

Expansion of Natural Gas Distribution Service

Natural Gas End Use Workgroup
Pipeline Infrastructure Task Force
Commonwealth of Pennsylvania

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Energy Association of Pennsylvania

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Energy Association of PA - Introduction

EAP Gas Utility Members

Columbia Gas of PA

National Fuel Gas Distribution Corp.

PECO Energy Company

Peoples Natural Gas Company

Peoples TWP LLC

Philadelphia Gas Works

Pike County Light & Power Company

UGI Central Penn Gas, Inc.

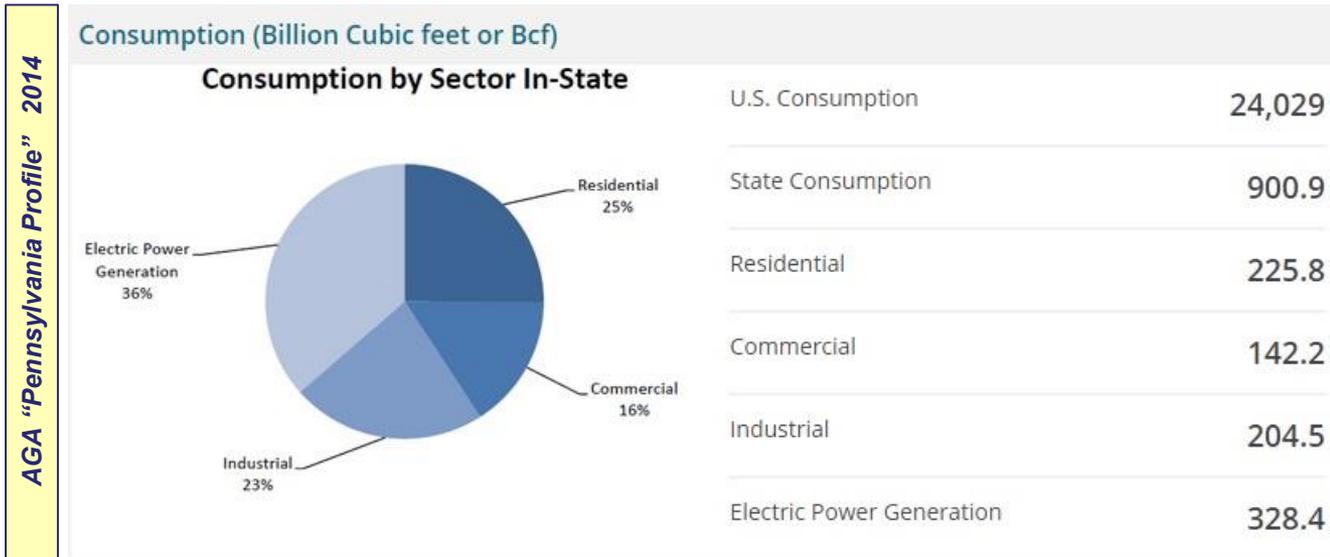
UGI Penn Natural Gas, Inc.

UGI Utilities, Inc. (Gas Division)

Valley Energy, Inc.

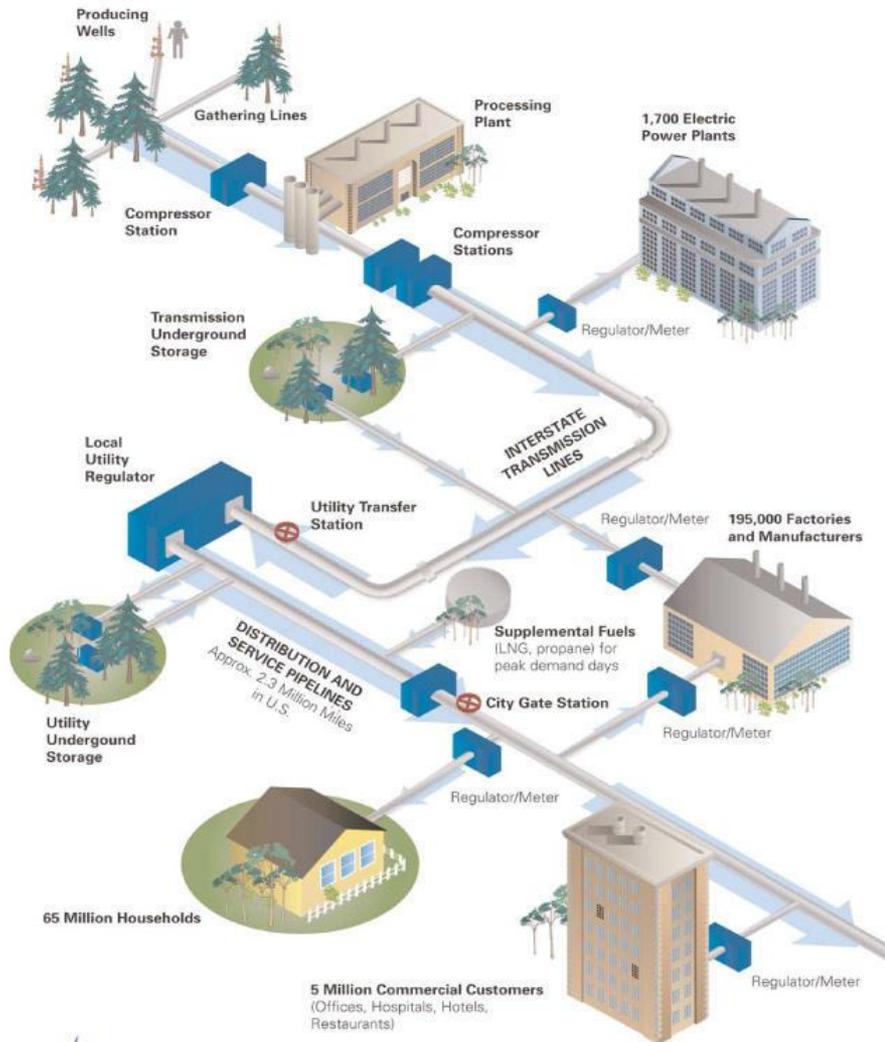
EAP Gas Utility Members

- Own and operate natural gas distribution pipeline systems – pipes, meters and other infrastructure used to deliver natural gas from the “city gate” to customers.
- Do not own production wells or transmission lines upstream of the “city gate”.
- Interact with customers – providing bills, responding to service issues, educating customers on safety & energy efficiency, and administering “universal service” programs to assist low-income customers.
- Serve as the retail market’s “Supplier of Last Resort” for customers who do not purchase their natural gas from a natural gas supplier.



Understanding How Gas is Delivered

NATURAL GAS DELIVERY SYSTEM



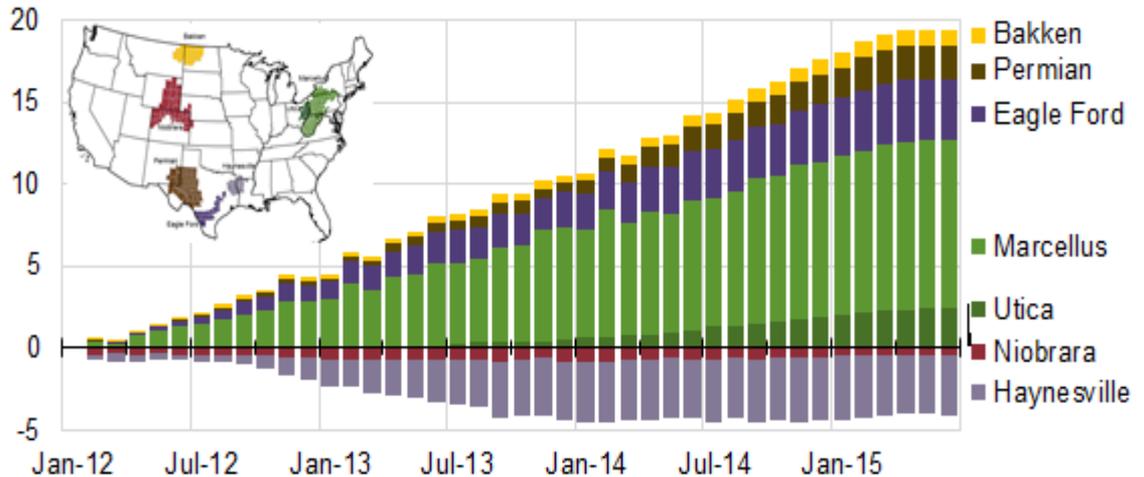
- Extracted from wells and moved from collection point into gathering system for sale into the wholesale market
 - *Includes processing facility where natural gas is purified and useful by-products such as propane and butane are removed*
- Moved into transmission system using compressors
 - *counteracts friction that is created when gas is moved through steel pipe*
- Transported by midstream companies to utility's delivery point ("city gate") or to upstream storage
 - *Pressure reduced*
 - *Odorant added*
- Moved into utility's distribution pipeline and delivered through individual service lines to customer
 - *pressure further reduced for delivery*

Increased Production

Pennsylvania is Driving Northeast Natural Gas Production

“In the Northeastern United States, natural gas production has grown rapidly since early 2009 as a result of increased drilling activity in the Marcellus Shale. The largest production gains have occurred in Northeastern Pennsylvania, with noticeable increases also in Southwestern Pennsylvania and West Virginia.”

Natural gas production in selected regions (Jan 2012 - June 2015)
cumulative change since January 2012, billion cubic feet per day (Bcf/d)



Since the beginning 2012, the **Marcellus** and **Utica** regions have accounted for 85% of increases in production from these selected shale gas regions.



Source: Energy Information Administration at
<http://www.eia.gov/todayinenergy/detail.cfm?id=22252>

Expansion of Gas Distribution Systems Policy Considerations

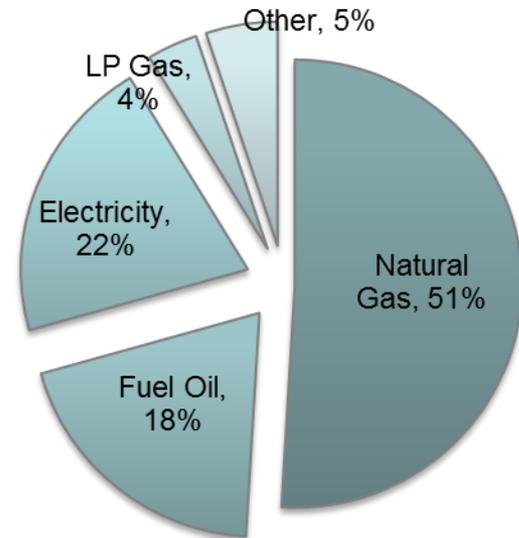
- Consider all the facts to develop informed and prudent policies.
 - Rationale of existing policies and regulations.
 - Benefits and costs of new policies.
 - Barriers to line extensions.
 - Innovative solutions.
 - Economic & environmental impacts.
 - New customers
 - Existing customers
 - Commonwealth as a whole

Gas Service Not “Universal”

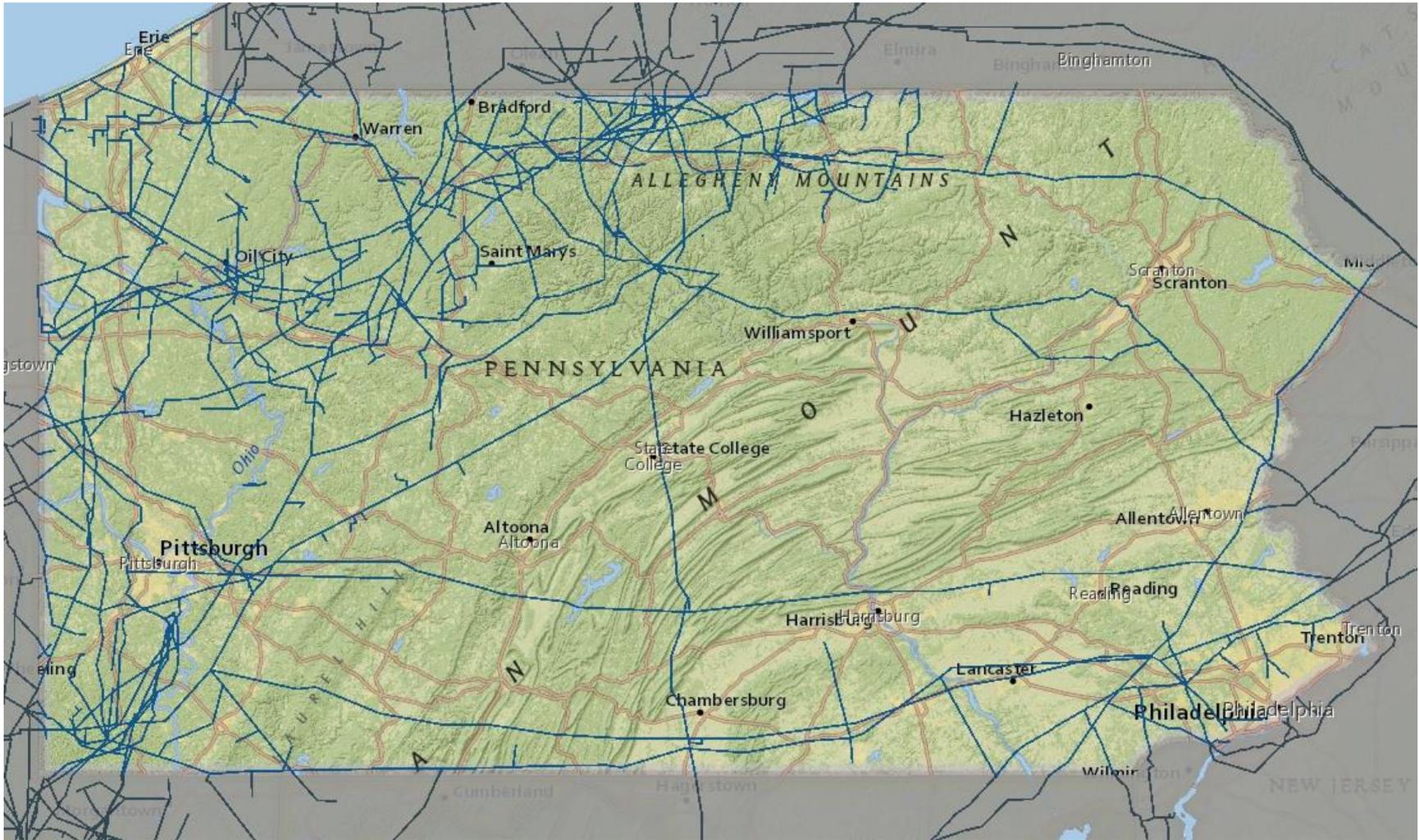
- Unlike some other utility services, natural gas service has never been “universal.”
- Telephone and electric service have only been extended to all rural areas with the help of subsidies within the rate structure or taxpayer support.
- Gas has competition – heating oil, electricity, etc.

PA Home Heating Fuel – 2013

Source: Energy Information Administration



Natural Gas Intra/Interstate Pipeline Infrastructure



Source: Energy Information Administration, as of Jan. 2012

Challenges and Barriers – Utilities

- Increasing costs of installing underground facilities (costs can > \$1 million per mile).
- Rate recovery based on consumption while energy use per customer continues to decrease due to high efficiency appliances & other conservation efforts.
- Low population density in rural areas.
- Need to replace existing infrastructure – competition for capital & labor.
- Public safety requirements must be met – expensive.
- Added challenge of extending mains into existing communities. (e.g., *digging up streets, uncertainty regarding customers switching to gas*)
- Increasing municipal permitting and ROW fees.
- Site-specific obstacles. (e.g., *trees, waterways, rocky terrain, other infrastructure, etc.*)

Replacing Existing Pipeline

- Like other northeastern states, PA has a significant amount of older cast / wrought iron and bare steel mains. Replacement of these pipes is a priority due to safety concerns.
- In 2014, PA had the 4th highest number of cast / wrought iron mains — 3,000 miles representing 6.3% of total main miles. PA was also 2nd in the nation in main miles of bare steel — 7,427 representing 15% of total main miles.
- For many years, gas utilities sought legislation to allow them to recover the cost of replacing infrastructure on a more timely basis than the traditional “base rate case” approach.
- Act 11 of 2012 (HB 1244) provided an additional mechanism for utilities to recover the costs related to repair and improvement of property via a distribution system improvement charge (DSIC).
- All NGDC plans for accelerated pipeline replacement were approved by the PUC.

Historic Expansion Policies

- PUC-approved gas utility tariffs
 - Assure gas service is available to as many as possible without unduly burdening existing customers with the costs of uneconomic extensions (e.g., higher rates).
 - Address extension costs, construction allowances, and customer's Contribution-in-Aid-of-Construction (CIAC) when costs exceed projected revenue.
- Economic Feasibility Test
 - Used to calculate justified company investment per dollar of additional revenue.
 - Assure that service extensions do not unduly burden current customers.
 - Factors impacting projected cost/revenue: line length, terrain and other physical obstacles, projected consumption, potential for additional customers, other factors.

Challenges and Barriers - Customers

- Cost and financing.
- Upfront costs
 - Line extension CIAC impacted by many variables (*e.g., distance to supply, line length, geography*)
 - Conversions can be cost-prohibitive (*e.g., appliances & equipment*).
- Isolated customers in absence of nearby anchor customer.

New Strategies in PA

Existing, Pending & Under Consideration

- Innovative rate structures.
 - **New Service Area Rider** – rider providing “new service area” customers an option to pay gas utility extension costs through a flat monthly surcharge, spread out over an extended period of time as opposed to the current practice of requiring the customer’s contribution upfront.
 - **Growth Extension Tariff** – Multi-year surcharge assessed on GET gas customers within the utility’s service territory based on the collective line extension projects.
- Securing large anchor customers to assist with affordability.
- Rebates on inside piping & natural gas appliances.
- Allowing some extension distance (e.g. 150 ft) without charge to customer
- Partnerships with financing entities for low rate loans to assist with upfront costs and conversions (Keystone HELP)
- Tax credits.
- Marketing, outreach, and customer education.
- Consider changes to law or policy to allow utility recovery of advertising expenses related to potential extension areas.

Strategies Being Implemented or Considered Around the Nation

- Federal, state, and local funding (e.g., economic development grants; gaming/casino revenues; Issuance of revenue obligation securities).
- Private investment.
- Permit monthly payments rather than upfront CIAC.
- Establish surcharge on conversion/expansion customers or on entire customer base;
- Establish an Expansion Fund (*e.g., funded through supplier refunds; PUC-approved expansion surcharges; funds that otherwise would have gone into a rate reduction*)
- Neighborhood conversion programs.
- Marketing to large anchor customers (improve project economics).
- Conversion partnership programs and bulk purchasing of appliances (e.g., marketers, trade allies, HVAC contractors) - helps reduce conversion costs.
- Compressed natural gas (CNG) or liquefied natural gas (LNG) storage facilities to supply geographically-difficult and expensive “cluster areas” unreachable by transmission lines – but there are technological and economic limitations.
- Some of these strategies are also being considered in PA.

Our Commitment

Gas utilities will continue this discussion with policymakers, customers, industry participants and other interested parties to identify fair, cost-effective strategies for promoting gas line extensions.

Thank you

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