Natural Gas Infrastructure Replacement and Expansion – Regional Outlook

Presentation to NGA Contractor Workshop

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Northeast Gas Association
Convergence of 3 Public Policy Goals

- Enhanced Safety Improvements
- **Growing the System**, to Create Opportunity for Consumer Benefits (e.g. lower fuels costs, better air quality, etc.)
- **Reducing Leaks**, Improving the Environment
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 the 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, refusal to deal with any company, and the like.
- Do consult with counsel on any non-routine correspondence that requests an NGA member company to participate in projects or programs, submit data for such activities, or otherwise join other member companies in NGA actions.
- Do use an agenda and take accurate minutes at every meeting. Have counsel review the agenda and minutes on sensitive antitrust subjects such as pricing, market allocations, refusal to deal with any company, and the like before they are put into final form and circulated.
- Do not have discussions with other member companies about:
  - your company’s prices for products or services, or prices charged by your competitors.
  - costs, discounts, terms of sale, profit margins or anything else that might affect those prices.
  - the resale prices your customers should charge for products you sell them.
  - allocating markets, customers, territories or products with your competitors.
  - limiting production.
  - whether or not to deal with any other company.
  - any competitively sensitive information concerning your own company or a competitor’s.
- Do not stay at a meeting, or any other gathering, if those kinds of discussions are taking place.
- Do not discuss any other sensitive antitrust subjects (such as price discrimination, reciprocal dealing, or exclusive dealing agreements) without first consulting counsel.
- Do not create any documents or other records that might be misinterpreted to suggest that NGA condones or is involved in anticompetitive behavior.

A copy of NGA’s full “Antitrust Compliance Procedures” document is available by contacting NGA at 781-455-6800, and is also posted on the NGA web site at www.northeastgas.org.
Time of Opportunity

- Lower cost for consumers compared to competing fuels – more money for consumer discretionary spending, more money into state and local economies.

- Utility investments in systems means jobs in the state/region.

- Improved air quality (CO2, NOx, SO2, particulates, etc.)

AGA estimates that U.S. natural gas customers saved almost $250 billion from 2008 to 2010 due to lower commodity prices. New England residential customers saved 14% in the 2008-10 period, and regional commercial customers saved 23%.

Source: AGA Energy Analysis, May 2012
System Replacement
Federal Advisories: Repair & Replace Aging Systems

◆ **Apr. 2011**: U.S. Secretary of Transportation announces “Pipeline Safety Action Plan,” calling for pipeline operators, including LDCs, to accelerate their efforts to replace pipeline facilities and take other actions that will enhance the integrity of network facilities.

◆ **Mar. 2012**: PHMSA published in the Federal Register an advisory bulletin to owners and operators of natural gas **cast iron distribution pipelines** and state pipeline safety representatives - highlighting "the need for continued safety improvements to aging gas pipeline systems." This advisory bulletin, among other points, urges owners and operators to conduct a comprehensive review of their cast iron distribution pipelines and replacement programs; and **accelerate pipeline repair, rehabilitation and replacement of high-risk pipelines**. It also requests state agencies to consider enhancements to cast iron replacement plans and programs.
Selected State Percentages: “Leak-Prone” Systems

- CA, 8%
- WA, 0.5%
- TX, 6%
- IL, 5%
- NY, 28%
- CT, 23%
- PA, 27%
- GA, 0.6%
- NH, 11%
- ME, 10%
- MA, 33%
- RI, 47%
- NJ, 23%

U.S. Average = 9%
## System Components, Northeast States (Miles of Distribution Main)

<table>
<thead>
<tr>
<th>State</th>
<th>Bare Steel</th>
<th>Coated Unprotected Steel</th>
<th>Iron</th>
<th>Subtotal %</th>
<th>Protected Steel</th>
<th>Plastic</th>
<th>Total*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT</td>
<td>195</td>
<td>55</td>
<td>1,521</td>
<td>23.1%</td>
<td>3,265</td>
<td>2,659</td>
<td>7,708</td>
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<tr>
<td>ME</td>
<td>2</td>
<td>15</td>
<td>59</td>
<td>9.8%</td>
<td>144</td>
<td>558</td>
<td>780</td>
</tr>
<tr>
<td>MA</td>
<td>1,902</td>
<td>1,161</td>
<td>3,903</td>
<td>32.9%</td>
<td>5,791</td>
<td>8,434</td>
<td>21,194</td>
</tr>
<tr>
<td>NH</td>
<td>38</td>
<td>23</td>
<td>140</td>
<td>10.7%</td>
<td>731</td>
<td>934</td>
<td>1,866</td>
</tr>
<tr>
<td>NJ</td>
<td>1,821</td>
<td>787</td>
<td>5,168</td>
<td>23.2%</td>
<td>10,647</td>
<td>15,219</td>
<td>33,676</td>
</tr>
<tr>
<td>NY</td>
<td>7,246</td>
<td>1,425</td>
<td>4,541</td>
<td>27.7%</td>
<td>13,877</td>
<td>20,593</td>
<td>47,700</td>
</tr>
<tr>
<td>RI</td>
<td>392</td>
<td>188</td>
<td>891</td>
<td>46.8%</td>
<td>588</td>
<td>1,103</td>
<td>3,180</td>
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<tr>
<td>VT</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>0.0%</td>
<td>188</td>
<td>499</td>
<td>688</td>
</tr>
<tr>
<td>US</td>
<td>62,329</td>
<td>15,935</td>
<td>34,329</td>
<td>9.1%</td>
<td>473,871</td>
<td>644,418</td>
<td>1,231,805</td>
</tr>
</tbody>
</table>

Benefits of an Accelerated Approach

An accelerated program will:

✓ reduce emissions,
✓ increase system efficiency,
✓ upgrade aging infrastructure,
✓ provide jobs,
✓ allow better utilization of operations and maintenance dollars as leak-prone pipe is replaced,
✓ enhance overall system safety.
Examples: 
Maine

Unitil’s SURE Project

- SURE – System Upgrade for Reliable Energy
- 100 miles of pipeline replacement – replacing cast-iron with plastic pipe
- 14 year project
- Initiated spring 2011
- Area of focus: Portland and Westbrook
Examples: *Rhode Island*

**Infrastructure, Safety and Reliability Program (ISR)**

- State legislation enacted providing for an annual gas “infrastructure, safety and reliability spending plan for each fiscal year and an annual rate reconciliation mechanism that includes a reconcilable allowance for the anticipated capital investments and other spending pursuant to the annual pre-approved budget.”

- The ISR Plan is designed to maintain and upgrade National Grid’s gas delivery system through proactively replacing leak-prone gas mains and services, upgrading the system’s pressure regulating systems, responding to emergency leak situations, and addressing conflicts that arise out of public works projects.
South Jersey Gas’s Accelerated Replacement Program

- On Feb. 28, 2013, the New Jersey Board of Public Utilities approved a proposal by South Jersey Gas to implement its Accelerated Infrastructure Replacement Program.

- SJG will complete infrastructure improvement projects over the next four years totaling approximately $140 million that are incremental to the company’s normal capital projects scheduled over that time period. SJG will spend approximately $35 million per year to perform this work and will be able to earn a return on these infrastructure investments as the funds are spent.
New Jersey Natural Gas’s Accelerated Replacement Program


- Through SAFE, NJNG will replace 276 miles, or approximately 50 percent, of the cast iron and unprotected steel mains and associated services in its delivery system over the next four years.

- NJNG will seek to recover its investment of $130 million of SAFE replacements over the four-year program, including a weighted average cost of capital of 6.9 percent, in the future. It is projected that the SAFE program could create approximately 1,325 direct and indirect jobs, as well as $100 million in gross state product.
Other States

- Different approaches in different states – but regulatory and industry partnerships are the goal to effective programs.

- In Massachusetts, there is proposed legislation to implement a process to ensure annual plans are in place and funded to get the work done and avoid delays and lags.
Environmental & Other Considerations

◆ Legislation introduced in Massachusetts in recent years to require expedited repair of Grade 3 leaks to address emissions.

◆ BU study, and CLF report, on estimated methane leakages from natural gas distribution in greater Boston
  - “Into Thin Air: How Leaking Natural Gas Infrastructure is Harming our Environment and Wasting a Valuable Resource” [Conservation Law Foundation report]

◆ National Regulatory Research Institute (NRRI) is releasing report this summer on “Lost-and-Unaccounted-for Gas”
  - Outline: “Various reasons account for LAUF gas, with the most important ones being measurement errors, pipe leaks and accounting errors…Society also receives an environmental benefit from producing and transporting less gas to meet a fixed level of end-use demand.”
What’s Ahead…

Expect to hear more from throughout the region and the U.S. about infrastructure replacement – to address safety, economic and environmental issues.
System Expansions
Everyone Wants Natural Gas

- LDCs reporting continuing high interest in conversion and new customer requests.
- Many state governments in region advocating for natural gas as positive for many policy reasons (especially consumer price & economic development)
- Line extension policies an issue under review. How to make it most economic and balanced?
Categories of Customer Growth Opportunity

- **Existing Customer, but Non-Heat only**
  - Percentage of LDCs’ non-heat residential customers is relatively low in many states

- **Not a customer, but residence/business located along the existing main**
  - Easiest opportunity for system additions

- **Located in towns served by LDC, but would require main extension**
Obstacles

- Cost to pay for conversions (even with a 3-5 year payback it's hard for the customer to come up with money up front); cost can range as high as $15,000 (equipment ~ $9K, main extension ~$5K, service connection, ~ $1.6K)
- Cost to utility of extending the main – dependent on customer commitment
- Securing qualified contractors
- Timing of road cuts
- Permit fees
NE States Studying Ways to Increase Access to Gas

- **New Jersey**’s 2011 “Energy Master Plan” calls for residential expansion, especially to southern parts of the state.

- **Maine** Natural Gas Task Force. Maine Natural Gas currently implementing Augusta/Kennebec Valley Area Project. Maine PUC recently authorized new distribution service by Summit Natural Gas. Strong customer growth by Unitil and Bangor Gas.

- **New York City**’s plans to phase out #4 and #6 oil in coming years for environmental reasons – either switch to #2 oil or to natural gas. Mayor Bloomberg released study in Aug. 2012:
  - “Additional gas supply and infrastructure upgrades are needed to meet rising demands – particularly as city buildings make mandatory conversions from heavy heating oil to cleaner fuels. The study also found that the production, transport and use of natural gas are estimated to result in 20 percent fewer greenhouse gas emissions than heavy heating oil.”
NYS DPS looking at existing natural gas franchise expansion policy with current proceeding. In opening its review a year ago, DPS said:

“The ongoing price disparity between natural gas and most other home heating fuels make it apparent that New York’s homeowners could save significant amounts of money if more of them had natural gas available for home heating. In addition, other benefits could be realized from expansions of existing natural gas franchises, such as reduced air emissions, enhanced reliability and economic development, not to mention the fact that utility shareholders could realize additional return on their investment.”

Massachusetts holding preliminary discussions with gas LDCs on expansion opportunities.

Connecticut released its “Comprehensive Energy Strategy” last month. Encouraging greater use of natural gas for home heating and business. Envisions as much as 200,000+ homes and businesses, “on-main”, switching to gas.
CT Plan: “Financing the Switch to Natural Gas”

“Incentives to Drive Conversion”
- Tax credit to jump-start conversion
- Targeted financing for economic development

“Streamlined Regulatory Framework”
Extend payback period for main extensions to 25 years
Adopt new ways to test cost-effectiveness
  - Aggregate multiple neighborhoods (portfolio approach)
  - Allow gas companies to factor in projections of after-acquired customers (forecasting)
Allow customers to pay for main extension over time, rather than up front
Alternative rate rider to pay customer main extension costs
Establish a mechanism for timely recovery of capital expenditures made by LDCs

Utility Growth: 
*St. Lawrence Gas*

Franklin County (NY) Expansion. Under construction.

- 33 miles of 8” HP steel gas main
- 15 miles of 4” HP steel gas main
- 50 miles of distribution main
- 4,000 potential customers (25% Increase)
  - 4 NYS correctional facilities
  - 2 dairy related industrial plants
- Total capital cost = $40 million
Utility Growth: 
*St. Lawrence Gas*

**2012**

- Clearing of ROW – began in mid-August, 2012
- Construction of 8” steel pipeline began in August 2012
- Have installed approximately 80,000 feet of 8” steel pipeline as of December 31, 2012 (32% of total transmission line)

**Project Plan: 2013-16**

- Spring 2013 - provide gas service to first anchor customers in North Lawrence and Brasher Falls
- Spring 2013 – continue NPS 8 to Malone, begin construction of NPS 6 and 4 steel pipelines to Chateaugay to complete the transmission lines
- Develop distribution systems to serve communities 2013-2016
Utility Growth: Vermont Gas

- **Addison County Expansion.** In-service 2014-2015. Further growth anticipated for 2016 and beyond.

  - 41 miles of 12 inch transmission pipeline
  - 3 gate stations
  - 6.8 miles of distribution mainline
  - Local distribution networks in Vergennes & Middlebury
  - 10” transmission lateral to Ticonderoga Paper Mill under design
  - Current total cost projection $140 million

Source: Vermont Gas
Proposed Pipeline Projects


- Tennessee, “MPP”
- Spectra/Texas Eastern, “TEAM 2014”
- PNGTS, “C2C Expansion”
- National Fuel, “West to East”
- Tennessee, “Northeast Expansion”
- Spectra, “AIM”
- Spectra, “NJ / NY Expansion”
- Empire, “Tioga County II”
- Tennessee, “Northeast Upgrade”
- Williams, “Rockaway Lateral/Northeast Connector”
- Iroquois, “Wright Interconnect”
- Tennessee, “Rose Lake”
- Williams, “Constitution Pipeline”
- Millennium, “Minisink & Hancock Compression Projects”

[Map showing various pipeline projects with connecting lines and text boxes indicating project names and companies involved.]
Projects In-Service This Year

- Tennessee’s “Northeast Upgrade”: 636 MMcf/d
- Tennessee’s “MPP Project”: 240 MMcf/d
- Millennium’s “Minisink Compressor”: 150 MMcf/d
- National Fuel Gas’s “Line N”: 30 MMcf/d
- Transco’s “Northeast Supply Link”: 250 MMcf/d
- Spectra’s “NJ-NY Expansion”: 800 MMcf/d

Photos courtesy of Spectra Energy, 12-12
What’s Ahead…

◆ Next few years promise period of what is likely to be unparalleled system growth in the Northeast.

◆ Uncertainties on the horizon: regulatory and environmental policies that might change the landscape.
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