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**A Report by the Staff of the  
Public Utilities Commission of Ohio**

**Columbia Gas of Ohio, Inc.  
Case Number 16-2422-GA-ALT**

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BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Columbia )  
Gas of Ohio, Inc. for Approval of an )  
Alternative Form of Regulation. )

Case No. 16-2422-GA-ALT

Asim Z. Haque, Chairman  
M. Beth Trombold, Commissioner  
Thomas W. Johnson, Commissioner  
Lawrence K. Friedeman, Commissioner  
Daniel R. Conway, Commissioner

To the Honorable Commission:

In accordance with the provisions of Ohio Adm. Code 4901:1-19-07, the Commission's Staff submits its investigation findings and recommendations within the Staff Report.

The Staff Report was prepared by the Commission's Rates & Analysis Department. The Staff Report is intended to present for the Commission's consideration, the results of the Staff's investigation. It does not purport to reflect the views of the Commission nor should any party to the above captioned proceeding consider the Commission as bound in any manner by the representations or recommendations set forth therein. The Staff Report, however, is legally cognizable evidence upon which the Commission may rely in reaching a decision in this matter. (See *Lindsey v. Pub. Util. Comm.*, 111 Ohio St. 6 (1924)).

Respectfully submitted,



Patrick Donlon  
Director  
Rates & Analysis Department

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**Columbia Gas of Ohio, Inc.**  
**Case No. 16-2422-GA-ALT**

**Introduction**

In accordance with R.C. 4929.05, 4929.051(B), and 4929.11, on February 27, 2017, Columbia Gas of Ohio, Inc. (Columbia or Company) filed an application (Application) in the above captioned case seeking approval by the Public Utilities Commission of Ohio (Commission) of an alternative rate plan to continue its natural gas Infrastructure Replacement Program (IRP or Program) and IRP Rider for a five-year period, covering investment years 2018 through 2022. The Company proposes to keep the scope, structure, and timeframes of the IRP the same as the IRP the Commission approved in Case No. 11-5515-GA-ALT (11-5515 case), the case where the IRP Program was most recently reauthorized. The only change that the Company recommends is an increase to the residential rate caps that were adopted in that case. Columbia proposes that the \$1.00 cap on annual increases to Rider IRP for the Small General Service (SGS) class of customers (includes residential and smaller commercial customers) be increased to \$1.30. The Staff of the Public Utilities Commission of Ohio (Staff) has completed its investigation of Columbia's Application and makes the conclusions and recommendations set forth below.

**Background**

Columbia is an Ohio corporation engaged in the business of providing natural gas service to approximately 1.4 million customers in 60 of Ohio's 88 counties. As such, Columbia is a public utility as defined by R.C. 4905.02 and 4905.03 and is subject to the Commission's jurisdiction. Columbia filed its Application in this case pursuant to R.C. 4929.05, 4929.051(B), and 4929.11. R.C. 4929.05 specifically governs approval of alternative rate plans for natural gas companies. This section provides that the Commission shall approve an alternative rate plan if the applying natural gas company sufficiently demonstrates, and the Commission finds, that the natural gas company: (1) is in compliance with R.C. 4905.35, prohibiting discriminatory or preferential treatment in the provision of its services, (2) is currently and is expected to continue to be in substantial compliance with R.C. 4929.02 setting forth the State's policy relating to natural gas goods and services, and (3) has proposed an alternative rate plan that is just and reasonable.<sup>1</sup> The natural gas company has the burden of proof to show that its proposed alternative rate plan meets all of the preceding requirements.<sup>2</sup> In addition, a natural gas company's application for an alternative rate plan filed pursuant to R.C. 4929.05 must comply with applicable Commission rules governing approval and implementation of alternative rate plans, most notably Ohio Adm. Code 4901:1-19-01, 4901:1-19-06, and 4901:1-19-07.

Columbia's IRP was first authorized by a Commission Opinion and Order issued on October 15, 2008 in Case No. 08-072-GA-AIR, *et al* (2008 Rate Case Order), the Company's most recent base rate case. Columbia's IRP initially called for replacement of 4,050 miles of bare steel, cast iron, and wrought iron (BS/CI) pipelines in its distribution system over a 25-year period (commencing in 2008) via the Accelerated Mains Replacement Program (AMRP). In addition, Columbia

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<sup>1</sup> R.C. 4929.05(A).

<sup>2</sup> R.C. 4929.05(B).

estimated that it would replace approximately 360,000 steel service lines under the AMRP. The 2008 Rate Case Order also authorized Columbia to recover costs incurred under its Riser Replacement Program (RRP) to replace approximately 320,000 natural gas risers that had been deemed “prone to fail” and approved for replacement over a three-year period in a Commission Opinion and Order issued in Case Nos. 07-478-GA-UNC and 07-237-GA-AAM. The RRP also included recovery of Columbia’s costs to replace and assume ownership and ongoing responsibility for all customer-owned service lines when such lines were separated from service in order to repair leaks. The Commission further authorized Columbia to recover the costs of installing automated meter reading devices (AMRD) on all residential and commercial meters in its system over five years (commencing in 2009) under the Company’s AMRD Program.

The 2008 Rate Case Order provided that costs for all three programs (AMRP, RRP, and AMRD) would be recovered via Rider IRP and established a process for annual review of Columbia applications to increase Rider IRP. This process called for Columbia to file a pre-filing notice containing financial schedules with a combination of actual and estimated data by November 30 each year followed by an application submitted by February 28 of the succeeding year. The updated application was to contain updated final schedules supporting rates to go into effect on May 1 of that year. The process provided opportunities for Staff and intervening parties to review and comment on the Company’s applications. The 2008 Rate Case Order authorized the IRP for an initial five-year period, 2008 through 2012, and established a cap on annual IRP Rider increases. For the first recovery year of the program in 2009, IRP Rider rates could not exceed \$1.10 per customer per month for the SGS class of customers. In 2010, the total rate was capped at \$2.20 per SGS customer per month and increases for years 2011-2013 were capped at an additional \$1.00 per SGS customer per month each year.

On May 8, 2012 in Case No. 11-5515-GA-ALT, Columbia filed an application for authority to continue its IRP for another five-year period, 2013 through 2017. On November 28, 2012, the Commission reauthorized the IRP for the 2013-2017 period through approval of a Stipulation and Recommendation (2012 Stipulation) filed by the majority of the parties in the case. The approved 2012 Stipulation also provided that the process for filing, review, and approval of annual IRP applications would remain the same as previously approved in the 2008 Rate Case Order and established new caps on annual increases to Rider IRP. The new caps for the 2013-2017 period (to be recovered in years 2014 through 2018) were set at \$6.20 in 2013 and set to rise \$1.00 per year to \$10.20 in 2017. The 2012 Stipulation also provided for several changes to the scope of the AMRP segment of the IRP as well as other modifications and agreements, including the following:<sup>3</sup>

- The parties agreed that the scope of the 25-year AMRP component of the IRP was primarily for the replacement of approximately 4,100 miles of BS/CI pipe and that, by December 31, 2017, Columbia is expected to have replaced approximately 1,640 miles of BS/CI pipe.<sup>4</sup>

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<sup>3</sup> The summary is provided for convenience and is not intended to supplant or alter the Stipulation as approved by the Commission in Case No. 11-5515-GA-ALT.

<sup>4</sup> 4,100 miles of BS/CI pipe divided by the 25 years of the AMRP equals 164 miles per year. By the end of 2017, the AMRP will have been in existence for 10 years. Consequently, 164 miles per year multiplied by 10 years results in 1,640 miles.

If Columbia does not meet the 1,640 miles goal, then the costs to replace the shortfall cannot be recovered through Rider IRP.

- The scope of the AMRP was modified to expressly include interspersed sections of non-priority pipe (i.e., any pipe that is not BS/CI, wrought iron, or unprotected coated steel pipe which was collectively termed “priority pipe”) when, in the course of a BS/CI replacement project, it is more economical to replace such pipe than it is to tie into the interspersed sections up to certain limits. The limits were set at 435 feet of interspersed 2-inch diameter pipe, 365 feet of 4-inch pipe, 250 feet of 6-inch pipe, and 205 feet of 8-inch pipe.
- The scope of the AMRP was modified to expressly include first generation plastic pipe (known as “Aldyl-A” plastic pipe) when such pipe was associated with priority pipe replacement projects up to a limit of 5% of the total AMRP footage replaced in the same year.
- The scope of the AMRP was modified to expressly include steel pipe installed and field-coated before 1955 (termed “ineffectively coated” steel pipe) and treat it as bare steel pipe. For field-coated pipe that was installed after 1955, Columbia was to conduct electric conductivity tests and replace any pipe found to be ineffectively coated in accordance with the Program. The cost of the tests will be recovered via the IRP Rider when pipe segments are determined to be ineffectively coated and replaced. Costs for testing pipe segments that are determined to be effectively coated will not be recovered under the Program.
- Costs for system improvements will be recovered in the IRP Rider only if the improvements serve the same role as the priority pipe replaced and cost no more to replace than similarly sized priority pipe.
- The cost of moving inside meters to outside locations were to be capitalized and recovered via the IRP Rider when such meters were connected to priority pipe that is replaced under the Program and the Company increases the operating pressure of the replaced service lines connected to the meters to regulated pressure (i.e., greater than 1 psig) within two years of the replacement.
- Costs associated with governmental relocation projects can be included in Rider IRP only if plastic pipe associated with the relocation is less than or equal to 25% of the total footage relocated.
- The operations and maintenance (O&M) savings mechanism was modified to compare annual expenses incurred for leak inspection, leak repair, general/other, and one-half of supervision and engineering activities against baseline values for the same activities for the 12 months ended on September 30, 2008. Only activities showing savings were included in the IRP revenue requirement calculation. In addition, the greater of the actual savings realized or \$750,000 for 2012 expenditures, \$1.0 million for 2013 expenditures, and \$1.25 million for expenditures in 2014-2016 was to be included in the annual revenue requirement calculations.

- Columbia agreed to complete AMRD installations by December 31, 2013 and that costs of installing any AMRDs after December 31, 2013 would not be recovered in the IRP Rider.
- Columbia agreed to continue to fund a customer assistance fund that had been approved in the 2008 Rate Case Order and was originally scheduled to terminate after the 2012-2013 heating season through the 2017-2018 heating season. Columbia agreed to provide \$512,500 per heating season for a total five-year contribution of \$2,562,500. The fund was to be operated in conjunction with the Ohio Development Services Agency and its associated network agencies to provide customer assistance through the Emergency Home Energy Assistance Program.

In this case, Columbia filed notice of its intent to file an application for approval to continue the IRP on December 27, 2016, and filed its Application on February 27, 2017. Pursuant to Ohio Adm. Code 4901:1-19-07(A)(1), on March 24, 2017 the Director of the Public Utilities Commission of Ohio's (PUCO) Rates & Analysis Department filed a letter in the case indicating that Columbia's Application complies with the Commission's alternative rate plan filing rules. On April 6, 2017, an Attorney Examiner assigned to this case issued an Entry establishing the following procedural schedule:

- April 19, 2017 – Deadline for filing of motions to intervene
- July 10, 2017 – Deadline for filing of the Staff Report
- August 9, 2017 – Deadline for filing objections to the Staff Report or Columbia's Application

On April 6, 2017, the Attorney Examiner granted motions to intervene in the case by the Office of the Ohio Consumers' Counsel (OCC), Ohio Partners for Affordable Energy (OPAE), and Industrial Energy Users-Ohio (IEU-Ohio).

### **Columbia's IRP Progress**

Columbia reports in its Application that by the end of the current IRP authorization period ending on December 31, 2017 it plans to have replaced 1,640 miles of priority pipe<sup>5</sup> and 200,000 associated service lines. In addition, it reports that, through 2016, it has repaired or replaced a total of 256,989 customer service lines under the IRP. Columbia also reports that it completed replacement of all prone-to-fail risers in its system in June 2011 and completed its AMRD Program at the end of 2013. The Company notes that it will continue to include ongoing costs for the risers and AMRD Programs in future IRP applications until the costs of the Programs are included in the Company's base rates during its next base rate case.

### **Columbia's Application and Proposed Changes to the IRP**

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<sup>5</sup> In Footnote 48 on page 7 of the Application, Columbia states that the reported 1,640 miles of priority pipe includes 155 miles of unprotected steel. Staff does not concede that including unprotected steel would count towards the 1,640 miles to be replaced as described in Section 4 (page 3) of the approved Stipulation in Case No. 11-5515-GA-ALT. This issue can be resolved when Columbia files its next annual IRP recovery application.

In its Application, Columbia requests that the Commission reauthorize its IRP for another five-year period, covering investment years 2018 through 2022 (recovery years 2019-2023). The Company maintains that its IRP meets all of the legislative requirements for approval of alternative rate plans set forth in the Revised Code, and that its Application and supporting documents comply with the Commission's rules governing applications for alternative rate plans. Further, Columbia requests that the Commission approve the IRP with the same terms, conditions, procedures, and processes that the Commission adopted in Case No. 11-5515-GA-ALT with a change the cap on annual Rider IRP rate increases. Columbia requests that the current cap of \$1.00 per SGS customer per month on annual IRP Rider increases be increased to \$1.30 per SGS customer per month.

Columbia supports the proposed five-year IRP renewal period by pointing out that the Commission authorized the IRP for an initial five-year period in Case No. 08-072-GA-AIR and subsequently reauthorized the Program for a second five-year period in Case No. 11-5515-GA-ALT. The Company maintains that the IRP is meeting its objective of replacing BS/CI and other priority pipe on an accelerated basis (over 25 years) and that the IRP complies with the legislative requirements for approval of alternative rate plans.

The Company supports its contention that the IRP comports with the legislative requirements governing approval of alternative rate plans by addressing each statutory provision related to approval of alternative rate plans. In regards to R.C. 4905.35 (prohibiting discriminatory or preferential treatment in the provision of public utility and bundled services), Columbia states that its public utility services are offered and provided to all similarly situated persons and customers on a comparable and nondiscriminatory basis and it provided a copy of its Standards of Conduct (current Tariff Sheet No. 22, Section VII) as verification. The Company also states that it presently does not offer any unregulated services that are bundled with its regulated utility services. Regarding current and ongoing substantial compliance with the State policies enumerated in R.C. 4929.02, Columbia maintains that its Gas Transportation Service Program and CHOICE Program both offer unbundled and comparable natural gas goods and services that permit customers to choose the supplier, price, terms, and conditions that meet their needs. In keeping with the State policies, the Company states that these programs promote diversity of natural gas supplies and suppliers by giving customers effective control over the selection of supplies and suppliers. Columbia further maintains that extending Rider IRP will continue to advance the State's policies by enabling it to continue to timely recover investments for replacing aging infrastructure on an accelerated basis towards continued provision of adequate, reliable, and reasonably natural gas goods and services. In addition, the Company states that it has worked proactively with stakeholders in Ohio to implement unbundled and ancillary service offerings that provide customers options towards meeting their natural gas needs, including programs such as the Standard Service Offer (SSO) and Standard Choice Offer (SCO) auction process for procurement of natural gas commodity supplies. Regarding the requirements in R.C. 4929.05(A)(3) that alternative rate plans must be just and reasonable, Columbia maintains that reauthorization of the IRP will enable it to continue to improve the safety and reliability of its system and improve customer satisfaction and convenience. It further suggests that the annual rate review provided in the IRP process will ensure that the IRP Rider rate will remain just and reasonable. The Company also suggests that, since customers are currently paying approximately 30% less for natural gas



service (on a total bill basis) than they were at the end of its last base rate case (in 2008), now is the optimal time to invest in infrastructure.

Columbia points to success of the IRP in meeting its goals in support of reauthorizing the Program under the same processes, terms, conditions, and agreements that were adopted in Case No. 11-5515-GA-ALT. In support of its proposed change to the Program to increase the rate cap on annual Rider IRP increases, the Company states that it has experienced an average annual increase in the AMRP component of the IRP of 6.47%. Columbia maintains that when this annual percentage increase is used to estimate the capital necessary to install an additional 820 miles of priority pipe over the five-year IRP renewal period (164 miles per year), then the requested cap increase is proven necessary. Columbia proposes that the annual cap on Rider IRP be increased from the currently approved \$1.00 per SGS customer per month to \$1.30 per SGS customer per month. This proposed increase would raise the IRP monthly charge for SGS customers from the currently approved \$10.20 per SGS customer per month for costs incurred in 2017 to 11.50 per SGS customer per month for costs incurred in 2018. Annual increases for costs incurred in 2019 through 2022 would then increase by \$1.30 per SGS customer per month yielding proposed monthly charges for the SGS class of \$12.80 in 2019, \$14.10 in 2020, \$15.40 in 2021, and \$16.70 in 2022.

Columbia claims that it has experienced and expects to continue to experience significant annual cost increases for replacing mains and service lines under the AMRP. It further claims that these historical costs increases will require additional capital investments and increases to the annual IRP Rider cap. The Company bolsters these claims with the testimony of Donald Ayers, the Company's Director of Construction, and Diana M. Beil, the Company's Regulatory Programs Manager.<sup>6</sup> Mr. Ayers points to annual increases in per mile costs for pipeline replacement restoration, directional boring, and video locating of sewer lines as examples of increasing cost trends that will require increased capital investments and future increases the Rider IRP rate cap. He states his opinion that pipeline replacement costs are likely to continue to trend upward. In addition, he notes that Columbia's current contracts with its blanket construction contractors will expire at the end of 2020 and must be renegotiated for new prices to take effect in 2021. He suggests that both the increasing trend in pipeline replacement costs and new blanket construction contracts with contractors will continue to drive IRP costs upward during the 2018-2022 renewal period. Ms. Beil examines Columbia's historical year-to-year per mile cost changes to determine an average annual increase in AMRP costs of 15.57% from the beginning of the Program through 2016 and 6.47% for the 2013 through 2016 period. Ms. Beil states that Columbia believes that the 2013-2016 period is more representative of what is more likely to happen during the 2018-2022 renewal period because this period eliminates abnormal changes in the Program's early years, represents years when the Program was more mature and stable, and includes the most recent contract renegotiation with the Company's blanket construction contractors, which took effect in 2016. Therefore, the average 6.47% annual cost increase from the 2013-2016 period was used to estimate the capital necessary to install 820 miles of priority pipe during the renewal period and develop the Company's proposed maximum IRP Rider rates.

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<sup>6</sup> See *In the Matter of the Application of Columbia Gas of Ohio, Inc. for Approval of an Alternative Form of Regulation*, Case No. 16-2422-GA-ALT, Prepared Direct Testimony of Donald Ayers, Prepared Direct Testimony of Diana M. Beil (Feb. 27, 2017).

### **Staff's Investigation**

Staff investigated Columbia's proposal to renew the IRP for another five-year period as approved by the Commission in Case No. 11-5515-GA-ALT and its proposal to increase the annual IRP Rider cap by reviewing the Company's Application and supporting testimony, issuing data requests, conducting follow-up meetings with Columbia personnel responsible for implementing the IRP, and issuing follow-up information requests when necessary. Based on this investigation, Staff makes the conclusions and recommendations by topic area set forth below.

### **Staff's Conclusions and Recommendations by Topic Area**

#### **IRP Term**

Columbia is requesting that the Commission authorize the IRP for a new five-year term covering investment years 2018-2022. The Company states that the IRP is on track to complete replacement of BS/CI and other priority pipe within its system by the end of 2033. Staff agrees with the Company's assessment. The Commission initially authorized the IRP for a five-year period in Case No. 08-072-GA-AIR *et al* and subsequently reauthorized the Program for another five-year period in Case No. 11-5515-GA-ALT. In Staff's opinion, the five-year cycle for IRP renewal provides an appropriate time frame to enable Columbia to engage in long-term planning and control costs through securing long-term contracts with its construction contractors while still affording opportunities for mid-course reviews and modifications. Therefore, Staff recommends that the Commission reauthorize the IRP for the 2018 through 2022 period.

#### **Legislative Compliance and Commission Rule Requirements for Approval of an Alternative Rate Plan**

Columbia recommends that the Commission find that its plan to continue the IRP for another five years complies with the legislative requirements for approving alternative rate plans and that its Application and supporting documents in this case comply with applicable Commission rules governing alternative rate plan applications. Regarding the Application's compliance with the Commission's rules governing alternative rate plan applications, Staff agrees that it does. In a letter filed in this case on March 24, 2017, the Director of the PUCO's Rates & Analysis Department stated Staff's opinion that Columbia's Application comports with applicable Commission rules for alternative rate plans. Staff also agrees that Columbia and the IRP are in compliance with R.C. 4905.35, prohibiting discriminatory or preferential treatment in the provision of its services. Staff found no evidence that Columbia unduly discriminates or provides or intends to provide preferential treatment in administration of its IRP. Similarly, in Staff's opinion, Columbia's current IRP is in compliance with the State policies established in R.C. 4929.02. However, as discussed in more detail below, it is Staff's position that Columbia's proposal to increase the annual IRP Rider rate cap to \$1.30 per SGS customer per month and plan to maintain the current methodology for determining O&M savings used in the annual IRP revenue requirement calculation do not comply with the provision in R.C. 4929.02(A)(1) regarding reasonably priced natural gas services or R.C. 4929.05(A)(3) requiring that alternative rate plans be just and reasonable.

Staff recommends that the Commission find that Columbia's Application is in Compliance with the Commission rules governing alternative rate plan applications and that Columbia and the current IRP is in compliance with R.C. 4905.35, prohibiting discriminatory or preferential treatment. In addition, with adoption of the modifications recommended below concerning the IRP Rider rate cap and methodology for determining O&M savings, Staff would then recommend that the Commission find that Columbia's IRP proposal in this case is in compliance with R.C. 4929.02 and 4929.05(A)(3).

Keeping the IRP Terms, Conditions, Procedures, and Agreements the Same as Approved in Case No. 11-5515-GA-ALT

Except for changing the IRP Rider rate cap, Columbia proposes that the Commission reauthorize the IRP under the same terms, conditions, procedures, and agreements that were approved with adoption of the 2012 Stipulation in Case No. 11-5515-GA-ALT. Staff largely agrees with continuing the Company's previously authorized IRP with some exceptions. Staff does not agree with continuing the methodology for determining the O&M savings or the minimum O&M savings provided in the 2012 Stipulation.

The additions to the IRP scope and corresponding limitations on the new additions agreed to in the 2012 Stipulation have enhanced safety while not adding significantly to the Program's costs. Columbia reports that it is on pace to complete replacing the BS/CI and related priority pipe within the Program's original 25-year period and that its annual Program rate increases have consistently come in under the annual rate caps. In addition, the Program's process for annual review of each year's IRP investments and resulting rates works well and provides for effective oversight. Also, Columbia's commitment to continue to provide funds to a fund established to aid low income customers when other sources of aid have been exhausted provides important benefits to customers. Therefore, Staff supports the Commission's reauthorization of the IRP for a new five-year period under most of the same terms, conditions, procedures, and agreements that were adopted in the 2012 Stipulation.

Staff does not support keeping the same methodology for determining the O&M savings that will be passed back to customers through reductions to the annual IRP revenue requirement or Columbia's proposal to keep the minimum O&M savings at \$1.25 million per year. The current methodology and minimum savings run counter to the Commission's expectations for O&M savings produced by mature accelerated mains replacement programs and are insufficient when compared to other similar replacement programs.

Columbia has costs for activities such as leak-surveillance, leak-repair, and related supervision and engineering built into customers' base rates that were last set in 2008. These costs are reduced as formerly leaking and at-risk BS/CI pipelines are replaced with new non-leaking plastic and protected steel pipe under the IRP. These "O&M savings" are passed back to customers in the form of a reduction to the annual IRP revenue requirement since base rates are not lowered to reflect the avoided costs that are still being collected from customers. As described above, the approved 2012 Stipulation provided that Columbia will compare its actual annual expenses incurred for leak inspection, leak repair, general/other, and one-half of supervision and engineering activities against baseline values for the same activities set in 2008. The Company then includes

the better of its actual savings realized or an agreed upon minimum of \$1.25 million as a reduction to the annual IRP revenue requirement.

The current O&M savings process did not produce actual O&M savings amounts greater than the guaranteed minimum amount of savings thus far for the 2013-2017 period covered in the 2012 Stipulation. The minimum savings amount is insufficient compared to other similar pipeline replacement programs. Columbia and all of the gas utilities with accelerated replacement programs have consistently argued that O&M savings should increase as their programs mature and more miles of BS/CI are replaced as long as base rates are not reset. This argument is intuitive and has been demonstrated in other utilities' replacement programs. For example, Dominion East Ohio Gas (Dominion) has a program very similar in scope as Columbia's AMRP that is on the same time schedule. Dominion uses a similar methodology to compute the O&M savings reductions to its annual revenue requirement calculations, but Dominion averaged more than \$3.2 million in savings per year for the 2013-2016 time period compared to Columbia's current and proposed \$1.25 million per year. Similarly, in the first five years of its accelerated replacement program, Duke (which had a much smaller program) averaged more than \$1.7 million in savings per year.

Columbia's AMRP has been successful in reducing the number of leaks reported on Columbia's system. For example, in a response to OCC interrogatories in this case,<sup>7</sup> Columbia reported that it had a total of 4,871 leaks in 2012 for all leak types (Grades 1, 2, and 3) versus 3,859 in 2016. Fewer leaks to monitor and fewer leaks to repair should result in increased O&M savings. Yet, at the end of the proposed IRP renewal period in 2022 Columbia will have completed 15 years of its original 25-year program (60 % complete), but its annual O&M savings will still not have attained the levels that Duke achieved in its first five years (when it was approximately 33% complete). Staff recommends that the Commission direct Columbia to work with Staff and interested parties to ascertain the reasons why Columbia is not achieving O&M savings results comparable to other utilities and to recommend a new methodology prior to January 1, 2018, which is the first day of the proposed IRP renewal period.

#### Columbia's Proposal to Increase the Rider IRP Rate Cap

Staff also does not agree with Columbia's proposal to increase the annual Rider IRP rate cap. In Staff's opinion, the available evidence does not support such a large cap increase (i.e., from \$1.00 per SGS customer per month to \$1.30 per SGS customer per month, which is a 30% increase) for a number of reasons. The first, and perhaps most salient, reason is that, despite all of the historical cost increase that Columbia points to as support for raising the IRP Rider rate cap, such increases have not caused Columbia to exceed the current rate cap. In fact, Columbia has never even reached its allowed rate cap in any year of the IRP. Staff agrees with Columbia that the 2013-2016 historical time period is likely the most representative period for estimating what might happen to IRP costs through the proposed renewal period, but even during this period Columbia averaged \$0.44 per year below the applicable annual rate caps. In the most recent IRP filing in 2016, the Company's IRP Rider rate was \$0.24 below the allowed \$9.20 per month rate for SGS customers despite the facts that the Company installed approximately seven more miles of pipe than the

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<sup>7</sup> Columbia responses to OCC Interrogatories Set 2, Nos. 24, 26, and 28 (June 23, 2017).

average for the 2013-2016 period and increased contractor prices that had been negotiated in 2015 were in effect for all of 2016.

Because Columbia's IRP Rider rate in 2016 was \$0.24 below the cap and the current proposal would increase the cap by \$0.30, the practical effect of Columbia's proposal over a two-year period, 2016-2018, is an annual cap increase of \$0.54. Monthly Rider IRP rates for the SGS class would have to increase from \$8.96 in 2016, to \$10.20 in 2017, and all the way to \$11.50 in 2018. Historically, such increases have not been seen in the IRP. In fact, as noted above, Columbia has never reached the allowed cap in any year.

Staff also reviewed the Company's analysis supporting the estimated capital investment that it states that it will need to install 164 miles of BS/CI pipelines per year during the renewal period. One concern with this analysis is that, by necessity, the Company relied on a number of interconnected assumptions to arrive at its projections. These assumptions were largely derived by averaging historical year-to-year changes in various inputs to the annual IRP revenue requirement calculation such as the miles of pipe retired, costs to remove existing pipe, property taxes, etc. The Company also used internal estimates for items such as future customer counts. A problem with this approach is that there are wide year-to-year swings in the various IRP cost components. In one year the Company may replace more miles than another year. Similarly, it may retire considerably more existing pipe in one year versus another. In addition, wide variations in IRP cost drivers can exist for cost items such as the ratio of hard-surface to soft-surface restorations, rural versus urban replacements, number of service lines replaced, etc. Such year-to-year swings in the variables that drive per mile replacement costs render historical averages of costs largely unreliable, especially over a short time span. Staff agrees that the 2013-2016 time period is likely more reflective of what may happen with IRP costs during the renewal period, but the period is simply too short for the historical swings to normalize such that trends could be more reliable.

Another problem is that the Company's analysis of historical costs to support the proposed increase to the annual IRP rate cap relies on an errant assumption. To calculate the historical per mile costs for replacements, the Company divided its actual annual pipeline additions costs by the miles of BS/CI pipe replaced the same year and averaged the results. This approach, however, inflates the costs per mile when compared to what Columbia actually experienced. Staff modified Columbia's calculations to divide the Company's actual annual plant additions costs by the actual total miles of pipe replaced that year. In the 2013-2016 period, in addition to BS/CI pipe, Columbia also replaced plastic, pre- and post-1955 field-coated, and Aldyl-A plastic pipe. When the Company's actual costs for pipeline additions costs are divided by the actual total miles replaced, the actual per mile costs that Columbia experienced during the 2013-2016 costs go down noticeably. Staff also modified Columbia's calculation to increase the miles that will be replaced each year during the renewal period. Staff determined a ratio of other pipe replaced to BS/CI pipe replaced in the 2013-2016 period and added this amount to the 164 miles that Columbia estimated that it would annually replace during the IRP renewal period. Staff estimated that the Company will add a total of approximately 211 miles of pipe per year during the renewal period. Staff's adjustments to Columbia's formula lowered the estimated capital investments that Columbia will need to make and lowered the resulting annual IRP Rider rate caps that will be necessary from Columbia's

proposed \$1.30 per month to \$1.22 per month. However, this process still suffers from the same reliance on unreliable assumptions as Columbia's original analysis.

Staff agrees with Columbia that it is likely to continue to experience increasing costs for many pipeline replacement activities during the IRP renewal period and that such increases will drive up per mile replacement costs. However, while the Company's per mile replacement costs are likely to go up, the miles replaced each year should go down noticeably. In order to replace the approximately 4,100 miles of BS/CI pipelines that was in its system at the start of the IRP in 2008, Columbia needs to replace, on average, 164 miles of BS/CI pipe per year over the Program's 25 years. However, during the 2013-2016 period, the Company actually replaced an average of 196 miles of BS/CI pipe and 269 total miles of pipe (i.e., BS/CI plus other eligible pipe types). The Company states in its Application that it will have completed 1,640 miles of priority pipe replacement by the end of 2017. This means that, after ten years, the Company is on target to complete the IRP within the original 25-year period (164 miles per year times ten years equals 1,640 miles). The Company fell behind the 164 average miles per year pace in some of the early years of the Program, but it made up for this shortfall by replacing extra miles during the 2013-2016 period. Now that it has caught up, however, it should not have to replace as many miles annually during the renewal period. As noted above, Staff estimates that the Company will only replace on average approximately 211 total miles per year in order to stay on the annual 164 miles BS/CI replacement pace. Fewer miles replaced per year should lower the future capital investments that Columbia will need to make during the IRP renewal period, thus lessening the need to increase the Rider IRP cap.

For all of the foregoing reasons, Staff recommends that the Commission find that Columbia's proposal to raise the IRP rate cap from the current \$1.00 per SGS customer per month to \$1.30 per SGS customer per month is not supported by the evidence and is not just and reasonable. In Staff's opinion, setting the IRP Rider rate cap too high will upset the balance between enhanced safety and customer rate increases that the Commission adopted when it originally approved the IRP and lessen Columbia's incentives for IRP cost-containment. When the Commission originally approved the IRP, it determined that customer and public safety would be enhanced through accelerated replacement of aging BS/CI pipelines, but it also recognized that the accelerated replacement would lead to accelerated cost recovery through annual increases in customer rates. The Commission determined that the appropriate balance between safety gained from accelerated pipeline replacement and customer rate increases was a 25-year replacement period for the IRP. Setting the cap on annual Rider IRP increases too high could provide Columbia enough capital to finish the IRP sooner than 25 years, thus upsetting the Commission's balance between enhanced safety and customer rate increases. It may also lead to a situation where current customers would be subsidizing future customers by paying too much for IRP costs today for benefits that will also accrue to future customers. Similarly, setting the IRP Rider rate cap too high will lessen Columbia's incentives for cost containment. Columbia has done a good job in controlling IRP costs. As noted above, the Company has never reached the annual rate cap, which provides a good indication that it has instituted sound cost control measures. However, if the IRP Rider rate cap is set higher than it needs to be, then Columbia has less incentive to control costs, especially when it renegotiates its blanket construction contracts with contractors for IRP replacement's in 2021 and 2022.

Having recommended that the Commission find that Columbia's proposed cap on annual Rider IRP increases is too high and not supported by the evidence, the next logical step is determining what the cap should be. In Staff's opinion, the appropriate rate cap for the renewal period should balance the facts that the current \$1.00 per month increase has been sufficient to enable Columbia to stay on target for completing IRP replacements within its original 25-year period and it should be replacing fewer miles per year during the renewal period against the facts that the Company has faced and will likely continue to face cost increases for many pipeline replacement activities. Staff recommends that the Commission maintain the current \$1.00 per SGS customer per month cap for the first three years of the renewal period (2108-2020) and increase it to \$1.10 per SGS per customer per month for 2021 and 2022. Staff recommends that the Commission authorize the following maximum SGS customer rates for the IRP renewal period:

	2018	2019	2020	2021	2022
Maximum SGS Customer IRP Rider Rate per Month	\$11.20	\$12.20	\$13.20	\$14.30	\$15.40

In Staff's opinion, these rates will enable Columbia to stay on track towards completing the IRP within its original 25-year period while recognizing that the Company is likely to continue to experience annual cost increases for pipeline replacement activities, especially when new blanket construction contracts take effect in 2021.

Lastly, Staff recommends that the Commission give no weight to Columbia's suggestion that, since customers are currently paying approximately 30% less for natural gas service (on a total bill basis) than they were at the end of its last base rate case (in 2008), now is the optimal time to invest in infrastructure. In Staff's opinion, Columbia's recommendations regarding renewing the IRP and increasing the IRP rider rate cap should stand or fall on their own merits.

### **Conclusion**

Based on the investigation described above, Staff recommends that the Commission approve Columbia's Application as modified by Staff's conclusions and recommendations made herein.