A Different Kind of
ENERGY COMPANY

KINDER MORGAN

Northeast Energy Direct Project

Groton Board of Selectmen

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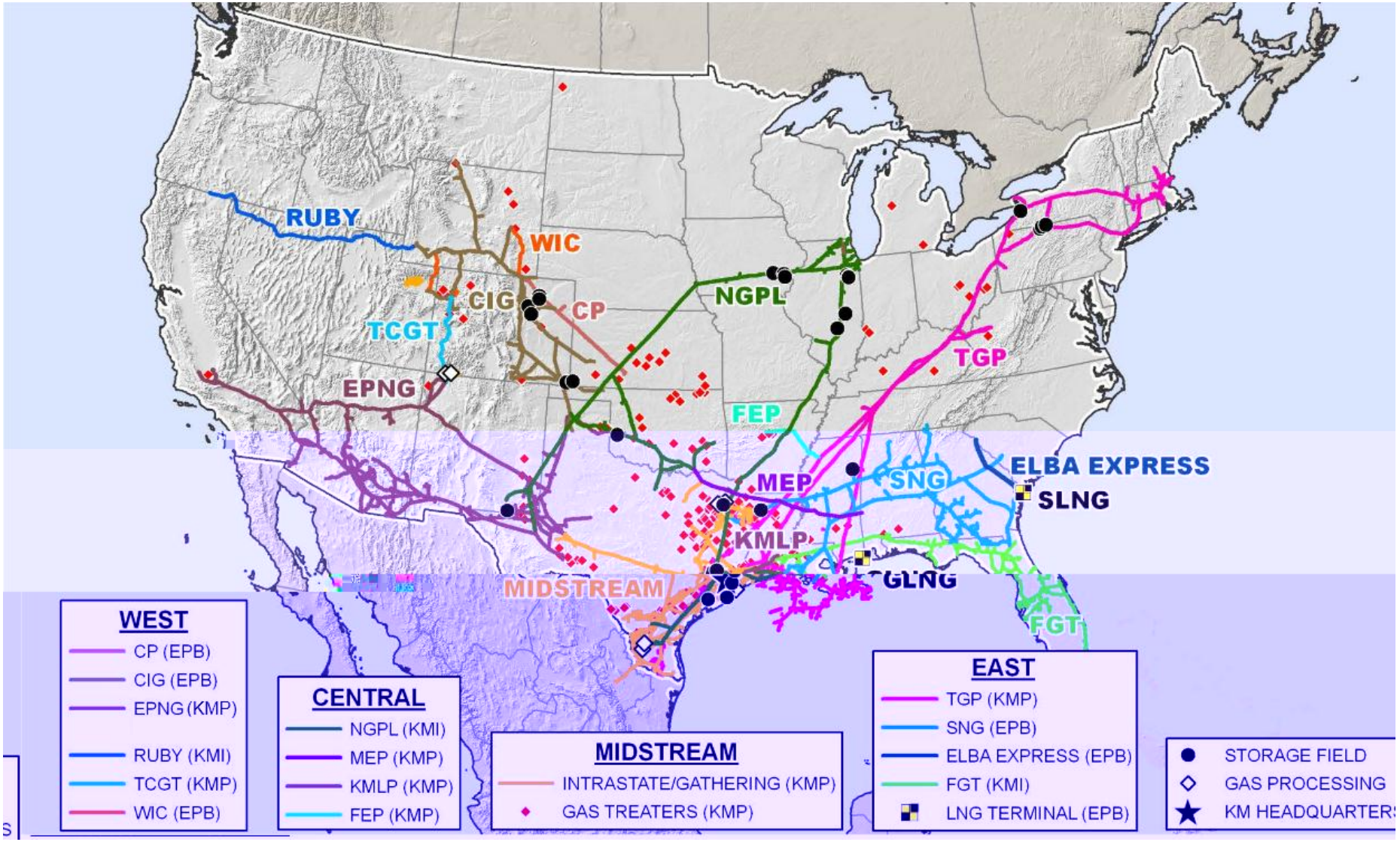

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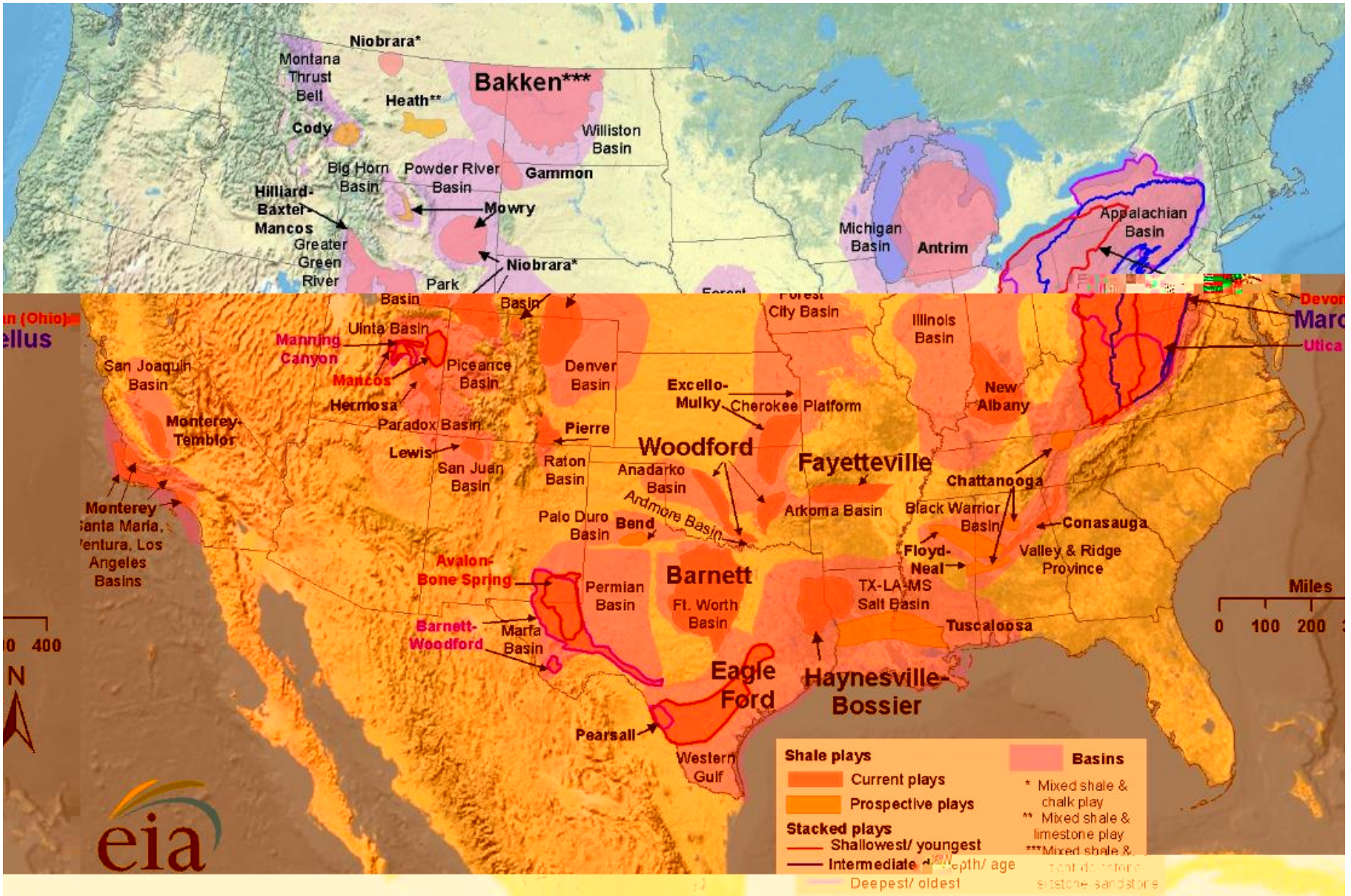
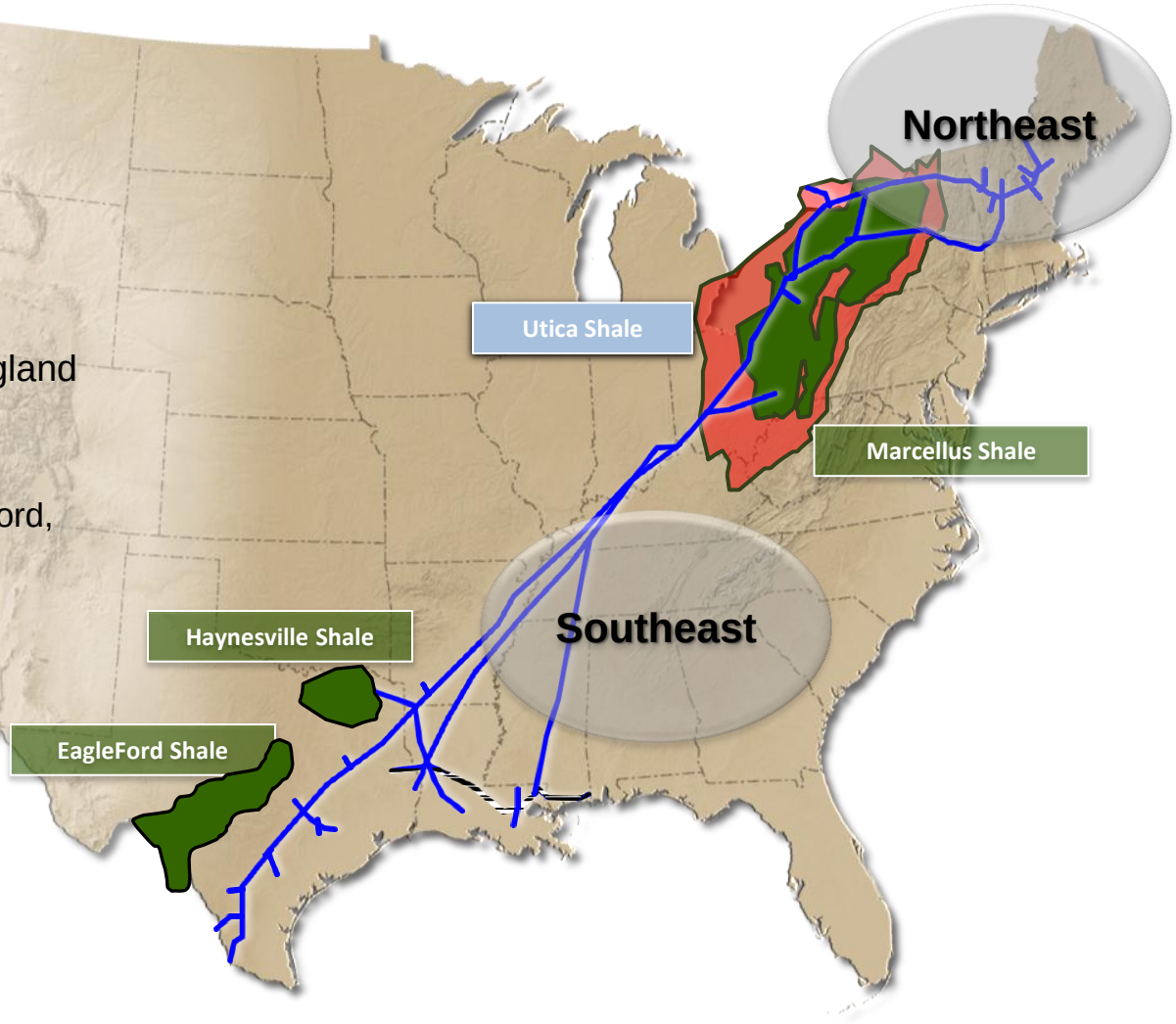

Niobrara*
Montana Thrust Belt
Heath**
Bakken***
Cody
Williston Basin
Big Horn Basin
Powder River Basin
Gammon
Hilliard-Baxter-Mancos
Mowry
Greater Green River
Niobrara*
Park
Michigan Basin
Antrim
Appalachian Basin
Basin
Basin
City Basin
Illinois Basin
Uinta Basin
Manning Canyon
Mancos
Hermosa
Piceance Basin
Denver Basin
San Joaquin Basin
Monterey-Temblor
Paradox Basin
Pierre
Excello-Mulky
Cherokee Platform
New Albany
Lewis
Woodford
Fayetteville
San Juan Basin
Raton Basin
Anadarko Basin
Ardmore Basin
Arkoma Basin
Chattanooga
Monterey
Santa Maria, Ventura, Los Angeles Basins
Palo Duro Basin
Bend
Black Warrior Basin
Conasauga
Floyd-Neal
Valley & Ridge Province
Avalon-Bone Spring
Permian Basin
Barnett
Ft. Worth Basin
TX-LA-MS Salt Basin
Miles
0 100 200
Barnett-Woodford
Marfa Basin
Tuscaloosa
Eagle Ford
Haynesville-Bossier
Pearsall
Western Gulf
Shale plays
Current plays
Prospective plays
Stacked plays
Shallowest/ youngest
Intermediate depth/ age
Deepest/ oldest
Basins
* Mixed shale & chalk play
** Mixed shale & limestone play
***Mixed shale &
eia

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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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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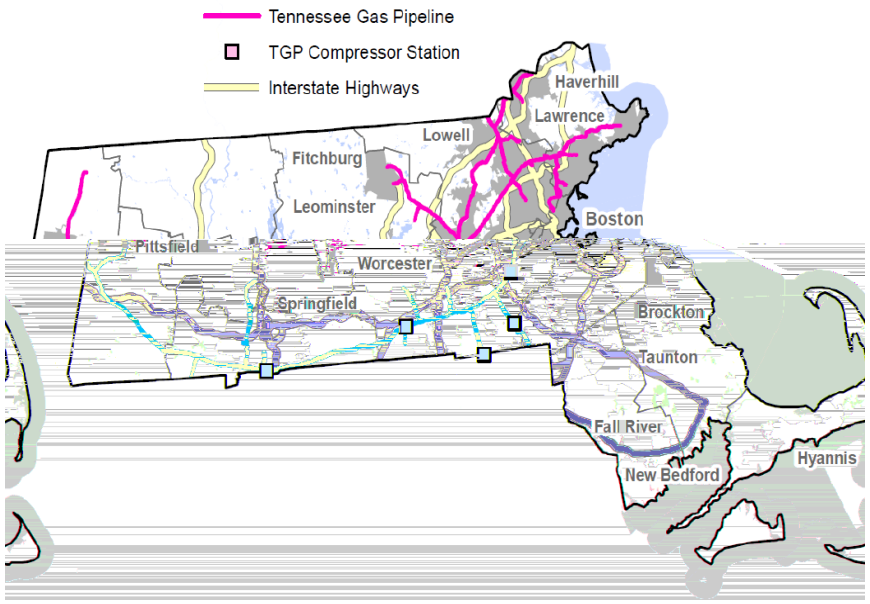
MASSACHUSETTS

KINDER MORGAN

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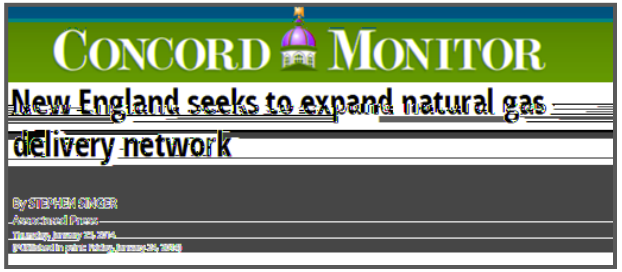
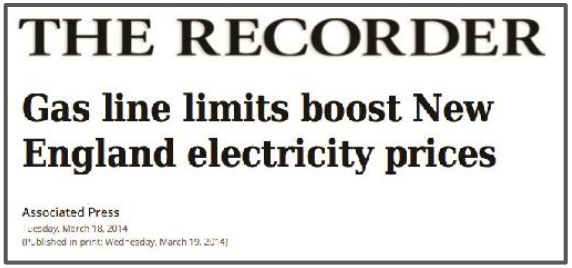
Unprecedented gas capacity constraints on existing pipelines
(Source: ISO-NE, EIA.gov)

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





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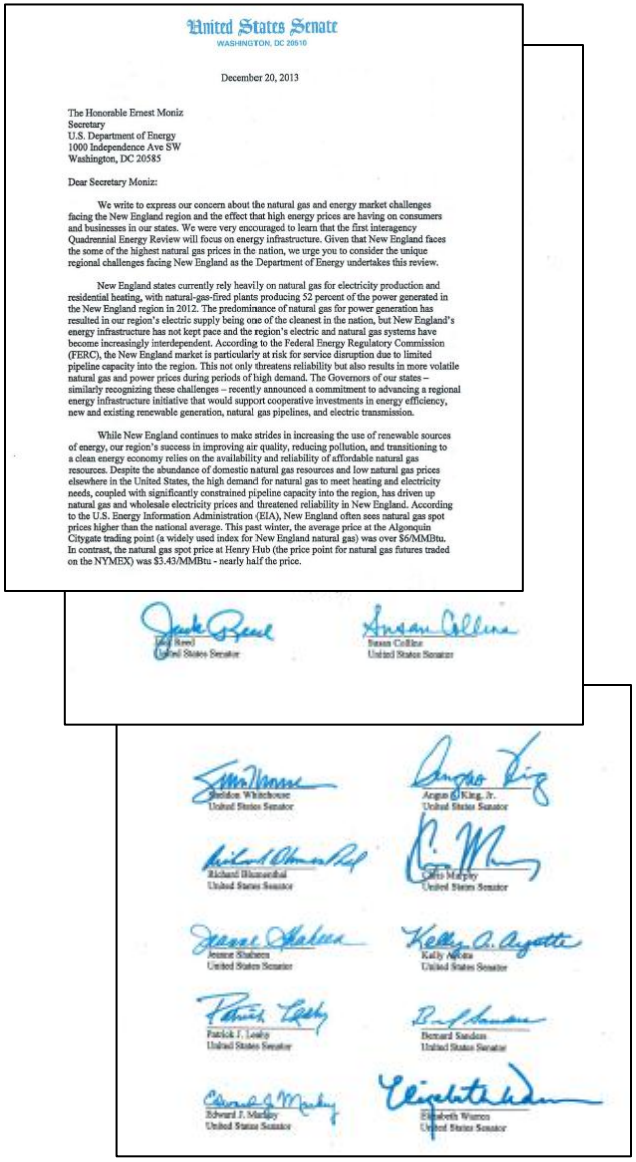

United States Senate
WASHINGTON, DC 20510

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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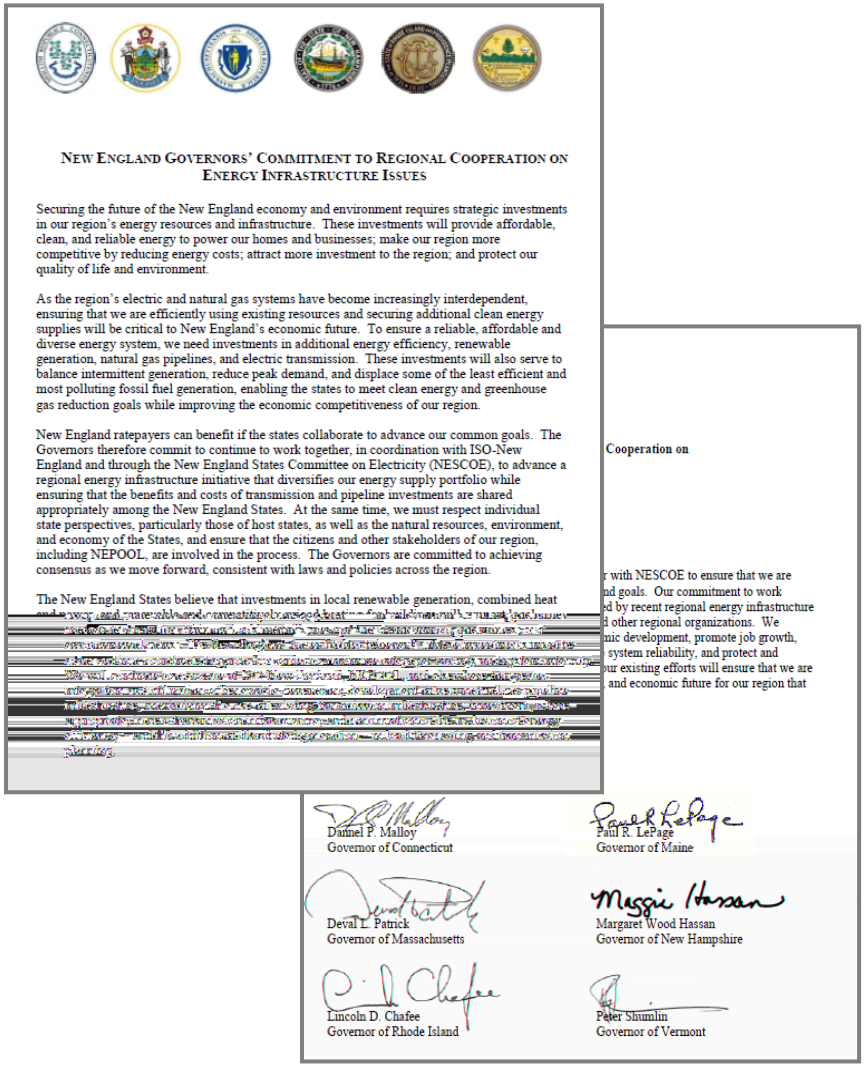
- In Dec. 2013, New England Governors called attention to the shortage of energy infrastructure.

- 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

Cooperation on

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

Daniel 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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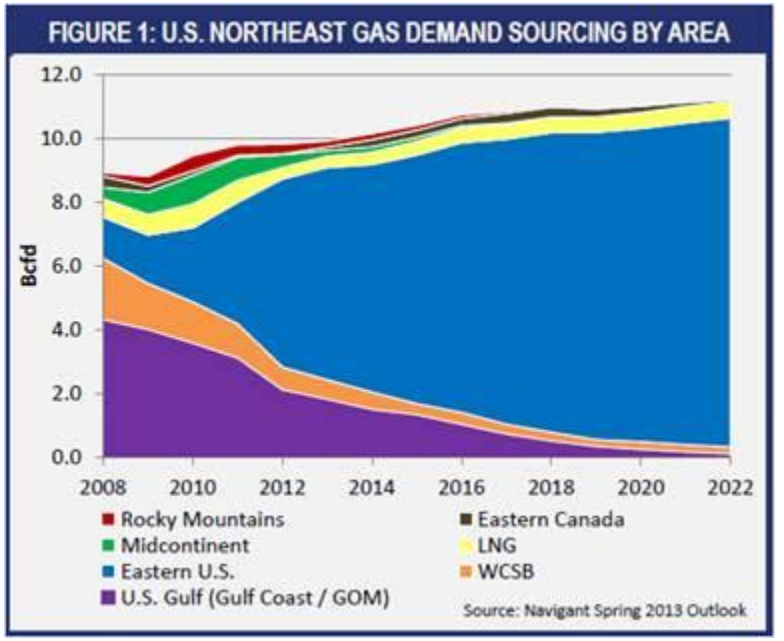
New England's Gas Needs:

- 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)

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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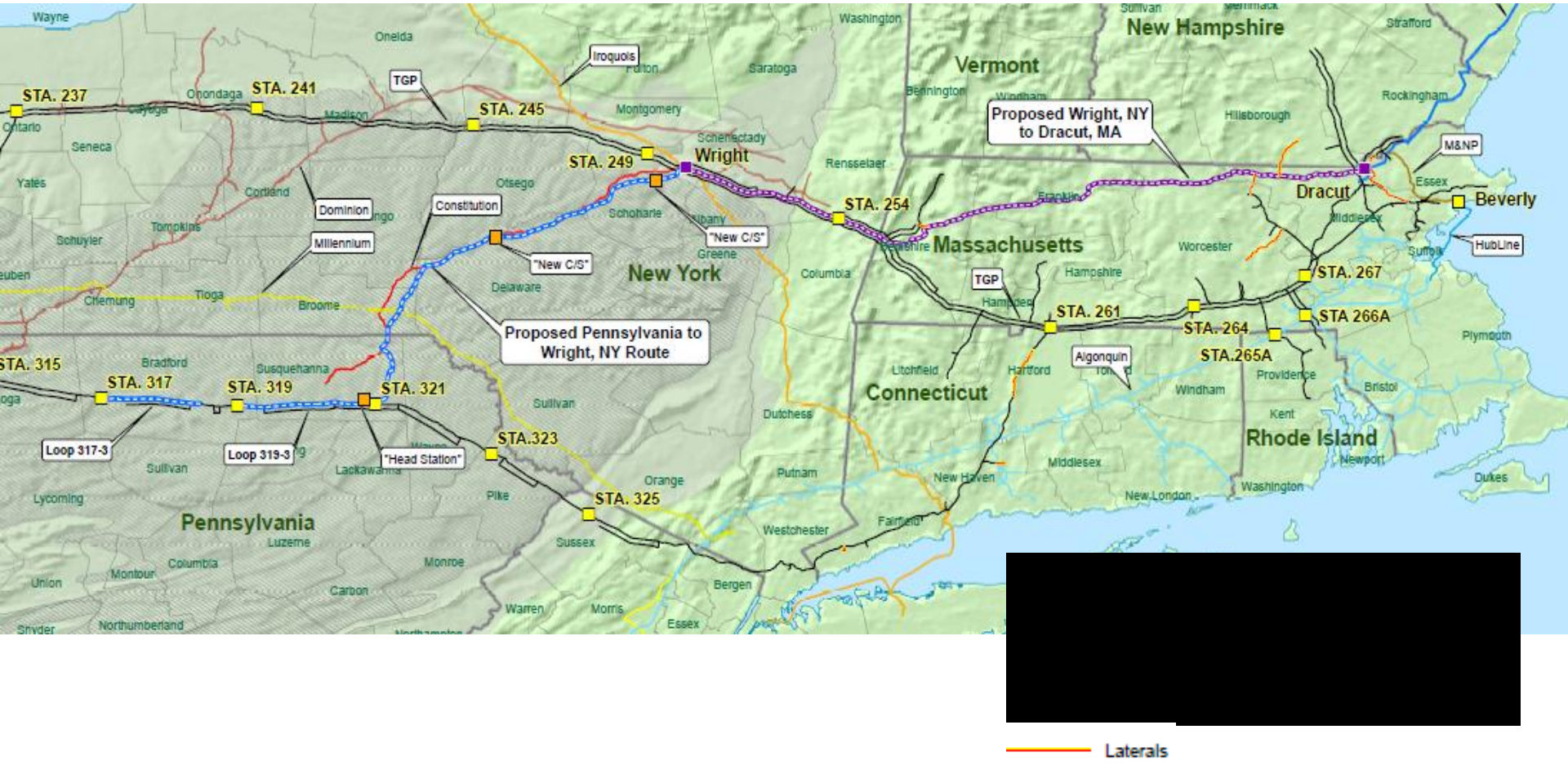
Estimated Project Schedule

Action	Timing



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

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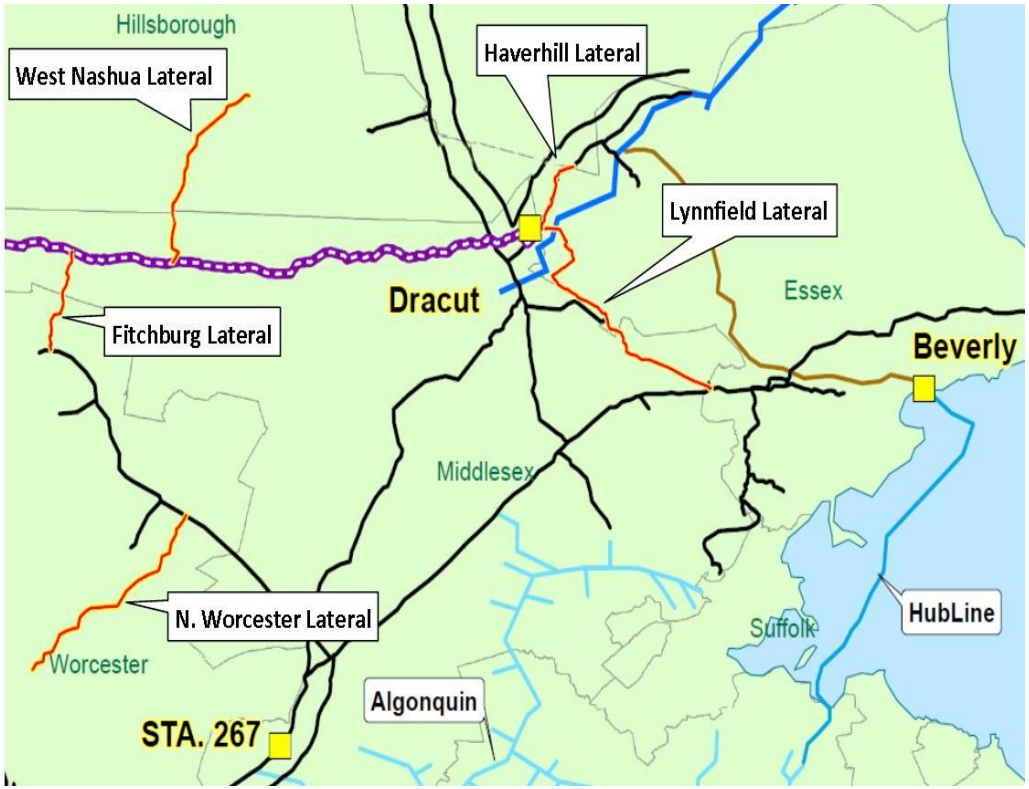
Proposed project components:

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

Federal

-
-
-
-
-
-

State

-
-

-

-

Local

-

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Preliminary Northeast Energy Direct Town List (MA)

Berkshire County

Worcester County

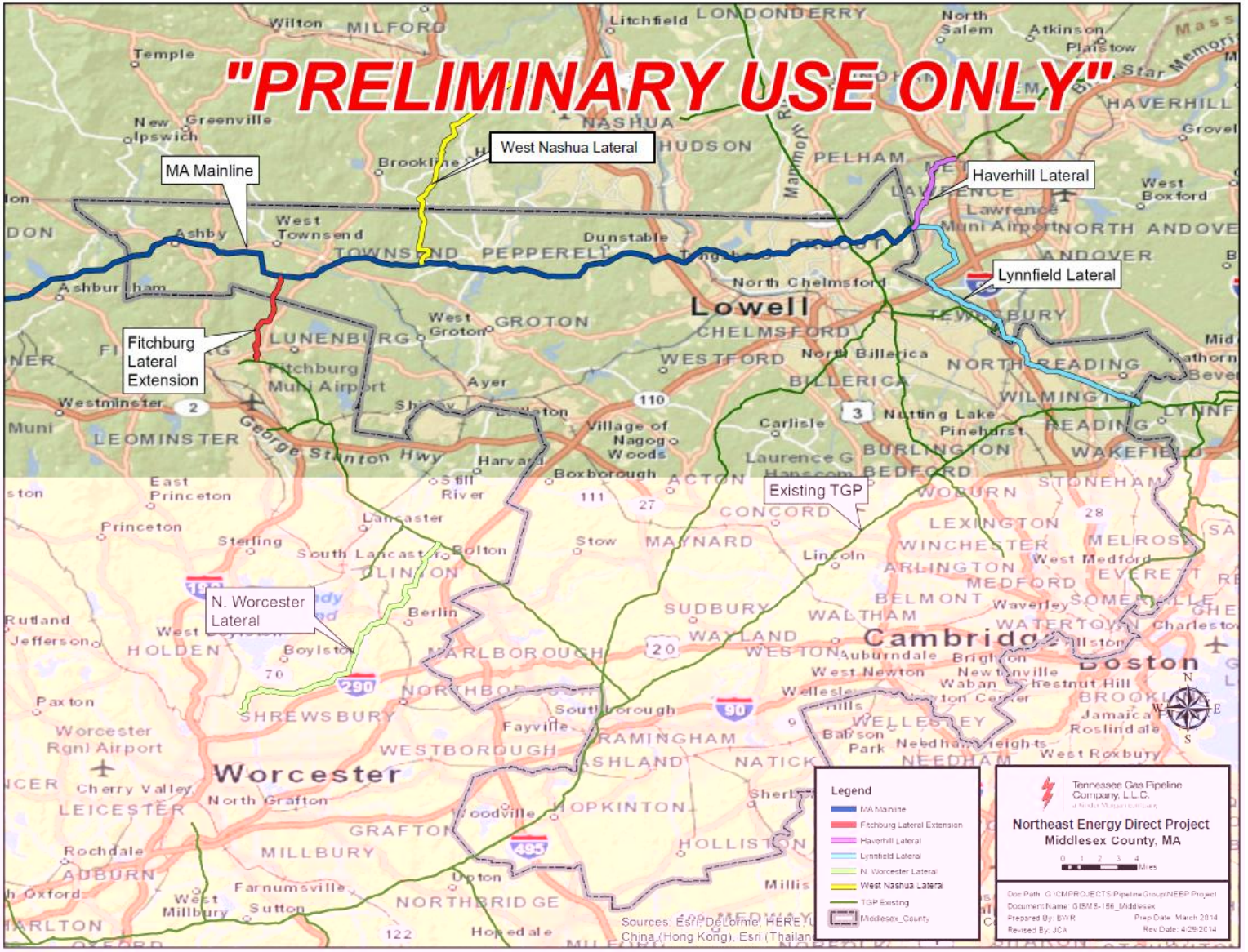
Hampshire County

Middlesex County

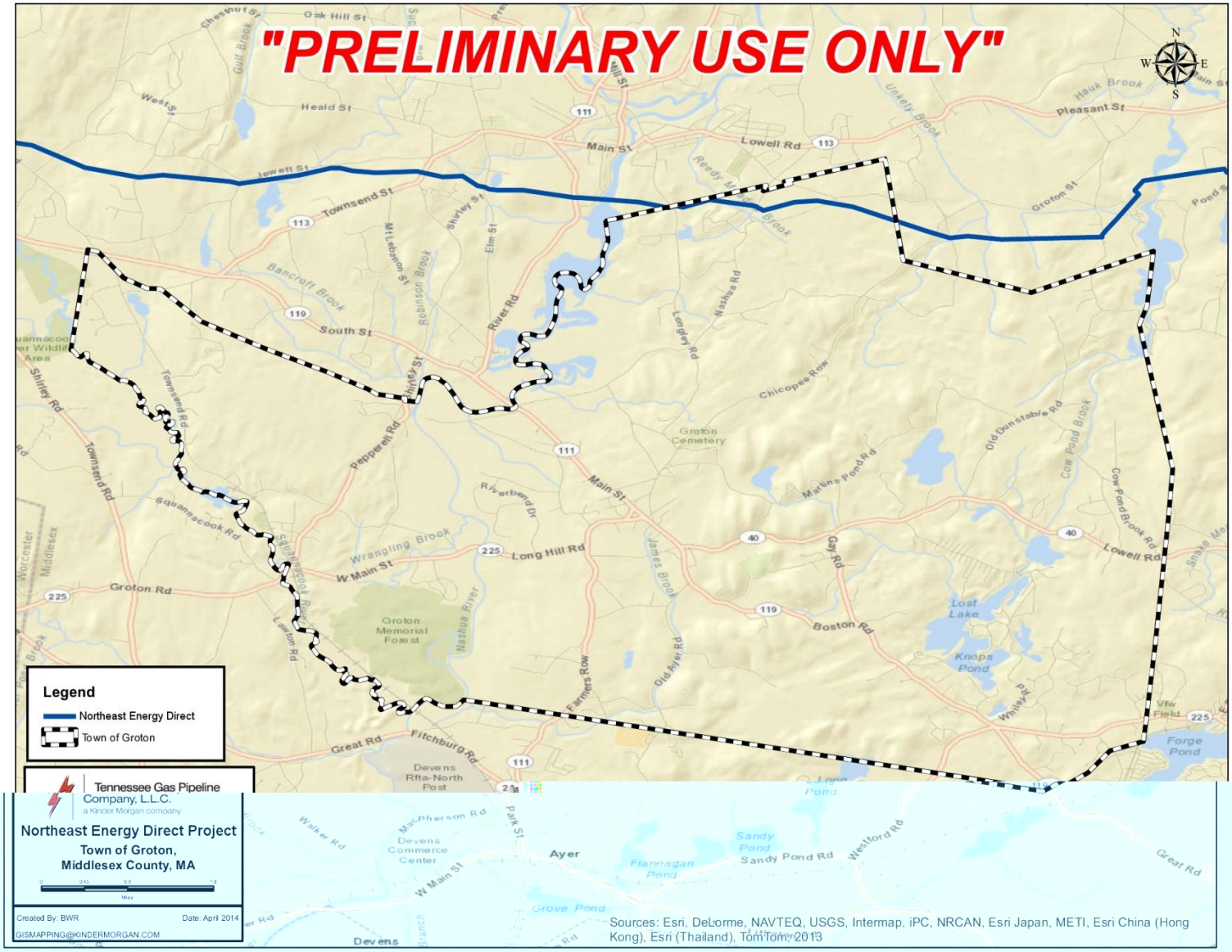
Essex County

Franklin County

Middlesex County Map



Groton Town Map



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Northeast Energy Direct Project Benefits

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INTERNATIONAL UNION OF OPERATING ENGINEERS
ORGANIZED DEC. 7, 1896
LABOR OMNIA VINCIT
TRADE MARK REGISTERED

INTERNATIONAL BROTHERHOOD OF TEAMSTERS

LABORERS' INTERNATIONAL UNION of North America
JUSTICE • HONOR • STRENGTH
Organized April 13, 1903

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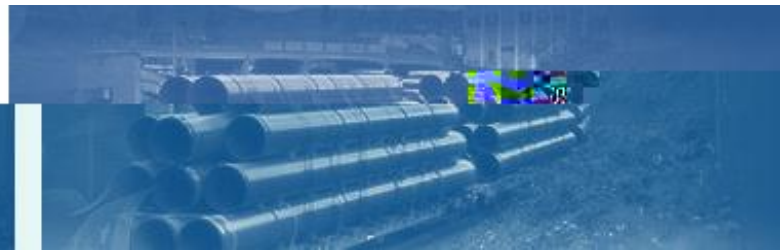
Next Steps

Our Commitment to Local Communities



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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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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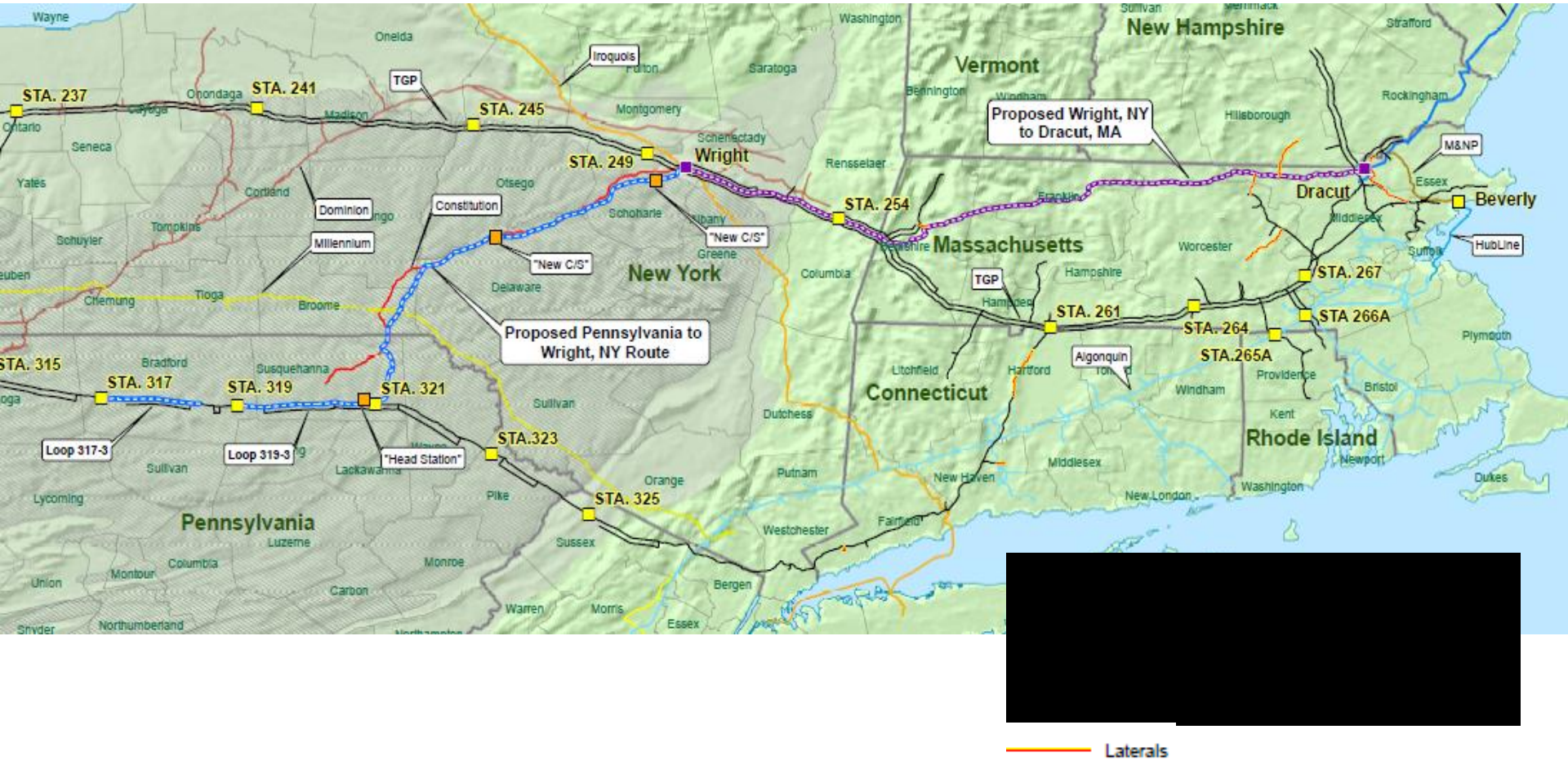
- **The Kinder Morgan Foundation**

Science from Scientists, Inc., Boston, MA

Please Touch Museum, Philadelphia, PA

Berkshire Museum, Pittsfield, MA



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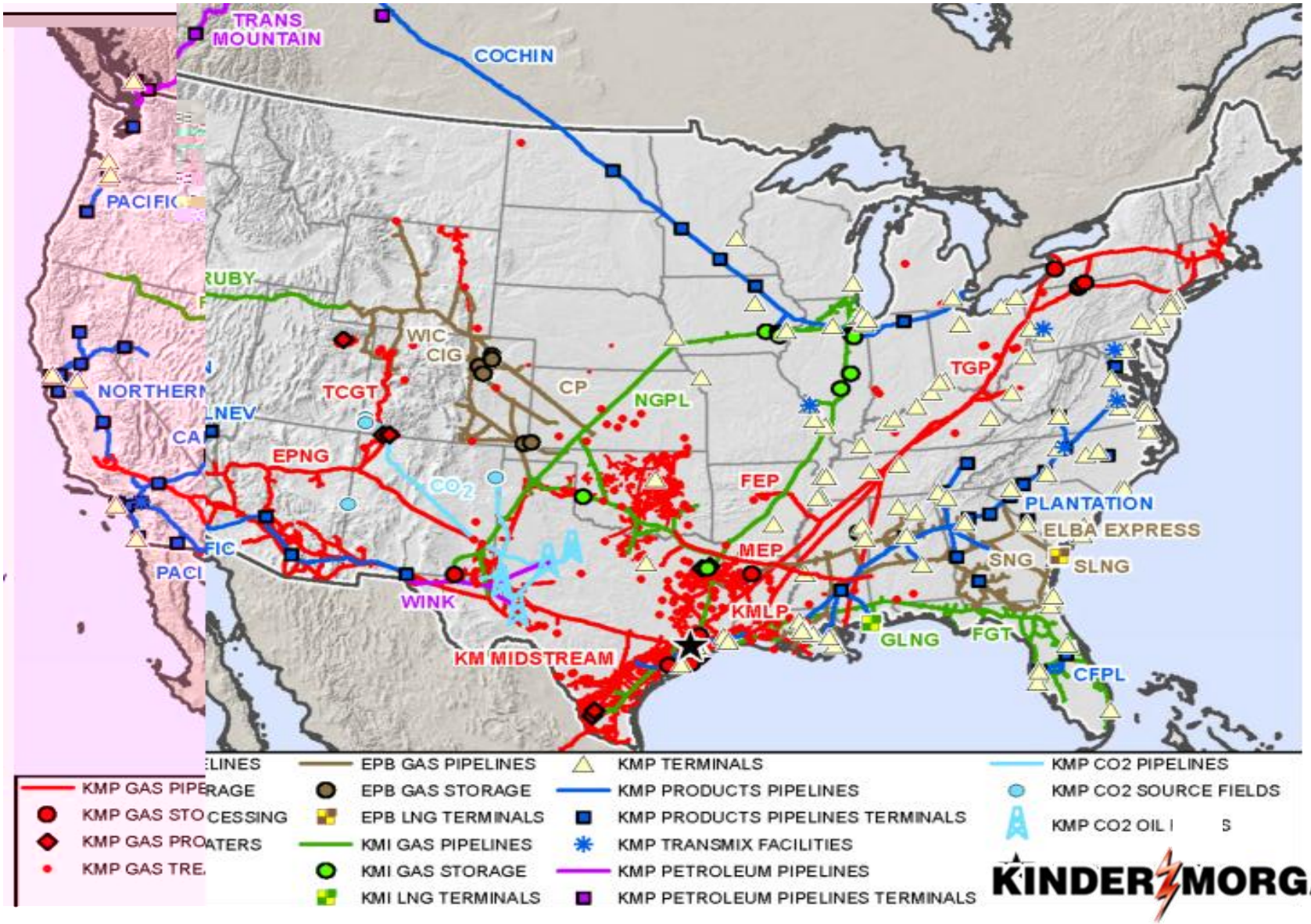
TRANS MOUNTAIN
COCHIN
PACIFIC
RUBY
NORTHERN
NEV
CA
PACI
FIC
WIC
CIG
TCGT
CP
NGPL
EPNG
CO2
FEP
TGP
PLANTATION
ELBA EXPRESS
SNG
SLNG
MEP
WINK
KMLP
GLNG
FGT
KM MIDSTREAM
CFPL
KMP GAS PIPE
KMP GAS STO
KMP GAS PRO
KMP GAS TRE
EPB GAS PIPELINES
EPB GAS STORAGE
EPB LNG TERMINALS
KMI GAS PIPELINES
KMI GAS STORAGE
KMI LNG TERMINALS
KMP TERMINALS
KMP PRODUCTS PIPELINES
KMP PRODUCTS PIPELINES TERMINALS
KMP TRANSMIX FACILITIES
KMP PETROLEUM PIPELINES
KMP PETROLEUM PIPELINES TERMINALS
KMP CO2 PIPELINES
KMP CO2 SOURCE FIELDS
KMP CO2 OIL
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