



**CITY COUNCIL ENVIRONMENT & FLOOD ISSUES
SUB/COMMITTEE WILL MEET AT 5:30 PM ON
TUESDAY, MAY 15, 2018 IN THE CITY COUNCIL
CHAMBER, CITY HALL**

1. ROLL CALL

2. MEETING CALLED TO ORDER

2.I. Environment & Flood Issues SC May 15, 2018.

Documents:

[2018 MAY 15 ENVIRONMENT FLOOD ISSUES SC.PDF](#)

3. ORDER OF BUSINESS

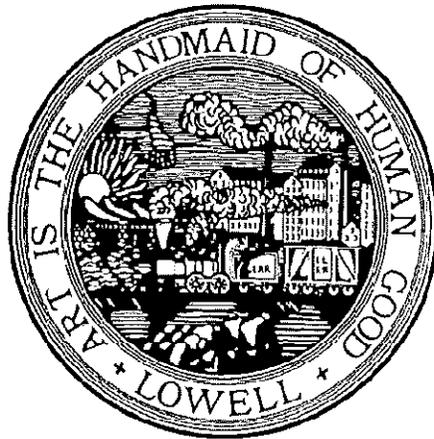
3.I. Discussion - National Grid Gas Pipe Line Project For A New 12 Inch Line To Replace 6 Inch Line Through Chelmsford, Lowell And Tewksbury (Per C. Cirillo Motion 3/20/18).

3.II. Presentation - National Grid Gas Modernization Project

Documents:

[SUBCOMMITTEE PRESENTATION - PRINT FOR COUNCILORS TO LOWELL
CC SUBCOMMITTEE _MAY 15 2018.PDF](#)
[NGRID GAS DISTR NETWORK - SAFETY IS OUR NUMBER ONE
PRIORITYT.PDF](#)

4. ADJOURNMENT



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**Discussion: National Grid gas pipe line project for a new 12
inch line to replace 6 inch line through Chelmsford, Lowell
and Tewksbury (Per C.Cirillo motion 3/20/2018)**

The Public is invited to attend.

Environment & Flood Issues Sub/Committee

C. Cirillo, Chair

C. Elliott, Member

C. Kennedy, Member

Michael Q. Geary
City Clerk

Gas Modernization Project - Lowell Area



Improving Our Safety Processes with Inline Pipe Inspection
Municipal Briefing - May 2018



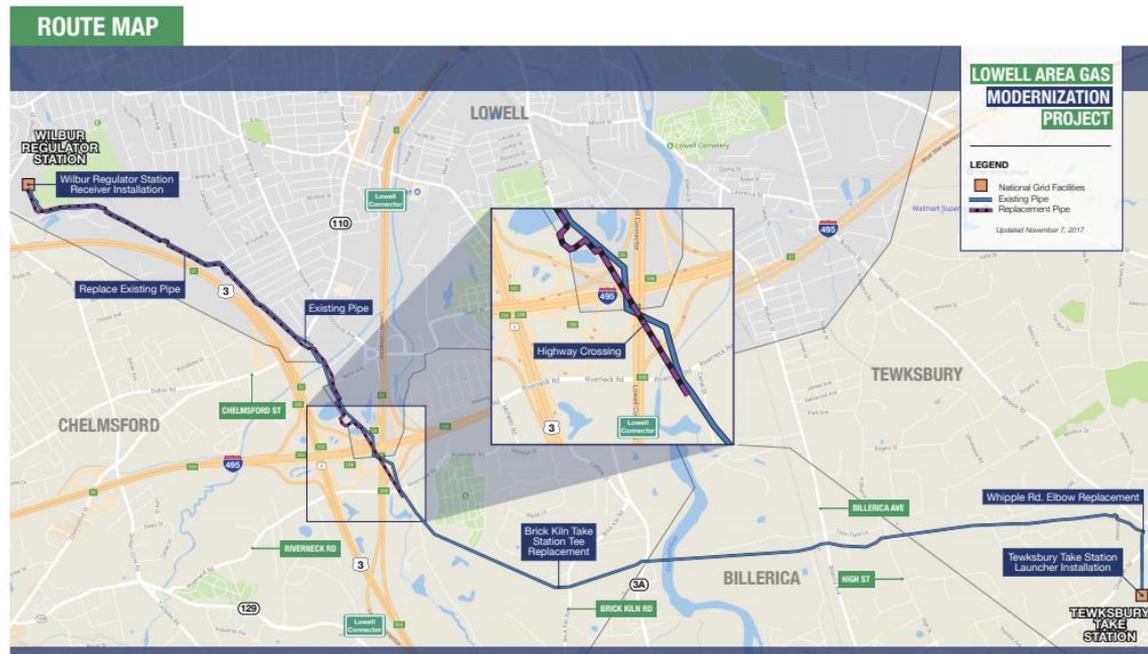
Project Charter

nationalgrid

HERE WITH YOU. HERE FOR YOU.

NEW TECHNOLOGY, NEW ENHANCEMENTS

The Gas Modernization Project is engineered to enhance the overall safety and reliability of the existing gas distribution network in the Lowell area through the use of new inspection technology



Project Objectives

- Improve safety process for natural gas network using inline inspection (ILI) along 5.8 mile route in Tewksbury, Chelmsford and Lowell
- Deploy state-of-the-art *Smart Pigs* including:
 - Sensors capable of detecting changes in pipe wall thickness and internal and external anomalies (ex: third-party damage or corrosion)
 - Tools for cleaning prior to ILI launch
- Standardize pipe diameter to enable *Pig* to operate effectively
- Wherever possible, engineer the project within right-of-way to limit disturbance to abutters, businesses and roadways



Future inspection process will enable comprehensive internal inspection of gas pipe – a significant improvement over current process which employs external survey only and months of above-ground testing and excavation.

Scope

- Standardize ~2.5 miles of existing pipe to 12" diameter between Riverneck Road (Chelmsford) and Wilbur Street (Lowell) for effective *Smart Pig* operation
- Use Horizontal Directional Drilling under Rte. 495 and Lowell Connector to eliminate need for highway excavation or road closure
- Replace small sections of pipe in Tewksbury and Chelmsford
- Install inspection device launcher at Tewksbury Take Station
- Install inspection device receiver at Wilbur Regulator Station in Lowell
 - Install fittings to support future use of inspection device at Doane Lateral
- National Grid expects to begin construction in Spring 2019, with completion expected in late Fall 2020

Benefits

- ~ \$30 million investment to improve safety of existing local energy infrastructure using state-of-the-art inspection devices
- Comprehensive inline inspection (ILI) process focused on pipe safety
 - Less disruptive and much more efficient than today's method
 - Inspection capabilities across 5.8 miles of pipe using a method that is rapidly becoming industry best practice
- Provision for future inspection upgrades along Doane Lateral (0.93 miles) to Doane Regulator Station - at Lowell Connector near National Amusements



Next Steps

- Permitting
- Final project design
- Meetings with agencies and municipal officials
- Ongoing community outreach

| Activity | Target Date |
|--|-------------------------------|
| Stakeholder Outreach | November 2017 – October 2021 |
| MEPA Environmental Notification Form (ENF) Filing MEPA ENF Certificate Received | November 2017 January 2018 |
| Energy Facilities Siting Board (EFSB) Application Filing | March 2018 |
| MEPA Draft Environmental Impact Report (DEIR) Filing | Summer 2018 |
| Construction Start | Spring/Summer 2019 |
| Construction Complete | Fall 2020 |
| Internal inspection of main line and Wilbur Lateral | By October 2021 |

Addendum 1

COMMUNITY OUTREACH

Project Communications

- Door-to-door outreach to abutters and businesses
 - Door hangers
 - Fact Sheet and FAQs
 - Mailings to 500 project neighbors
- Public Open House
- Dedicated website:
 - <https://www.lowellareamodernization.com>
- Toll-free hotline:
 - 844-569-3551 / 844-LOWELL1



Outreach (as of May 2018)

nationalgrid

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Municipal

- Lowell:
 - City Council
 - City Manager's Office
 - DPW/Engineering
 - Planning & Development Services
- Chelmsford:
 - Town Manager's Office
- Tewksbury:
 - Town Manager's Office
 - Community Development
 - Planning/Conservation

Other

- Public Open House
- Highlands Association
- Project abutters
- Agencies: MEPA, MassDOT, Army Corps of Engineers
- The project will undergo a rigorous review by federal, state and local permitting agencies



OUR NATURAL GAS NETWORK

Safety & Infrastructure Investment

Massachusetts – May 2018

More than half (52%) of all Massachusetts homes and businesses count on natural gas as their primary heating source. Natural gas is reliable, plentiful, and is 20-30% less expensive than the next most affordable heating source, which is oil. Massachusetts also generates more than half of its electricity from natural gas.

Massachusetts is home to the second-oldest gas distribution system in the country (after Baltimore.) Like much of New England's energy infrastructure, Massachusetts gas mains are aging and in need of repair and replacement.

National Grid has approximately 11,000 miles of gas pipeline in Massachusetts. Of that, over 3,100 miles or about 29% is cast iron and bare steel pipe, which is more susceptible to leaks. National Grid has a focused infrastructure investment plan to replace its gas mains with newer, plastic pipe over the next several years. At the same time, we are employing new technologies to enhance our preventive maintenance and inspection capabilities— all with the goal of delivering the highest level of safety and reliability across our natural gas network.

Safety is Always Our Number One Priority

At National Grid, safety is our number one priority. In all that we do, we operate in full compliance with all rules and regulations regarding leak repair. We grade and repair reported gas leaks using the classification system established in 2014 by the Massachusetts Department of Public Utilities (see box.) Our inspection devices use DPU-approved technologies that focus on the potential for safety issues in determining how to classify individual gas leaks. We have also recognized the need to integrate environmental considerations into our replacement and repair policies. We are working to address methane emissions in a safe, efficient, and workable manner, which balances keeping costs reasonable for our customers, who pay for main replacement and repair.

Our Plan to Upgrade the Gas Distribution Network

Distributing natural gas to our customers' homes and businesses requires continual infrastructure investment – everything from pipes to meters to the skilled, dedicated and experienced employees who maintain our systems. Since 2010, National Grid has invested \$2 billion in infrastructure upgrades.

We are well underway with a Gas Main Replacement Program to replace small diameter (up to 12") cast iron and non-cathodically protected bare steel pipe with newer, plastic pipe. For larger diameter pipe, we use other methods of rehabilitation including sealing and lining of the pipe. We are also working to install robotic inline pipe inspection technologies across critical areas of the network.

Each of these infrastructure investment programs are the cornerstone of our commitment to provide safe and reliable natural gas service to our 908,000 customers across 116 communities in Massachusetts.

MA DPU LEAK CLASSIFICATION SYSTEM

Grade 1 leaks must be responded to immediately and have traditionally been defined as hazardous. We work until a Grade 1 leak is repaired.

Grade 2 leaks are non-hazardous and must be monitored every six months and scheduled for repair within one year.

Grade 3 leaks are low level leaks posing no imminent risk to public safety. We repair these leaks through our Gas Main Replacement Program and are exploring ways to prioritize the most environmentally significant leaks.