy

Gas & Power Generation

- Renewed focus on gas & electric coordination – on NY-ISO, ISO-NE and PJM systems; EIPC study underway; Scheduling, communications – and infrastructure?
- Strong coordination & communications is in place among pipeline industry and electric grid operators in the region; NGA Gas Supply Task Force also plays a role.
- For natural gas industry in the Northeast, central issue remains the over-reliance of the power sector on “non-firm” or interruptible gas capacity.
- New pipeline infrastructure needed and will help – but will (can?) the regional power sector invest in its share of pipeline capacity?

Proposed Pipeline Projects

Prepared by NGA, based on publicly available information. Project locations approximate. As of 9-14.

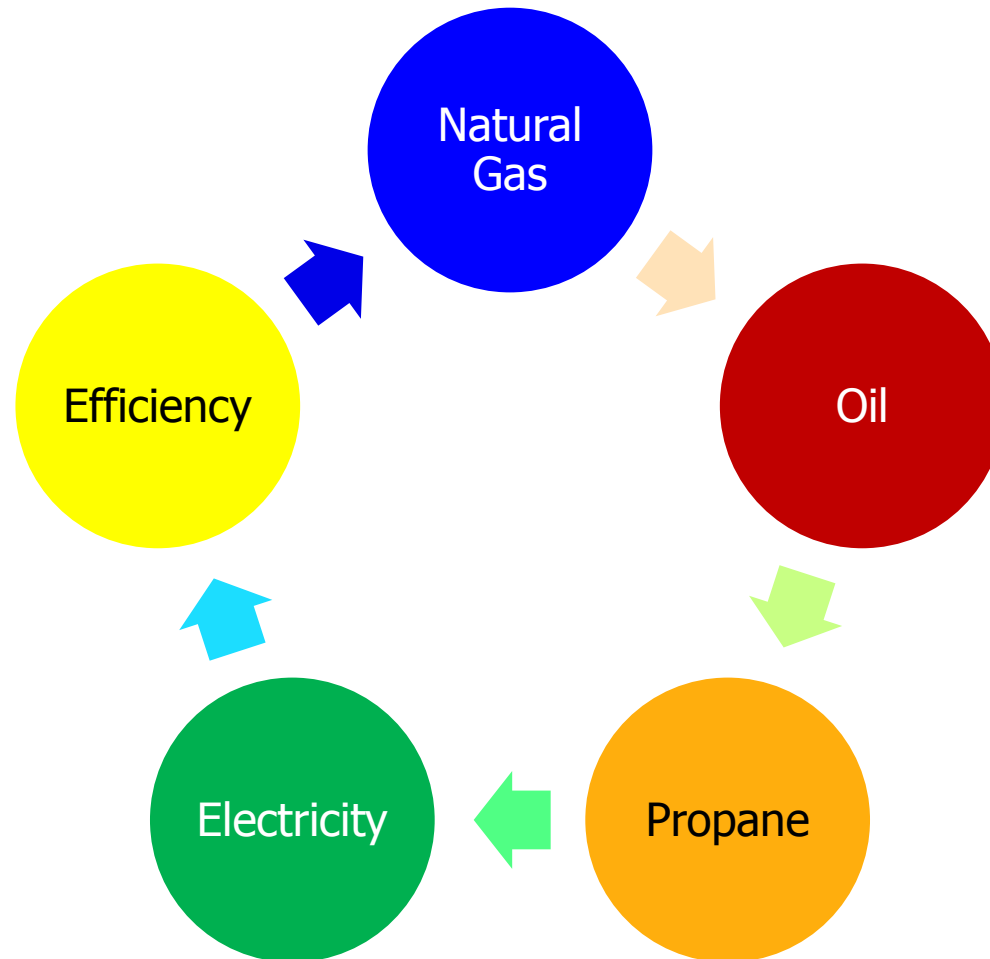


New England Governors' Energy Infrastructure Initiative / NESCOE



The New England Governors last December announced a joint energy initiative designed to accelerate regional cooperation on expanding renewable energy and energy infrastructure in New England. The governors said that they would advocate “for greater integration and utilization of renewable generation; development of new natural gas pipeline infrastructure; maximizing the use of existing transmission infrastructure; investment, where appropriate, in new transmission infrastructure; and continuation of the inclusion of energy efficiency – and the addition of distributed generation – in load forecasting and transmission planning.”

Inter-Relation of Fuels



Value of EIA

- ◆ Timely, informative and reliable market Data and Analysis.

Northeastern Winter Natural Gas and Electricity Issues Tuesday January 7, 2014

Current status of natural gas and electricity markets in New York and New England



Average temperature	Mon 1/6	Tue 1/7	Wed 1/8
Boston	43°F	17°F	16°F
New York City	37°F	11°F	16°F

Natural gas demand Bcf per day	Mon 1/6	Tue 1/7	Wed 1/8
New England	3.4	3.7	3.6
New York City	5.2	5.3	5.7

Day-ahead spot natural gas price per MMBtu	3-day wknd	Mon 1/6	Tue 1/7
New England	\$16.00	\$38.10	--
New York City	\$12.83	\$47.80	--

Day-ahead on-peak electricity price per MWh	3-day wknd	Mon 1/6	Tue 1/7
New England	\$173.43	\$228.90	--
New York City	\$138.91	\$224.84	--

Prices are by Trade Date. Weekends are (Fri, Sat, Sun)

Sources: NOAA, Bentek Energy, S&P, Energy

Northeastern cold snap drives natural gas price increases

Temperature: Both New York City (NYC) and Boston expect near historic low temperatures on Tuesday as a winter weather pattern spreads from the Midwest to the East Coast.

Natural gas demand: Bentek forecasts that demand will increase significantly on Tuesday in both New England (+8%) and New York (+2%) as the cold weather increases the need for natural gas for space heating.

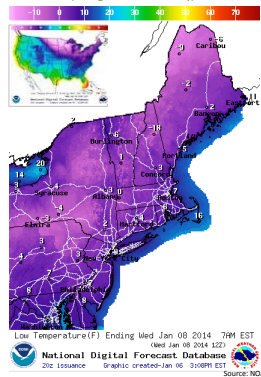
Natural gas constraints & LNG: All pipelines from the west and south into New England remain constrained today. Flows on the marginal pipeline into NYC (Texas Eastern - Tecto) are constrained at key points. Flows of LNG stored at Canaport and eastern Canadian imports into New England are scheduled to be 858 MMcf/d today, a 75% increase from yesterday.

Natural gas prices: Prices traded yesterday for delivery today are near \$40/MMBtu in both New England and NYC. Natural gas at Tecto-M3 in Pennsylvania and Transco Zone 6 Non-New York were higher still, indicating some reduced demand for natural gas as electric power plants switch to burning oil in New York and New England.

Electricity prices: Day-ahead electricity prices are more than \$200/MWh in both New York and New England. Power prices in New England were elevated throughout the previous week as cold weather and high natural gas prices led to triple-digit power prices in the day-ahead market.

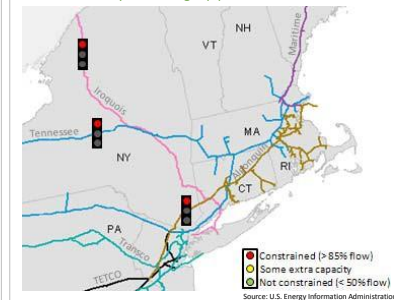
Pipeline notices: Critical notices were declared for today on Algonquin and Tecto which are requiring hourly scheduling from generators. Spectra Energy noted it may issue an operational flow orders (OFOs) for today on Algonquin, restricting unscheduled service as necessary.

Tonight's overnight low temp forecast (through 7 a.m. Wednesday)



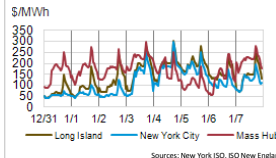
Low Temperature (F) Ending Wed Jan 08 2014 7PM EST
 National Digital Forecast Database
 2012 Issuance Graphics created Jan 06 3:00PM EST
 Source: NOAA

Today's natural gas pipeline flow status



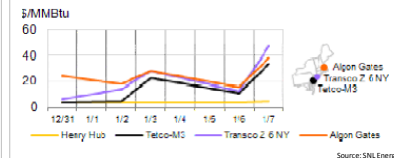
Legend:
 ● Constrained (> 85% flow)
 ● Some extra capacity
 ● Not constrained (< 50% flow)
 Source: U.S. Energy Information Administration

Day-ahead hourly electric prices in NY & NE



Sources: New York ISO, ISO New England

Day-ahead spot natural gas prices in NY, NE, and Henry Hub



Source: S&P Energy

Source: U.S. EIA

Summary

- ◆ Marcellus production in the Northeast continues to be robust, leading to greater supply availability and lower price opportunities.
- ◆ New gas pipeline development activity continues to be active in the NY/NJ/PA area, to move new area supplies to markets. Infrastructure for New England several years away – and contingent on pipeline commitments.
- ◆ Lessons learned from last winter: infrastructure is important, as is inter-industry coordination.
- ◆ Valuable role of EIA and Office of Electricity and Energy Reliability.



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