A Different Kind of
ENERGY COMPANY

KINDER MORGAN

Northeast Energy Direct Project

Tewksbury Board of Selectmen

Tewksbury, MA

Tuesday, June 24, 2014

About Kinder Morgan

- Kinder Morgan is one of the largest, most experienced energy companies in North America. We own an interest in or operate approximately 80,000 miles of pipelines and 180 terminals.
- Kinder Morgan employs approximately 11,500 people throughout the United States and Canada.
- We are committed to operating our assets in a safe, ethical and transparent manner.
- We ensure public safety and safe pipeline operations through employee training, regular testing, right-of-way aerial and foot patrols and adherence to our comprehensive Integrity Management plan and procedures.
- Kinder Morgan does not have a Political Action Committee (PAC), or make any political contributions.

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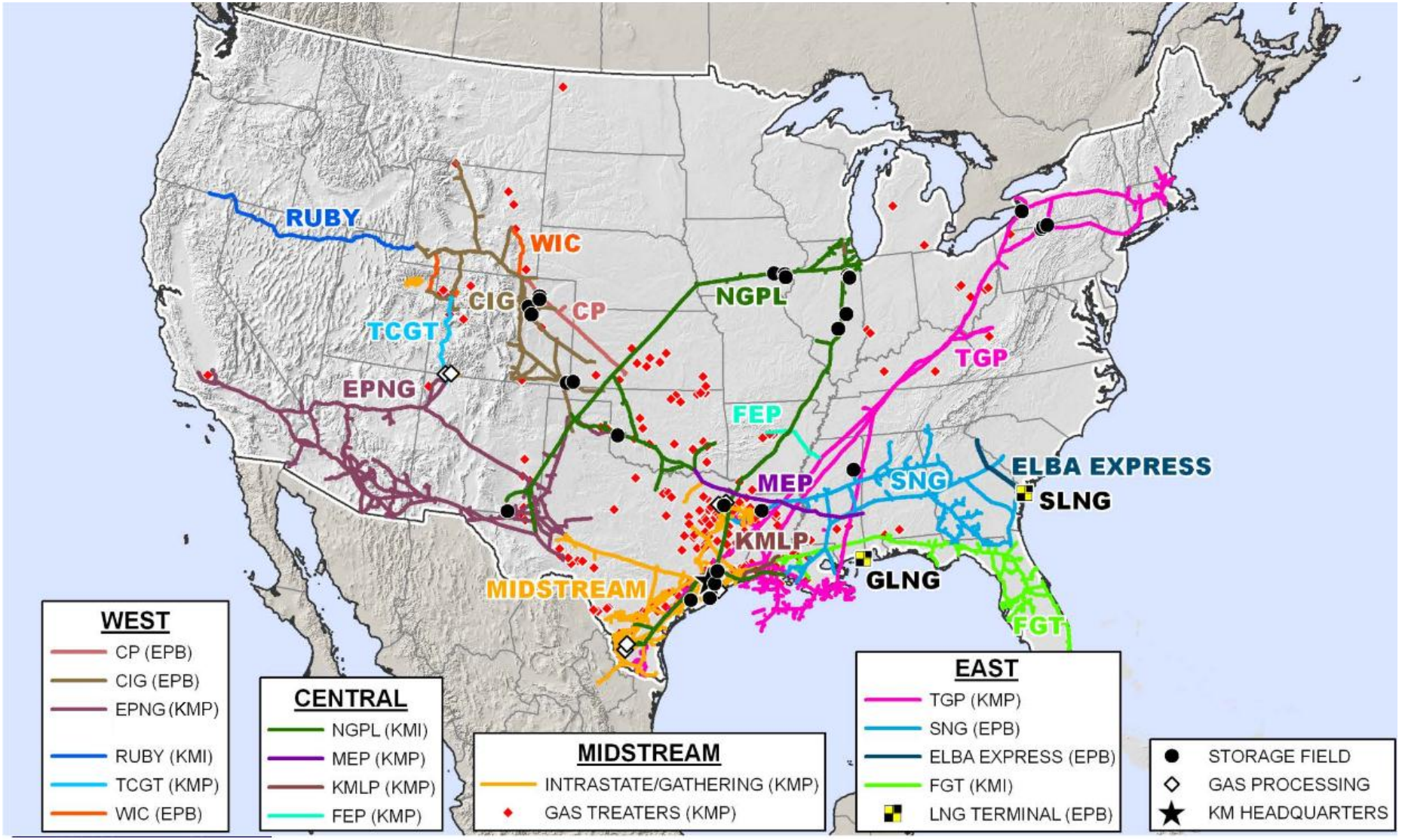
Kinder Morgan Natural Gas Pipelines



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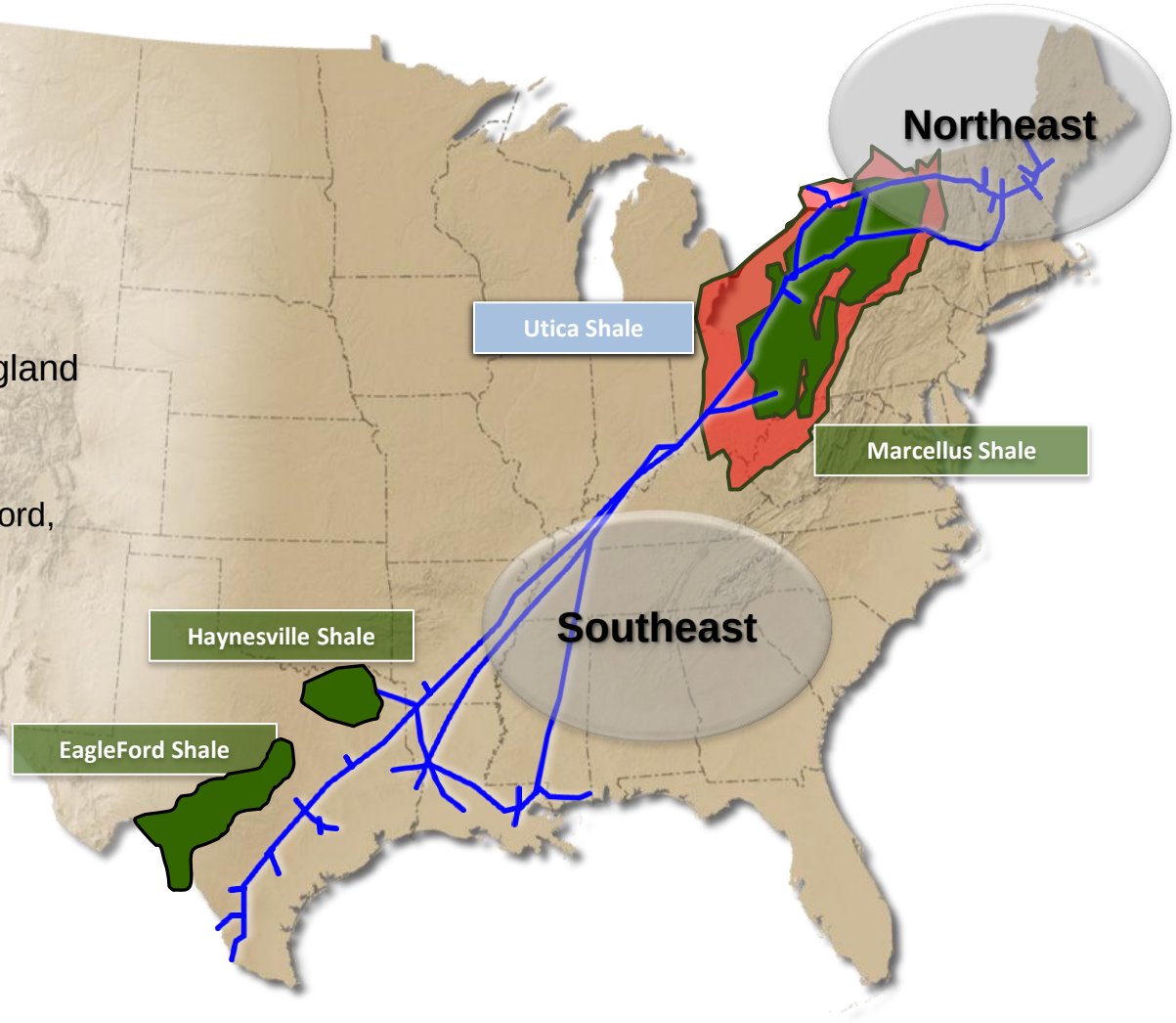
U.S. Shale Plays

Tennessee Gas Pipeline

System Overview

- 13,900 miles of pipeline
- 79 Bcf of storage capacity
- ~8.0 Bcf/d – design capacity
- 1.4 million horsepower
- >500 FT customers
- 35 MM households equivalent
- Delivered ~390 Bcf to New England customers in 2012
- Abundant & Growing Supply
  - Marcellus, Utica, Eagle Ford, Haynesville, Fayetteville



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Customers in New England

New England LDC Customers

- EnergyNorth Natural Gas (NH)
- Northern Utilities (ME)
- Fitchburg Gas & Electric Light Co. (MA)
- Colonial Gas Co. (MA)
- Essex County Gas Co. (MA)
- Boston Gas Co. (MA)
- NSTAR Gas Co. (MA)
- Bay State Gas Co. aka Columbia Gas of MA (MA)
- Blackstone Gas Co. (MA, Municipal)
- Narragansett Electric Co. d/b/a National Grid (RI)
- Holyoke Gas & Electric (MA, Municipal)
- Westfield Gas & Electric Dept. (MA, Municipal)
- Berkshire Gas Co. (MA)
- Connecticut Natural Gas Co. (CT)
- Southern Connecticut Gas Co. (CT)
- Yankee Gas Services Co. (CT)

New England Power Generators

- Granite Ridge LLC
- Entergy RISE
- Blackstone GDFSUEZ

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MASSACHUSETTS

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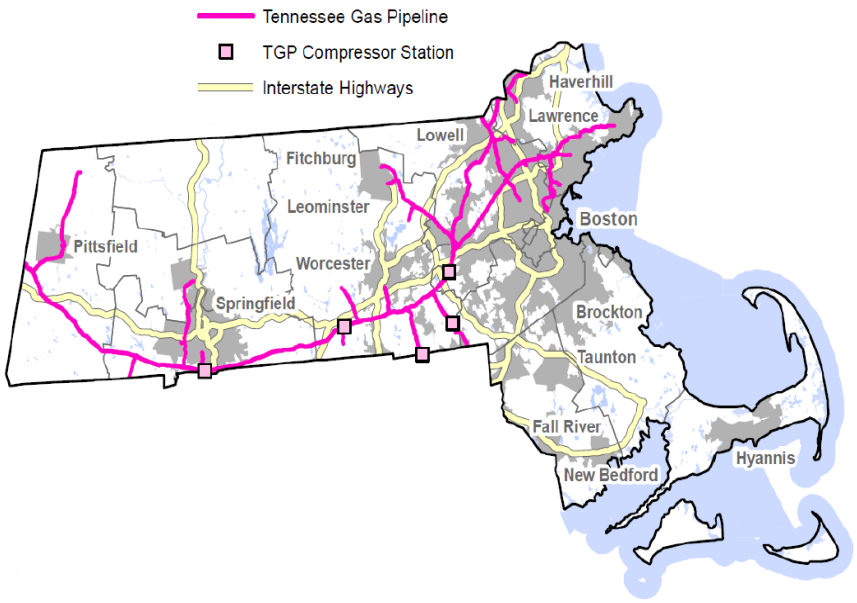
KINDER MORGAN MASSACHUSETTS ASSETS

In Massachusetts,

- Kinder Morgan employed **46 people** in 2013
- Kinder Morgan's total 2013 payroll was **$3.6 million**
- In 2013, Kinder Morgan paid approximately **$5.85 million** to state and local taxing bodies.
  - In 2013, Kinder Morgan paid approx. **$1.4 million** in taxes to Middlesex County.
- Kinder Morgan operates approximately **600 miles** of pipeline
  - Kinder Morgan operates approximately **half** of Massachusetts **1,125 miles** of natural gas transmission pipelines.



Kinder Morgan operates assets in eight counties throughout Massachusetts: Berkshire, Essex, Hampden, Hampshire, Middlesex, Norfolk, Suffolk and Worcester

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The Need for the Northeast Energy Direct Project

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Northeast Energy Crisis

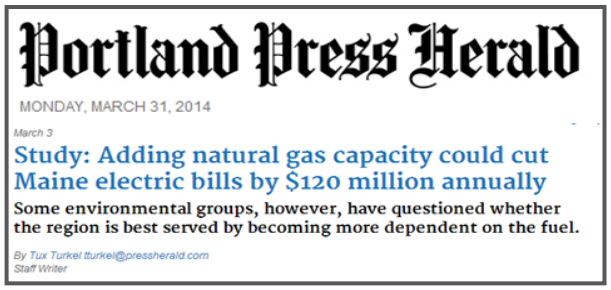
Unprecedented gas capacity constraints on existing pipelines
(Source: ISO-NE, EIA.gov)

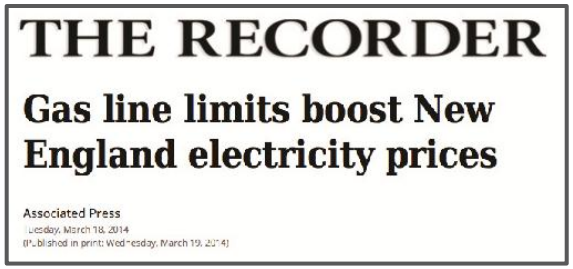
Highest and most volatile gas commodity costs in the nation
(Source: ISO-NE, EIA.gov)

BloombergBusinessweek
Global Economics
Energy
Northeast's Record Natural Gas Prices Due to Pipeline Dearth
By Matthew Philips | February 06, 2014

BOSTON BUSINESS JOURNAL
Mass. faces gas shortage despite national surge
Despite abundant new sources of natural gas, New England faces shortages — and may pay the price

CONCORD MONITOR
New England seeks to expand natural gas delivery network
By STEPHEN SINGER
Associated Press
Thursday, January 23, 2014
(Published in print: Friday, January 24, 2014)


Portland Press Herald
MONDAY, MARCH 31, 2014
March 3
Study: Adding natural gas capacity could cut Maine electric bills by $120 million annually
Some environmental groups, however, have questioned whether the region is best served by becoming more dependent on the fuel.
By Tux Turkel tturkel@pressherald.com
Staff Writer


THE RECORDER
Gas line limits boost New England electricity prices
Associated Press
Tuesday, March 18, 2014
(Published in print: Wednesday, March 19, 2014)

lowellsun.com
Lowell Massachusetts
ISO: Gas-pipeline shortage boosts electricity prices
The Lowell Sun
HOLYOKE (AP) -- A lack of pipelines into New England is making natural gas costlier, pushing up wholesale electricity prices in the region by 55 percent last year, the region's electric grid operator said Tuesday.

wcvb.com
Insufficient pipelines boosting natural gas price
ISO-New England says price up to $56.06 per megawatt hour
Published 2:58 PM EDT Mar 18, 2014

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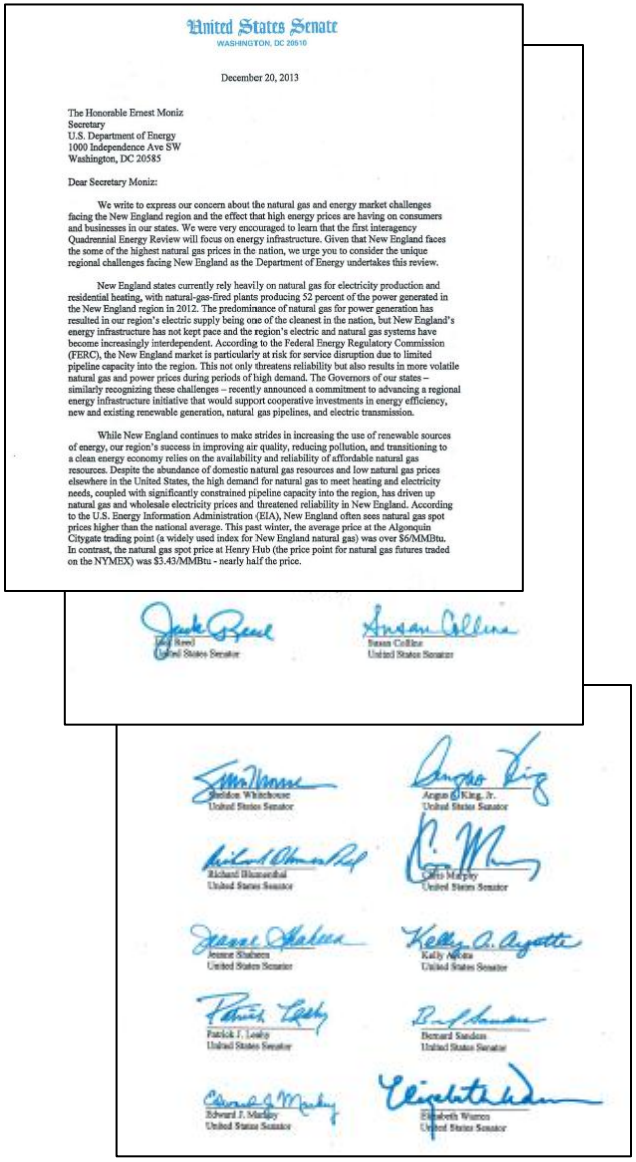
Northeast Energy Crisis



United States Senate
WASHINGTON, DC 20510

December 20, 2013

The Honorable Ernest Moniz
Secretary
U.S. Department of Energy
1000 Independence Ave SW
Washington, DC 20585

Dear Secretary Moniz:

We write to express our concern about the natural gas and energy market challenges facing the New England region and the effect that high energy prices are having on consumers and businesses in our states. We were very encouraged to learn that the first interagency Quadrennial Energy Review will focus on energy infrastructure. Given that New England faces the some of the highest natural gas prices in the nation, we urge you to consider the unique regional challenges facing New England as the Department of Energy undertakes this review.

New England states currently rely heavily on natural gas for electricity production and residential heating, with natural-gas-fired plants producing 52 percent of the power generated in the New England region in 2012. The predominance of natural gas for power generation has resulted in our region's electric supply being one of the cleanest in the nation, but New England's energy infrastructure has not kept pace and the region's electric and natural gas systems have become increasingly interdependent. According to the Federal Energy Regulatory Commission (FERC), the New England market is particularly at risk for service disruption due to limited pipeline capacity into the region. This not only threatens reliability but also results in more volatile natural gas and power prices during periods of high demand. The Governors of our states – similarly recognizing these challenges – recently announced a commitment to advancing a regional energy infrastructure initiative that would support cooperative investments in energy efficiency, new and existing renewable generation, natural gas pipelines, and electric transmission.

While New England continues to make strides in increasing the use of renewable sources of energy, our region's success in improving air quality, reducing pollution, and transitioning to a clean energy economy relies on the availability and reliability of affordable natural gas resources. Despite the abundance of domestic natural gas resources and low natural gas prices elsewhere in the United States, the high demand for natural gas to meet heating and electricity needs, coupled with significantly constrained pipeline capacity into the region, has driven up natural gas and wholesale electricity prices and threatened reliability in New England. According to the U.S. Energy Information Administration (EIA), New England often sees natural gas spot prices higher than the national average. This past winter, the average price at the Algonquin Citygate trading point (a widely used index for New England natural gas) was over $6/MMBtu. In contrast, the natural gas spot price at Henry Hub (the price point for natural gas futures traded on the NYMEX) was $3.43/MMBtu - nearly half the price.

Jack Reed
United States Senator

Susan Collins
United States Senator

Sheldon Whitehouse
United States Senator

Angus S. King, Jr.
United States Senator

Richard Blumenthal
United States Senator

Chris Murphy
United States Senator

Jeanne Shaheen
United States Senator

Kelly Ayotte
United States Senator

Patrick J. Leahy
United States Senator

Bernard Sanders
United States Senator

Edward J. Markey
United States Senator

Elizabeth Warren
United States Senator

LETTER FROM THE NEW ENGLAND U.S. SENATE DELEGATION TO DEPARTMENT OF ENERGY SECRETARY MONIZ – December 13, 2013

“According to the Federal Energy Regulatory Commission (FERC), *the New England market is particularly at risk for service disruption due to limited pipeline capacity into the region*. This not only threatens reliability but also results in more volatile natural gas and power prices during periods of high demand.”

“Energy infrastructure in the region is simply inadequate to meet demand and has been a key factor in the energy price volatility.”

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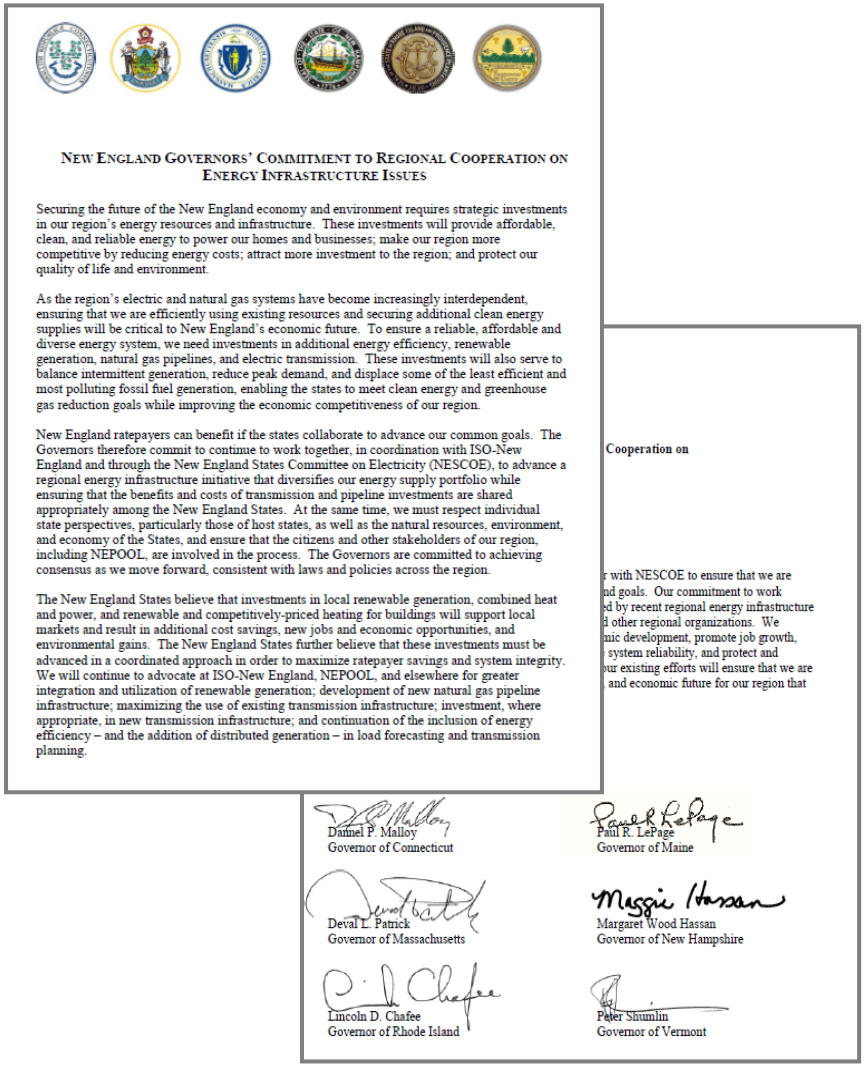
Governors' Statement on Northeast Energy Infrastructure

- In Dec. 2013, New England Governors called attention to the shortage of energy infrastructure.
- An open letter was signed by Governors Malloy (CT), LePage (ME), Patrick (MA), Hassan (NH), Chafee (RI), and Shumlin (VT).
- *"To ensure a reliable, affordable and diverse energy system,* ***we need investments in additional energy efficiency, renewable generation, natural gas pipelines, and electric transmission****."*
- ***"These investments will provide affordable, clean, and reliable energy to power our homes and businesses****; make our region more competitive by reducing energy costs; attract more investment to the region; and protect our quality of life and environment."*



NEW ENGLAND GOVERNORS' COMMITMENT TO REGIONAL COOPERATION ON ENERGY INFRASTRUCTURE ISSUES

Securing the future of the New England economy and environment requires strategic investments in our region's energy resources and infrastructure. These investments will provide affordable, clean, and reliable energy to power our homes and businesses; make our region more competitive by reducing energy costs; attract more investment to the region; and protect our quality of life and environment.

As the region's electric and natural gas systems have become increasingly interdependent, ensuring that we are efficiently using existing resources and securing additional clean energy supplies will be critical to New England's economic future. To ensure a reliable, affordable and diverse energy system, we need investments in additional energy efficiency, renewable generation, natural gas pipelines, and electric transmission. These investments will also serve to balance intermittent generation, reduce peak demand, and displace some of the least efficient and most polluting fossil fuel generation, enabling the states to meet clean energy and greenhouse gas reduction goals while improving the economic competitiveness of our region.

New England ratepayers can benefit if the states collaborate to advance our common goals. The Governors therefore commit to continue to work together, in coordination with ISO-New England and through the New England States Committee on Electricity (NESCOE), to advance a regional energy infrastructure initiative that diversifies our energy supply portfolio while ensuring that the benefits and costs of transmission and pipeline investments are shared appropriately among the New England States. At the same time, we must respect individual state perspectives, particularly those of host states, as well as the natural resources, environment, and economy of the States, and ensure that the citizens and other stakeholders of our region, including NEPOOL, are involved in the process. The Governors are committed to achieving consensus as we move forward, consistent with laws and policies across the region.

The New England States believe that investments in local renewable generation, combined heat and power, and renewable and competitively-priced heating for buildings will support local markets and result in additional cost savings, new jobs and economic opportunities, and environmental gains. The New England States further believe that these investments must be advanced in a coordinated approach in order to maximize ratepayer savings and system integrity. We will continue to advocate at ISO-New England, NEPOOL, and elsewhere 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.

Cooperation on

r with NESCOE to ensure that we are
nd goals. Our commitment to work
ed by recent regional energy infrastructure
d other regional organizations. We
mic development, promote job growth,
system reliability, and protect and
ur existing efforts will ensure that we are
and economic future for our region that

Dannel P. Malloy
Governor of Connecticut

Paul R. LePage
Governor of Maine

Deval L. Patrick
Governor of Massachusetts

Margaret Wood Hassan
Governor of New Hampshire

Lincoln D. Chafee
Governor of Rhode Island

Peter Shumlin
Governor of Vermont

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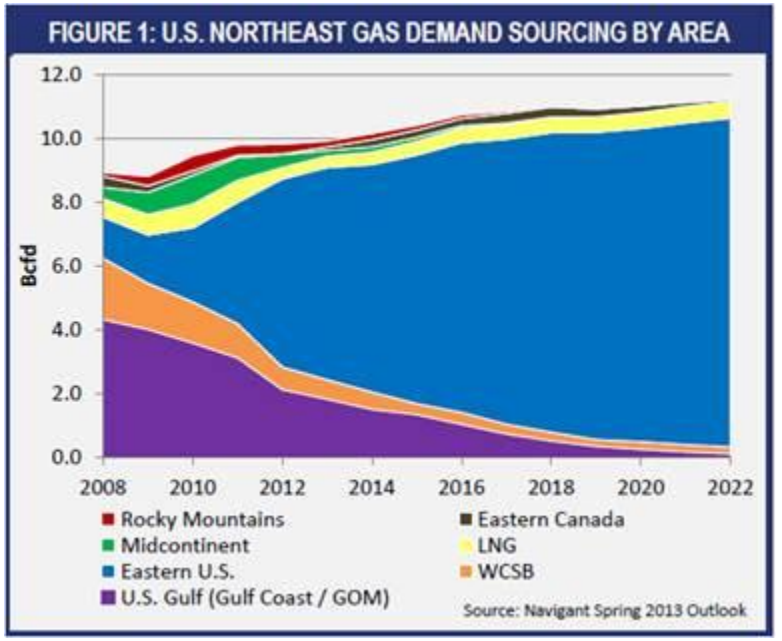
Current Sources of New England Natural Gas

New England's Gas Needs:

- In 2013, New England relied on natural gas for **52%** of its electricity produced, more than any other source. (Source: ISO-NE)
- Tennessee Gas Pipeline and Algonquin Gas Pipeline are the two major pipelines transporting natural gas to New England. (Source: U.S. Energy Information Administration)



Sources of New England's Gas Supply:

- In 2012, the Northeast region received **60%** of its gas supply from Eastern US sources, mainly shale formations. (Source: Navigant North American Natural Gas Market Outlook, Spring 2013)
- In 2008, the Northeast received only **14%** of its natural gas from Appalachia/Eastern U.S. sources such as the Marcellus shale. (Source: Navigant, Spring 2013)
- It is estimated that by 2022, based on current trends and source supply that the Northeast will receive **92%** of ifs gas supply from Eastern US sources. (Source: Navigant North American Natural Gas Market Outlook, Spring 2013)

Northeast Energy Crisis

The energy situation is likely to worsen if no new capacity is constructed;

- Currently, **four** large New England coal, oil and nuclear power plants are planning to retire in the next few years due to increasing operating costs and new emissions standards. This includes the Brayton Point and Salem Harbor Plants in MA, the Norwalk Harbor Plant in CT, and the Vermont Yankee plant in VT. (Source: ISO-NE, 2013)

- Unless new capacity is provided, New England's power system will be increasingly vulnerable to electric service disruptions and consumer prices will increase greatly. The region will be at **a large economic and competitive disadvantage** to neighboring states and regions due to high energy costs. (Source: New England States Committee on Electricity, 2014)

Solution:

- NESCOE, ISO-NE, and New England's Governors have all publically identified **natural gas pipelines** as a solution to the Northeast Energy crisis.

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Northeast Energy Direct Project Introduction

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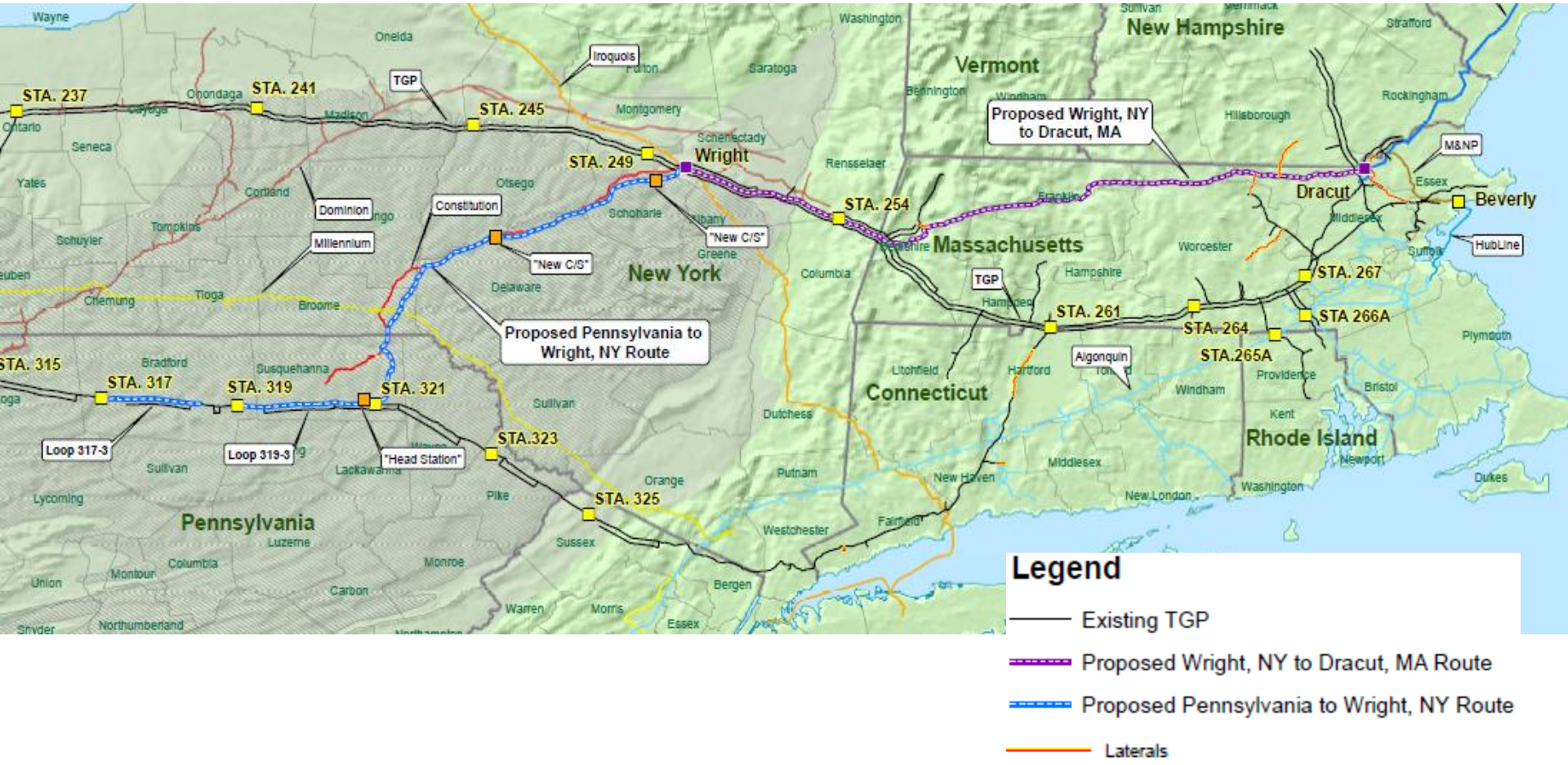
Northeast Energy Direct Project Overview

- The Northeast Energy Direct Project will expand the existing Tennessee Gas Pipeline system within Pennsylvania, New York, Massachusetts, New Hampshire and Connecticut.
- The project, as currently configured, would result in the construction of approx. 418 miles of new pipeline, additional meter stations, compressor stations and modifications to existing facilities.
- The expansion will help meet increased demand in the U.S. Northeast for transportation capacity for natural gas.
- Following completion, the proposed project could bring an estimated increased capacity of up to 2.2 Bcf/d to the Northeast, which is equivalent to an additional 1.5MM households.
- Pending receipt of necessary regulatory approvals, the proposed project is estimated to be placed in-service by November 2018.
- The project is estimated to generate an additional $25M to local taxing bodies in MA.

Estimated Project Schedule

Action	Timing
Outreach Meetings	Ongoing
Route Selection and Permit Preparation	Ongoing
Agency Consultations	Ongoing
File for FERC pre-filing	October 2014
KM Open Houses	November – December 2014
FERC Scoping Meetings	January – February 2015
FERC filing	Sept. 2015
Anticipated FERC approval	November 2016
Proposed Start of Construction Activity	January 2017
Proposed In-Service	November 2018

Proposed Northeast Energy Direct Route



**Any final route determination is subject to surveying, land acquisition and easements, environmental impact assessments, permitting and stakeholder input.*

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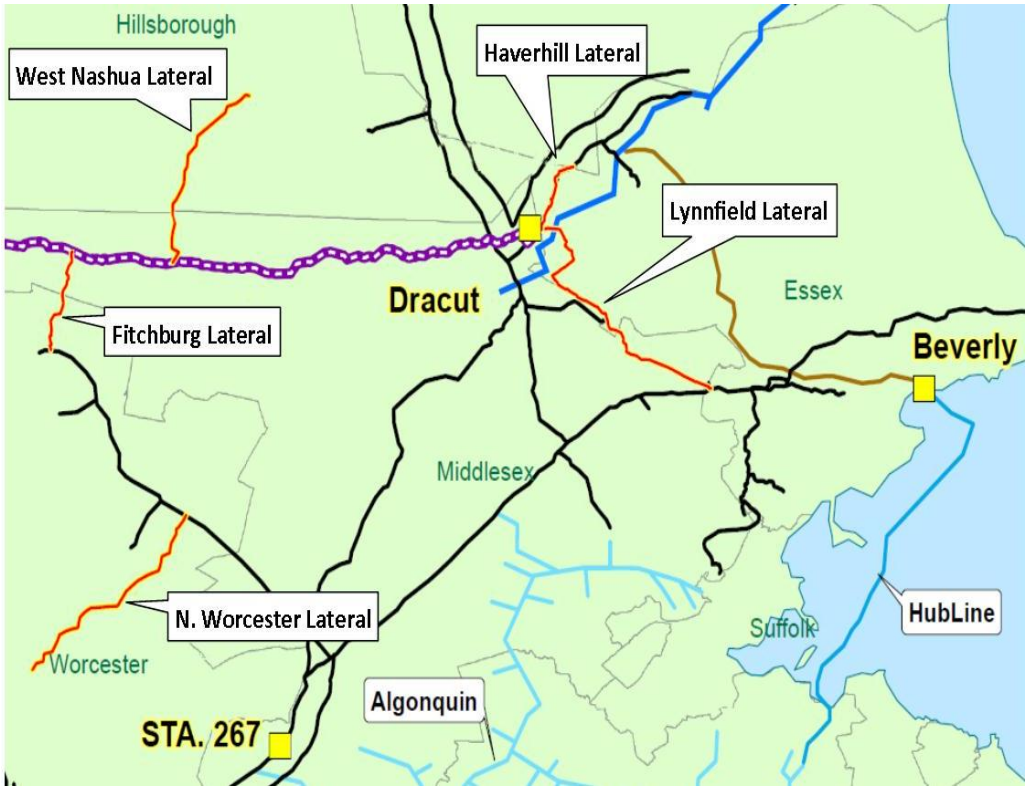
Northeast Energy Direct Components

Proposed project components:

- **Pennsylvania to Wright, NY**
- **Wright, NY to Dracut, MA**
- West Nashua Lateral *(MA/NH)*
- N. Worcester Lateral *(MA)*
- Pittsfield Lateral *(MA)*
- Stamford Delivery Loop *(CT)*
- Wallingford Delivery Loop *(CT)*
- Fitchburg Lateral Extension *(MA)*
- Haverhill Lateral *(MA)*
- Lynnfield Lateral *(MA)*
- 300 Line CT Lateral *(CT)*



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Regulatory Oversight

Federal, state and local agencies will have extensive regulatory authority over the proposed project. Some of these include:

Federal

- Federal Energy Regulatory Commission
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Department of Agriculture
- U.S. Department of the Interior

State

- Massachusetts State Legislature
- Massachusetts Executive Office of Energy and Environmental Affair s(EOEEA)
  - Dept. of Public Utilities
  - Dept. of Fish and Game
  - Dept. of Environmental Protection
  - Dept. of Agricultural Resources
  - Office of Coastal Zone Management
- MA Energy Facilities Siting and Licensing Board
- MA Historical Commission

Local

- MA Town Conservation Commissions

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Preliminary Northeast Energy Direct Town List (MA)

Berkshire County
- Dalton, MA
- Hinsdale, MA
- Lenox, MA
- Peru, MA
- Pittsfield, MA
- Richmond, MA
- Washington, MA
- Windsor, MA

Essex County
- Andover, MA
- Lynnfield, MA
- Methuen, MA

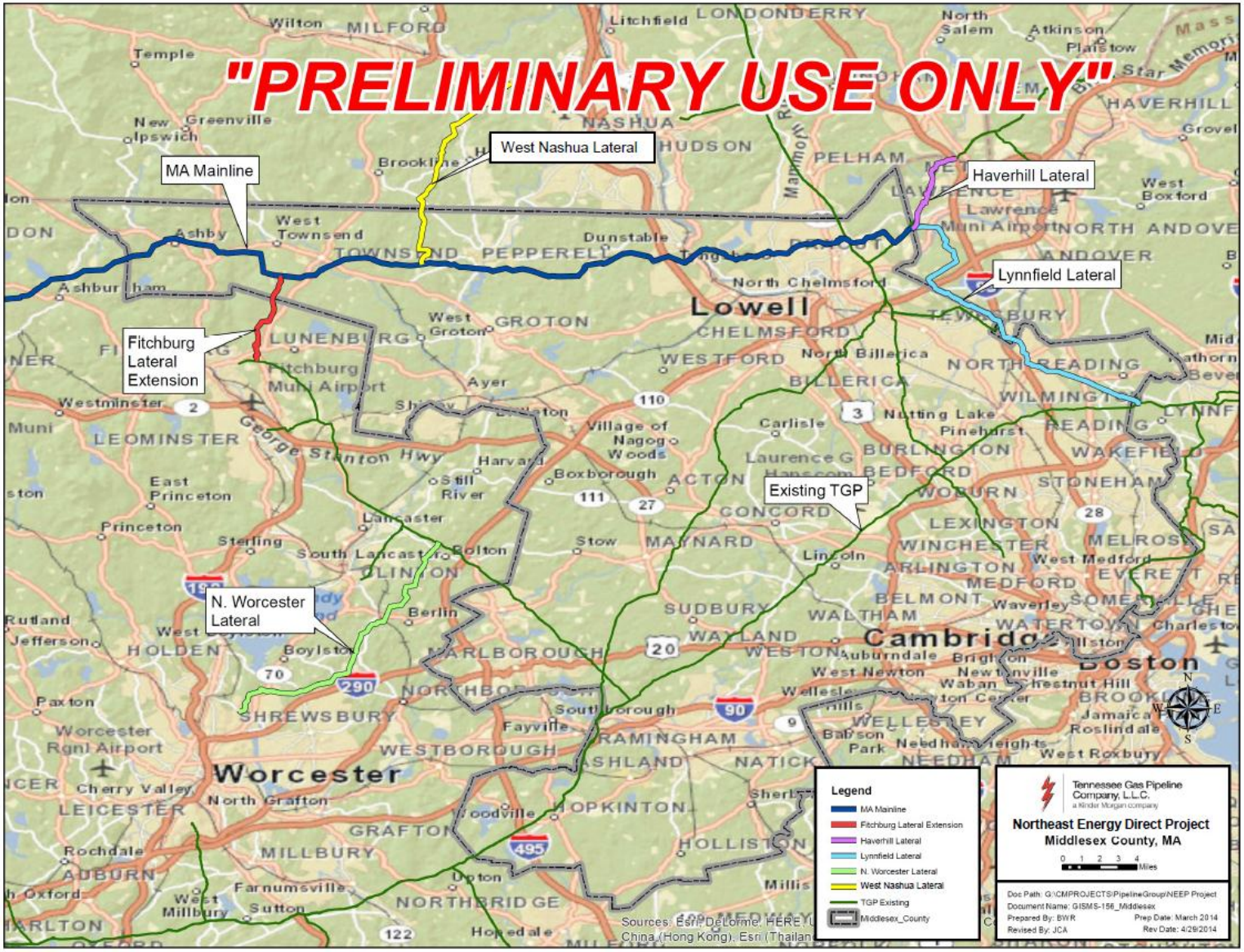
Franklin County
- Ashfield, MA
- Conway, MA
- Deerfield, MA
- Erving, MA
- Montague, MA
- Northfield, MA
- Orange, MA
- Shelburne, MA
- Warwick, MA

Hampshire County
- Plainfield, MA

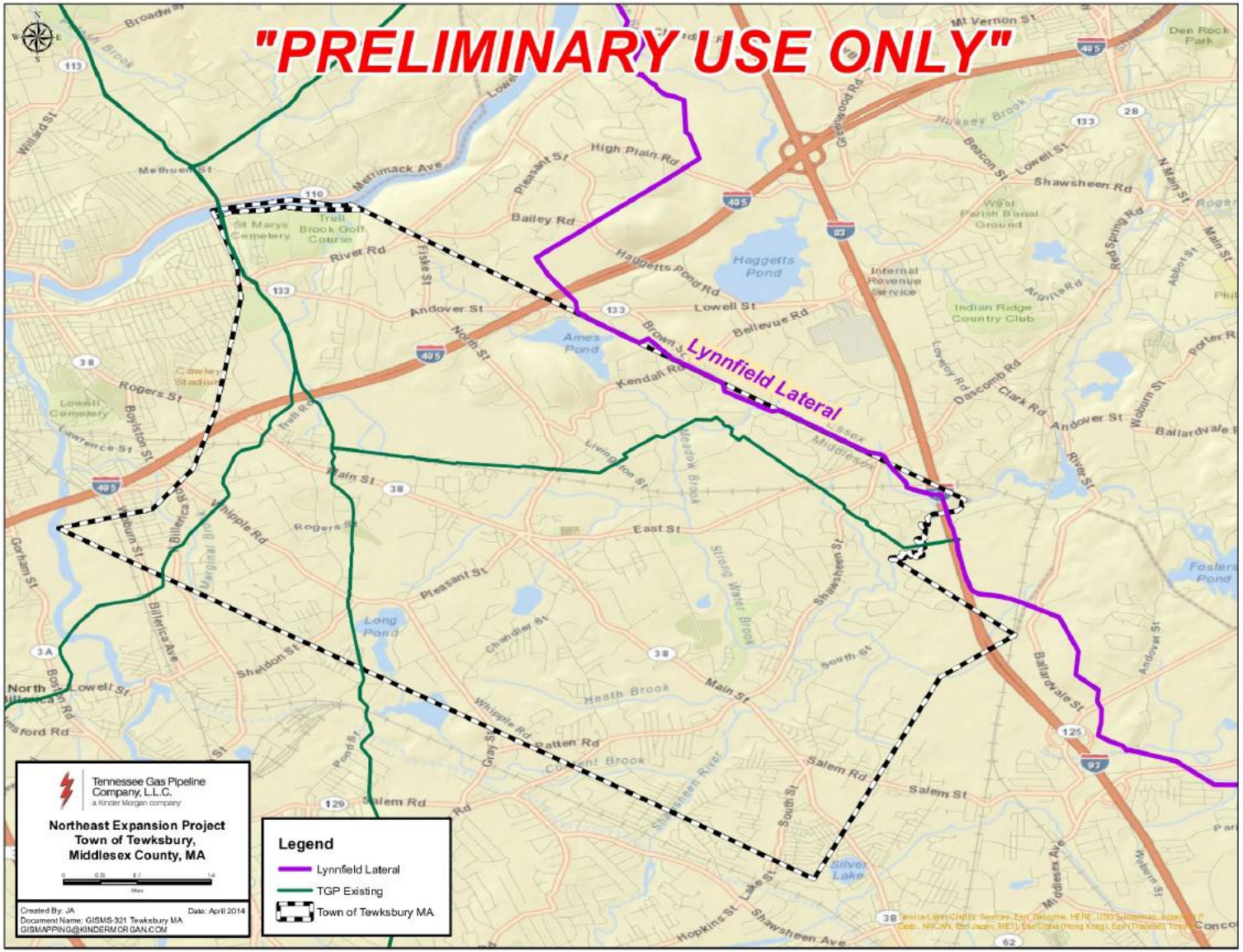
Middlesex County
- Ashby, MA
- Dracut, MA
- Dunstable, MA
- Groton, MA
- North Reading, MA
- Pepperell, MA
- Reading, MA
- Tewksbury, MA
- Townsend, MA
- Tyngsborough, MA
- Wilmington, MA

Worcester County
- Ashburnham, MA
- Athol, MA
- Berlin, MA
- Bolton, MA
- Boylston, MA
- Gardner, MA
- Lunenburg, MA
- Northborough, MA
- Royalston, MA
- Shrewsbury, MA
- West Boylston, MA
- Winchendon, MA

Middlesex County Map



Tewksbury Town Map



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Northeast Energy Direct Project Benefits

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Project Benefits

- An estimated additional $25M to local taxing bodies in MA
- Estimated creation of 3,000 construction-related jobs
- Economic stimulus to surrounding areas during construction (retail, hospitality, etc.)
- Providing long-term energy reliability to the region
- Creates potential new source of energy for communities
- Platform for growth; expandable to meet future needs

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Next Steps

Our Commitment to Local Communities

Massachusetts Outreach

Project Briefings:

- Governor Deval Patrick
- Office of U.S. Senator Elizabeth Warren
- Office of U.S. Senator Ed Markey
- Office of Congressman Jim McGovern
- Office of Congressman John Tierney
- Office of Congresswoman Niki Tsongas
- Office of Congressman Richard Neal
- Office of Congressman Joe Kennedy
- Office of Congresswoman Katherine Clark
- Senator Benjamin Downing
- State Senate Majority Leader Stan Rosenberg
- Senator Stephen Brewer
- Senator Barry Finegold
- Senator Eileen Donoghue
- Senator Hariette Chandler
- Senator Jennifer Flanagan
- State House Speaker Robert DeLeo
- State Representative Stephen Kulik
- State Representative William Pignatelli
- State Representative Tricia Farley-Bouvier
- State House Minority Leader Bradley Jones
- State Representative Stephen DiNatale
- State Representative Colleen Garry
- State Representative Anne Gobi
- Office of Senator Bruce Tarr
- Office of Senator Michael Moore
- Department of Public Utilities
- Office of Energy and Environmental Affairs
- Department of Fish and Game
- Coastal Zone Management
- Department of Agricultural Resources
- Department of Energy Resources
- Department of Environmental Protection

Town Contacts:

- Dalton
- Hinsdale
- Lenox
- Peru
- Pittsfield
- Richmond
- Washington
- Windsor
- Andover
- Lynnfield
- Methuen
- Ashfield
- Conway
- Deerfield
- Erving
- Greenfield
- Montague
- Northfield
- Orange
- Shelburne
- Warwick
- Plainfield
- Ashby
- Dracut
- Dunstable
- Groton
- North Reading
- Pepperell
- Tewksbury
- Townsend
- Tyngsborough
- Wilmington
- Ashburnham
- Athol
- Berlin
- Bolton
- Boylston
- Gardner
- Lunenburg
- Northborough
- Royalston
- Shrewsbury
- Winchendon
- Worcester

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Project Presentations to Date

- **April 7th, 2014** : Montague (MA) Board of Selectmen
- **April 8th, 2014**: Dracut (MA) Board of Selectmen
- **April 9th, 2014**: Ashburnham (MA) Board of Selectmen
- **April 21st, 2014**: Hollis (NH) Public Meeting
- **April 22nd, 2014**: Plainfield (MA) Board of Selectmen
- **April 23rd, 2014**: Ashby (MA) Board of Selectmen
- **May 12th, 2014:** Pepperell (MA) Board of Selectmen
- **May 13th, 2014**: Warwick (MA) Public Meeting
- **May 14th, 2014**: Tyngsborough (MA) Board of Selectmen
- **June 4th, 2014**: Richmond (MA) Board of Selectmen
- **June 5th, 2014:** North Reading (MA) Board of Selectmen
- **June 23rd, 2014**: Groton (MA) Board of Selectmen

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Kinder Morgan in the Community

2014 Donation to Eastern Pike Regional Police Department to support national gas conversion of squad cars.

In 2013, Tennessee Gas Pipeline donated to the Milford Beach in the Delaware Gap National Recreation Area to keep it open for the summer.

In 2013, Parkway Pipeline supported the Collins, MS Fire Department.

In 2012, Parkway Pipeline (a KM subsidiary) provided the funding for the construction of a new playground in Pelican Park in Mandeville, LA

In 2013, Kinder Morgan donated 3,000 tree saplings to elementary schools in seven counties across NJ and PA to celebrate Arbor Day.

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Kinder Morgan Foundation

- **The Kinder Morgan Foundation** funds programs that promote the academic and artistic interests of young people in the many cities and towns across North America where Kinder Morgan operates.

SCIENCE
FROM SCIENTISTS

Science from Scientists, Inc., Boston, MA

Berkshire Museum, Pittsfield, MA

Please Touch Museum, Philadelphia, PA

www.kindermorgan.com/community

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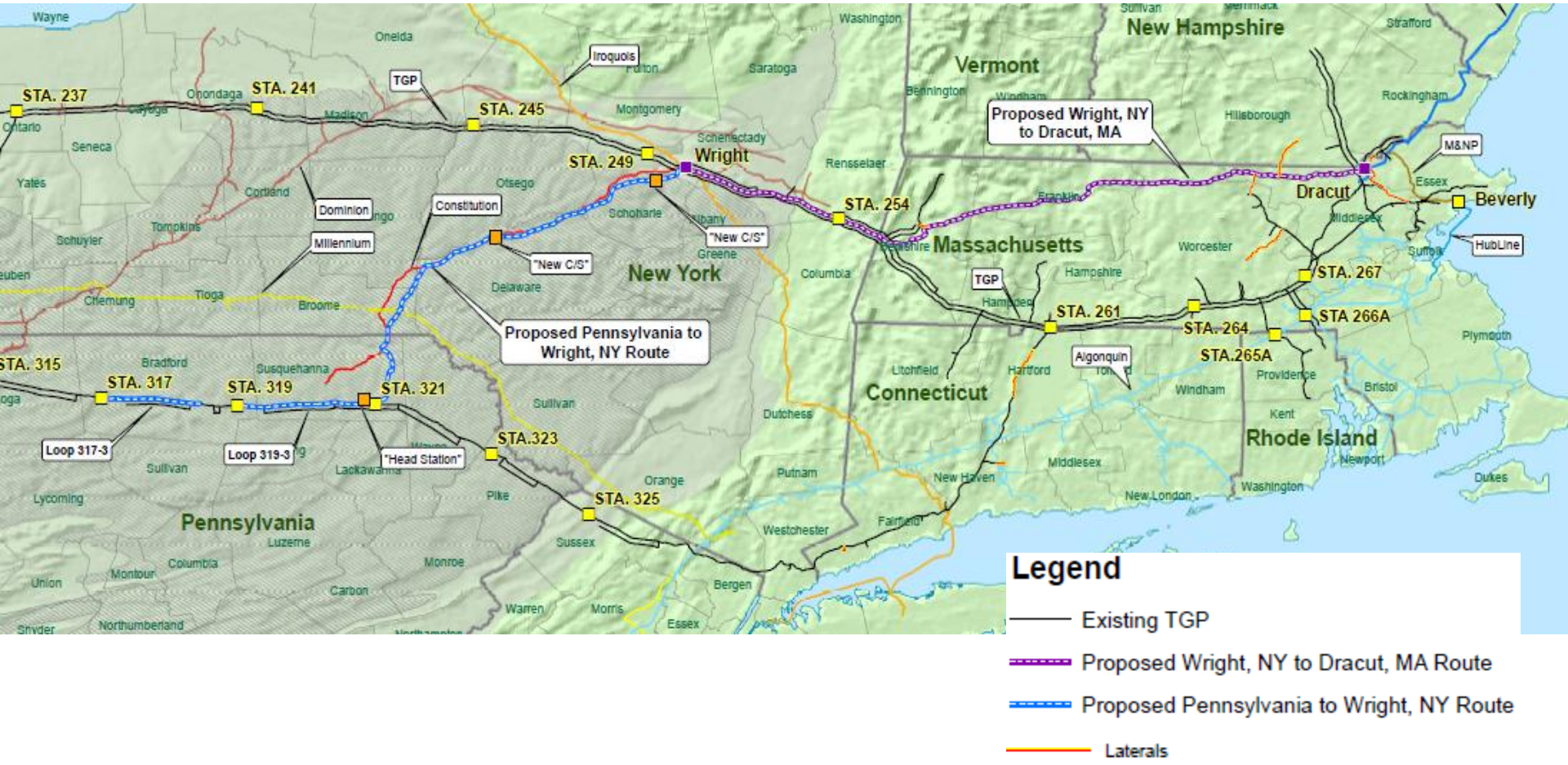

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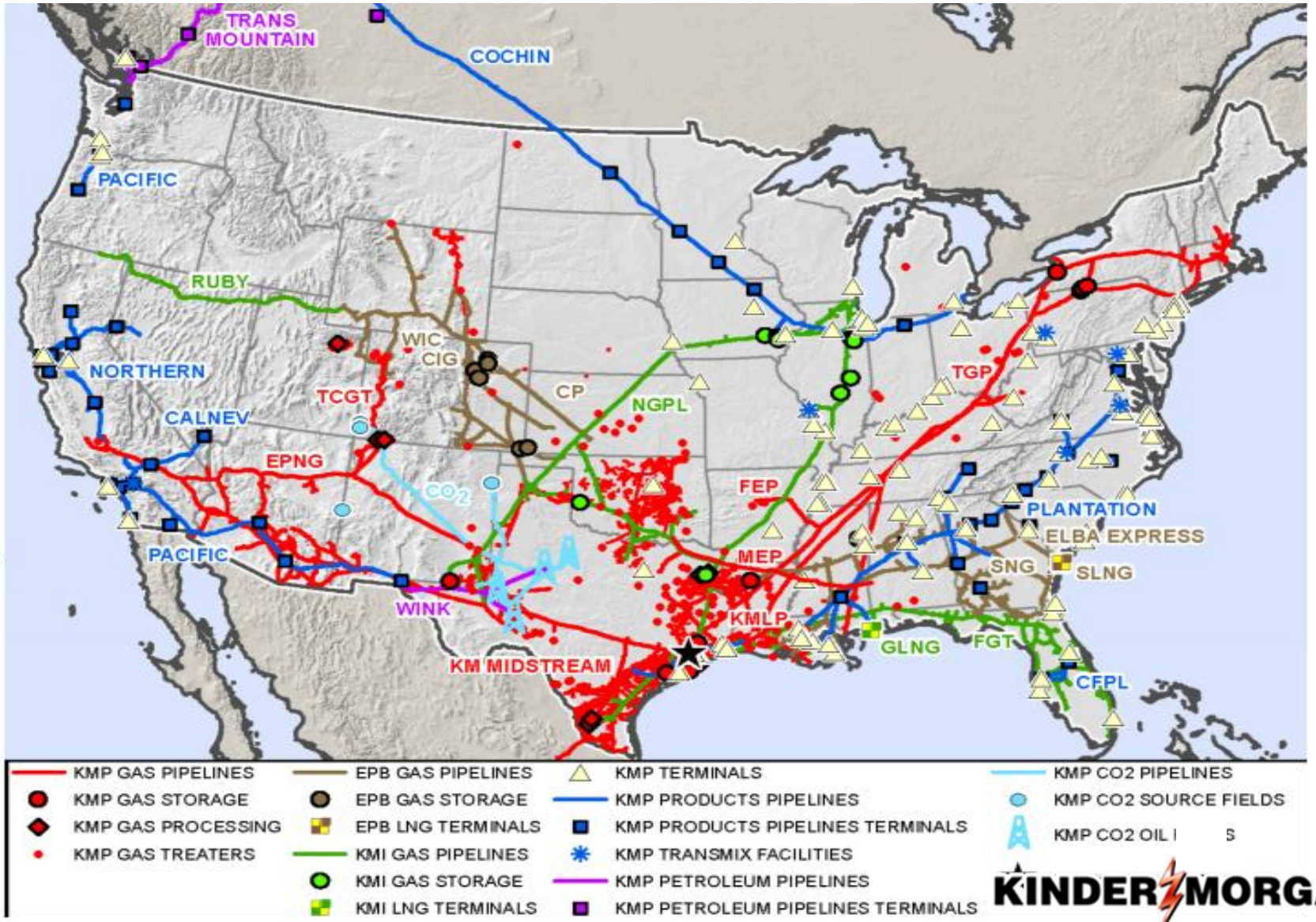
Kinder Morgan Asset Map