

**Report of the
NARUC Task Force
on Natural Gas
Access and
Expansion**

November 2017



Natural Gas Access and Expansion Task Force
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Scope of Report

In April 2017, the National Association of Regulatory Utility Commissioners (NARUC) then-President Robert F. Powelson and its Executive Committee established a new Presidential Natural Gas Access and Expansion Task Force (Task Force) with an eight-month term. Pennsylvania Commissioner John F. Coleman, Jr., and Mississippi Commissioner Brandon Presley were appointed as co-chairs, with North Dakota Commissioner Julie Fedorchak appointed to serve as vice-chair. The Task Force was charged with developing best practices and recommendations regarding natural gas service for underserved and unserved areas of the country, including, but not limited to rural communities.

The primary responsibility of the Task Force is to prepare an analytical report (Task Force Report) that: (1) studies current access, expansion and service extension policies for underserved and unserved areas; (2) examines the need for access and expansion including case studies and review of the barriers and obstacles to such access; (3) recommends potential mechanisms to address the benefits and opportunities for access and expansion and identifies alternative or unconventional approaches to reaching unserved and underserved areas; and (4) compiles a national “best practices” collection on natural gas access and expansion to underserved and unserved areas.

At the outset, we note that the primary goal of this Task Force Report is to facilitate communication among state regulators on what states are doing to promote and facilitate natural gas expansion. To that end, this Report is intended to provide states with educational tools and guidance on policies, mechanisms, and best practices that regulators can use to help extend natural gas service to unserved and underserved areas, where appropriate. Ultimately, we hope to educate regulators on how to bring the benefits of natural gas as an energy source to more consumers in unserved and underserved areas and hence, give consumers more energy choices.

This Task Force Report addresses those four issues that NARUC identified as within the domain of the Task Force. Specifically, this Task Force Report includes:

- A discussion of how natural gas is an important energy source in the United States (U.S.);
- A discussion of the regulatory structure of the natural gas industry, including the role of states in regulating natural gas distribution service. This state role includes regulation of gas utility line extension policies,

which govern the rates, terms, and conditions of extending natural gas distribution line service to potential customers;

- A discussion of the shale gas boom that has resulted in an abundant supply of natural gas in the U.S. and the benefits that the shale gas boom has provided;
- A discussion of natural gas access in the U.S. and the impediments to natural gas expansion that currently exist for both gas utilities and consumers in unserved and underserved areas;
- A detailed summary of natural gas expansion activities occurring in each state in recent years, with a focus on state public utility/service commission proceedings addressing natural gas expansion and state legislation that has been enacted addressing natural gas expansion;
- A discussion of the types of mechanisms that states use to help finance natural gas expansion; and
- Recommended mechanisms and best practices that state utility/public service commissions can use to promote and facilitate expanding natural gas service in unserved and underserved areas.

The Task Force Commissioner Members thank Past-President Powelson, current NARUC President John Betkoski III of Connecticut, NARUC Gas Committee Chairman Stan Wise of Georgia, and the NARUC Executive Committee for the opportunity to review and assess the role of state commissions in promoting and facilitating natural gas expansion in unserved and underserved areas in the U.S. The Task Force Commissioner Members also thank NARUC staff and state Commission staff for their contributions to this Report.

Introduction

Natural Gas Industry Basics

Natural gas is a gaseous mixture of methane and other hydrocarbons¹ and is extracted most commonly via wells from sedimentary rock formations in the U.S. Natural gas withdrawn from wells often is “wet” gas that contains methane, liquid hydrocarbons (e.g., ethane, propane, butane), and nonhydrocarbon gases. Methane and other useful gases are separated from the wet natural gas near the site of the well or at a natural gas processing plant. This process produces “dry” or consumer grade gas, which is then delivered to homes and businesses via the natural gas distribution system.

Today, natural gas is used for a variety of purposes in the U.S. The various sectors of the U.S. economy generally use natural gas in the following ways:²

- The residential sector uses natural gas to heat buildings and water, to cook, and to dry clothes. According to the United States Energy Information Administration (EIA), about half of the homes in the U.S. use natural gas for these purposes. Also according to EIA, natural gas in 2015 was the source of about 23 percent of U.S. residential sector energy consumption.
- The commercial sector uses natural gas to heat buildings and water, to operate refrigeration and cooling equipment, to cook, to dry clothes, and to provide outdoor lighting. Some consumers in the commercial sector also use natural gas as a fuel in combined heat and power systems. According to EIA, natural gas in 2015 was the source of about 18 percent of U.S. commercial sector energy consumption.
- The industrial sector uses natural gas as a fuel for process heating and for combined heat and power systems. This sector also uses natural gas as a raw material (feedstock) to produce chemicals, fertilizer, and hydrogen. According to EIA data, natural gas in 2015 was the source of about 30 percent of U.S. industrial sector energy consumption.
- The electric power sector uses natural gas to generate electricity. According to EIA, natural gas in 2015 was the source of about 26 percent of U.S. electric power sector energy consumption.

¹ A hydrocarbon is an organic compound made of carbons and hydrogens. Examples of hydrocarbons are methane (CH₄), ethane (C₂H₆), propane (C₃H₈), and butane (C₄H₁₀).

² https://www.eia.gov/energyexplained/index.cfm?page=natural_gas_use (Natural Gas Explained).

- The transportation sector uses natural gas primarily to fuel compressors that move natural gas through pipelines and to a lesser degree as vehicle fuel in the form of compressed natural gas and liquefied natural gas (typically government and private fleet vehicles). According to EIA, natural gas in 2015 was the source of about 3 percent of U.S. transportation sector energy consumption, of which 97 percent was for natural gas pipeline and distribution operations.

Overall, electric generators, industrial customers, and residential customers accounted for 85 percent of natural gas usage in the U.S. in 2015. EIA data for 2015 show the following percentages of natural gas usage by end-use sector:³

1. Electric Power—35%
2. Industrial—33%
3. Residential—17%
4. Lease and Processing Plant Fuel—3%
5. Transportation (pipeline and vehicle fuel and Other)—3%

Total consumption of natural gas in the U.S. was 27.31 trillion cubic feet (Tcf) in 2015 and 27.49 Tcf in 2016.⁴ Based on the most recent EIA data that are available, the top five states identified below accounted for about 39 percent of this consumption in 2015:⁵

1. Texas—4.14 Tcf (15%)
2. California—2.31 Tcf (8%)
3. Louisiana—1.47 Tcf (5%)
4. New York—1.36 Tcf (5%)
5. Florida—1.34 Tcf (5%)

Production of dry natural gas was 27.06 Tcf in 2015 and 26.46 Tcf in 2016.⁶ Based on the most recent EIA data that are available, the top five states identified below accounted for about 65 percent of this production in 2015:⁷

³ Id.

⁴ <https://www.eia.gov/dnav/ng/hist/n9140us2a.htm> (U.S. Natural Gas Total Consumption).

⁵ https://www.eia.gov/dnav/ng/NG_CONS_SUM_A_EPG0_VC0_MMCF_A.htm (U.S. Natural Gas Consumption by State).

⁶ <https://www.eia.gov/dnav/ng/hist/n9070us2a.htm> (U.S. Dry Natural Gas Production).

⁷ https://www.eia.gov/dnav/ng/NG_PROD_SUM_A_EPG0_FPD_MMCF_A.htm (U.S. Natural Gas Dry Production by State).

1. Texas—7.07 Tcf (26%)
2. Pennsylvania—4.76 Tcf (18%)
3. Oklahoma—2.34 Tcf (9%)
4. Wyoming—1.75 Tcf (6%)
5. Louisiana—1.74 Tcf (6%)

These data show that natural gas consumption and production is significant in the U.S. and that natural gas is an important energy source for numerous end-use sectors. With the shale gas play discussed in more detail below, the U.S. should have an abundant supply of natural gas for the foreseeable future, and our reliance on natural gas as an energy source is expected to continue.

Regulatory Structure of the Natural Gas Industry

The natural gas industry in the U.S. can be divided into four sectors: (1) exploration and production, which involves using wells to extract natural gas from beneath the earth; (2) natural gas gathering, treating, and processing or “midstream” services, which includes separating consumer-grade dry gas and transporting it to transmission lines; (3) natural gas transmission services, which includes transporting natural gas to local distribution systems; and (4) local distribution service that moves natural gas to end-user customers.

In the U.S., the regulatory approach with natural gas depends on the sector. Exploration and production typically are not subject to state or federal public utility-style regulation.⁸ Midstream services typically are not subject to this type of regulation either.⁹ Consequently, there is no state or federal regulation of the rates, terms, and conditions of these services.

With transmission service, interstate pipelines are responsible for transporting most of the gas from the production and midstream sectors to market. As a service that involves interstate commerce, interstate pipeline transportation service is regulated exclusively by the Federal Energy Regulatory Commission (FERC).¹⁰ Specifically, the FERC regulates the rates, terms, and conditions of the natural gas transportation services provided by interstate pipelines.

⁸ For example, state public utility/service commissions do not regulate the rates for these services. State commissions also do not regulate the safety and reliability of these services.

⁹ However, some states have safety jurisdiction over certain natural gas gathering lines. For example, in Pennsylvania, the Pennsylvania Public Utility Commission (PAPUC) has safety jurisdiction over natural gas gathering lines in non-rural areas. Such jurisdiction was established by Act 127 of 2012, 58 P.S. §§ 801.101, *et seq.*

¹⁰ FERC jurisdiction over interstate pipelines is established pursuant the Natural Gas Act, 15 U.S.C. §§ 717 *et seq.*

In comparison, local distribution service is a state-regulated public utility service. This means that state public utility/service commissions regulate the rates, terms, and conditions of distribution service provided by natural gas distribution companies (NGDCs)/local distribution companies to end-user customers.

In regulating natural gas distribution service, safety and reliability are top priorities of state public utility/service commissions. State commissions have regulatory oversight pursuant to state law to ensure that NGDCs provide safe natural gas distribution service. Moreover, in many states, the state utility/service commission is authorized to enforce federal safety standards as an agent for the U.S. Department of Transportation's Office of Pipeline Safety. These safety standards are applicable to the design, installation, operation, inspection, testing, construction, extension, replacement and maintenance of natural gas pipeline facilities, including those belonging to NGDCs. State commissions also have regulatory oversight to ensure that NGDCs provide reliable natural gas distribution service, including in times of peak demand. Thus, the provision of safe and reliable natural gas distribution service is paramount to state public utility/service commissions.

Another priority of state public utility/service commissions is to ensure that rates for natural gas distribution service are just and reasonable for all parties involved. Historically, most NGDCs have been regulated under rate base/rate-of-return ratemaking. This form of regulation seeks to set rates to provide adequate and reliable service at reasonable prices. At the same time, this form of regulation also seeks to allow the opportunity for utility shareholders to earn a reasonable return on invested capital, comparable to that of similarly risky ventures.¹¹ NGDCs typically are natural monopolies that are not subject to competing distribution services in their service territories. Consequently, with no competition, economic regulation is viewed as necessary to keep prices for natural gas distribution service in check.

Regarding the commodity itself, nearly all large customers (i.e., commercial & industrial and governmental customers) in the U.S. do not purchase natural gas from their NGDC. Rather, these customers purchase natural gas supply from an alternative source, a natural gas supplier (NGS), and purchase transportation service only from their NGDC. Such competitive supply rates are not price-regulated. In some states, residential and small commercial customers also can purchase gas from an NGS if they elect to do so. However, most residential and

¹¹ Paraphrased from *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n W. Va.*, 262 U.S. 679, 692-693 (1923).

small commercial customers obtain natural gas supply from their NGDC, which is a price-regulated service.¹²

As part of their regulatory responsibilities, state utility/public service commissions also regulate the rates, terms, and conditions under which NGDCs extend natural gas distribution service to new customers.¹³ The NGDC's line extension policy typically is contained in the utility's tariff.¹⁴ A typical line extension policy requires a NGDC to use an economic reasonableness test to determine whether an additional payment from a potential customer is required to obtain service. Under this test, the NGDC seeks to recover the difference between the projected costs to extend service and projected revenues from the new customer.¹⁵ Generally, if the costs to the NGDC are projected to exceed the revenues, the utility charges the difference to the new customer in the form of a customer advance for construction or contribution in aid of construction (CIAC) for what is the uneconomic portion of the extension.

States and even companies within the same state utilize different methods to calculate the uneconomic portion of a line extension. However, the objective with calculating the up-front payment is the same: to prevent existing customers from having to unfairly subsidize new customers for an uneconomic line extension.

As discussed in more detail, natural gas prices in recent years have decreased significantly due to the shale gas play, which has made it significantly more beneficial for consumers to switch to natural gas. In this climate, NGDC service line extension policies have become increasingly important, given their role in calculating the costs to extend distribution service to new customers seeking to take advantage of these lower commodity prices. Depending on the results of that calculation, these policies can have a significant impact on whether a consumer switches to natural gas.

¹² In Pennsylvania for example, NGDCs that meet a certain intrastate operating revenue threshold are required to pursue a least cost procurement policy when procuring natural gas supply, which is subject to reconciliation measures.

¹³ Typically, public utilities are not required to extend service to all customers in their service territory. Rather, public utilities only required to extend service to customers under reasonable conditions approved by the regulator. *See Fayette County Gas Co. v. Pa. Pub. Util. Comm'n.*, 33 A.2d 761 (Pa. Super. 1943); *Popowsky v. Pa. Pub. Util. Comm'n.*, 589 Pa. 605, 910 A.2d 38(2006).

¹⁴ A tariff is a legally enforceable contract-like document that defines utility and customer duties and obligations. Typically, a utility's tariff includes not only its rates and rate schedules, but also, the rules, regulations and practices of the utility.

¹⁵ Factors impacting projected costs and revenues include line length, terrain and other physical obstacles, projected consumption, and potential for additional customers.

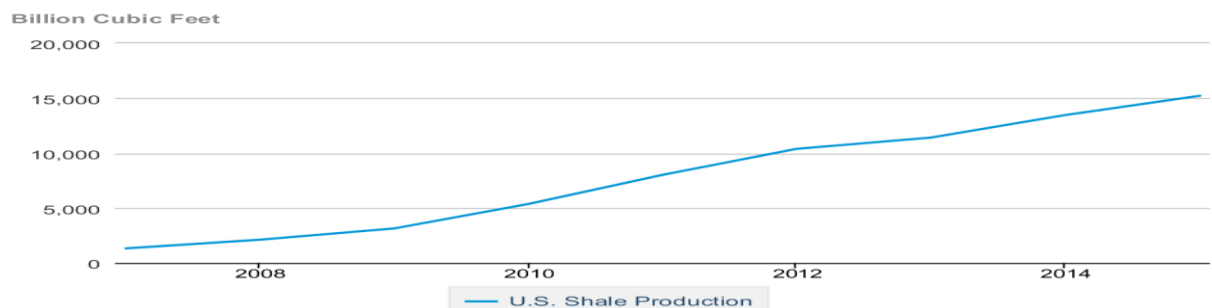
The Shale Gas Play

In recent years, the natural gas landscape in the U.S. has changed dramatically due to an abundant supply of domestic shale natural gas. Shale gas is found in shale sedimentary rock formations approximately one mile below the Earth's surface and is located throughout the United States. According to the EIA, shale gas deposits can be found in the following states: New York, Pennsylvania,¹⁶ West Virginia, Ohio, Michigan, Indiana, Kentucky, Mississippi, Alabama, Georgia, Louisiana, Texas, Arkansas, Oklahoma, Kansas, New Mexico, Colorado, Utah, Wyoming, Montana, North Dakota, and South Dakota.

Shale natural gas is known as unconventional gas. This means that simply drilling a conventional well is not enough to generate a commercial flow of gas.¹⁷ Rather, shale natural gas is extracted using unconventional wells using other processes like horizontal drilling and hydraulic fracturing (fracking) to generate a commercial flow of gas. Horizontal drilling allows for access to natural gas deposits at a wide range of angles,¹⁸ while fracking involves injecting water, sand and chemicals into the well at very high pressure to fracture the Shale rocks and release the natural gas. Neither technology is new, as horizontal drilling has been around for almost 90 years, while fracking has been around for around 70 years. However, innovations in these technologies helped pave the way for the shale gas revolution that has occurred over the past decade in the U.S.

As shown by the below chart, shale gas production in the U.S. has increased dramatically since 2008:

U.S. Shale Production



 Source: U.S. Energy Information Administration

¹⁶ A significant portion of Pennsylvania is underlain by the Marcellus Shale, which is a rock formation approximately one mile below the surface. A few thousand feet below the Marcellus is another formation called the Utica Shale that could be another large natural gas resource.

¹⁷ A conventional well typically is drilled vertically and is sufficient to generate a commercial flow of gas.

¹⁸ With horizontal drilling, the well is drilled vertically up to a mile or so underground, and then the drill is turned at a 90° angle horizontally into the shale formation.

From 2010 through 2015, shale gas production in the U.S. nearly tripled from 5,336 billion cubic feet (Bcf) in 2010 to 15,213 Bcf in 2015.¹⁹

Pennsylvania and several other states have been at the forefront of this shale gas boom. Of the 9,877 Bcf increase in shale gas production in the U.S. from 2010 through 2015, 42.5 percent is attributable to Pennsylvania. Specifically, Pennsylvania shale gas production increased from 396 Bcf in 2010 to 4,597 Bcf in 2015.²⁰ This increase is captured in the chart:

Pennsylvania Shale Production



 Source: U.S. Energy Information Administration

After Pennsylvania, the next closest state is Texas, which was responsible for 21.6 percent of the increase in shale gas production from 2010 through 2015. Ohio and West Virginia also experienced increases in shale gas production and combined to make up 20.7 percent of the overall increase in U.S. shale gas production between 2010 and 2015. North Dakota and Oklahoma also saw increases in shale gas production combining to make up 10.8 percent of the increased production. The table that follows depicts 2010 versus 2015 shale gas production levels in Bcf for these states:²¹

State	2010 Prod.	2015 Prod.	Prod. Increase
PA	396	4,957	4,561
TX	2,218	4,353	2,135
WV	80	1,163	1,083
OH	0	959	959
OK	403	993	590
ND	64	545	481

¹⁹ https://www.eia.gov/dnav/ng/hist/res_epg0_r5302_nus_bcfa.htm (U.S. Shale Gas Production).

²⁰ https://www.eia.gov/dnav/ng/NG_ENR_SHALEGAS_A_EPG0_R5302_BCF_A.htm (U.S. Shale Gas Production (estimated) by State).

²¹ Id.

The shale gas play has resulted in numerous benefits to the U.S. This includes national security benefits associated with being less reliant on foreign energy sources. This also includes environmental benefits associated with increased gas-fired electric generation, which is the cleanest-burning fossil fuel. In 2016, natural gas-fired generators accounted for 42 percent of the operating electricity generating capacity in the U.S. and 34 percent of the total electricity generation overall in the U.S., surpassing coal to become the leading generation source in the nation. The increase in natural gas generation is primarily a result of the continued cost-competitiveness of natural gas relative to coal.²²

The shale gas play also has benefitted local, regional, and state economies. These benefits include, but are not limited to: (1) employment growth in areas where shale gas drilling has occurred, even in the face of an economic recession (2009 – 2014); (2) additional revenues for local businesses from out-of-state workers who come to a state to work in the shale gas industry; (3) royalty payments to landowners for drilling on private property where the landowners own subsurface mineral rights; and (4) additional public revenues from taxation, impact fees, permitting, and other activities related to shale gas drilling.

Another significant benefit of the shale gas play has been to lower the price of natural gas paid by consumers. The impact of shale gas on natural gas prices is evident when tracking the industry benchmark Henry Hub²³ Natural Gas Spot Price from 2008 through the present. According to EIA data, the Henry Hub Natural Gas Spot Price was \$8.86 per Million BTU in 2008. By 2015, the Henry Hub Natural Gas Spot Price dropped to \$2.62 per Million BTU, a 70 percent decrease from 2008. The Spot Price remained low in 2016 – \$2.52 per Million BTU, and as of the third quarter 2017, remained under \$3.00 per Million BTU.²⁴

The impact of shale gas on natural gas prices also is evident when comparing retail natural gas prices in the U.S. from 2008 to recent years. Overall, U.S. consumers have experienced a significant decrease in natural gas prices in recent years. For industrial customers, natural gas prices were \$3.91 per Mcf in 2015, a 59.4 percent decrease from 2008. For commercial customers, natural gas prices were \$7.91 per Mcf in 2015, a 35.3 percent decrease from 2008. Based on EIA data, retail gas prices continued downward for industrial and commercial customers in 2016 – \$3.51 per Mcf for industrial customers and \$7.25 per Mcf for

²² <https://www.eia.gov/todayinenergy/detail.php?id=30872> (U.S. Electric Generation Mix).

²³ The Henry Hub is a natural gas pipeline located in Erath, Louisiana that serves as the official delivery location for futures contracts on the NYMEX. The Henry Hub is owned by Sabine Pipe Line LLC and has access to many of the major gas markets in the U.S.

²⁴ <https://www.eia.gov/dnav/ng/hist/rngwhhdm.htm> (Henry Hub Natural Gas Spot Price).

commercial customers.²⁵ For residential customers, natural gas prices were \$10.38 per Mcf in 2015, 25.2 percent lower than in 2008. For 2016, residential customers saw a further decrease in retail natural gas prices to around \$10.00 per Mcf.²⁶

This price data show that natural gas retail prices are at historic lows for the business sector. Cheap natural gas for the business sector is important because, among other things, it can help attract manufacturing and other businesses and, hence, is one of the tools in the toolbox to promote economic development. At the same time, prices are low for residential customers as well, which provides an opportunity for residential customers to save on their energy costs and has sparked an interest in these customers in switching to natural gas. The primary driver of this price decrease is the abundance of natural gas supply from the shale gas play.

Access to Natural Gas

Even with the shale gas revolution that has occurred in the U.S., natural gas distribution service is not universal. Unlike electric distribution service for example, natural gas faces strong competition from other energy sources such as oil, propane, and electric heat. The tables show, both nationwide and by region, the percentages of households served by the various heating sources in 2015-2016:²⁷

Northeast²⁸	Percentage
Natural gas	54.1
Heating oil	22.7
Propane	4.0
Electricity	14.7
Wood/other	4.5

²⁵ <https://www.eia.gov/dnav/ng/hist/n3035us3A.htm> (U.S. Natural Gas Industrial Price) and <https://www.eia.gov/dnav/ng/hist/n3020us3A.htm> (U.S. Natural Gas Commercial Price).

²⁶ <https://www.eia.gov/dnav/ng/hist/n3010us3A.htm> (U.S. Natural Gas Residential Price).

²⁷ https://www.eia.gov/outlooks/steo/special/winter/2016_winter_fuels.pdf (U.S. Household Heating Sources).

²⁸ The Midwest region consists of ND, SD, NE, KS, MN, IA, WI, MI, MO, IL, IN, and OH.

Midwest²⁹	Percentage
Natural gas	66.7
Heating oil	1.1
Propane	7.6
Electricity	21.1
Wood/other	3.5

West³⁰	Percentage
Natural gas	55.8
Heating oil	0.8
Propane	3.3
Electricity	33.6
Wood/other	6.5

South³¹	Percentage
Natural gas	29.7
Heating oil	1.4
Propane	4.0
Electricity	62.8
Wood/other	2.1

U.S.	Percentage
Natural gas	47.9
Heating oil	5.0
Propane	4.7
Electricity	38.6
Wood/other	3.8

As the data show, natural gas faces strong competition from alternative heating sources and is not the predominant heating source for most homes in the U.S. This competition also is evident when examining the regional heating sources in the U.S. In the Northeast for example, natural gas heats 54.1 percent of homes, whereas 45.9 percent of households use alternative heating sources, including oil or propane (26.7 percent) and electricity (14.7 percent). Meanwhile, in the other regions, the chief competition for natural gas heating comes from electric heat. In

²⁹ The Northeast region consists of ME, NH, VT, MA, RI, CT, NY, NJ, and PA.

³⁰ The West region consists of NM, CO, WY, MT, ID, UT, AZ, NV, CA, OR, WA, AK, and HI.

³¹ The South regions consists of TX, OK, AR, LA, AL, MS, GA, FL, NC, SC, VA, MD, DE, WV, KY, and TN.

the South for example, electric heat is the predominant heating source in the region.

The Pennsylvania experience with natural gas as a heating source is similar. In March 2013, the Senate of Pennsylvania adopted Senate Resolution 29, directing the Center for Rural Pennsylvania (Center)³² to study the potential for the increased extension of natural gas distribution infrastructure by Pennsylvania's natural gas public utilities to unserved and underserved areas. Specifically, the Center was charged with studying the extension of natural gas distribution infrastructure by collecting and analyzing information on the: (1) estimated demand for natural gas service in unserved and underserved areas of the commonwealth; (2) estimated price consumers are willing to pay for access or conversion to natural gas service; (3) regional differences in consumer demand and willingness to pay for natural gas service; and (4) other relevant economic information on the costs and benefits to expand natural gas distribution infrastructure.

To consider residential extension, the Center worked with researchers to conduct a telephone survey of Pennsylvania households and developed a demographic and socioeconomic profile of Pennsylvania communities. The household survey conducted in July and August 2013 included more than 1,000 Pennsylvanians from four regions of the state: (1) North Central;³³ (2) South Central;³⁴ (3) Southeastern;³⁵ and (4) Cumberland County. These regions encompassed both rural and urban areas and were selected to provide geographic and demographic diversity to the research.

The centerpiece of the survey was a set of questions that measured how much homeowners would be willing to pay to connect to natural gas service and convert to natural gas heat for their home. The survey results are valid only for households located in the four study regions that currently are not connected to natural gas.

The survey revealed several important findings, including that 60.3 percent of households in the surveyed areas do not heat with natural gas.³⁶ The survey

³² The Center is a bipartisan, bicameral legislative agency that serves as a resource for rural policy within the Pennsylvania General Assembly. The Center was created by statute in 1987 to promote and sustain the vitality of Pennsylvania's rural and small communities.

³³ Bradford, Clinton, Lycoming, Sullivan, and Tioga Counties.

³⁴ Bedford, Blair, Cambria, Clearfield, Fulton, Huntingdon, and Somerset Counties.

³⁵ Chester and Delaware Counties.

³⁶ *Analysis of Potential Demand for the Extension and Expansion of Natural Gas Distribution Infrastructure in Pennsylvania – A Report in Response to Senate Resolution 29.* (Center Report), p. 6,

also revealed that most households were well informed about the relative operating costs of different heating systems and that very few respondents lived in houses that were incapable of being converted to natural gas heat due to the inability to install pipes or ducts. These results suggest that there is a large potential pool of households that are good candidates to switch to natural gas to save money on heating.³⁷

The Task Force acknowledges that this data analyzes access to natural gas by measuring usage, not access. However, there is no publicly available database or other source of information that captures areas with or without natural gas distribution service on a national and, with few exceptions, a per-state basis. In any event, access to natural gas distribution service has come into focus in recent years, given the abundant supply of shale gas in the U.S. As discussed in more detail below, there are impediments to extending natural gas distribution service in unserved and underserved areas that help explain why natural gas distribution service is not more ubiquitous.

Impediments to Natural Gas Expansion

As mentioned previously, despite an abundant supply, there still are many areas throughout the U.S. that are either unserved or underserved by natural gas distribution service. There are obstacles to expanding natural gas distribution lines that help explain why there are so many unserved or underserved areas in the U.S. For both gas utilities and consumers, the primary obstacle to natural gas expansion in unserved and underserved is cost.

For a consumer to switch to natural gas, a NGDC must have adequate infrastructure to serve new customers. To that end, NGDCs face considerable costs when installing the facilities needed to roll out natural gas distribution service to new customers. In Pennsylvania, these installation costs average around \$1,000,000 per mile and typically range from \$750,000 to \$1,250,000 per mile,³⁸ depending on project specifics. And, these costs are only rising, due to increased municipal permitting, right-of-way, and road restoration costs.³⁹ In cases where the

Table 1. Counties included in the telephone survey. A copy of the Center Report is available at <http://www.rural.palegislature.us/documents/reports/Natural-Gas-Infrastructure-SR29.pdf>.

³⁷ Center Report, p. 15.

³⁸ These figures are according to two Pennsylvania NGDCs that were surveyed, as of September 13, 2017.

³⁹ The PAPUC recently approved a request by a NGDC to increase its pipeline replacement spend due in part to increased construction costs associated with municipal road restoration requirements. *Petition of PECO Energy Company for Approval of its Second Modified Gas Long-Term Infrastructure Improvement Plan*, Docket No. P-2013-2347340 (Opinion and Order entered June 14, 2017) (*Second Revised LTIIP Opinion and Order*). The utility explained that in addition to requiring mill and overlay restoration instead of trench repair, municipalities also have been increasing the paving specifications for such work.

potential customer is not close to existing gas facilities,⁴⁰ the additional revenues for the utility from the extension are not likely to come close to covering the costs of extension. Under this scenario, the extension simply is not economic for the utility.

Moreover, NGDCs in some states looking to expand natural gas service face competition for capital and labor to perform the work, which can further increase the costs to expand service. This includes competition for capital and labor associated with performing pipeline replacement work.

The utility further explained that many municipalities also are requiring that an entire length of a street be repaved rather than just a section. *PECO Second Revised LTIP Opinion and Order*, pp. 6-9.

⁴⁰ This may include distribution facilities that serve other residential customers or facilities that serve a large commercial or “anchor” customer.

As one example, Pennsylvania has a significant amount of cast iron and bare steel gas mains and, in some cases, cast iron and bare steel service lines. Replacement of this pipe is a priority in Pennsylvania due to the safety concerns associated with this existing infrastructure. To that end, the PAPUC has approved Long-Term Infrastructure Improvement Plans for all Pennsylvania NGDCs, all of which include accelerated pipeline replacement plans for at-risk pipe.

For NGDCs in Pennsylvania and elsewhere, pipeline replacement work competes with gas expansion work for both capital and labor. This competition creates an increased demand for the qualified labor necessary to perform the work at a time when there is a shortage of such qualified labor.⁴¹ Under basic principles of supply and demand, this dynamic serves to increase labor costs and construction costs for these projects. This means NGDCs must allocate their labor and plan for growth prudently so that business growth and gas expansion do not conflict with their plans to remove at-risk pipe.

A switch to natural gas also may require a significant financial investment by the consumer. This financial investment typically includes an up-front CIAC for the line extension as well as appliance and other in-home conversion costs. In some cases, the cost of the CIAC can be prohibitive for a homeowner or small business, running into the thousands of dollars. This is especially true for those homeowners and small businesses located in rural, sparsely populated areas who are not close to existing natural gas mains. Moreover, site-specific obstacles such as waterways and rock terrain can further increase line extension costs for consumers. Depending on these factors, extending natural gas service can be just as uneconomic for the consumer as it is for the utility.

The issue of consumer costs as a barrier to natural gas expansion was substantiated by the previously discussed Center Report from Pennsylvania. The table that follows identifies by region the predicted percentages of households who would connect to natural gas based on the payback period and upfront costs for connecting:⁴²

⁴¹ The other reason PECO Energy Company asked to increase its pipeline replacement spend was due to increased construction costs related to labor issues. The utility noted the following factors that have increased its construction costs: a shortage of qualified labor personnel in the industry that perform gas construction work; a limited number of reputable contractors that can complete gas construction projects according to PECO's requirements for quality and safety; and increased amounts of pipeline construction due to Long-Term Infrastructure Improvement Plan programs being implemented concurrently by other Pennsylvania NGDCs combined with limited qualified contracting resources. *PECO Second Revised LTIP Opinion and Order*, p. 5.

⁴² See Center Report, p. 14, Table 10. Predicted proportion of households who would connect. The results in Table 10 were based on the use of a regression model to calculate the proportion of households that meet the selection criteria who would connect to a new natural gas distribution system combined with the proportion of households that are not now currently connected to natural gas that meet the selection criteria.

Region	Payback Time/Upfront Cost	Percentage of Households Who Would Connect ⁴³
North Central	12 years/\$10,000	14.2/19.8
North Central	6 years/\$6,000	25.9/31.9
North Central	3 years/\$3,000	35.6/40.9
South Central	12 years/\$10,000	8.8/13.7
South Central	6 years/\$6,000	17.3/23.5
South Central	3 years/\$3,000	25.3/31.7
South Eastern	12 years/\$10,000	9.4/14.5
South Eastern	6 years/\$6,000	18.3/24.9
South Eastern	3 years/\$3,000	26.8/33.6
Cumberland County	12 years/\$10,000	8.7/13.5
Cumberland County	6 years/\$6,000	17.1/23.2
Cumberland County	3 years/\$3,000	24.9/31.3

As one would expect, the data show that the probability of households converting to natural gas service *increases* as the upfront costs and payback times *decrease*. Conversely, the opposite also is true; the probability of households converting to natural gas service *decreases* as the upfront costs and payback times *increase*. Thus, for consumers, cost does matter when deciding whether to convert to natural gas.

Thus, extending natural gas distribution service presents financial and other challenges for both the utility and consumers. A question becomes what, if anything, state public utility/service commissions can do to address these challenges and help remove unreasonable impediments to natural gas expansion in unserved and underserved areas, including rural areas.

⁴³ The first percentage is for responses with a certainty threshold of 8 (i.e., how sure a respondent is about his or her answer on a scale of 1 to 10), whereas the second percentage is for responses with a certainty threshold of 7.

Natural Gas Expansion Efforts

State Natural Gas Expansion Efforts

In recent years, states have been extremely active with efforts to expand the availability of natural gas distribution service within their borders. Appendix A of this Task Force Report contains detailed summary of these state efforts,⁴⁴ covering enacted legislation covering expansion of natural gas service, programs approved by the relevant state public utility/service commissions to facilitate the expansion of natural gas service, and pending state investigations on natural gas expansion. A close examination of Appendix A indicates these state efforts attempt to address the main impediment to natural gas expansion in unserved and underserved areas: the costs to utilities and consumers to extend service.

States have used a wide variety of mechanisms to promote and finance natural gas pipeline expansion into unserved or underserved areas. Some of these mechanisms focus on addressing the needs of customers near existing infrastructure, while others are part of a more ambitious plan to reach into new, unserved areas. In some states, public utility/service commission proceedings are the genesis for increased access and expansion, whereas in others, the impetus comes from the legislature. What follows are examples of approaches states can use to incentivize natural gas expansion.

Customer-Funded Approaches

Some states looking to expand access to natural gas address costs at the individual customer-level. For example, a few states offer no-cost extensions for consumers that are located a short distance from an existing gas main. In Arkansas, Delaware, and Pennsylvania, some utilities offer no-cost extensions for the first 100 feet or less (150 feet or less in Pennsylvania) from an existing natural gas main.⁴⁵

In Connecticut, NGDCs proposed to offer no-cost extensions for consumers located 150 feet or closer to natural gas mains. This offer was made as part of a larger plan to connect 280,000 customers to natural gas service over the course of 10 years, some of whom are not near existing infrastructure. However, the

⁴⁴ This information originally was compiled by the American Gas Association (AGA) and is available on its website under the “Natural Gas State Profiles – Infrastructure Expansion” section for each state, which is available at <https://www.aga.org/knowledgecenter/facts-and-data/state-profiles-natural-gas>. Where appropriate, this information has been updated to reflect more recent events.

⁴⁵ In West Virginia, one utility proposed that customers receive no-cost extensions for up to 300 feet as part of a pipeline replacement and expansion program proposal. However, the proposed program was removed by settlement.

Connecticut Public Utilities Regulatory Authority approved what it considered a simplified approach. Under the approved plan, all new customers living near existing mains, but not currently using natural gas, pay a 10 percent premium over existing distribution rates for a 10-year period. In comparison, consumers who live in areas without gas mains pay a 30 percent premium.

Other states take a different approach. For example, Arkansas, Colorado, Illinois, Maine, Minnesota, Nebraska, New Mexico, Pennsylvania, Texas, Wyoming, and Wisconsin offer individual consumers the ability to finance extensions through on-bill surcharges or other payment plans. This allows consumers to pay a CIAC in installments over time instead of paying the full CIAC amount up front.

In Colorado, Nebraska, and Wyoming, SourceGas Distribution offers eligible consumers an additional Extra Construction Allowance (up to \$4,805 for Colorado and up to \$5,000 each for Nebraska and Wyoming) over the Regular Incentive Allowance and spreads the repayment obligation with the advance over up to 15 years via a maximum \$50 per month payment added to that customer's gas bill. SourceGas contends that the Regular Incentive Allowance alone is frequently inadequate for rural consumers to connect to the system because the total cost is substantially greater.

In Pennsylvania, the three UGI NGDCs have implemented a Gas Expansion or "GET Gas" tariff. This 5-year pilot program targets gas service expansions to consumers located close to existing natural gas mains.⁴⁶ Under GET Gas, eligible consumers can pay line extension costs over a 10-year period in lieu of an up-front CIAC. Consumers qualify if their extension requires a total capital main cost of \$15,000 or more, a per customer maximum project cost of \$10,000, and where at least 50 percent of the prospective customers along the path of the project can reasonably be expected to convert their heating source to natural gas within 12 years.⁴⁷

State gas expansion efforts are not limited to residential and small commercial consumers only. In Pennsylvania, one NGDC has implemented a Large Customer Incentive (LCI) program available to consumers using more than 64,400 therms annually. Under the LCI program, terms and payment period are

⁴⁶ The GET Gas pilot program is funded at \$15,000,000 per year (or \$5,000,000 UGI Gas, UGI Penn Natural Gas, and UGI Central Penn Gas) for five years.

⁴⁷ The availability of the program is impacted by economics, including main extension costs, service line extension costs, and the number of consumers along the main extension that the NGDC thinks will convert to natural gas. Generally, customers who live far from an existing gas main in sparsely populated areas will have difficulty meeting these criteria.

negotiated on a case-by-case basis, but customers participating in the program must either pay 30 percent of the uneconomic portion of the deposit up front or agree to a payment period of 10 years or less collected via the gas service bill. In Mississippi, two of its largest NGDCs have established Supplemental Growth Riders designed to incentivize investment in extending natural gas service for major commercial, industrial and manufacturing projects that are not otherwise economically feasible to fund.

Other states fund gas expansion by socializing the costs for new customers and new infrastructure through increases on all an NGDC's customers or all NGDC customers in a defined area. For example, Minnesota enacted legislation permitting an NGDC to petition the Minnesota Public Utilities Commission outside of a general rate case for a rider to recover the revenue deficiency from a natural gas extension project. The rider would apply to all the gas utility's customers, including transport customers.⁴⁸ Similarly, Ohio enacted legislation permitting an NGDC to ask the Ohio Public Utilities Commission to charge up to \$1.50 per customer per month in a rider to be used for expansion in situations where it is not otherwise economical. Nebraska also has a state law that permits a NGDC to spread natural gas expansion costs to all the NGDC's customers.

The Georgia Public Service Commission (PSC) recently approved a multi-year, two-phase program for one of its NGDC's called the Strategic Infrastructure Development and Enhancement (STRIDE) Program. STRIDE also allows a rider on customer bills to recover costs associated with traditional infrastructure replacement, as well as infrastructure expansion relating to customer growth and economic development. To pay for the approximately \$45,000,000 in extension expenditures of the utility, the commission approved an additional \$0.48 per month rider on customer bills beginning in January 2015, an additional \$0.48 in 2016, and another \$0.47 increase in 2017.

Arkansas enacted legislation in 2017 that provides for a surcharge to recover the cost of extensions of natural gas facilities to unserved areas. The legislation changes the law to provide for a surcharge to recover the cost of such extensions from all customers if they result in benefits for the utility and all its existing customers, and the Arkansas PSC can only approve a project if it results in benefits for the utility and all its existing customers. The maximum amount of the surcharge is 0.5 percent of the utility's gross plant at the time of its last general rate case.

⁴⁸ The Minnesota Public Utilities Commission approved a New Area Surcharge rider, which is designed to permit the utility to extend service into a new area that would be uneconomic to serve at tariffed rates by allowing that utility to collect the surcharge on top of the tariffed rate for up to 30 years.

In addition to financing natural gas line extension costs, some states also provide financial assistance to customers to convert appliances and equipment. In the state of Washington for example, one NGDC has a 3-year pilot program that includes a rebate program for certain existing single-family customers that receive a natural gas line extension when converting to natural gas from another fuel source. In cases where the customer's line extension allowance exceeds the cost of providing the line extension, an "excess allowance" remains. Customers in this circumstance can, within 90 days, apply for a rebate to cover the costs of purchasing and installing high-efficiency natural gas appliances for space-heating and water-heating.⁴⁹

As another example, Wisconsin's Focus on Energy program helps to defray the cost of fuel-switching for customers. Eligible business program customers may be eligible for a \$0.60/therm incentive, and eligible residential customers may be eligible for cash incentives for new, energy-efficient appliances such as furnaces and water heaters.

Alternative Funding Approaches

Other states have used loans, bonds, shareholder funds, ratemaking incentives, grants and other appropriations, and tax incentives as mechanisms to fund natural gas expansion. In Alaska, the Alaska Industrial Development and Export Authority (AIDEA) is a state-owned public corporation that provides various means of financing to promote economic growth and diversity. In 2015, an Alaska NGDC received a \$29,700,000 million loan from AIDEA that was targeted to advance natural gas distribution system development in Fairbanks and North Pole. The loan allowed the utility to move forward with the first three phases of its 6-year plan to build out its certificated service area. The utility expects to put approximately 73 miles of pipe in the ground to more than 140 multi-family/commercial structures and more than 2,100 residential services.

In North Carolina, the state legislature passed the North Carolina Clean Water and Natural Gas Critical Needs Bond Act of 1998, which authorizes natural gas bonds for uneconomic line extensions. NGDCs may only apply those funds to economically infeasible expansions or to expansions estimated to produce a negative net present value. These funds can come from a surcharge imposed on

⁴⁹ The UGI NGDCs in Pennsylvania have energy efficiency and conservation (EE&C) plans that include rebate programs intended to provide incentives to cover the cost difference between baseline gas and more efficient gas appliances. Although consumers converting to natural gas are eligible for EE&C program rebates to assist with in-home conversion costs, the UGI EE&C Plans are not to be used primarily as a marketing tool for the UGI companies to expand their business.

existing ratepayers, supplier refunds and other sources approved by the North Carolina Utilities Commission.

New Mexico has taken a different approach and looks to shareholder funds to assist with natural gas expansion. The New Mexico Public Regulation Commission adopted a settlement in an acquisition proceeding, which included a provision that the relevant NGDC would pursue several shareholder-funded economic development activities in New Mexico, including a matched \$10,000,000, 5-year fund aimed at extending gas infrastructure to unserved and underserved communities.

Mississippi has provided two of its largest NGDCs with a ratemaking incentive to expand natural gas service in their service territories. Atmos Energy and CenterPoint Energy each have instituted a Supplemental Growth Rider (SGR) to provide an incentive to extend gas service to projects previously viewed as economically infeasible. Under the SGR, each utility can invest up to \$5,000,000 annually under a 5-year pilot program in such projects. In return, qualified investments can earn a return of 12 percent for a 10-year period.

Recommended Mechanisms and Regulatory Best Practices to Expand Natural Gas Service

As the previous discussion demonstrates, states have been actively experimenting with different types of efforts to expand natural gas service to unserved and underserved areas. Based upon a review of these efforts, the Task Force has compiled recommended mechanisms and best practices that state utility/public service commissions can use to promote and facilitate expanding natural gas service within their borders, including in rural areas. These recommendations are from the state regulator perspective and accordingly, focus on the role that state regulators can play in expanding natural gas service.

This Task Force Report recognizes the shift in consumer demand for increased access to natural gas and contains a representative sample of actions states have taken to meet that demand. This Report seeks to provide insight and guidance to those states that may be contemplating changes to gas expansion policies to allow a level of gas expansion beyond what has traditionally been available. However, it takes no position on the relative merits of customer switching mandates.

This Report is not intended to be prescriptive, and there is no “one size fits all” approach for regulators to promote and facilitate the expansion of natural gas service. Rather, the regulatory approach may vary, depending on, among other things, the individual NGDC and its service territory. All NGDCs are not the same,

and what may work for one NGDC to expand natural gas service may not work for another. For example, several NGDCs in Pennsylvania have implemented programs that allow consumers obtaining gas service to pay the CIAC over time through a monthly surcharge. However, other Pennsylvania NGDCs believe its customers are more amenable to paying a higher delivery charge to obtain natural gas service. Thus, state commissions should be flexible when considering solutions to expand natural gas service and should evaluate proposed natural gas expansion mechanisms on a case-by-case basis with these variances in mind.

Furthermore, the regulatory approach to be used also may vary, depending on the type of consumer that is being targeted for expansion. Generally, consumers that lack access to natural gas fall into one of the following broad categories: (1) a consumer along an existing gas main; (2) a consumer close to an existing gas main; or (3) a consumer not at all close to an existing gas main. The regulatory approach that works for one consumer category may not work for another.

As one example, for consumers along an existing main, extending service may be as simple as installing a service line, at a low or no charge to the consumer.⁵⁰ In contrast, for consumers who are not close to an existing main, an extension of a gas main for a significant distance is required prior to the extension of a service line. An extension of this nature often is prohibitively expensive for the consumer. Thus, the regulatory options may be limited for these consumers, absent the presence of a nearby anchor customer that is willing to pay the gas main extension costs⁵¹ or absent some other mechanism to make the project economical. For these consumers, the best option may be to remain on their existing fuel source, whether propane, oil, or electricity. Thus, it is anticipated that propane and other fuel sources will continue to remain as important fuel sources for consumers.

Also, the regulatory approach to natural gas expansion may vary, depending on whether relevant state legislation has been enacted. States like Arkansas, Minnesota, Nebraska, and Ohio have enacted legislation permitting NGDCs in those states to socialize the costs of expanding natural gas service among all

⁵⁰ The consumer also would be required to make the necessary in-home appliance/system conversions.

⁵¹ For example, in Pennsylvania, the PAPUC in 2013 granted public utility status to Leatherstocking Gas Company (LGC) to provide natural gas distribution service in several municipalities within Susquehanna County, Pennsylvania. LGC obtained public utility status to provide natural gas distribution service using local or Marcellus Shale gas to Pennsylvania customers in these rural areas who do not have access to such service. LGC sought to serve two anchor customers – a school and a hospital – and looked to also serve residential consumers living along the main constructed to serve these anchor customers. As another example, in Maine, Summit Natural Gas sought to serve 15,000 homes using the Sappi Fine Paper Mill as an anchor customer (the project for the Mill was completed in 2014).

customers. Thus, the state public utility/service commissions in these states are expressly permitted by legislation to socialize natural gas expansion costs among all customers. In states where the legislature has given no such directive, however, a state commission may find it more difficult to socialize these costs among all customers.⁵²

With the foregoing in mind, this Task Force makes the following recommendations regarding the mechanisms and best practices that state utility/public service commissions can utilize to promote and facilitate the expansion of natural gas service to unserved and underserved areas, including rural areas.

1. State public utility/service commissions should use a robust, open, and transparent process that allows for important and diverse input from stakeholders.

When undertaking natural gas expansion efforts, we believe it is essential for state public utility/service commissions to utilize methods and procedures that provide all interested parties⁵³ with an opportunity to meaningfully participate in the process. Therefore, we recommend that any changes to existing line extension policies and/or the establishment of any additional gas expansion mechanisms occur via formal proceedings that provide all interested parties with notice of and a meaningful opportunity to be heard on the issues.⁵⁴ This approach is consistent with due process.⁵⁵ This approach also helps ensure that decision-makers receive stakeholder input prior to making final decisions and in doing so, helps ensure that state commissions make informed decisions on the issues.

2. State public utility/service commissions should consider allowing NGDCs to offer no-cost line extensions within certain parameters.

⁵² We acknowledge that some states currently are grappling with the issue of whether to socialize natural gas expansion costs. For example, Wisconsin's current investigation into natural gas extensions includes identifying when and if socializing costs for system improvements is appropriate, and when those system improvement costs should be shared, on a pro-rated basis, with customers requesting an extension.

⁵³ Interested parties include NGDCs, consumers, consumer advocates, and legislators.

⁵⁴ Formal commission proceedings include but are not limited to: (1) a generic investigation regarding natural gas expansion; (2) a general rate case or other similar proceeding in which a gas expansion reform or mechanism is proposed; or (3) a separate proceeding such as a tariff filing that proposes a gas expansion reform or mechanism.

⁵⁵ Procedural due process of law generally entails providing a party with meaningful notice and opportunity to be heard before a government agency. *Reading School District v. Dep't of Educ.*, 875 A.2d 1218 (Pa. Cmwlth. 2005).

We recommend that state public utility/service commissions consider allowing NGDCs to offer no-cost line extensions for consumers without natural gas service that live within a predefined distance along an existing gas main.⁵⁶ We note that NGDCs in several states have such an offering. We further note that other states may have a *de facto* free extension allowance depending on an NGDC's existing line extension policies and the methodologies used to calculate a CIAC. In this situation, the relative low costs associated with a short distance extension plus the revenues to be received from the extension may obviate the need for a CIAC. However, we believe there is value in making this free extension allowance explicit and including it in an NGDC's line extension policy. Such an approach helps provide transparency and certainty for line extension costs to potential customers. Such an approach should be particularly beneficial to consumers living along an existing gas main, as they are the "low hanging fruit" to convert to natural gas and are the ones who most likely will benefit from this information.

3. State public utility/service commissions should consider allowing NGDCs to update their CIAC calculation methodology to reflect current market realities and expectations.

We recommend that state public utility/service commissions consider allowing NGDCs to update their CIAC methodology that is used to determine whether an extension is economic. Existing CIAC calculations may not reflect actual costs in today's market or, conversely, may not accurately reflect the anticipated income or timeframe that a company's investment can be recouped. As one example, Wisconsin uses a model tariff approach to ensure that utilities annually update values used in cost estimation and allowance and contribution calculations. As another example, one Pennsylvania NGDC changed its CIAC revenue calculation methodology to a net present value (NPV) methodology⁵⁷ using a 40-year revenue period. We believe this type of approach better recognizes the economics of natural gas service and more accurately accounts for the useful life of the facilities in question. This type of approach also reduces the CIAC for consumers, thereby reducing one of the main financial barriers to the extension of natural gas service.

4. State public utility/service commissions should consider allowing consumers to pay a CIAC over time in lieu of an up-front, lump-sum payment.

⁵⁶ This does not include appliance and system conversion costs that are on the consumer's side of the gas meter and does not include local permitting and other similar fees.

⁵⁷ NPV is a way to calculate the present value of future payments over a set term.

We recommend that state public utility/service commission consider allowing NGDCs to provide consumers with the option to pay a CIAC in installments over time.⁵⁸ We note that numerous states currently permit this practice in some form. We further note that this practice can be utilized, whether a potential customer has applied for natural gas service under a traditional line extension policy or under a targeted natural gas expansion program. Allowing payment of a CIAC over time should be particularly helpful to consumers living along or close to an existing gas main for whom the CIAC becomes significantly more affordable when spread out over time. Thus, allowing payment of a CIAC over time reduces a major financial barrier to extending natural gas service.

5. State public utility/service commissions should consider allowing NGDCs to implement targeted natural gas expansion programs.

As mentioned, an up-front CIAC can be prohibitive for a homeowner or small business to obtain natural gas service, especially for consumers in rural areas who do not live along an existing gas main. State public utility/service commissions should be open to allowing jurisdictional NGDCs to implement special programs like the SourceGas Extra Construction Allowance, the UGI GET Gas program, the Mississippi rural expansion program, or the Wisconsin Area Expansion Program to target consumers. To the extent that a state public utility/service commission has difficulty obtaining buy-in from interested parties, a state commission does not have to approve a permanent targeted gas expansion program. Rather, the program can be implemented as a pilot with caps on expenses, limits on the duration of the program, and reporting requirements⁵⁹ to assist the state commission and interested parties in properly evaluating the success of the program.

⁵⁸ We note that such a program can be implemented via an on-bill surcharge or via a separate billing affiliate of the NGDC.

⁵⁹ For example, with the “GET Gas” program, the UGI NGDCs must file an annual report with the PAPUC containing the following information: (a) Investment per project broken out by Underserved and Unserved classification; (b) Total distance of GET Gas main installed; (c) Number of customers connected by project Underserved and Unserved classification; (d) Current saturation by project Underserved and Unserved classification; (e) GET revenues received by principal and interest; (f) Annual GET participant average use per customer by residential and commercial sectors; (g) Average GET participant investment cost per customer by residential and commercial sectors; (h) The number of customers along GET facilities who have not yet connected and, to the extent available, why; (i) Direct program expenses; (j) Data on collections, including efforts for unpaid surcharge amounts; (k) The number of applicants turned down for insufficient credit; (l) The number of GET Gas participants also participating in the utility’s low-income assistance program; and (m) The quarterly gas/oil spread differential pursuant to proposed tariff sections 5.8.4 Limitations (UGI) and 5.9.4 Limitations (PNG and CPG).

- 6. State public utility/service commissions should be open to natural gas expansion programs that target all customers, including large commercial and industrial users, and where appropriate, should consider the use of anchor customers.**

Although most state natural gas expansion activity has concentrated on the residential and small business customer classes, we recommend that state public utility/service commission also should be open to natural gas expansion programs targeting large commercial and industrial customers who may act as anchors for large gas main extensions. In addition to the economic development benefits, extending natural gas service to major commercial, industrial and manufacturing sites also has the potential to help extend natural gas service to residential and small business consumers in areas where it would otherwise be uneconomic to do so. For example, in Pennsylvania and Maine, two NGDCs have sought to serve residential consumers located along natural gas mains initially constructed to serve large commercial customers. For residential and small business consumers that do not live close to an existing main, the presence of an anchor customer may be the most cost-effective way to obtain service, absent significant subsidization of the service by all the NGDC's customers or some other mechanism.

- 7. State public utility/service commissions should consider allowing NGDCs to provide financial assistance to customers to convert appliances and equipment to mitigate the “behind the meter” costs of gas conversions.**

Line extension costs are not the only costs that a consumer incurs to install natural gas service. Consumers also have expenses on their side of the meter, including in-home appliance and equipment conversion costs. NGDCs in several states have rebate programs to cover some or all the non-utility-related costs when converting to natural gas service and we recommend that state public utility/service commission be open to allowing NGDCs to establish such programs. We believe that providing consumers with financial assistance for in-home conversion costs helps reduce a major financial barrier to extending natural gas service. Moreover, such assistance can promote energy efficiency when these conversions are completed from a less clean heating source to natural gas. To the extent that a state public utility/service commission has difficulty obtaining buy-in from interested parties, rebate programs can be implemented as pilot programs where their impact can be properly and thoroughly evaluated by the state commission and other interested parties.

- 8. State public utility/service commissions should consider innovative financial ratemaking incentives for NGDCs to build out their natural gas distribution networks.**

We recommend that state public utility/service commissions consider using financial incentives as part of the ratemaking process to spur natural gas expansion by NGDCs. As previously discussed, two states have used financial ratemaking incentives to facilitate natural gas expansion. As one example, Mississippi permitted two of its largest NGDCs to earn a higher return on investments in expansion projects that were otherwise uneconomic. These types of financial incentives are favorable because they can be tied to a utility's actual performance in converting customers and can lead to natural gas expansion projects that would otherwise not be constructed due to economics. Thus, ratemaking incentives are another tool in the toolbox that can be used to address the financial barriers to natural gas expansion.

Conclusion

In recent years, the natural gas landscape in the U.S. has changed dramatically due to an abundant supply of domestic natural gas from shale resources. EIA data show that natural gas consumption and production is significant in the U.S. and that natural gas is an important energy source for numerous end-use sectors. With the shale gas play, the U.S. should have an abundant supply of natural gas for the foreseeable future and our reliance on natural gas as an energy source is expected to continue.

The abundance of domestic shale gas has resulted in numerous benefits to the U.S. These benefits include, among other things, lower natural gas prices paid by consumers, which has made it significantly more economic for consumers to switch to natural gas. Despite an abundant supply of shale gas and its impact on natural gas prices however, there still are many areas throughout the U.S. that are either unserved or underserved by natural gas distribution service. There are logistical and financial obstacles to expanding natural gas distribution lines that help explain why natural gas service is not more ubiquitous in the U.S. For both gas utilities and consumers, the primary obstacle is the cost to convert.

A review of current state efforts shows that there is a wide variety of mechanisms used to promote and finance natural gas pipeline expansion into unserved or underserved areas. Some of these mechanisms focus on addressing the needs of customers near existing infrastructure, whereas other mechanisms are part of a more ambitious plan to reach into new, unserved areas. In some states, public utility/service commission proceedings are the genesis for increased access and expansion, whereas in other states, the impetus comes from the legislature. Upon review, what these efforts have in common is they attempt to address the main impediment to natural gas expansion in unserved and underserved areas: the cost to convert.

Upon review of these state efforts, the Task Force has compiled recommended mechanisms and best practices that state utility/public service commissions can use to promote and facilitate expanding natural gas service within their borders. These recommended mechanisms and best practices are as follows:

- 1. State public utility/service commissions should use a robust, open, and transparent process that allows for important and diverse input from stakeholders.**

- 2. State public utility/service commissions should consider allowing NGDCs to offer no-cost line extensions within certain parameters.**
- 3. State public utility/service commissions should consider allowing NGDCs to update their CIAC calculation methodology to reflect current market realities and expectations.**
- 4. State public utility/service commissions should consider allowing consumers to pay a CIAC over time in lieu of an up-front, lump-sum payment.**
- 5. State public utility/service commissions should consider allowing NGDCs to implement targeted natural gas expansion programs.**
- 6. State public utility/service commissions should be open to natural gas expansion programs that target all customers, including large commercial and industrial users, and where appropriate, should encourage the use of anchor customers.**
- 7. State public utility/service commissions should consider allowing NGDCs to provide financial assistance to customers to convert appliances and equipment to mitigate the “behind the meter” costs of gas conversions.**
- 8. State public utility/service commissions should consider innovative financial ratemaking incentives for NGDCs to build out their natural gas distribution networks.**

These recommendations focus on the role that state regulators can play to expand natural gas distribution service. We note, however, that there is no “one size fits all” regulatory approach. Rather, the regulatory approach may vary, depending on, among other things, the circumstances of the individual NGDC, the proximity of the consumer to existing natural gas facilities, and whether state legislation has been enacted that provides guidance on how to best expand natural gas service.

This Task Force Report contains a list of recommended practices that state utility/public service commissions can utilize to facilitate natural gas expansion where there is consumer demand. However, this list is in no way intended to be prescriptive. Each state must evaluate and determine what is in its own best interest and the best course of action for its stakeholders. In the end, we hope that

this Task Force Report serves to educate regulators and promote dialogue on how to bring the benefits of natural gas as an energy source to more consumers in unserved and underserved areas and hence, give consumers more energy choices. The Task Force charter ends with the release of this report. However, the issues remain. NARUC and its Committee on Gas will continue to scrutinize the evolution of state approaches to extend gas service to underserved and unserved areas of the country.

Appendix

State Natural Gas Expansion Efforts

Disclaimer

State regulatory programs frequently evolve to adjust to new circumstances. Although the authors have taken reasonable steps to ensure the accuracy of the information in this appendix, it was taken from public sources and may no longer be accurate. The listings should not be construed as either endorsement or disagreement with any listed State approach.

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Alaska	<p>The Alaska Industrial Development and Export Authority (AIDEA) is a state-owned public corporation that provides various means of financing to promote economic growth and diversity. In 2015, Interior Alaska Natural Gas Utility (IGU) received a \$29.7 million loan from AIDEA that was targeted to advance natural gas distribution system development in Fairbanks and North Pole. The loan allows IGU to move forward with the first three phases of its 6-year plan to build out its certificated service area. IGU expects to put approximately 73 miles of pipe in the ground to more than 140 multi-family/commercial structures and more than 2,100 residential services.</p> <p>Avista, which owns the Alaska Electric Light and Power Company, seeks to move forward with a \$130 million project to bring natural gas to Juneau. The company has requested a \$58 million loan from AIDEA. If the loan is granted, the remaining \$72 million in project costs would come from an equity investment from Avista.</p>
Arkansas	<p>Arkansas Oklahoma Gas Corporation offers extensions of facilities at no charge when, in the Company's judgment, the construction investment will provide the Company with the opportunity to earn a reasonable rate of return. However, when the request for the extension is beyond the cost to provide the Company with the opportunity to earn a reasonable rate of return, the customer will be required to pay the additional costs.</p> <p>Black Hills Energy Arkansas offers extensions at no cost to the customer of 100 feet or less from its existing main. For main extensions exceeding 100 feet, the Company offers a Main Extension Surcharge (MES). Once a customer elects to receive the MES, a monthly charge is applied to the premises at which the customer will receive gas service in order that the customer at that premises repay the cost of the extension. The amount of the MES available and the corresponding monthly payment are as follows:</p> <p style="padding-left: 40px;">Up to \$2,129 for customers selecting a \$20 per month MES, Up to \$3,193 for customers selecting a \$30 per month MES, Up to \$4,257 for customers selecting a \$40 per month MES, Up to \$5,322 for customers selecting a \$50 per month MES.</p> <p>In order to qualify for the MES: (1) The total cost of the extension must exceed the cost of 100 feet of extension per customer; (2) The homes or structures to receive gas service must have gas heat and gas water heating or have gas appliances(s) with comparable annual load; (3) The customer must pay any costs (including installation in excess of those that are economically feasible, less the amount to be paid through the MES, before construction begins; and (4) The customer requesting the MES must be the property owner at the address of the premises for which the service is requested.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Arkansas (Con't)	<p>CenterPoint Energy Arkansas Gas offers service line extensions at no cost to the customer of 100 feet. Any additional costs incurred by the Company will be charged to the customer. Main extensions will be made where the cost of the Company's capital investment is economically feasible using an economical model that will take into consideration the following factors: (1) Construction cost estimate; (2) Non-gas revenue; (3) Depreciation; (4) Incremental operating costs; and, (5) Any other factors relevant to economic feasibility of the project.</p> <p>However, if it is determined that the Company's return on investment will be less than the Company's cost of funding capital projects, the customer shall be required to pay an amount sufficient to ensure that the Company can earn a return on investment equal to its cost of funding capital projects.</p> <p>In addition, when the Company is requested to extend its distribution facilities to an area with existing potential users where no contributory capital is available, the Company has the option to provide the necessary capital in the amount equal to the necessary customer contribution to be recovered by a fixed surcharge rate applied to each customer account within the boundaries of the project. To ensure sufficient customer commitment to each project, each customer will be required to sign an Extension Surcharge Agreement.</p> <p>Arkansas enacted legislation in 2017 that provides for a surcharge to recover the cost of extensions of natural gas facilities to unserved areas. The legislation changes the law to provide for a surcharge to recover the cost of such extensions from all customers if they result in benefits for the utility and all its existing customers, and the Arkansas Public Service Commission (PSC) can only approve a project if it results in benefits for the utility and all its existing customers. The maximum amount of the surcharge is 0.5% of the utility's gross plant at the time of its last general rate case.</p>
Colorado	<p>In 2013, the Colorado Public Utility Commission (PUC) expanded the Extra Construction Allowance for SourceGas Distribution (previously established in 2008) to make available \$4,805 of costs over the amount provided to eligible customers through the Regular Construction Allowance and spreads the repayment obligation with that advance for up to 15 years through a \$50 per month payment added to their natural gas bill. See Docket Nos. 08S-108G, 15AL-0135G.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Connecticut	<p>In 2013, the Connecticut Public Utilities Regulatory Authority (PURA) approved a joint natural gas expansion plan for Connecticut Natural Gas, Southern Connecticut Natural Gas and Yankee Gas. The utilities filed their joint plan seeking to finance connecting 280,000 customers to natural gas pipelines over the course of the next 10 years.</p> <p>Effective January 1, 2014, customers connected to gas pipelines that are 150 feet or closer to gas mains are no longer required to pay a contribution toward construction. Effective January 1, 2014, customers who are not 150 feet or closer to gas mains are charged a monthly premium over current rates to offset incremental costs of expansion, in lieu of making a 1-time upfront payment to cover connection costs. All new customers who live near existing mains, but do not currently use gas, pay a 10% premium over existing distribution rates for a 10-year period, while all new customers who live in areas without mains pay a 30% premium. Premiums cease after 10 years and are to be paid only on the distribution portion of rates, which account for 40-60% of a customer's bill. Revenue earned through interruptible and off-system sales – non-firm margin "credits" – is used to offset expansion costs for current natural gas customers rather than returning this revenue to customers as a bill credit. If the new customer surcharge and non-firm margin revenue prove insufficient to cover ongoing expansion costs, a system expansion reconciliation charge on existing customer bills is to be used to cover the difference.</p> <p>For small projects under the plan, the Connecticut PURA requires the utilities to obtain customer commitments for 60% of the estimated Breakeven Revenues prior to commencement of construction. For large projects, the utilities are not required to obtain customer commitments for 60% of the estimated Breakeven Revenues prior to commencement of construction. Instead, the utilities are required to obtain contractual commitments from all anchor customers participating in the project prior to the commencement of construction.</p> <p>The Connecticut PURA also requires the utilities to develop a conversion cost calculator for consumers.</p> <p>Standards that would trigger a re-evaluation of the plan include substantial failure to meet customer conversion forecasts, an increase in residential gas rates of 5% in any given year or 15% over the 10-year period, and spikes in price of gas compared to delivered heating oil.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Delaware	<p>In 2013, the Delaware PSC approved a settlement (in Docket 12-292) regarding a gas expansion proposal from Chesapeake Utilities. Under the settlement, Chesapeake agreed to utilize an infrastructure expansion service (IES) rate to recover line extension costs from new customers only. The IES would apply to new customers within proposed expansion areas and would remain in place long-enough to ensure the appropriate level of rate and cost recovery related to distribution infrastructure in those defined expansion areas. The settlement also modified the company's line extension policy to apply the internal rate of return method, which is an estimate of the rate of return on a project expressed as a percentage, for evaluating the economics of new line extensions.</p> <p>In 2014, the Delaware PSC (in Docket No. 12-546) approved a settlement regarding a Delmarva Gas proposal to change its tariff for residential and non-residential line extensions in existing subdivisions to, among other things, provide a 100-foot main extension per requesting customer at no charge. After the first 100 feet for a residential line extension, the customer's contribution is calculated using a model based upon a discounted cash flow analysis. After the first 100 feet for a non-residential line extension, if the estimated investment in the extension exceeds three times the Estimated Revenue, a customer contribution is required for the excess amount.</p>
Florida	<p>Florida City Gas offers an Area Expansion Program (AEP) that allows the company to recover costs exceeding the allowable investment over a 10-year period from customers served along the new route. Costs are borne by all customers served in the defined area. Rates can be adjusted after two years based on customer count and usage. Customers pay normal tariff charges for gas service in addition to the AEP charge.</p>
Georgia	<p>In 2009, the Georgia PSC approved the Strategic Infrastructure Development and Enhancement (STRIDE) Program for AGL Resources, Inc. STRIDE provides for a rider on customer bills that allows AGL to recover, <i>inter alia</i>, costs associated with infrastructure expansion. In 2013, AGL received approval of phase 2 of its STRIDE program. As part of phase 2, AGL received approval for \$46 million to further expand its distribution system into unserved and underserved areas within the state. As a result of Phase 2, customers were to see an additional 48 cents per month on their bills beginning in January 2015, followed by a 48 cent monthly increase in 2016, and a 47 cent monthly increase in 2017. See Docket Nos. 8516 and 29950.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Illinois	<p>Nicor Gas (at Docket No. 15-0218) has an Illinois Commerce Commission-approved Designated Extension Service Area Rider (Rider DESA). The Rider DESA is designed to provide new customers with an alternative mechanism to pay to extend gas facilities in areas that are established as a DESA. The Rider DESA establishes a DESA Connection Charge that is the Required Contribution to extend a gas main to and within the DESA divided by the Estimated Connections. As per the rider, the DESA Connection Charge is capped at \$5,000.</p> <p>Rider DESA provides new customers seeking gas service in DESAs with the option to pay the DESA Connection Charge/Required Contribution over time in installments. Rider DESA allows these customers to pay the charge over a 10-year period rather than upfront and provides these customers monthly installment payment options of \$20, \$30, \$40, \$50 and \$60.</p>
Indiana	<p>In 2013, the Indiana General Assembly enacted legislation allowing gas utilities to apply for a cost recovery tracker for infrastructure upgrades and extensions. Under the legislation, utilities are permitted to propose a 7-year infrastructure plan to the Indiana Utility Regulatory Commission (URC), and, if reasonable, the utility may recover its investment in a timely manner through a tracker on the customer's bill.</p> <p>In 2014, the Indiana URC (at Case No. 44403) approved a 7-year plan filed by NIPSCO. A portion of NIPSCO's plan is dedicated to investments in extending natural gas service to rural areas. Specifically, NIPSCO proposed to include in its plan approximately \$99 million for the extension of natural gas lines into currently unserved rural areas.</p> <p>In 2014, the Indiana URC (at Case No. 44429) also approved a 7-year plan filed by Vectren Corporation. A portion of the planned infrastructure investments include expanding gas delivery infrastructure to rural areas. Consistent with prior decisions, the URC further found that the approximate \$14.2 million allocated for rural extensions is limited to the use of rural extensions identified in the plan. The plan also included expanding gas infrastructure to rural areas served by propane and supporting economic development growth along the new I-69 corridor.</p>
Iowa	<p>Iowa Utilities Board rule IAC 199 19.3(10) includes several provisions allowing for extension of natural gas service. No advance for construction from the customer is required if the cost of the distribution main extension will be less than or equal to three times the estimated base revenue calculated on the basis of similarly situated customers. A feasibility model may be used in lieu of the calculation to determine the amount, if any, of the advance for construction.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Iowa (Cont't)	<p>If a customer is not going to attach to a distribution main extension within the agreed-upon attachment period after completion, an advance for construction equal to the estimated construction cost is required in advance of construction. A feasibility model may also be used to determine the amount required for the advance for construction.</p> <p>An advance for construction of a distribution main is refundable. When the customer is required to make an advance for construction, the utility shall refund to the depositor for a period of ten years from the date of the original advance a pro-rata share for each service line attached to the distribution main extension. The pro-rata refund shall be computed in the following manner:</p> <ul style="list-style-type: none"> • If the combined total of three times the estimated base revenue, or the amount determined in a feasibility model exceeds the total estimated construction costs the entire amount is refunded. • If the combined total of three times estimated base revenue, or the amount allowed by the feasibility model, for the distribution main extension and each service line attached to the distribution main extension is less than the total estimated construction cost to provide the distribution main extension, the amount to be refunded shall equal three times estimated base revenue, or the amount allowed by the feasibility model, when a service line is attached to the distribution main extension. • The amount refunded cannot exceed the advance amount paid and all refunds are paid without interest. At the expiration of the ten-year period, the advance for construction shall be closed and the remaining balance shall be credited to the respective plant account. <p>For service lines up to 50 feet, or 100 feet if polyethylene pipe is used, no contribution in aid of construction (CIAC) is required. Applicants are required to pay a nonrefundable CIAC within 30 days of completion for the portion of the service line that exceeds the applicable 50 or 100 foot distance.</p> <p>The Board is currently undertaking a rulemaking for areas currently without service or with constrained service. The rules adopted by the Board, subject to legislative review, includes the ability to extend gas service without requiring an advance for construction if a feasibility model shows that the project is economically justified over a period not to exceed twenty years. If the feasibility model does not show the extension is economically justified, the customer or customers may provide an advance for construction in the amount which would make the project economically justified.</p> <p>One utility in Iowa also has a tariff which allows for the use of liquefied natural gas (LNG) in certain situations to provide or supplement gas service to customers.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Kansas	<p>The Kansas Corporation Commission (at Docket No. 14-GIMG-514-GIG) opened an investigation that remains pending regarding natural gas expansion in rural Kansas. In accordance with a staff recommendation, the investigation is to explore the following:</p> <p>(1) Developing or relinquishing certificated territory held by existing public utilities; (2) Allowing open competition/multiple Certificates of Convenience and Necessity to entities wishing to distribute natural gas in rural areas; (3) Providing transparency and objectivity in line extension policies; (4) The appropriate mechanism for recovery of line extension costs that encourages rural development without cross-subsidization of customer classes; (5) The use of customer specific Certificates of Convenience and Necessity and what, if any, obligation to serve exists for the certificated utility to serve future customers; and (6) The ability to access gas supply from interstate pipelines.</p>
Maine	<p>In 2012, Maine enacted legislation authorizing the Finance Authority of Maine to issue bonds for the development of the state’s natural gas infrastructure.</p> <p>In 2013, Maine enacted legislation that, among other things: (1) gives the Director of the Governor’s Energy Office the authority to submit an energy cost-reduction contract to procure natural gas pipeline capacity that is reasonably likely to lead to the development or expansion of a natural gas transmission pipeline and (2) establishes the Maine Energy Cost Reduction Authority to, among other things, identify and designate corridors for the construction of natural gas transmission pipelines.</p> <p>Summit Natural Gas aims to serve 15,000 homes using the Sappi Fine Paper Mill as an anchor customer (the project for the Mill was completed in 2014). Beginning in 2015, Maine’s State Energy Plan must include a description of the State's activities relating to the expansion of natural gas service, any actions taken by the office to expand access to natural gas in the State and any recommendations for actions by the Legislature to expand access to natural gas in the State.</p> <p>In 2015, Maine Public Utilities Commission (PUC) (at 2015-00146) approved Unitil’s Targeted Area Build-out program (TAB Tariff). The TAB Tariff provides the Company a mechanism to serve new customers in the defined TAB area who are currently “off the main.” New customers served from these TAB mains will pay a monthly TAB surcharge over a period of years instead of paying an up-front CIAC. The amount of the surcharge is determined by a discounted cash flow analysis.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Maryland	<p>In 2016, the Maryland PSC (at Case No. 9417) approved a base rate case settlement of Columbia Gas of Maryland, which included the following on gas expansion: (1) the utility would implement an extension program to provide 100 feet of main line and 150 feet of service line to new heating customers at no charge and (2) the utility would implement a program to reimburse developers of residential buildings with four or more individually-metered units for the cost of installing house piping, up to the positive Net Present Value of the new load. In 2017, however, the PSC held that costs associated with this program may only be added to base rates through a general rate case.</p> <p>The Maryland PSC in 2017 denied a request from Washington Gas Light Company to implement three natural gas expansion programs: (1) a Contribution Payment Plan that would allow customers to pay a CIA over time rather than up-front; (2) a Targeted Conversion Plan that would lower the customer commitment threshold for converting groups of customers to natural gas; and (3) a Gas Access Program that would allow the utility to extend backbone infrastructure into unserved areas designated by counties and municipalities where all customers would pay for the costs of the infrastructure and with commission approval would create a regulatory asset for certain expenditures. The proposals were opposed by various parties and were rejected by the Commission, which reasoned that the three proposals would have asked existing ratepayers to bear the risks of programs that would primarily benefit a select few new customers. See Case No. 9433.</p>
Massachusetts	<p>In 2014, Massachusetts enacted legislation with an expansion component that permits the Massachusetts Department of Public Utilities (MA DPU) to authorize gas utilities to design and offer programs to customers that will increase the availability, affordability and feasibility of natural gas service for new customers (Chapter 149, § 3, of the Acts of 2014).</p> <p>On June 10, 2016, the MA DPU received a petition from NSTAR Gas Company d/b/a Eversource Energy for approval of a Natural Gas Expansion Pilot Program. The Pilot Program proposed to allow an alternate payment option for CIACs by permitting eligible customers to pay the CIAC over a 10-year period, instead of in a single up-front payment. The MA DPU docketed the matter D.P.U. 16-79 and issued a decision approving the company's proposal on February 10, 2017.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Minnesota	<p>In 2012, the Minnesota PUC approved a New Area Surcharge (NAS) rider for Minnesota Energy Resources (MERC). The NAS Rider is intended to permit the utility to extend service into a new area that would be uneconomic to serve at tariffed rates by permitting that utility to collect the surcharge on top of the tariffed rate. In the late 1990s, the MN PUC approved NAS riders for CenterPoint and Xcel. In 2014, the Minnesota PUC extended the maximum time frame from 15 years to 30 years for CenterPoint and MERC.</p> <p>In 2015, enacted legislation that a public utility may petition the Minnesota PUC outside of a general rate case for a rider that would apply to all of a gas utility's customers, including transport customers, to recover the revenue deficiency from a natural gas extension project. The legislation specifies that the petition must include certain information about the project and about cost recovery mechanisms among other things.</p>
Mississippi	<p>To address gas expansion efforts for the purpose of economic development, in 2013, the Mississippi PSC approved Supplemental Growth Riders (SGR) for the state's two largest gas utilities, Atmos Energy and CenterPoint Energy. The SGRs provide an incentive to invest in extending gas service for major commercial, industrial and manufacturing projects which would otherwise be economically infeasible. The programs were approved for an initial 5-year pilot period and allows the companies to invest up to \$5 million annually in projects selected by the Mississippi Development Authority and the companies, in consultation with the PSC, with these capital investments recovered in a separate SGR rider. To incent investment of these funds, qualified investments earn a return equal to 12% for a 10-year period. With an investment of approximately \$30 million dollars, Mississippi has seen over \$3 billion in investments from major manufacturers that require gas service to locate in Mississippi and around 12,500 direct and indirect jobs created that would not have been possible without gas expansion incented by the programs.</p> <p>In 2017, at the urging of the PSC, the Mississippi Legislature passed HB 883. The bill loosens used and useful standards for gas expansions that support economic development, allowing capital investments in prospective projects such as industrial parks where tenants may not materialize until after the pipes are in the ground.</p> <p>Since 2014, the PSC has implemented a program entitled "Zap the Gap." Zap the Gap allows customers in unserved areas to voice their desire to see gas service extended to their areas. By compiling this data and sharing the information with gas companies, utilities can gauge interest in new service and seek commitments from potential customers. With sufficient</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Mississippi (Con't)	<p>commitments, investments can be considered in rural areas that may not have been considered without Zap the Gap.</p> <p>In 2015, the PSC approved 3-year pilot programs for both Atmos and CenterPoint to aid rural expansion. The rural growth plans loosen build-out restrictions in each companies' tariffs, allowing the companies to justify the costs of new service in areas previously considered uneconomical by allowing consideration of the economic potential of new service as a conduit to other areas with a significant concentration of customers. Additionally, in certain cases, the changes waive the CIAC. Currently, the PSC is in discussion with the utilities regarding other options for rural gas expansion.</p> <p>With municipally-owned gas systems that fall within the PSC's jurisdiction, a policy has been adopted in recent years that in rate cases where excess funds are discovered in utility department coffers, those excess funds are sometimes ordered to be spent on specifically named expansion projects. With this policy, some municipalities have extended service to rural areas that would otherwise remain unserved.</p>
Nebraska	<p>The Nebraska PSC approved an Extra Construction Allowance for SourceGas (Docket No. NG-0067), which was expanded in 2011. The Extra Construction Allowance advances participants up to \$5,000 of costs over the regular incentive amount and is provided to eligible customers by spreading the repayment obligation of the advance for up to 15 years through a \$50 per month payment added to their natural gas bill. SourceGas also offers on bill financing of gas appliances.</p> <p>In 2012, Nebraska enacted legislation to provide for a streamlined process to implement a plan to construct rural natural gas infrastructure to provide natural gas to unserved or underserved areas in the state. The law streamlines the regulatory review process and allows utilities to spread costs to all ratepayers. The law also requires stakeholders (utilities, municipalities, etc.) to put together a plan for infrastructure expansion to be approved by the Nebraska PSC.</p>
New Jersey	<p>In 2015, Elizabethtown Gas filed for approval of a neighborhood expansion program. Under this program, customers would pay a monthly fixed surcharge over a 10-year period in lieu of an up-front contribution. This matter remains pending at Docket No. GR15010038, as a hearing was scheduled for Third Quarter 2017.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
New Mexico	<p>Effective in September 2015, New Mexico Gas Company obtained approval from the New Mexico Public Regulation Commission (PRC) to revise its Line Extension Policy. The revised Policy creates a new Advantage Program, which provides an advance to potential customers to apply towards the cost of line extensions and/or new service lines. The Advantage Program is available in any amount between \$100 and \$5,000. Customers can repay any advances on their monthly bill over a period not to exceed 120 months. Customers must repay at least \$20 per month, and liability for repayment shall remain with the premise.</p> <p>In 2016, the New Mexico PRC adopted a settlement approving Emera's proposed acquisition of TECO Energy. TECO is the parent of New Mexico Gas Company (NMGC). Included in the approved settlement was a provision that NMGC would pursue several shareholder-funded economic development activities in New Mexico, including: (1) a \$5 million pipeline enlargement project to export gas to Mexico; (2) a matched \$10 million, 5-year fund aimed at extending gas infrastructure to unserved and underserved communities; and (3) a \$5 million contribution to be made within five years of the close of the deal to be allocated to general projects.</p>
New York	<p>Many of the New York PSC rate plans adopted for the major gas utilities in the state have Neighborhood or Network Expansion Programs that require the gas utilities to develop plans for the reasonable, economic extension of gas service to unserved applications and communities. The programs are designed to eliminate common barriers to conversion and provide financial support to low-income customers to enable their full participation. The gas utilities identify areas for expansion and conversion and aggregate rebate programs to encourage more conversions from dirtier fossil fuels to natural gas.</p> <p>For example, in 2016, the New York PSC approved New York State Electric and Gas' (NYSEG) Community Expansion Pilot Program under which the company will test a community expansion approach that will provide a fixed surcharge quote for a project. During the development period for prospective projects, NYSEG will develop a fixed surcharge quote based on a forecast of customers that it anticipates would connect over the 10-year surcharge period for the project. Therefore, potential customers will know the surcharge amount before committing to take natural gas service and will have the option to pay upfront or monthly.</p> <p>The NY PSC also approved a Community Development Fund Pilot Program for NYSEG and Rochester Gas and Electric (RG&E) to expand natural gas to communities where either no approved gas franchise exists or where there</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
New York (Con't)	<p>is an existing approved franchise, but no gas main. The Fund would match funding provided by local, regional, and/or state agencies to offset the capital costs incurred to construct natural gas infrastructure in a community. This will be a 2-year pilot program with a fund of \$300,000 for NYSEG and RG&E, both with a maximum matching fund contribution of \$100,000 per project. Any unspent funds in a given year will be carried forward to the next year throughout the duration of the program. Any funds not spent when the pilot program ends would be returned to customers through a reconciliation mechanism. See Case No. 15-G-0284.</p> <p>In December 2016, the New York PSC approved as part of a rate plan settlement an expense allowance of \$200,000 for Brooklyn Union Gas Company d/b/a National Grid NY (KEDNY) to support a customer conversion rebate program. This allowance may be used, among other things, for gas air conditioning projects and conversions to natural gas that require contribution in aid of construction.</p> <p>For KeySpan Gas East Corp. d/b/a National Grid (KEDLI), the New York PSC as part of the rate settlement approved a conversion rebate program that provides a \$1,000 rebate to new residential customers who agree to connect to the distribution system along planned main replacement routes. Of note, as compared to KEDNY, KEDLI has a significantly higher number of residential customers who are located near a gas main but are not connected to the system. See Case Nos. 16-G-0058 and 0059.</p> <p>As part of a rate plan settlement that was approved by the New York PSC in 2017, Consolidated Edison Company of New York, Inc. (Con Edison) commits to the following to foster and further facilitate oil-to-gas conversions: (1) Con Edison will continue to provide milestones/timelines to each applicant for gas service. The milestones are available via a Web portal as well as through various pieces of correspondence sent to each applicant; (2) Con Edison will continue to report, on a quarterly basis, aggregated data with respect to conversion activity within the following counties: New York, Bronx, Queens and Westchester; (3) Con Edison will continue to provide maps, with appropriate disclaimers, of all the anticipated Area Growth Zones for the duration of the program (which is expected to conclude no later than 2020 for NYC) and will continue to make it available on its website; (4) Con Edison will review and grant requests in writing by applicants made before the expiration of the 60-day period, for an additional 30 days, or less if requested, to complete the customer commitment portion of the conversion upon the applicant explaining the need for additional time; (5) Additional detail of the breakdown of costs will be provided to applicants receiving an order of magnitude cost to connect to Con Edison's gas system.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
New York (Con't)	<p>Specifically, the company will provide details of the footage of main/service required to serve the customer. Con Edison will also report on a quarterly basis any permitting issues it encounters that affect the installation of regulators, mains or services to serve the population of customers seeking to convert from heating oil to natural gas. As of mid-2017, over 1,400 conversion requests were active. See Case No. 16-G-0061.</p> <p>In April 2017, the New York PSC approved a rate plan for National Fuel Gas Distribution Corporation (National Fuel) that continued the Gas Network Enhancement program and Partnership to Revitalize the Industrial Manufacturing Economy of Western New York (Prime-WNY) program. The Gas Network Enhancement program promotes economic gas growth and expansion, including the implementation of a pilot program that will simplify the CIAC process and lead to easier mainline expansion and increased natural gas conversions from dirtier fuels. The Prime-WNY program utilizes shareholder funding to incent large commercial and industrial customers in the National Fuel service territory to install incremental gas-fired equipment at their existing facilities. See Case Nos. 16-G-0257 and 14-G-0551.</p>
Nevada	<p>In 2015, Nevada enacted legislation requiring the Nevada PUC to adopt regulations authorizing a public utility that purchases natural gas for resale to expand the infrastructure of the public utility in a manner consistent with a program of economic development, including, without limitation: (1) Procedures for the public utility to apply to the Commission for approval of an activity relating to the expansion of the infrastructure of the public utility in a manner consistent with a program of economic development; and (2) Procedures for the public utility to apply to the Commission for the recovery of costs associated with an activity approved by the commission.</p> <p>In 2016, the Nevada PUC completed a proceeding at Docket 15-05025 to implement this legislation. Regulations were adopted that allow consideration of alternative cost-recovery mechanisms to support system expansion.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
North Carolina	<p>In 1998, North Carolina enacted legislation authorizing natural gas bonds for uneconomic line extensions.</p> <p>In 2016, North Carolina enacted legislation authorizing a natural gas economic development infrastructure rider that allows natural gas local distribution companies (LDCs) to recover the economically infeasible portion of natural gas infrastructure for eligible projects. To use this mechanism, the North Carolina Department of Commerce must first determine the project is eligible by determining: (1) The project provides opportunities for natural gas usage, jobs and other economic development benefits; (2) The business has invested or will invest at least \$200 million in private funds for real and personal property; and (3) The business employs or will employ at least 1,500 full time employees.</p> <p>The North Carolina Utilities Commission (NCUC) may permit an LDC to implement an infrastructure rider for projects approved by the Department of Commerce, if the Commission determines: (1) The project is located in an area where the natural gas infrastructure for the project is not economically feasible; (2) The developer of the project, the prospective customer or the occupant of the project provides a binding commitment that the project will use the natural gas service for at least 10 years; and (3) The projected margin generated by the eligible project will not cover the cost of the natural gas infrastructure.</p> <p>The costs recovered in a NCUC-approved infrastructure rider include the costs normally recovered for infrastructure, including the planning and development costs, construction costs, financing costs, depreciation, and property taxes. The rider may be allowed on an annual or semiannual basis, and will be subject to periodic reconciliation. The rider terminates when the costs are fully recovered, or with the LDC's next general rate case, whichever occurs first.</p> <p>An LDC may not invest more than \$25 million a year in infrastructure development costs, and the amount recovered in the rider may not exceed 5% of the margin revenues approved in the last rate case of the LDC. The total amount of infrastructure costs that can be recovered by all LDC's in the state is limited to \$75 million.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Ohio	<p>In 2014, Ohio enacted legislation allowing gas utilities to file an application with the Ohio PUC for approval of an infrastructure development rider to recover prudently incurred infrastructure development costs of one or more economic development projects approved under applicable law.</p> <p>In 2017, Ohio's Transportation Budget Bill gave gas utilities the ability to ask the Ohio PUC for up to \$1.50 per customer per month in a rider for uneconomic expansion projects. The OH PUC may approve a project under this law if: (1) The infrastructure development costs for the project are projected to generate a return on the company's investment that is less than the most recently authorized rate of return. (2) The amount of infrastructure development costs to be incurred by the company per calendar year, for the project and all other projects previously approved under this law, is not projected to exceed the product of two dollars multiplied by the aggregate number of the company's customers in the state.</p>
Oregon	<p>In 2016, Oregon enacted legislation directing the Oregon PUC to form a working group to study methods by which a public utility that furnishes natural gas may expand service to areas that do not have access to natural gas. The bill required the Commission to report results of the study to the Oregon legislature on or before September 15, 2016. The working group reached the following findings: (1) The cost of natural gas expansion into unserved areas is a major obstacle to expansion; (2) Because the determination of whether expansion will benefit existing customers is based on the comparison of costs to benefits of the expansion, proper accounting for all appropriate benefits is essential; (3) Customers located within a previously unserved area will benefit from access to new service and should be charged accordingly; (4) There are multiple potential funding sources (other than from ratepayers) to fill the economic gap for natural gas service expansion; (5) Multiple funding sources should be bundled when possible, and best practices for bundling multiple revenue sources should be studied and implemented; and (6) If the legislature chooses to create funding sources for the expansion of natural gas service, it should create transparent subsidies. The working group reached two primary conclusions: (1) Potential changes to distribution expansion policies could increase the amount of ratepayer revenue to support the expansion of natural gas service territory. Although the Oregon PUC could approve such changes within its current statutory authority, these additional revenues are not likely to be sufficient to fully fund expansion to any city in Oregon that currently does not have natural gas service and (2) Potential legislative action could provide additional revenue to support natural gas expansion. These actions include using funds from existing sources, such as the general fund, or creating new funding mechanisms, such as a service territory expansion surcharge on all natural gas customers. The diverse members of the Work Group, however, could not agree on any legislative action to create this additional revenue.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Pennsylvania	<p>In 2013, the Commission granted a certificate of public convenience to Leatherstocking Gas Company (LGC) to provide natural gas distribution service in Susquehanna County, Pennsylvania in the Townships of Bridgewater, Forest Lake, Great Bend, Harmony, New Milford, and Oakland, and in the Boroughs of Great Bend, Hallstead, Lanesboro, Montrose, New Milford, Oakland and Susquehanna. The purpose of obtaining Pennsylvania PUC certification was so that LGC can provide natural gas distribution service using local or Marcellus Shale gas to Pennsylvania customers in these rural areas who do not have access to such service. Specifically, LGC sought certification to serve two anchor customers – a school and a hospital – and looked to serve residential consumers along that main constructed to serve these anchor customers.</p> <p>Also in 2013, the PAPUC approved the initial tariff of LGC to provide natural gas distribution service. The initial tariff authorized LGC to collect a Construction Build-out Fee (CBF) in accord with the following conditions: (1) LGC shall treat all CBF collections as contributions in aid of construction for accounting, ratemaking, and tax purposes; (2) The CBF rate shall apply on a Municipality-by-Municipality basis in a manner similar to the tariff divisions employed by regulated water utilities; (3) The LGC tariff shall define a Municipality as a recognized political subdivision i.e., a township, borough, city, or village; (4) The LGC tariff shall establish the CBF rate as separately applicable to each Municipality such that all customers within the Municipality pay a non-discriminatory identical CBF rate for an identical time; (5) The CBF shall apply for no longer than a 10-year period (120 months) in any municipality; (6) The CBF shall commence and terminate upon permanently fixed dates certain (set by tariff) for each municipality; (7) LGC shall establish the fixed dates certain by filing a tariff supplement with the Commission concurrent with the initiation of gas delivery service within each Municipality served; (8) The CBF shall not exceed \$3/Mcf for any customer or customer class, and all customers and classes within each shall be subject to an identical CBF rate; and (9) The CBF shall appear as a separate rate for each customer class identified in the LGC tariff service classifications, and shall similarly appear as a separate line item on each customer bill. See Docket No. A-2011-2275595.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
<p>Pennsylvania (Con't)</p>	<p>In 2014, the PAPUC approved LGC's application to expand its service territory to include Dimock Township, Susquehanna County, PA. LGC agreed to charge the same rates and operate under the same rules as with its prior certification. See Docket No. A-2014-2408064</p> <p>In 2014, the PAPUC also approved the Growth Extension Tariff (GET Gas) pilot program of the three Pennsylvania UGI gas companies to increase the availability of natural gas in underserved and unserved areas in the UGI companies' service territories in Pennsylvania. While not replacing the companies' line extension rules, the program allows eligible customers to pay line extension costs over a 10-year period, avoiding the significant upfront costs that often deter customers from connecting to a natural gas distribution system. Eligible customers are those seeking an extension of company facilities that requires a total capital main cost of \$15,000 more, a per customer maximum project cost of \$10,000 and where at least 50% of the prospective customers along the path of the GET Gas project can reasonably be estimated to convert their heating source to natural gas within a 12-year period. The GET Gas pilot program is funded at \$15 million per year (or \$5 million for each Pennsylvania UGI gas company) for five years. The UGI companies also are subject to annual reporting requirements to help monitor the program. See Docket No. P-2013-2356232.</p> <p>In 2014, the PAPUC also approved a 4-year Pilot New Area Service (Rider NAS) for Columbia Gas of Pennsylvania. The Rider allows consumers to pay the costs to extend new natural gas distribution over 20 years through a monthly surcharge that would not exceed \$35. Under the Rider, consumers pay interest at the weighted cost of capital because it equals the return customers would have paid in rates for an economic plant investment. Rider NAS continues for a period of four years, and the company agreed to spend no more than \$1 million per year on the Rider. Rider NAS also is subject to annual reporting requirements for monitoring purposes. See Docket R-2014-2407345.</p> <p>In 2015, the PAPUC approved a pilot project of PECO Energy containing two proposals. The first allows PECO to update its method for calculating CIACs for main extensions and service lines by applicants for new service. Specifically, PECO was permitted to switch to a Net Present Value methodology using a 40-year revenue period for its CIAC calculation. These changes result in a more accurate evaluation and assist new customers by lowering the up-front payment.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Pennsylvania (Con't)	<p>The second proposal implements a Neighborhood Gas Pilot Program designed to study coordinated strategies to increase access to natural gas service by: (1) allowing a residential customer to pay a CIAC for a main extension through a fixed monthly surcharge, instead of requiring an upfront, lump-sum payment; and (2) calculating the required CIAC by taking into account the revenue, including the fixed monthly CIAC payment, expected from the applicant or applicants requesting service and from prospective customers located along the proposed main extension that are expected to connect to the main in the future. To be eligible for the program, the customer must be in the PECO suburban territory, the proposed main extension must be greater than \$15,000, and at least 20% of eligible residential customers along a proposed main extension must sign a contract for service. PECO's pilot also is subject to reporting requirements for monitoring purposes. See Docket No. P-2014-2451772.</p> <p>In 2016, the PAPUC approved the proposal of the three Peoples Natural Gas companies in Pennsylvania to implement Rate MLX as a 5-year pilot program. Peoples believes their customers are more amenable to paying a higher delivery charge to obtain natural gas service. Therefore, the companies proposed to implement Rate MLX, which is a tiered delivery rate structure to obtain natural gas distribution service. With residential customers, the tiered charges range from \$6.79 to \$10.31, depending on the project cost and number of customers committed to the project at the time of construction. Depending on the specific project, Rate MLX could permit an extension of up to approximately 175 feet per residential customer without requiring an up-front payment, and the Rate MLX includes the costs of the customer's service line. Rate MLX also is subject to reporting requirements for monitoring purposes. See Docket No. 2542918.</p> <p>In, 2016, the PAPUC approved as part of a general rate case settlement Columbia Gas of PA's proposed Large Customer Incentive (LCI) program available to customers using more than 64,400 therms per year. Under the LCI program, Columbia can receive the full deposit up-front from the customer or negotiate to receive all or some of the deposit over time, through an increase in the customer charge for the customer. Terms and payment period are negotiated on a case-by-case basis, but customers participating in the program must either pay 30% of the uneconomic portion of the deposit up-front or agree to a payment period of 10 years or less. See Docket No. R-2016-2529660.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Rhode Island	In 2013, the Rhode Island PUC approved National Grid’s annual Gas Infrastructure Safety and Reliability Plan, which included an Expansion Pilot Program. Through the pilot program, the company will identify areas in Rhode Island where the distribution system could be expanded efficiently in terms of the number of potential customers and cost considerations. The company offers an incentive to offset the first 75% of the costs of the project for customers in a particular area so that the customer only bears the cost of the remaining 25%.
Tennessee	In 2013, Tennessee enacted legislation, which provides for alternative regulatory methods to allow for public utility rate reviews and cost recovery for investments in infrastructure replacement and expansion in lieu of a general rate case. The bill allows the Tennessee Regulatory Authority to authorize the recovery of costs related to infrastructure expansion for economic development, if such costs are found to be in the public interest. Expansion of economic development infrastructure may include that associated with alternative motor vehicle transportation fuel, combined heat and power installations in industrial or commercial sites, or that which will provide opportunities for economic development benefits in the area to be directly served by that infrastructure.
Texas	In 2003, the Texas Legislature passed SB 1271 which established the Texas Gas Reliability Infrastructure Program (GRIP). GRIP allows a gas utility that has filed a rate case within the previous two years to file a tariff or rate schedule that provides for an interim adjustment in its monthly customer charge or initial block rate to recover investment costs, which could include the replacement of aging infrastructure or expansion of infrastructure. In 2016, the Texas Railroad Commission issued a decision in Texas Gas Service’s (TGS) base rate case permitting TGS to extend lines to serve a group of new customers outside or inside the incorporated areas or the West Texas Service Area via a CIAC. Unless not economical or reasonable, the company can allow payment of the CIAC in the form of a monthly Tapping Fee to be charged to all customers connecting to the extension of facilities each month until the company recovers the amount of CIAC required to serve the area. At least 50% of the existing homes in the area must be under contract for service for this extension of facilities to be available to the area.

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Utah	<p>The Utah PSC approved changes to Questar’s line extension policy in 2014. These changes were expected to reduce customer line extension costs and a Pilot Program would have been used to evaluate these changes through December 31, 2016. See Docket No. 13-057-05. However, the Pilot Program was subsequently superseded by legislative action. Tariff provisions intended to implement new legislation on line extension practices were approved by the Utah PSC in 2015 at Docket No. 14-057-13. The changes are intended to reduce costs of main and line extensions. For example, applicants for service no longer are required to pay the costs of a standard meter and bracket. Also, home builders may now hire contractors to install service and main extensions, subject to qualification requirements.</p>
Vermont	<p>In 2011, the Vermont Public Service Board (PSB) allowed Vermont Gas Systems to use ratepayer monies to plan for future line extensions, reasoning that it will result in increased economic development and a reduction in greenhouse gas emissions. Vermont Public Service Board Docket No. 7712—To establish a System Expansion and Reliability Fund (“SERF”) with funds provided by reductions in the quarterly Purchase Gas Adjustment rate under the Alternative Regulation Plan. Vermont Gas Systems subsequently constructed a pipeline and sought to offset rate increase through use of the SERF funds.</p>
Virginia	<p>Virginia enacted legislation in 2012, 2015 and 2016 to facilitate natural gas expansion. The 2012 law allowed gas utilities to defer the cost recovery of line extensions to future base rate cases. The 2015 law allowed costs of extensions to be recovered from the customer over time in certain circumstances. The 2016 law allowed the Virginia State Corporation Commission (SCC) to approve programs that facilitated natural gas expansion to sites for economic development. In 2016, WGL Energy filed a rate request with the Virginia SCC proposing to utilize elements of these laws. A settlement was negotiated by the parties in which these elements were approved, in part, and the case remains pending as of the Third Quarter 2017.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Washington	<p>In 2016, the Washington Utilities and Transportation Commission approved a Petition of Avista Utilities to facilitate natural gas expansion. This approval included changes to the methodology used to determine customer allowances for line extensions. The Commission also approved, for accounting purposes, the deferral of cost recovery for certain line extension expenditures to future rate cases.</p> <p>Avista also received approval for a 3-year pilot program that includes a rebate program for certain existing single-family customers that receive a natural gas line extension as part of a conversion to natural gas from another fuel source. In cases where the customer's line extension allowance exceeds the cost of providing the line extension, an "excess allowance" remains. Customers in these circumstances can, within 90 days, apply for a rebate to cover the costs of purchasing and installing high-efficiency natural gas appliances for space-heating and water-heating. See Docket UG-152394.</p>
West Virginia	<p>West Virginia enacted legislation in 2015 to facilitate replacement and expansion of natural gas infrastructure. Under the legislation, gas utilities may file Pipeline Replacement and Expansion Program (PREP) with the WV PSC, which may include proposals to extend gas mains to unserved areas.</p> <p>The WV PSC approved a settlement of the Dominion PREP Case No. 15-1600-G-390P in 2016. Dominion had proposed that customers receive no-cost extensions for up to 300 feet as part of a pipeline replacement and expansion program proposal. However, the proposal was removed by the settlement. The WV PSC also approved a proposal of Mountaineer Gas to extend mains to unserved parts of the Eastern Panhandle region in 2016. The initial 22-mile segment is under construction. See Case Nos. 15-1256-G-390P and 39033 and 16-0922-G-390P.</p>

STATE NATURAL GAS EXPANSION EFFORTS

State	Activity
Wisconsin	<p>Customers in Wisconsin may have financing options through the natural gas utility, including a bill surcharge for a specified time-period. This is especially true for area expansion programs where natural gas distribution is extended to customers in a geographic area. For example, Wisconsin utilities use an Area Expansion Program model that allows natural gas expansion to customers in a clustered geographic area using an on-bill surcharge over a 5-year period.</p> <p>Wisconsin also has a first user approach where a customer or group of customers, of any class, may seek an extension of natural gas service and pay for the uneconomic portion of the project. These “first users” are then eligible for a refund of their payment from any customers that sign up for gas service from the extension for a period of 5 years.</p> <p>Wisconsin has implemented a Focus on Energy program that helps to defray the cost of fuel-switching for customers. Eligible business program customers may be eligible for a \$0.60/therm incentive,⁶⁰ and eligible residential customers may be eligible for cash incentives for new, energy-efficient appliances such as furnaces and water heaters.⁶¹</p> <p>The Wisconsin PSC opened an investigation into natural gas utility line extension rules in 2016 at Docket 5-GI-116. Wisconsin PSC staff has proposed a model tariff approach to regulation, and staff is currently working with utilities and stakeholders. Among other things, the model tariff approach would align the methods of calculating the costs associated with natural gas line extensions, including the evaluation of project economics. As of the Third Quarter 2017, the investigation remains open.</p>
Wyoming	<p>In 2008, the Wyoming PSC approved an Extra Incentive Allowance for SourceGas at Docket No. 30022-106-GT-07. SourceGas stated that the Regular Incentive Allowance, standing alone, was frequently inadequate for rural customers to connect to the system because the cost of the attachment substantially exceeded the Regular Incentive Allowance. In response, SourceGas proposed an Extra Incentive Allowance of up to \$5,000 over and above the Regular Incentive Allowance. The Extra Incentive Allowance applies when the overall service connection cost exceeds the Regular Incentive Allowance. The Extra Incentive Allowance is paid back over time via an additional charge on the customer’s monthly bill until it is recouped. SourceGas is also able to offer on bill financing of gas appliances.</p>

⁶⁰ See <https://focusonenergy.com/business>.

⁶¹ See https://focusonenergy.com/residential/efficient-products-appliances/residential-rewards?utm_source=vanity-url&utm_medium=vanity&utm_campaign=heatingandcooling.