**BEFORE THE**

**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

*En Banc* Hearing on Alternative : Docket No. M-2015-2518883

Ratemaking Methodologies :

**TESTIMONY OF PAULA A. STRAUSS**

**ON BEHALF OF**

**COLUMBIA GAS OF PENNSYLVANIA, INC.**

Chairman Brown, Vice Chairman Place, Commissioners Witmer, Coleman, and Powelson: my name is Paula A. Strauss, and I am the Director of Regulatory Strategy & Support for NiSource Corporate Services Company (“NCSC”)[[1]](#footnote-1), a management and services subsidiary of NiSource Inc., (“NiSource”) which is the ultimate parent company of Columbia Gas of Pennsylvania, Inc. (“Columbia” or the “Company”). On behalf of Columbia, I would like to thank you for the opportunity to appear before this Commission today and to offer comments on Alternative Ratemaking Methodologies.

NiSource, headquartered in Merrillville, Indiana, is an energy holding company whose subsidiaries provide natural gas and electricity services to nearly 4 million customers across seven states. The NiSource core operating companies engage in natural gas distribution, as well as electric generation, transmission and distribution. Its natural gas distribution operations, which operate under the Columbia Gas brand, serve at retail over 3 million residential, commercial and industrial customers with approximately 57,000 miles of pipeline in 7 states (Indiana, Kentucky, Maryland, Massachusetts, Ohio, Pennsylvania and Virginia). The NiSource gas distribution

companies are now: Bay State Gas Company dba Columbia Gas of Massachusetts, Columbia Gas of Kentucky, Inc., Columbia Gas of Maryland, Inc., Columbia Gas of Ohio, Inc., Columbia Gas of Pennsylvania, Inc., Columbia Gas of Virginia, Inc., and Northern Indiana Public Service Company. NiSource and its natural gas distribution operating companies have determined that the use of certain Alternative Ratemaking Methodologies, which I describe below, are both appropriate and necessary rate designs to be used across the NiSource footprint. However, NiSource and Columbia do not support a “one size fits all” strategy to rate design, as by its very nature, rate design involves art and not just science. Therefore, it is important that each utility and its operations be reviewed separately to determine which rate design(s) may best serve the utility’s customers and its operations.

Again, NiSource and Columbia have determined that various alternative ratemaking methodologies are appropriate for use in designing residential rates and have requested and received approval for these rates from this and other state commissions. As I will discuss, since 2011 Columbia has requested approval of the following alternative ratemaking methodologies: (1) a Levelized Distribution Charge (“LDC”); (2) a Revenue Normalization Adjustment (“RNA”); and (3) a Weather Normalization Adjustment (“WNA”). Presently, Columbia has a WNA in operation on a pilot basis and, as detailed below, the WNA is operating as expected by adjusting the temperature-sensitive portion of customers’ bills to mitigate the impact of weather. My testimony will review the various alternative rate methodologies that Columbia has proposed in Pennsylvania, as well as those in place across the NiSource footprint.

**Introduction**

Before beginning a discussion concerning alternative ratemaking methodologies, it is important to emphasize the traditional principles that guide the development of rate design. These principles include: efficiency, simplicity, continuity, fairness, and earnings stability. An efficient rate design provides an accurate basis for consumers’ decisions and affords the Company a reasonable opportunity to recover the costs of providing distribution service. A simple rate structure is understood by customers. The goal of rate continuity implies that customers will have an adequate opportunity to adjust their consumption patterns, as needed, allowing the opportunity to achieve conservation and energy efficiency goals. A fair rate design considers results of allocated cost of service studies in determining a customer class’ total revenue responsibility. Finally, earnings stability means that the Company’s revenue resulting from its rates should not vary significantly over the period of a few years.

My testimony addresses several of the items included within the “Topics Designed to Guide the Discussion” offered by the Commission in its invitation to participate in this hearing. At the outset, I will briefly detail Columbia’s history of proposing innovative alternative rate designs, including the LDC that was previously proposed for residential customers, as well as RNA and WNA. Again, Columbia currently has a pilot WNA in place. However, as discussed below, the LDC remains Columbia’s preferred residential rate design and, therefore, my testimony addresses cost causation, stability and simplicity, along with other benefits of a residential LDC. Lastly, I provide a brief review of jurisdictions within the NiSource footprint that utilize alternative rate designs that are similar to Columbia’s recent proposals.

**Columbia’s History of Proposed Alternative Rate Designs**

In Pennsylvania base rate cases, a utility’s recovery of fixed costs typically involves, at most, a modest increase in monthly customer charges for various rate classes. This leaves the bulk of the revenue increase to be recovered through usage based distribution rates. Since 2008, Columbia has filed for six base rate increases and, in two of those cases, the Company submitted residential rate design proposals that sought to depart from traditional methods. First, in 2011, Columbia proposed the establishment of a monthly LDC for its residential customer class. The LDC, as proposed, would have permitted Columbia to recover fixed costs through a higher monthly customer charge, while using volumetric rates to recover variable costs, such as gas costs and certain riders. However, since the LDC was not approved by the Commission, Columbia considered other residential rate design options in its next base rate proceeding.

In its 2012 base rate case, Columbia expanded its alternative rate design options to include proposals to implement a residential RNA and WNA, as well as the LDC that it had first proposed in 2011. In the next few sections of this testimony, I describe each of these rate design mechanisms and explain the reasons that Columbia has determined that LDC is the preferred rate design for its residential customers.

**Levelized Distribution Charge**

LDC is essentially a straight fixed variable rate design, which features a flat monthly fee for distribution service coupled with a separate volumetric charge for the gas commodity. Under the LDC proposed by Columbia, the gas cost portion of customers’ bills would remain subject to usage based rates. However, fixed costs – which are not impacted by customer usage – would be recovered through a fixed charge. Thus, the flat fee replaces both the “traditional” customer charge and the usage-based distribution rate and allows the utility to have a steady revenue stream that is linked to customer count instead of gas throughput. Likewise, the customer pays the same fixed amount for distribution service each month.

As stated above, under the LDC gas costs would continue to be charged on the basis of commodity usage, as would the unbundled uncollectibles cost that relates to gas cost charges. In addition, Columbia’s Rider USP – Universal Service Plan would continue to be charged on a volumetric basis. Low income customers served under Columbia’s Rate CAP – Customer Assistance Program (“CAP”) would continue to be billed based upon their CAP payment. However, the current CAP shortfall that is recovered under Columbia’s Rider USP would likely be reduced with a residential LDC because historic usage patterns have generally shown that CAP customers, as a group, use more gas than average non-CAP residential customers. For example, during the 12-month period ended November 2015, the average CAP customer on Columbia’s system consumed approximately 980 therms, while the average non-CAP residential customer used about 720 therms.

Columbia recognizes that a residential LDC represents a substantial departure from the customer charge and volumetric base rate structure that Pennsylvania gas utilities traditionally have used for residential rate design. However, the Company respectfully submits that there are a number of sound reasons associated with favoring a new approach for residential rate design. The sections below focus on the LDC and address several of the “Topics Designed to Guide the Discussion” offered by the Commission:

**LDC Accurately Reflects Cost Causation and Sends Proper Price Signals**

One of the fundamental reasons for favoring the adoption of the LDC for residential customers is that it most accurately reflects cost causation. Simply stated, Columbia incurs costs to provide distribution service to residential customers that do not vary with customer usage. A gas utility designs and installs a distribution system to meet customers’ design day requirements. These distribution facilities include mains, regulators, services and meters. These costs are fixed and do not vary with the amount of gas consumed. A rate design should follow costs. Columbia submits that recovery of the same level of distribution costs from all residential customers, regardless of their levels of consumption, is consistent with that rate design principle. Traditional usage-based recovery of fixed costs improperly causes lower use customers to be subsidized by higher than average use customers and, as such, is out of step with cost causation. In summary, a residential LDC removes existing intra-class cross subsidies that result from charging distribution costs on a volumetric basis.

Further, a proper price signal resulting from the use of a residential LDC may help to provide clarity to customers shopping for CHOICE service. Currently, customers’ bills include volumetric charges for gas and distribution service, along with Rider USP. Charging distribution service as a fixed fee would eliminate one of the variable charges that appears on a customer’s bill. As described in the next section, accurate price signals for distribution service are also important for customers considering energy efficiency and conservations measures.

**Alignment of LDC with Energy Efficiency and Conservation**

Opponents of the LDC may suggest that such a rate design will discourage customer conservation. However, Columbia submits that current usage-based pricing of fixed distribution costs gives false price signals to customers. When fixed costs are recovered on a usage basis, a customer’s perceived conservation “savings” are distorted because the customer receives a bill reduction when there is no matching reduction to Columbia’s distribution costs. As a result, a regulated entity like Columbia will under recover its costs, contributing to the need to file for a rate increase. This results in a cycle of potentially inefficient conservation activities and possibly the need for more frequent rate cases.

Under volumetric rates, customers who invest in conservation see their expected benefits eroded by subsequent rate cases, where dollars are added to the commodity rates to offset the loss of fixed cost recovery resulting from reduced gas usage. This may encourage other customers to adopt conservation, but discourage additional conservation from early adopters. However, the cycle will continue as new investment in conservation is again eroded by subsequent rate cases. This can lead to customer confusion and complaints, when, in future rate cases, the Company informs customers that one of the causes of the rate filing is reduced revenues due to lower customer consumption. Customers may conclude that conservation efforts serve no purpose if their efforts just lead to further rate increases. On the other hand, efficient price signals, which measure a customer’s true gas commodity cost savings, will produce the most cost-effective energy efficiency improvements.

**LDC Decreases Bill Volatility and Provides Revenue Stability**

As I noted above, under the LDC, the primary variable components of residential customers’ bills would be gas costs and Rider USP. Since all distribution costs would be recovered through a fixed charge, the LDC would result in reduced bill volatility for residential customers. In fact, LDC provides bill certainty for the base rate portion of a residential customer’s bill.

Bill certainty for customers implies revenue stability for Columbia. One possible benefit associated with increased revenue stability is the simplification of an economic analysis performed to determine the feasibility of adding new load. Since recovery of any incremental revenue requirement is foundational to an economic analysis concerning a line extension, implementing a residential LDC would assist Columbia with determining if a project is economically justified. Currently, Columbia must rely on accurate usage projections to establish the viability of a line extension. The LDC would enable Columbia to rely on expected revenues from a fixed monthly charge and remove volumetric forecasts from this equation. This would simplify the Company’s existing economic analysis and improve the decision process concerning whether a requested line extension will result in benefits for the system and other customers.

Another possible advantage of LDC concerns Columbia’s use of the Distribution System Improvement Charge (“DSIC”). The LDC, coupled with the DSIC, may provide Columbia with the best opportunity to remain out of a rate case. Columbia’s current residential rate design includes a pilot WNA program, which I describe later in my testimony. This rate design represents a positive step towards revenue and bill certainty because it addresses the impact of weather. However, in comparison to the WNA, the LDC would improve revenue and bill stability for the Company and its customers due to the recovery of fixed costs through a flat monthly charge. Enhanced revenue stability may influence Columbia’s decision to utilize the DSIC and recover capital using a historic time period, instead of filing a rate case, which permits the Company to utilize a fully forecasted rate year.

**Residential LDC Achieves Bill Simplicity**

The residential LDC achieves bill simplicity and promotes understandability of the true cost to serve a residential customer. The current volumetric distribution charge suggests that the utility’s costs to provide distribution service increase as customers use more gas, but that is simply not the case. With the exception of the cost for gas odorant, which increases with the consumption of gas, none of the Company’s distribution-related costs increase as customers consume more gas. While this has always been the case, the volumetric distribution charge has sent misleading price signals to customers over the years. Now, customers believe a gas utility’s costs increase as they consume more gas. While some customers may not care about how a utility recovers its costs, customers do care that about their bills being easy to understand.

Moving to a structure in which virtually all of the utility’s costs are recovered through a flat monthly fee will simplify a bill by splitting it into two primary components: one to recover the Company’s costs of distribution service and the other to recover the cost of the gas consumed. With a fixed monthly charge for distribution service, customers would be given a correct price signal regarding the Company’s cost of providing distribution service, and customers would clearly see how much the gas commodity costs them each month.

A change from usage-based to flat rate billing of distribution costs should not be viewed as confusing for customers. Residential customers already are accustomed to paying for many basic consumer services on a fixed monthly basis. These include local and long distance telephone service, cellular telephone service, cable and satellite service, internet access, home security and trash removal. Moreover, many customers already are familiar with levelized monthly billing for utility services, as Columbia offers budget billing consistent with the Commission’s regulations. 52 Pa. Code § 56.12(7). Indeed, Columbia’s customers are encouraged to consider budget billing as a way to even out monthly charges. Thus, adopting a fixed charge for residential distribution services should not be considered as outside the norm.

**Other Benefits Provided by Residential LDC**

Along with increasing the understandability of customers’ bills, a LDC provides many other benefits, including: (1) low implementation costs; (2) no need for rate adjustments or caps; (3) consistent treatment of existing and new customers; and (4) no requirement to have periodic proceedings to “re-link” revenue with other rate making inputs. Additionally, by using a customer-based fixed charge to align rates with the cost of service, rate cases would be simplified as issues such as weather normalization and volume forecasting would be eliminated for the residential class.

1. Low Implementation Costs

The Information Technology (“IT”) costs associated with implementing a residential LDC would be minimal, since residential customers would be billed only a fixed fee for distribution service. Columbia already bills a fixed monthly customer charge. Residential customers’ bills would be revised and would no longer display a volumetric component for distribution service. After an initial one-time billing change, ongoing IT costs would likely be comparable to the costs that the Company incurs to issue bills under the current rate structure. The benefits of a residential LDC would outweigh the related IT costs.

Implementing other alternative rate mechanisms, such as RNA would cause the Company to incur ongoing implementation costs associated with additional filings, IT programming changes and possibly other items, such as reporting. Of course, implementing any new rate mechanism would cause the Company to incur costs to educate call center employees and customers.

1. Adjustments and Caps Not Required

A residential LDC mechanism would not include any adjustments, so a cap would not be necessary. Columbia’s customers would pay the same distribution charge each month, along with gas cost rates and Rider USP. On the other hand, WNA and RNA include adjustments based on weather or benchmark revenues. While these rate mechanisms may be beneficial for both customers and the Company, they are more complex to implement and maintain.

1. Consistent Treatment of New and Existing Customers

A residential LDC would not have a disparate impact on new customers versus existing customers. As detailed above, the LDC results in the setting of a flat monthly charge to recover a utility’s fixed costs to provide distribution service. This results in limiting variable costs to the gas commodity and other limited variable charges. Therefore, all non-CAP residential customers, regardless of the time when they came onto the utility’s system, would pay the same fixed distribution charge.

1. No Need to Re-link Revenue

Rate proceedings to “re-link” revenue with other ratemaking inputs would not be necessary with a residential LDC. Columbia’s affiliate, Columbia Gas of Ohio, Inc. (“COH”) provides a solid example of how the LDC can be established during a base rate case with no re-linking needed for a number of years. COH’s LDC was phased in with an initial rate change occurring on December 3, 2008. The first rate change included a higher fixed charge and a reduced volumetric rate. The second change became effective on December 3, 2009 and the LDC has remained constant for new and existing customers since that date.

**Low Income Residential Customers are Not Disadvantaged by LDC**

Critics of the LDC are apt to argue that it has an unequal impact on low income customers. However, in its 2011 rate case, Columbia presented data on the average usage of residential customers participating in its various energy assistance programs. This data demonstrated that the average annual usage of Columbia’s energy assistance program participants exceeded the average annual usage of a typical Columbia residential customer.

In preparing this testimony, Columbia has considered more current residential income and consumption data. As stated previously, for the 12-month period ended November 2015, the average CAP customer consumed approximately 980 therms, while the average non-CAP residential customer used about 720 therms. Additionally, other information analyzed by Columbia reinforces that lower-income residential customers on Columbia’s system are not necessarily lower-use residential customers. Generally, Columbia has observed that customers in all categories of income are scattered above and below the average monthly residential usage level. In fact, many low-income customers have above average gas consumption and would benefit from a residential LDC.

Further, the affordability of a rate to a specific residential customer, or a subset of customers defined by income and usage in combination, should not factor into the decision of proper rate design. If there are low income customers who would find their bills unaffordable under the LDC, then the proper approach would be to address these customers through energy assistance programs. A variety of assistance programs are available to low income customers. These programs include CAP, which offers affordable payment plans for customers with low income and long-term bill payment problems and WarmWise Low Income Usage Reduction Program (LIURP), which is a free weatherization program. Other low income assistance programs are also available in Columbia’s service territory.

**Large Volume Customers Have Not Been Included in Columbia’s LDC**

Columbia has proposed the LDC only for residential customers because this class of customers is relatively homogenous. This means that individual customer size has no effect on the distribution cost of service for residential customers. Columbia has not proposed the LDC for commercial and industrial customer classes because there is less homogeneity of usage characteristics. Commercial and industrial customer demands can vary substantially and this can impact distribution costs of service due to the variability in the investments required for meters and services for these customers. It may be appropriate to consider demand-based or other innovative rate structures for commercial and industrial classes in the future, but Columbia has not yet undertaken an examination of rate design changes for these customer classes.

**Revenue Normalization Adjustment Charge**

RNA provides benchmark distribution revenue levels regardless of changes in customers’ actual usage levels. As proposed by Columbia in its 2012 base rate case, RNA would adjust actual non-gas distribution revenue to recover the Commission-approved non-gas distribution revenue for the non-CAP residential customer class. Columbia’s proposed RNA was designed to “break the link” between residential non-gas revenue received by the Company and gas consumed by residential customers. The adjustment was to be calculated every six months based upon a comparison of benchmark distribution revenue to the actual billed revenue. Benchmark distribution revenues would be established for non-CAP residential customers, whose bills would be adjusted on per therm basis. It is important to note that residential customers’ bills would still vary with the RNA approach. However, like the LDC, under the RNA, gas cost recovery would still be subject to fluctuations and influenced by weather and customer behaviors.

The RNA promotes revenue stabilization because the RNA relies on revenue per customer, not usage per customer. Once a revenue requirement is set through a base rate case proceeding, then a baseline revenue per customer is established. The Company would refund any amount over the baseline revenue per customer and would be allowed to collect any amount below the baseline revenue per customer. Hence, the RNA is both fair and reasonable for the customer and the Company. However, for the reasons identified earlier in my testimony, the LDC remains the Company’s preferred option for residential rate design.

**Weather Normalization Adjustment Charge**

 In the 2012 base rate proceeding, the Commission approved the establishment of a pilot WNA program. The WNA design adjusts a customer’s monthly revenue based on the actual temperature experienced during the month. Under the WNA, the Company and customers are only protected from variations due to weather. The WNA adjusts only the temperature-sensitive portion of customers’ bills to reflect normal weather levels. By distinguishing between base load and temperature-sensitive load, each customer’s bill is calculated to mitigate the undesirable impacts of warmer than normal or colder than normal weather.

Columbia acknowledges that while WNA was a step in the right direction, WNA does not fully stabilize distribution revenues, as WNA only targets weather-related variances. The Company’s current residential rate design, even with WNA, is not optimal because it does not align the revenue recovered by the Company for providing gas delivery service with the costs incurred to provide that service. Further, variations in energy usage due to other factors, such as the economy and end-use energy efficiency may still occur and are not normalized through WNA. Consequently, the WNA does not provide the same bill and revenue stability offered through the RNA or the LDC. Additionally, Columbia’s WNA includes a 5% dead band, which means that a billing adjustment will only occur if the variation of actual heating degree days is lower than 95% or higher than 105% of the normal heating degree days for an individual billing cycle.

Pursuant to Paragraph 41(b) of the Joint Petition for Settlement approved by the Commission Order entered on May 23, 2013 at Docket No. R-2012-2321748, Columbia has filed reports concerning the operation of the WNA for the 2013/2014 and 2014/2015 heating seasons. These reports include the monthly computation and supporting data of the WNA. Both of those heating seasons were colder than normal and, as a result, the Company billed less to residential customers than it would have billed without the WNA mechanism. For the 2013/2014 season, WNA revenue adjustment was ($9.36M), and for the 2014/2015 season, WNA revenue adjustment was ($10.98M). So far, the 2015/2016 heating season has been warmer than normal, and information for October through January shows WNA revenue adjustment of $8.49M. This amount will change after the completion of February and March 2016.

**Alternative Rate Designs in Other Columbia Jurisdictions**

As stated in the Commission’s invitation to discuss Alternative Ratemaking Methodologies, an examination of other jurisdictional rate designs is appropriate for this discussion. In his testimony for Columbia’s 2012 rate base proceeding, Columbia’s President, Mark Kempic, outlined rate design approaches in Columbia’s sister companies.

Columbia’s affiliated company, Columbia Gas of Ohio, Inc. (“COH”) received approval from the Public Utilities Commission of Ohio for LDC.[[2]](#footnote-2) This rate design has provided more certainty that the utility will recover its revenue requirement and residential customers’ bills will remain stable, since weather is not a factor influencing COH’s recovery of revenue from residential customers. The LDC rate was also upheld in an Ohio Supreme Court case for gas utilities in 2010.[[3]](#footnote-3) The Court found that the Ohio Commission had the discretion to approve such a rate design, and that the rate design would, on average, benefit low-income customers, since low-income customers are, on average, high use customers.[[4]](#footnote-4) Both the Ohio Commission and the Ohio Supreme Court approvals of COH’s LDC demonstrates that other states have thoroughly evaluated and adopted innovative rate mechanisms, similar to those proposed by Columbia.

Another state with an alternative rate design is Massachusetts, where the Department of Public Utilities (“the Department”) approved decoupling for Columbia’s affiliate, Columbia Gas of Massachusetts (“CMA”).[[5]](#footnote-5) The Department approved CMA’s revenue decoupling mechanism structured as a “revenue per customer” approach for all customer classes. Under this approach, CMA adjusts its base rates semi-annually for all firm service customers in order to reconcile actual base revenue recoveries with benchmark base revenues. Benchmark base revenues are calculated for each customer group for the peak and off-peak seasons, reflective of CMA’s most recent base proceeding.[[6]](#footnote-6) This mechanism serves to eliminate the link between customer volumes and CMA’s earnings, thereby aligning the interests of CMA and its customers with respect to lowering customer usage.

 A third example is in Virginia, in which the State Corporation Commission (“SCC”) approved decoupling for Columbia Gas of Virginia, Inc. (“CVA”).[[7]](#footnote-7) Under the terms of that Order, CVA has implemented a Revenue Normalization Adjustment designed to reconcile weather-normalized non-gas-distribution revenues per customer to allowed distribution revenues per customer. The RNA serves to mitigate the impact of decreasing sales on CVA’s ability to recover its costs. In addition, on December 17, 2010, the SCC granted CVA a rate increase in which it increased fixed customer charges for all classes of customers and also approved a WNA, both of which serve to mitigate the impact of weather on CVA’s revenues and customers’ bills. CVA’s RNA applies to residential and commercial small general service customers, but does not apply to industrial small general service customers.[[8]](#footnote-8)

Columbia Gas of Maryland, Inc. (“CMD”) and Columbia Gas of Kentucky, Inc. (“CKY”) have WNA mechanisms with no dead bands for adjustments. These WNA mechanisms are applied to residential and small commercial customers and are effective for the months of December through April. CMD also has a monthly RNA adjustment for residential customers.

**Conclusion**

 In closing, Columbia, and its affiliated gas companies in Maryland, Virginia, Kentucky, Massachusetts, and Ohio have determined that the use of alternative rate designs is appropriate and beneficial for use on their systems. Indeed, each of the gas companies providing natural gas distribution service under the Columbia Gas brand in these states has requested and received approval of various mechanisms. As with the Columbia companies, each utilities’ rate design options should be carefully analyzed, since there is not a single rate design applicable in all circumstances. For the reasons described in this testimony, Columbia Gas of Pennsylvania’s continues to maintain that the preferred rate design option for its residential customers is a Levelized Distribution Charge.

Presented on March 3, 2016.

1. As Director of Regulatory Strategy and Support, my principal responsibilities include all regulatory activities for Columbia Gas of Pennsylvania, Inc. I oversee and prepare regulatory compliance filings and provide base rate case support. I served as Columbia’s Rate Design Witness in Docket R-2012-2321748, where I presented proposals for three residential alternative rate designs, as discussed in this testimony. [↑](#footnote-ref-1)
2. Order dated Dec. 3, 2008 at Case Nos. 08-0072-GA-AIR, 08-0073-GA-ALT, 08-0074-GA-AAM and 08-0075-GA-AAM [↑](#footnote-ref-2)
3. *Ohio Consumers’ Council v. Pub. Util. Comm.,* Slip Opinion No. 2010-Ohio-6329 (Dec. 23, 2010) [↑](#footnote-ref-3)
4. *Id.* [↑](#footnote-ref-4)
5. Bay State Gas Company d/b/a Columbia Gas of Massachusetts; Order dated Oct. 30, 2009 at Docket No. D.P.U. 09-30. [↑](#footnote-ref-5)
6. Columbia Gas of Massachusetts; Order date Oct. 7, 2015 at Docket No. D.P.U 15-50 [↑](#footnote-ref-6)
7. Order dated October 28, 2009 at Case No. PUE-2009-0051. [↑](#footnote-ref-7)
8. Case No. PUE-2010-000017 (Dec. 17, 2010) [↑](#footnote-ref-8)