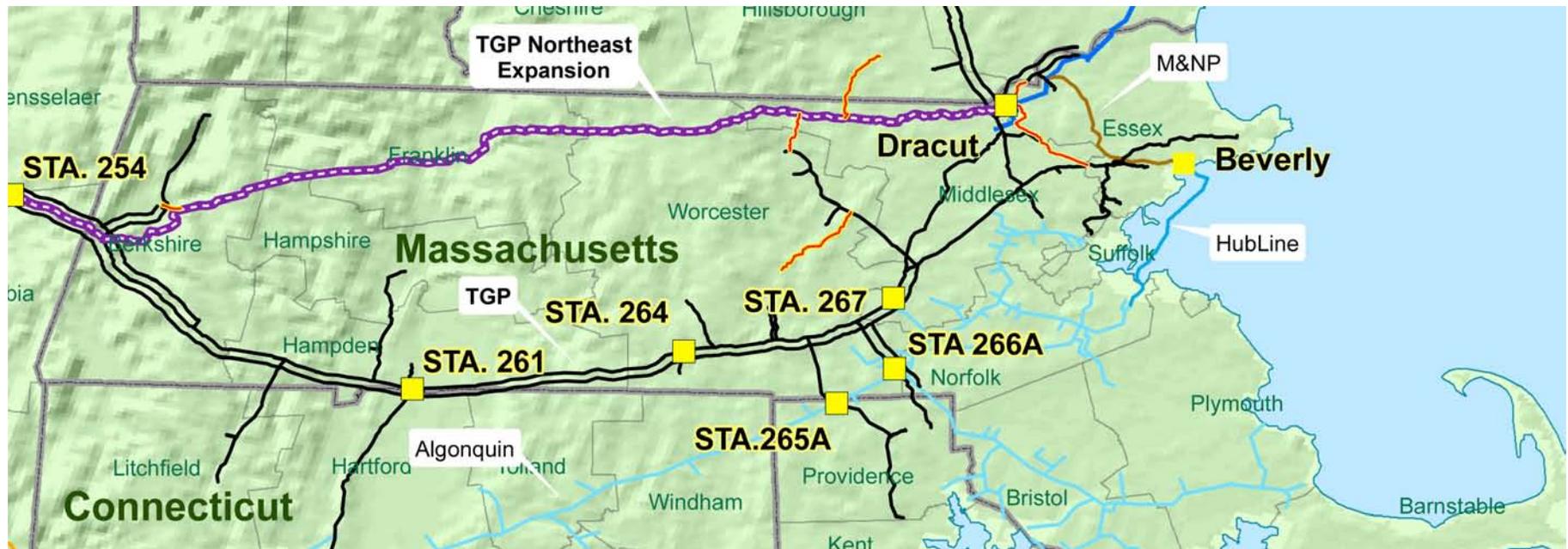


# The Pipeline Route

## The Pipeline Formerly Known as “Northeast Expansion”

- A buried 30-36” high-pressure natural gas transmission line containing natural gas obtained by hydraulic fracturing
- Planned to connect at hub in Wright, NY, enter MA at Richmond and extend to terminal hub in Dracut with laterals
- Capacity of this pipeline could be up to 2.2 billion cu. ft./day<sup>1</sup>



<sup>1</sup>-Allen Fore, Kinder Morgan Public Relations Director, select board meeting, Warwick MA, May 13, 2014

# The Pipeline Route

## NORTHEAST ENERGY DIRECT PROJECT (NED)

This project consists of two new transmission lines, the new one across MA and another from Susquehanna Co, PA to Wright NY along with expansion loops along existing 200 and 300 lines in all three states<sup>1</sup>



<sup>1</sup>-Kinder Morgan / Tennessee Gas Pipeline letter to ISO New England

# About the Pipelines

## CONNECTICUT EXPANSION

Several miles of new pipeline to be run alongside two older ones.

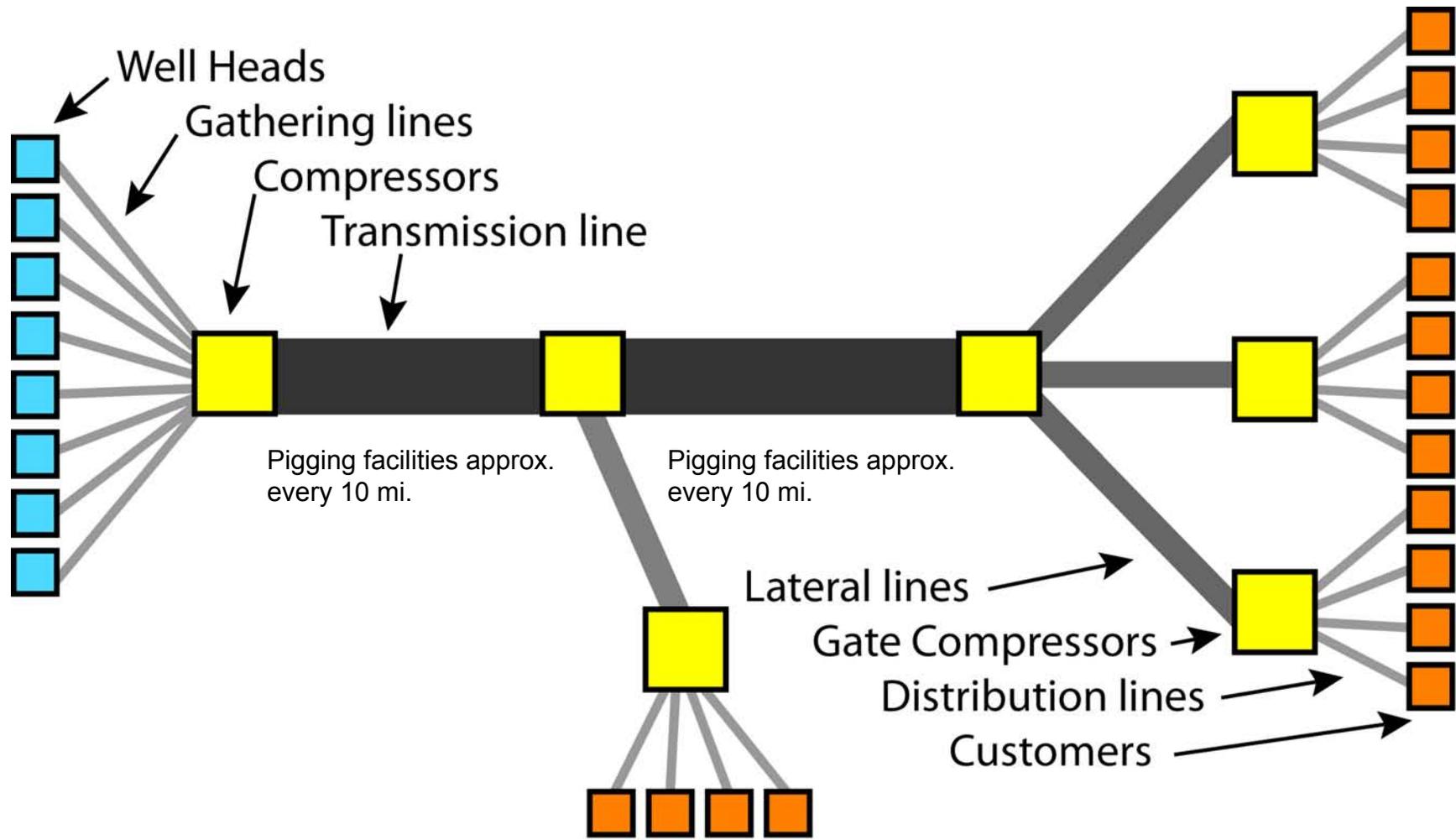
36" diameter, likely with a "pigging facility" †

Currently in MEPA Review, still before FERC pre-filing.



# Components of a pipeline system

Transmission line, compressor stations, pigging facilities, lateral lines



# About the Pipeline

- Will maintain pressure up to 1,460 psi to allow for “line packing” storing as much gas as possible in the pipe<sup>1</sup>
- Ruptures and explosions create super-hot extended burns until miles of gas between safety valves burns off<sup>2</sup>
- Automatic Shut-Off valves range from 2-1/2 to 10 miles apart<sup>2</sup>
- Industry instructions for local emergency crews are<sup>3</sup>
  - Contact the pipeline company
  - Secure the area
  - Evacuate as necessary
  - Stay upwind
  - Do not attempt to put out fire or operate valves
  - Attempt medical assistance if it is safe to do so
  - Establish command center for when pipeline company team arrives

1- Kinder Morgan executive, select board meeting, Plainfield, MA, April 22, 2014

2-American Gas Association, Natural Gas Consumer Information PDF

3-Northern Natural Gas Safety & Public Awareness General Guidance for Emergency Responders  
& Jim Hartman, TGP Right of Way Agent, select board meeting, Warwick, MA, May 13, 2014

Over 990 “Significant Incidents” on gas transmission lines since 2000  
 34 Fatalities • 137 Injuries • Over \$1.5 billion in property damage<sup>1</sup>

**National Gas Transmission: Significant Incidents Summary Statistics: 1994-2013**

Year	Number	Fatalities	Injuries	Property Damage (A) (C)
1994	45	0	22	\$62,786,321
1995	32	2	7	\$13,297,013
1996	43	1	5	\$16,856,141
1997	33	1	5	\$14,506,077
1998	51	1	11	\$54,958,518
1999	38	2	8	\$22,842,808
2000	54	15	16	\$21,166,751
2001	50	2	5	\$16,434,933
2002	56	1	4	\$30,397,650
2003	69	1	8	\$53,622,318
2004	63	0	2	\$37,119,624
2005	110	0	5	\$329,926,758
2006	78	3	3	\$39,010,059
2007	76	2	7	\$56,872,162
2008	73	0	5	\$264,212,662
2009	73	0	11	\$55,742,206
2010	79	10	61	\$427,732,690
2011	84	0	1	\$103,645,356
2012	61	0	7	\$50,111,670
2013	70	0	2	\$47,289,891
<b>Totals</b>	<b>1,238</b>	<b>41</b>	<b>195</b>	<b>\$1,718,531,617</b>
<b>2014 YTD</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>\$6,277,075</b>

When taking the number of hospitalizations required into account, pipelines are less safe than rail transport.<sup>2</sup>

1- US DOT, PHMSA Significant Incidents Summary 1994-2013; 2- PHMSA Pipeline Risk 2010 Final Report



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# CBCnews

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## EXCLUSIVE | Pipeline safety incident rate doubled in past decade

### Database gives detailed picture of 1,047 reported problems

By Amber Hildebrandt, CBC News | Posted: Oct 28, 2013 5:00 AM ET | Last Updated: Nov 08, 2013 4:26 PM ET



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## ToyotaTime sales event

\$116/mo. All-New Corolla Sport

One of the causes of pipeline rupture can be frost heaves, as was the case in a recent gas transmission line explosion in Minnesota.

TGP's new pipeline is planned to be 3' ft. deep.!

I-Allen Fore, Kinder Morgan Public Relations  
Director, select board meeting,  
Montague, MA, April 7, 2014

March 18, 2014 at 8:11 am

### **Ice blamed for gas pipeline burst in north east Penna.**

LENOX TWP. Susquehanna County, Penna. — Williams, a natural gas pipeline company, has confirmed a gathering pipe line accidentally burst, letting brine escape Thursday in a rural Susquehanna County area. The 37 acre Loomis Lake is nearby.

TwinCities.com  
PIONEER PRESS

Weather: ☁ Saint Paul, MN

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## Northwestern Minnesota gas pipeline explosion: 'It was just hell on earth'

By Charly Haley

Forum News Service

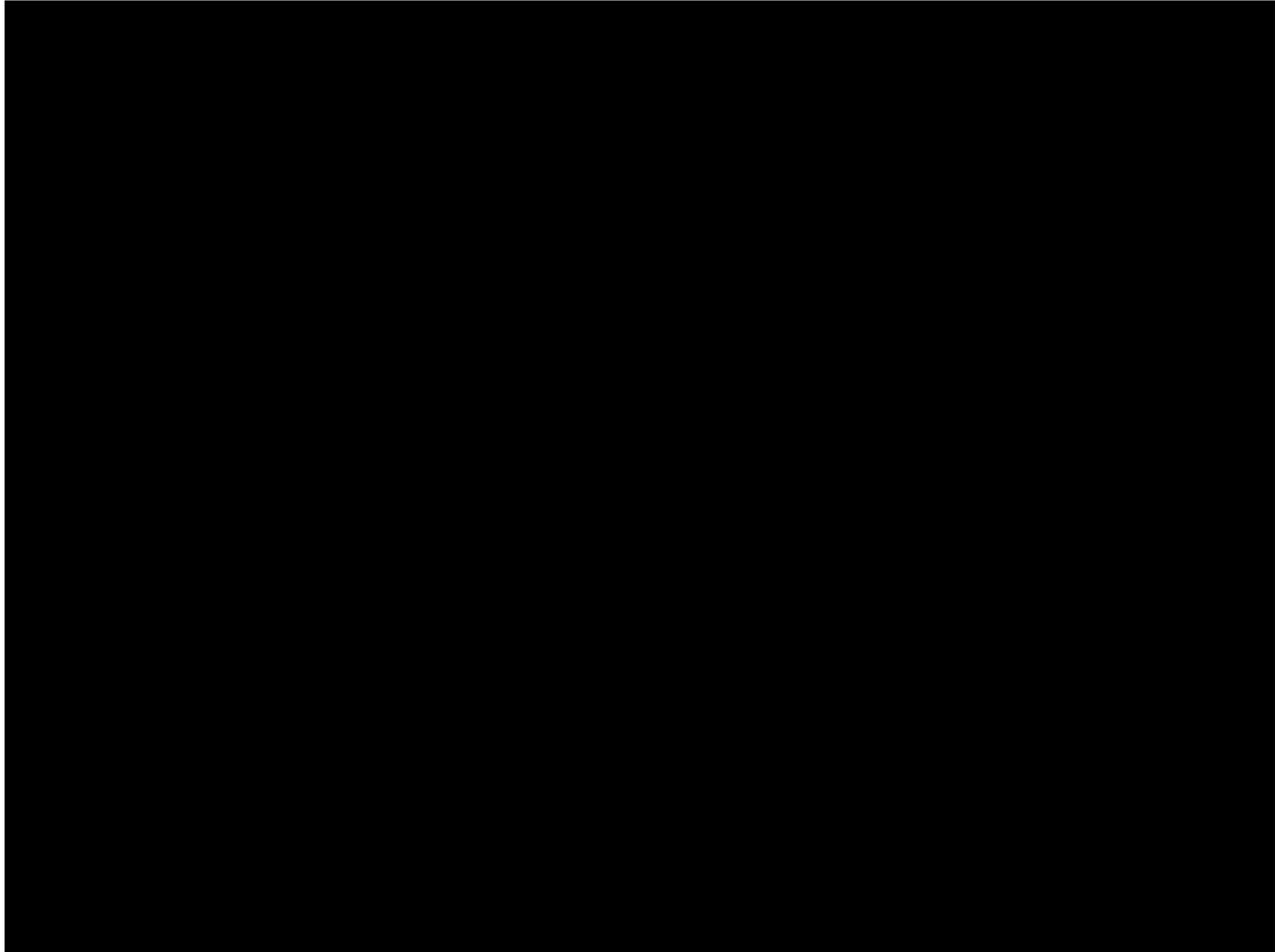
[Click to know what happens next with this story](#) [TRAQ IT](#)

POSTED: 05/26/2014 12:01:00 AM CDT | UPDATED: 8 DAYS AGO



## **20" Pipeline in Sissonville, WV - 2012**

30" is 2.25 times the volume • 36" is 3.25 times the volume





# Compressor Stations

- Placed every 50-60 miles to maintain pressure along the line. Additional stations would be necessary to maintain 2.2Bcf/day capacity <sup>1</sup>
- Barn size facilities on average of 10 acres <sup>2</sup>
- 10 ft. diameter exhaust fans that run 24/7 and substantial lighting at night
- Noise levels usually range from 50-90 decibels at distance
- Regularly exhaust and “blow off” methane gas and drilling chemical residues as part of regular operations

1-Allen Fore, Kinder Morgan Public Relations Director, select board meeting, Warwick, MA, May 13, 2014

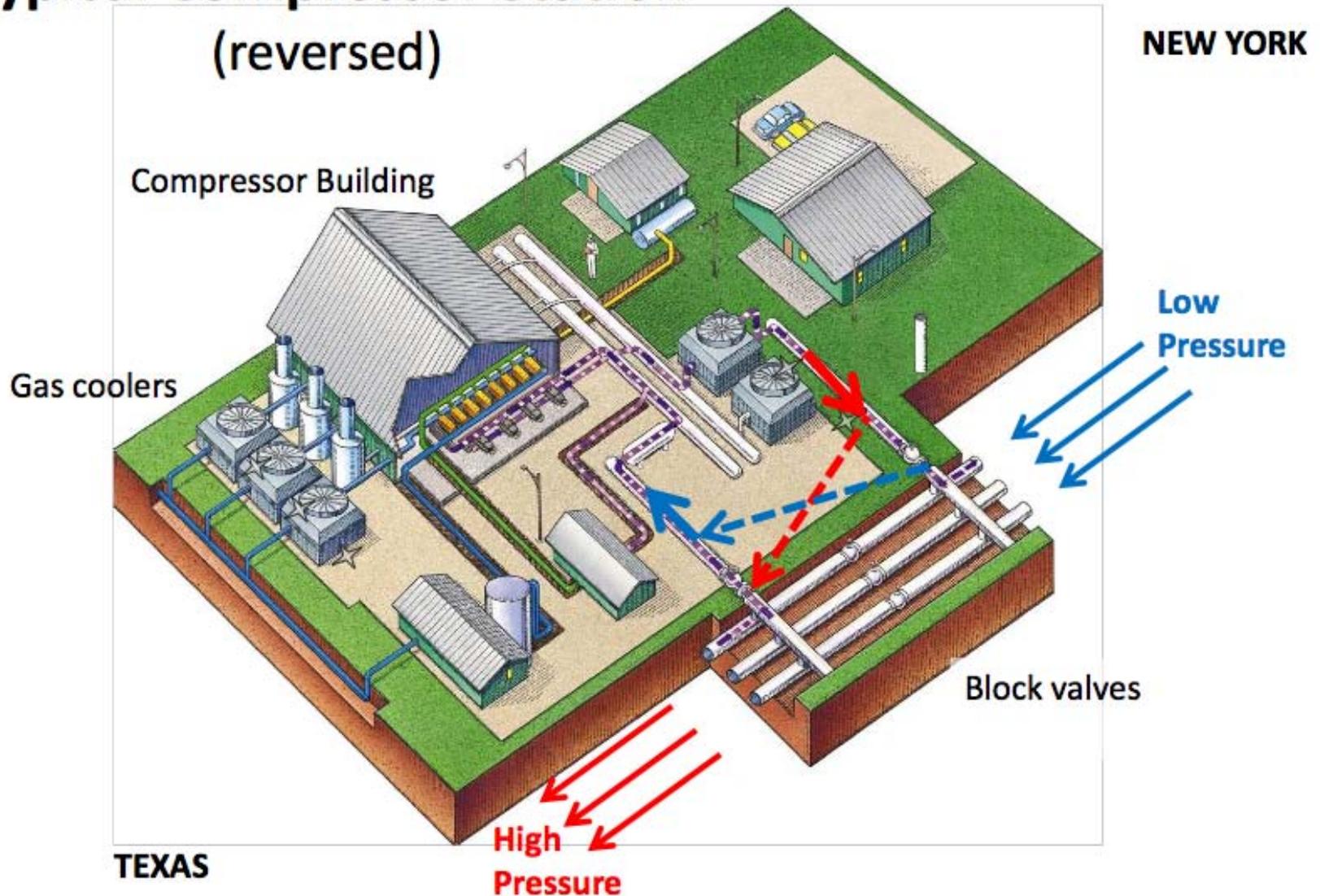
2-Enogex Bentley Award Full Case Study, 2013, Bentley Systems Incorporated

All other info: American Gas Association

# Compressor Stations

KINDER MORGAN

## Typical Compressor Station (reversed)



# Compressor Stations



Chatham, NY Compressor Station

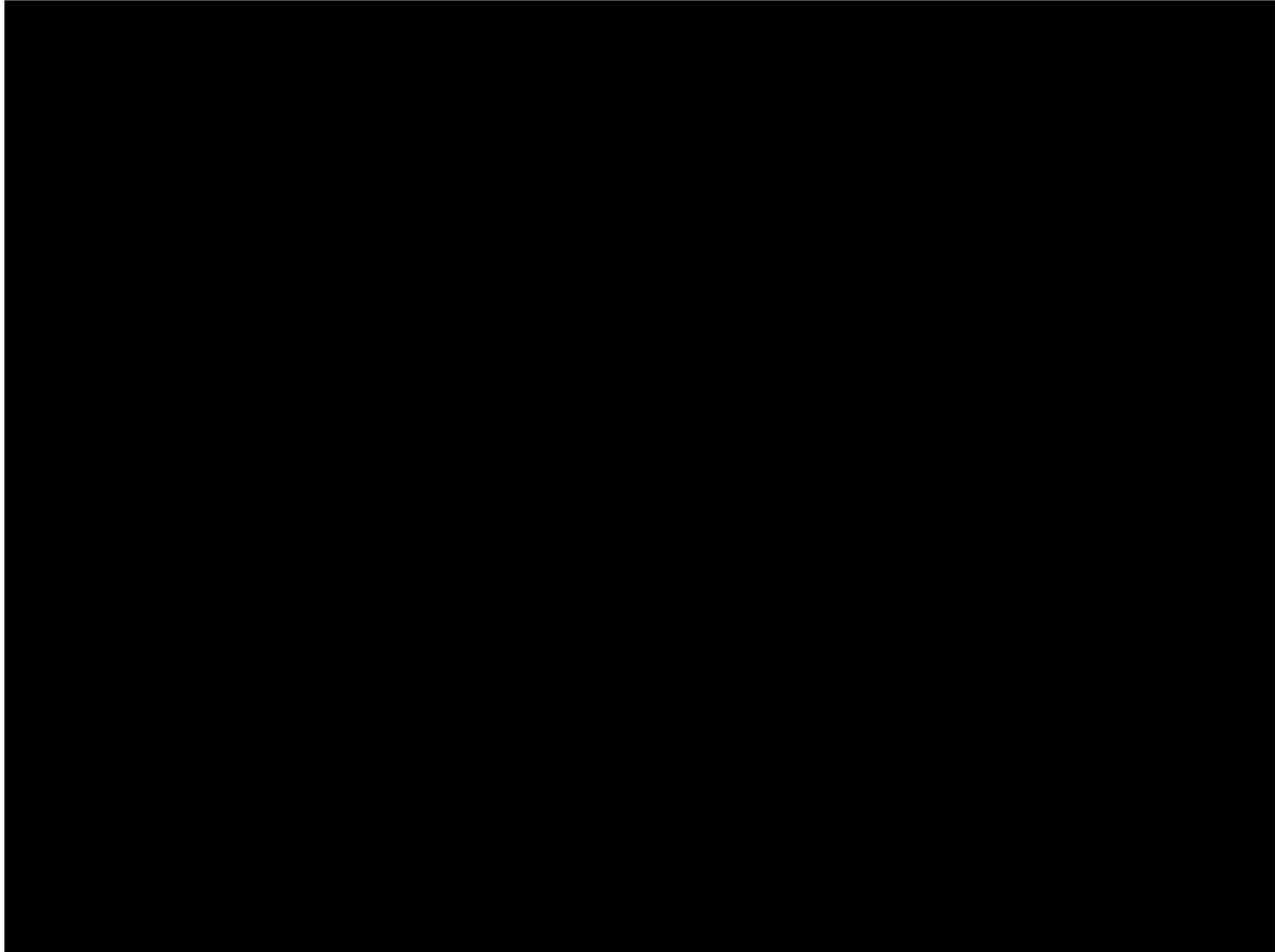
# Compressor Stations



Agawam, MA Compressor Station

# Compressor Stations

TEEL COMPRESSOR STATION in PA



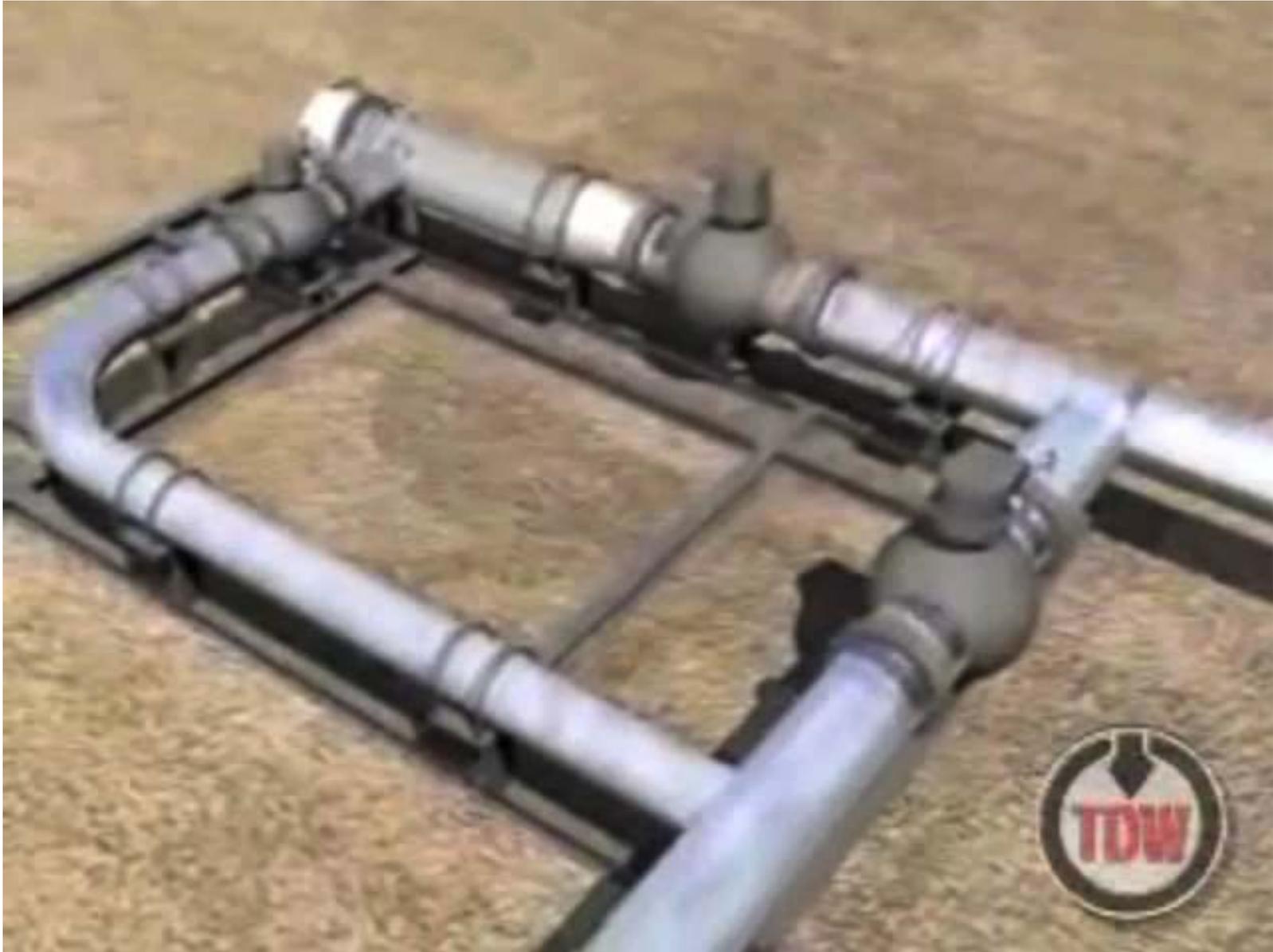
# About Pigging

- Cleans and checks pipes – a squeegee-like “pig” runs through the pipe along with cleaning agents to eliminate residues
- Sensors check integrity and condition of the pipe
- Waste is pushed out the other end and taken away for disposal <sup>1&2</sup>



1-Rigzone Industry Training and Learning Resources  
2-N-SPEC and other companies' demonstration video

# Pigging - Diagrammatic Rendering



# Chemicals used in Hydraulic Fracturing carry through transmission lines

Air sample testing near compressor stations<sup>1</sup> and of gas in transmission lines<sup>2</sup> included:

benzene, dimethyldisulfide, trimethyl benzene, diethyl benzene, tetramethyl benzene, carbon disulfide, naphthalenes, methyl pyridine, carbonyl sulfide, toluene among others.

Over 60 known carcinogens, neurotoxins and endocrine disrupters

1-Town of Dish, TX, Ambient Air Monitoring Analysis Final Report”, Alisa Rich, MPH, PhDc, President, Wolf Eagle Environmental, September 15, 2009,

2-Environmental Public Health Dimensions of Shale and Tight Gas Development”, Seth B. Shonkoff, Jake Hays, and Madelon L. Finkel, April 16, 2014, published by National Institutes of Health

## Long term exposure to pollutants

- Chronic exposure to low levels of benzene can lead to anemia, a decrease in blood platelets, and may increase one's risk of getting cancer. (US EPA, 2012).
- Chronic exposure to toluene over time can lead to problems in the nervous system, kidneys and liver (US EPA, 2012).
- Ethylbenzene has been found to cause liver and kidney damage as well as being ototoxic after chronic exposures (US EPA, 2012). Ototoxic means damage caused to the ear or its nerve supply due to a toxin.
- Chronic exposure to Xylene can cause damage to the nervous system (Jacobson, 2012).

According to an EPA 2011 report, xylene was found in 44 products that are commonly used in hydraulic fracturing fluid, toluene was found in 29 products, ethylbenzene was found in 28 products, and benzene was found in 3 products (Waxman, 2011)

\*Human Health Effects of Hydraulic Fracturing Fluids BTEX Compounds, Andersen, Fenton, Friedman, Jackson & Morrison, University of Vermont, 2013

# Landowner Issues

- Preliminary evaluation by town of Richmond shows no change in property value due to presence of pipelines. Evaluation is ongoing.<sup>5</sup>
- Presence of a transmission line may lower your property value and that of your neighbors by as much as 10-30%<sup>1</sup>
- The average initial offer for similar projects is:  
\$1 per inch of diameter of the pipe for 1 linear foot x # of feet  
(*i.e. 30" dia. pipeline x 500 ft = \$15,000 one-time pay-out*)<sup>2</sup>
- Landowners continue to pay taxes on the easement<sup>1</sup>
- No trees, pools, ponds or permanent structures can be put on the 50' wide easement once the pipeline is constructed.<sup>3</sup>
- If TGP get their Certificate of Public Convenience & Necessity, they can take the easement on your land by eminent domain.<sup>4</sup>

1-Johns Marrs Ellis & Hodge LLP Forensic Appraisal Group & consultation with town of Lee, Massachusetts property listings that currently have pipelines.

2-Atty. Jay Duffy, Clean Air Action, independent consultant for landowners faced with TGP pipeline

3-Jim Hartman, TGP Right of Way Agent, select board meeting, Montague, MA, April 7, 2014

4-FERC Citizen's Guide

5-Conversation with Richmond Town Admin. Matt Kerwood, June 4, 2014

# Stages of Pipeline Development

## 1) Planning and Survey

- TGP/Kinder Morgan approaches landowners and some towns for survey
- Developing detailed map and review of conditions for applying to FERC (Federal Energy Regulatory Commission) for Certificate
- Denial of permission to survey forces gas company to apply with MA DPU for Hearings for permission. They have notified landowners of intent to do so.

## 2) Pre-Filing

- Starts once TGP/Kinder Morgan files application with FERC
- Public Comment Period when general public, NGOs, Govt. Agencies can file reports and opinions on the impact of the pipeline
- Gas company and FERC required to hold public hearings with towns in which the pipeline is to be built

## 3) Construction

- Starts once FERC grants “Certificate of Convenience & Public Necessity”  
April 2017 - November 2018

# Northeast Expansion Project Overview

- The Northeast Expansion Project will expand the existing Tennessee Gas Pipeline system within New York, Massachusetts, New Hampshire and Connecticut.
- The project, as currently configured, would result in the construction of approx. 250 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 will 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	August 2015
Anticipated FERC approval	November 2016
Proposed Start of Construction Activity	January 2017
Proposed In-Service	November 2018

\* Kinder Morgan Presentation Slide, select board meeting, Plainfield, MA, April 22, 2014

# What Opponents Have Been Doing

## **PUBLIC OPPOSITION**

- Statewide Petition to Ban New Natural Gas Pipelines and Champion Efficiency and Renewable Energy, over 9,100 signatures online and on paper
- Town Resolutions  
15 out of 15 towns & cities that have held votes so far have passed Resolutions to ban new pipelines within town borders, or Resolutions in favor of town rights to maintain local control.

### **PASSED**

- Ashby
- Chesterfield\*
- Conway
- Cummington\*
- Lenox
- Leverett\*
- Northampton\*
- Pelham\*
- Plainfield
- Sandisfield
- Shelburne
- Warwick
- Wendell
- Windsor
- Worthington

### **SLATED FOR VOTE**

- Ashfield (2-Pipeline & Comm. Rights)
- Becket\*
- Dalton

*Drafting resolutions or gathering signatures*

- Richmond, Deerfield, Dracut, North Adams and more!
- Pepperell is working on writing a joint resolution for multiple towns in the area, including Hollis, NH

# What Opponents Have Been Doing

## POLITICAL OPPOSITION

- Joint Statement from State Legislators
  - Sen.s Downing & Rosenberg
  - Rep.s Mark & Kulik
- Public Statements from State Rep. Denise Andrews & Rep. Anne Gobi
- Statement from Congressional Rep. McGovern
- Statement from Green-Rainbow Party



COMMONWEALTH OF MASSACHUSETTS  
MASSACHUSETTS GENERAL COURT  
STATE HOUSE, BOSTON 02133-1053

## MEDIA ADVISORY

### JOINT STATEMENT OF SENATOR STAN ROSENBERG, SENATOR BEN DOWNING, REPRESENTATIVE STEVE KULIK AND REPRESENTATIVE PAUL MARK FOR PIPELINE RALLY IN GREENFIELD, MAY 15, 2014

Since this gas pipeline was first proposed, we have been actively working together to obtain factual information about the project and its potential impacts on the people and communities that we represent.

Our major focus to date has been on determining exactly what the role of Massachusetts state government would be for this project, since most of the regulatory and permitting authority for it lies with the federal

*Jim McGovern's Statement to Greenfield Common Rally*

*As many of you know, my office has been actively working with local, state, and federal officials and regulatory agencies to ensure that the public understands the federal process for permitting interstate pipelines and their rights in this process.*

## Green-Rainbow Party opposes pipeline expansion in Mass.

May 23rd, 2014 | By [Environmental Headlines -- CT environmental news](#) | Category: [Featured Story](#)

The position statement below was adopted by the Administrative Committee of the Green-Rainbow Party on May 21, 2014.

### POSITION STATEMENT FROM THE GREEN-RAINBOW PARTY STOP GAS PIPELINE EXPANSION IN MASSACHUSETTS

We are fundamentally opposed to the two major gas pipeline expansion projects being proposed in Massachusetts: The Algonquin fracked gas pipeline being proposed by Spectra Energy and the "Tennessee

*Commission (FERC) is the federal permitting interstate natural gas pipelines. I have not yet submitted an application to*

*and I have not yet submitted an application to the Governor. The Governor has made the expansion of the pipeline through one of the most*

# What Opponents Have Been Doing

## LAND TRUST & CONSERVATION GROUPS who have issued statements

- Mass Association of Conservation Commissions
- Mass Audubon
- Massachusetts Land Trust Coalition
- Mount Grace Letter to the Governor
- Nashoba Conservations Trust
- North Quabbin Energy
- Trustees of Reservations



**Pipeline**

**Dear Friends,**  
Nashoba Conservation Trust was formed in 1969 by Pepperell resi protect open space for the benefit of wildlife and for the enjoymen the Pepperell community have sustained that mission by helping re safeguarding our town's water supply, by sustaining Pepperell's ru

**About us**  
We're an informal group of people in north-central Massachusetts who are concerned about issues relating to energy use. More...  
To contact us by email: info[at]northquabbinenergy.org

**Where We Stand**  
Our position is always to emphasize energy conservation first and foremost, then energy efficiency and renewable/alternative energies.  
North Quabbin Energy stands opposed to this possible new gas pipeline that would run through many towns of Berkshire, Franklin and Worcester counties. Much of the land that this proposed pipeline might cross is rural farmland, forests and designated conservation lands. We do not believe that any new gas pipelines should be built across Massachusetts.  
Our other concerns include:  

- Possible environmental issues which include the effects of fracking (hydraulic fracturing) in PA and NY (groundwater pollution, geological instabilities, etc.)
- More new contributions to greenhouse gases when we burn this natural gas and use for it for electricity generation and heating our leaky homes
- Safety concerns regarding the infrastructure of pipeline



# What You Can Do

## **DELAY THE SURVEY & PLANNING!**

If you're approached for a survey - TELL THEM NO

If you've already said yes, but haven't signed an agreement, you can rescind permission – sample letter online

Saying no forces them to file with Mass DPU for permission to access land

If your selectboard gave permission to survey on town land, ask them to rescind permission.

Even if you haven't been approached, you can still deny permission

***Saying no to the survey is not the same as not negotiating an easement, you will not lose any bargaining power***

\*Downloadable letters to Rescind or Deny permission are available on **[nofrackedgasinmass.org](http://nofrackedgasinmass.org)** under the **Resources > Landowner Resources** tab

# What You Can Do

## ***Sign the petition***

Hosted by MoveOn.org, link on the left hand side of [nofrackedgasinmass.org](http://nofrackedgasinmass.org) -  
*Join over 9,300 people!*

## ***Contact your elected officials***

*Especially the Governor!*

"neither state nor local governments will have a lot to say" about the pipeline route and the permit, he said -- decisions which will be made at the federal regulatory level.

Patrick said he is "glad I don't have to make a decision like the one Governor Cuomo has to make,"

*Tell them:*

- say no to the tariff
- say no to the pipeline
- stand up for our protected lands



**Gov. Deval Patrick urges patience on gas line, medical marijuana licenses**

PITTSFIELD -- Gov. Deval Patrick urged patience Monday on a natural gas line...

BERKSHIREEAGLE.COM

*Berkshire Eagle, June 10, 2014*

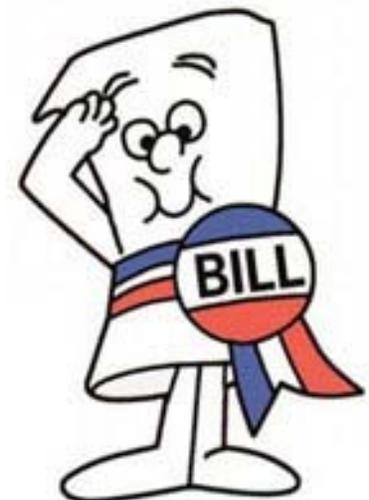
# What You Can Do

## ***Write to or call your State Legislators about H.4187***

*Currently in House Ways & Means*

- Make sure wording allowing tariff is kept out
- Require a formal study of all alternatives before any new energy infrastructure is built
  - Continued energy efficiency programs first
  - Make sure new infrastructure complies with state mandated greenhouse gas emissions limits under the Global Warming Solutions Act
  - Assess and minimize damage to land and water resources
  - Allow only new infrastructure with lowest risk to safety, environment and economy  
*(especially protection against fuel market price spikes)*

Contact info for every state legislator is available at [www.malegislature.gov](http://www.malegislature.gov)



# What You Can Do

## ***Talk to your neighbors & friends***

Talk to your friends and neighbors and let them know the details.

Reach out to people in other parts of the state as well.

## ***Write Letters to the Editor, Invite Reporters to Presentations***

Get the word out.

See an inaccurate or one-sided report?

Write a letter to the editor explaining the inaccuracies

Write your own article to submit as an op-ed

*Hold writing parties to help friends get motivated.*

*FAQs available under “Resources” on [nofrackedgasinmass.org](http://nofrackedgasinmass.org)*

## ***Make videos for social media and local community tv***

- Make your own, put it on YouTube, Vimeo or Daily Motion
- Talk to Climate Summer bike riders

*See contact info under “Contact”  
on [nofrackedgasinmass.org](http://nofrackedgasinmass.org)*



# ACTIVE OPPOSITION ORGANIZATIONS

Berkshire Environmental Action Team

Better Future Project

Climate Action Now/350MA, Pioneer Valley

Climate Summer

Dracut/Tyngsboro Pipeline Watch

GASP – Green Alliance to Stop the Pipeline

Hilltown Community Rights

Live Fracked Free or Die

Mothers Out Front

No Fracked Gas in Mass

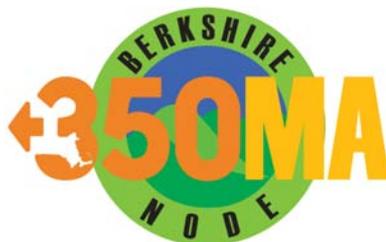
Stop NY Fracked Gas Pipeline

Students for a Just and Stable Future

350 MA - Berkshires

350 MA - Worcester

*\*Independent citizens  
taking action in 4 states*



# Online Resources

## [www.nofrackedgasinmass.org](http://www.nofrackedgasinmass.org)

- Maps of proposed pipeline route
- Town by Town listing with news pipeline developments
- Increasing volume of information (with sources cited)
- Contact info for legislators & regulatory agencies
- Resource Materials (Info sheets, sample letters, sample resolution)
- Link to State-Wide Petition to Ban New Gas Pipelines  
and Champion Sustainable Energy

## [www.massplan.org](http://www.massplan.org)

- Fully annotated FAQs
- Maps of proposed pipeline route
- Info on protected lands
- Government resources (information on FERC, conservation issues)
- Legal information for landowners



# When Pigging Goes Wrong

