BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Annual Application)	
of Columbia Gas of Ohio, Inc. for an)	Case No. 16-2236-GA-RDR
Adjustment to Rider IRP and Rider)	
DSM Rates.	

PREPARED DIRECT TESTIMONY OF JOHN A. LAVERTY ON BEHALF OF COLUMBIA GAS OF OHIO, INC.

COLUMBIA GAS OF OHIO, INC.

Stephen B. Seiple, Asst. General Counsel (0003809)

Joseph M. Clark, Sr. Counsel (0080711)

Counsel of Record

290 W. Nationwide Blvd.

P.O. Box 117

Columbus, Ohio 43216-0117

Telephone: (614) 460-4648

(614) 460-6988

Email: sseiple@nisource.com

josephclark@nisource.com

Attorneys for

COLUMBIA GAS OF OHIO, INC.

PREPARED DIRECT TESTIMONY OF JOHN A. LAVERTY

- 1 Q. Please state your name and business address.
- 2 A. John A. Laverty, 290 West Nationwide Boulevard, Columbus, Ohio 43215.

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- Q. By who are you employed?
- 5 A. I am employed by Columbia Gas of Ohio, Inc. ("Columbia").

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- 7 Q. Will you please state briefly your educational background and experience?
- 9 A. I graduated from Ohio University in 1976 with a Bachelor of Arts in 10 Government. I began my career in energy efficiency in 1979 and previous-11 ly worked for the former Ohio Department of Economic and Community 12 Development, the Ohio Association of Community Action Agencies, and 13 the Corporation for Ohio Appalachian Development where I worked on 14 design, implementation, and evaluation of energy efficiency services and 15 programs. I began my career with Columbia in 2003 as a manager of the WarmChoice® program, Columbia's low-income customer weatherization 16 17 program. In 2009, I assumed my current position as Manager of Demand 18 Side Management.

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- Q. What are your job responsibilities as Manager of Demand Side Management?
- A. As Manager of Demand Side Management, my primary responsibilities include developing, administering, and evaluating energy efficiency programs and services for Columbia customers, including low-income customers. Other responsibilities include the preparation and/or support of exhibits, proposed tariff changes and testimony filed by Columbia in support of the Demand Side Management ("DSM") rider proposed by Columbia in this case.

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- 30 Q. Have you previously testified before this Commission?
- 31 A. Yes.

- 33 Q. What is the purpose of your testimony?
- A. The purpose of my testimony is to support the reasonableness of Columbia's request for the proposed rate adjustments in Rider DSM. I provide

detailed explanation of the DSM programs and the schedules filed by Columbia on February 27, 2017, in support of the proposed adjustments.

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Q. What schedules are you sponsoring in this proceeding?

A. Following is a list and brief description of the schedules I am sponsoring in this proceeding, which are applicable to Rider DSM:

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Schedule/Exhibit	Description
Schedule DSM-1	DSM Revenue Requirement Calculation
Schedule DSM-2	Detail of Deferred DSM Expenditures by Month
Schedule DSM-3	Detail of DSM Recoveries by Month
Schedule DSM-4	Computation of DSM Carrying Costs
Schedule DSM-5	Shared Savings Incentive
Schedule DSM-6	Computation of DSM Rate per Mcf

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EXPLANATION OF DSM SCHEDULES

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- Q. Are you familiar with Columbia's Application to Establish Demand Side Management Programs, Case No. 08-0833-GA-UNC, filed on July 1, 2008 and approved by the Commission on July 23, 2008?
- 14 A. Yes. Among other things, this Application defined the DSM program portfolio, program benefits, funding limits, customer base, program evaluation plan, and program timeframes.

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Q. Are you familiar with Columbia's Application in Case No. 08-0072-GA-AIR, et al., filed on March 3, 2008, and approved by the Commission on December 3, 2008?

A. Yes. Columbia's Application in these dockets requested authority to defer expenses incurred in the development and implementation of the DSM Program. Also, as part of its Alternative Regulation Plan filed in those dockets, Columbia requested approval of the proposed Rider DSM to recover DSM costs, including those deferred expenses incurred in the development and implementation of the DSM programs.

- Q. Are you familiar with Columbia's Application in Case No. 11-5028-GA-UNC, filed on September 9, 2011, and with the Commission Order dated December 14, 2011 which approved that Application?
- 31 A. Yes. In that case, Columbia's Application sought continuation, expansion, and approval of various DSM programs through December 31, 2016. In its

Order, the Commission authorized Columbia to implement all of the proposed DSM programs. This filing is the last to be filed utilizing the authority granted in Case No. 11-5028-GA-UNC, et al.

On June 10, 2016, Columbia filed an application in Case No. 16-1309-GA-UNC, et al., to continue its demand side management Program with recovery to continue to be provided for through the use of accounting previously approved in Case Nos. 08-0072-GA-AIR, et al., and 11-5028-GA-UNC, et al., for an additional six years through December 31, 2022. This application was approved by the Commission's December 21, 2016 Opinion and Order in that proceeding.

Q. Please describe Rider DSM.

A. Rider DSM authorizes Columbia to recover the costs of implementing a comprehensive, ratepayer funded, cost-effective energy efficiency program made available to all residential customers during calendar years 2009-2011. This time period was extended in Case Nos. 11-5028-GA-UNC, et al., for program costs incurred in calendar years 2012-2016.

Rider DSM will be determined annually based on the actual cost of the program for the previous calendar year with rates to become effective the following May. The procedure for the filing of Rider DSM adjustments is identical to the filing procedure applicable to the Rider IRP, as set forth in the Order.

Q. What are the customer benefits of the DSM programs?

A. The primary customer benefits of the DSM programs are lower natural gas usage and bills as a result of the implementation of energy efficiency measures. Other customer benefits include improved health, safety, housing affordability and building durability, as well as reduced greenhouse gas emissions, moderation of Percentage of Income Payment Plan arrearages, water savings, and job creation and economic development.

- Q. Please provide a brief description of each of the DSM programs for which Columbia has incurred costs during 2016.
- A. Columbia incurred costs for most of its DSM programs during 2016.

Columbia's income eligible customer home weatherization program, WarmChoice®, served 1,820 households in 2016 through a network of four

community based providers and their subcontractors. Customers receive a diagnostic energy and safety inspection and installation of attic, wall, floor, duct and pipe insulation, air leakage sealing, and replacement of defective natural gas fueled water and/or space heating appliances, when needed. During 2016, participating customers received the following services: 1,366 customers received attic insulation, 751 customers received wall insulation, 312 customers received floor insulation, and 618 customers received a heating system replacement. All customers who received services through WarmChoice received a quality assurance inspection by their WarmChoice provider after all heating work was completed, and again after all weatherization work was completed. Additionally, eight percent of homes that received WarmChoice services in 2016 had a quality assurance inspection completed by Columbia staff which included a complete inspection of all heating and weatherization work completed at the home.

The Home Performance Solutions program provides low-cost energy audits, programmable thermostats and high-performance, energy-efficient showerheads installed during the energy audit (if needed), and rebates for high-efficiency gas furnaces and boilers, air sealing, and attic and wall insulation targeted to customers with higher than average natural gas usage. CLEAResult is Columbia's implementation contractor for this program. CLEAResult has on-staff and independent energy auditors located strategically throughout Columbia's service territory to perform the residential customer energy audits and install the programmable thermostat and energy-efficient showerheads at the time of the energy audit, if needed. CLEAResult also recruits, manages, and trains the HVAC and insulation contractor network, processes rebates, maintains a database of customers served and transactions processed, and performs quality assurance inspections of completed work. CLEAResult performed energy audits for 3,031 customers, and installed 722 programmable thermostats and 1,523 showerheads. CLEAResult's customer contact center handled 19,011 calls from customers during 2016.

Customers completing work in the Home Performance Solutions program in 2016 totaled 1,164, although energy audits that were completed late in the year will result in work being completed in 2017. The following rebates were paid to customers in 2016: 1,055 air sealing; 986 attic insulation; 595 wall insulation; and, 97 high efficiency furnaces. The percentage of en-

ergy audits resulting in work from program inception through December 31, 2016 averaged 48%. We attribute the high conversion rate to the rebates that provide incentive for customers to have energy efficiency improvements installed, and the customers' perceived value of the program, including from a comfort, health, and safety standpoint.

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Columbia continued its contract with MaGrann Associates, Inc. ("Ma-Grann") in 2016 to implement the EfficiencyCrafted® Homes program. This program provides incentives to builders to construct homes to a higher energy efficiency standard than Ohio's building energy code. Columbia collaborated with American Electric Power - Ohio ("AEP"), which also used MaGrann as its implementation contractor, to combine resources and incentives for a standardized program in the counties that both utilities share. MaGrann recruited and trained home energy raters and homebuilders to participate in the program. Columbia also offered the program in counties that are not shared with AEP. Thirteen new Ohio homebuilders and two new home energy rating firms enrolled in the program in 2016 in addition to the previous one hundred twenty homebuilders and twenty-seven home energy rating firms who enrolled in the program prior to 2016. In 2016, 2,028 homes with an average Home Energy Rating System ("HERS") score of 57 were built to program standards (606 were ENERGY STAR® Certified) and received incentives. During 2016, 2,074 homes enrolled in the program. We expect that approximately 60% of those homes not completed in 2016 to be completed in 2017. This program received the United States Environmental Protection Agency ENERGY STAR® Sustained Excellence Partner of the Year award in 2016, the Central Ohio Building Industry Association Most Successful One-Time Event award from the 29th Annual Marketing and Merchandising Excellence, a 2015 Service Industry Advertising Silver Award, and a 2016 ENERGY STAR® Certified Homes Market Leader Award.

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The Simple Energy Solutions program provides rebates to customers who purchase programmable thermostats; high-performance, energy-efficient showerheads; and/or energy-efficient faucet aerators. Customers may purchase eligible products from our E-Store, operated by Energy Federation, Inc., and have the rebates applied automatically to the purchase price. Customers also may purchase products at a hardware or home improvement store and mail in a rebate form with the UPC and receipt to receive their rebate by mail. Customers obtained 1,437 programmable ther-

mostats, 2,096 energy-efficient showerheads and 1,522 energy-efficient faucet aerators through the program in 2016.

Columbia re-contracted with the Ohio Energy Project ("OEP") in 2016 to operate the Student Energy Efficiency Education program, known as "e³ smart". OEP provided program orientation to schoolteachers throughout Columbia's service territory to offer a curriculum on energy efficiency to students in grades 4 to 12. Students received a kit of energy efficiency materials, including an energy-efficient showerhead, faucet and bathroom aerator, and weather stripping, to install in their homes as part of the course curriculum to help lower their home energy usage. During 2016, 21,288 students were educated through the program. Columbia collaborated with AEP in school districts served by both utilities and shared the cost of 78% of the total kits distributed through the program. The remaining kits were funded by Columbia, though OEP used grant funding to cover the cost of adding compact fluorescent lightbulbs to the Columbia kit.

Columbia continued its contract with CLEAResult to implement the High Efficiency Heating System Replacement rebate program. This program provides instant rebates to customers when they have a high efficiency natural gas furnace or boiler installed by a participating contractor. In 2016, 6,501 instant rebates were provided through participating subcontractors to customers who installed high efficiency heating systems through the program.

OPOWER, Inc., which implements Columbia's Home Energy (Efficiency) Reports program, was acquired by Oracle in 2016. The Home Energy (Efficiency) Report is an engaging, user-friendly customer experience tool that anonymously compares customers' energy usage to that of their neighbors of similar size homes and demographics, tapping into the behavioral science insight that social pressure is a driving factor in motivating behavioral change around energy usage. The program provides customers with their energy usage information, a comparison of their usage with similar homes, and energy saving tips to help them take actions to reduce their natural gas usage. The program provided reports to approximately 390,000 randomly selected customers in 2016.

The Innovative Energy Solutions program provides funding for energy audits; rebates for energy efficiency improvements; funding for building commissioning; research and demonstration projects; and evaluation, measurement and verification projects for commercial and industrial buildings, including those owned by not-for-profits and religious institutions. In 2016, Columbia continued its contract with DNV GL to provide implementation services for the program. Thirty-nine energy audits were funded in 2016, and rebates were provided for one hundred forty energy efficiency improvement projects. We anticipate that some of the remaining customers that had energy audits funded in 2016 will apply for rebates in 2017.

In 2016, Columbia continued its contract with MaGrann Associates to operate its Energy Design Solutions program. The Energy Design Solutions program, branded the Small Commercial Construction program, provides education and training to building industry professionals and owners on the benefits of building energy efficient small buildings. During 2016, the program provided 13 training sessions to 122 attendees, and provided incentives to six customers to implement energy efficiency measures into new small commercial construction projects.

 During 2016, Columbia supported the Environmental Protection Agency's Portfolio Manager tool for commercial and industrial buildings to track energy consumption over time and compare energy consumption of their building with that of similar building types to identify energy saving opportunities. Columbia worked with the city of Columbus' Green Team to promote benchmarking within the city, and worked with the Ohio Hospital Association to provide natural gas usage data to enable the benchmarking of its members' hospital buildings. Columbia also partnered with Ohio Interfaith Power and Light to promote benchmarking and energy efficiency for houses of worship.

Finally, in 2016 Columbia continued to offer its Home Energy Checkup program, a simple, easy-to-use on-line energy audit for customers who want to determine how efficient their homes are without an energy auditor visiting their home. The on-line energy audit provides information on low-cost actions as well as DSM programs that are appropriate for customers to participate in. During 2016, 6,809 households completed the Home Energy Checkup.

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Q. What are the key DSM programs on which Columbia focused its program ramp-up and implementation efforts in 2016?

A. Columbia focused on ramping up the On-Line Energy Audit (Home Energy Checkup), integrating a new information management system into the WarmChoice® program, and continued to implement all of its core DSM programs.

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Noteworthy program awards include the 2016 ENERGY STAR® Certified Homes Market Leader Award, the 2016 EPA Partner of the Year - Sustained Excellence in Energy Efficiency Program Delivery award, and the BIA of Central Ohio Marketing and Merchandising Excellence - Most Successful One-Time Event award.

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Q. What are some of the challenges that Columbia faced in implementing DSM programs in 2016?

17 A. There were two primary challenges that Columbia faced in implementing 18 its DSM programs in 2016. Warmer than normal winter weather appeared 19 to have an impact on some DSM program demand, and the Simple Energy 20 Solutions program e-store was taken off line in December for an update to 21 the software platform that is used to host the e-store.

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Q. How do actual DSM costs to date compare to the DSM Action Plan?

A. Columbia invested approximately \$20.6 million in its DSM programs in 2016 versus the \$24.2 million in the DSM Action Plan budget.

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Q. What are Columbia's plans for the DSM funds not invested in 2016?

A. Columbia has no plans for the DSM funds not invested in 2016 and/or prior years since it does not have authority to invest unspent funds after December 31, 2016, the end date of the DSM Action Plan approved in Case No. 11-5028-GA-UNC. Columbia is not seeking recovery for any funds not spent.

- Q. How are the schedules included in Columbia's November 28, 2016 Notice of Intent different from the updated schedules filed in this proceeding on February 27, 2017?
- 37 A. The schedules included in Columbia's Notice of Intent contained nine 38 months actual and three months estimated calendar year 2016 data. The

schedules filed February 27, 2017 contain twelve months of actual calendar year 2016 data.

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Q. Does your testimony support the estimated data?

A. No. My testimony supports the actual data filed in this proceeding on February 27, 2017 because the actual data is what supports the Rider DSM rate calculated on Schedule DSM-6 that will ultimately be billed to customers.

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10 Q. What types of DSM expenses are deferred?

A. Expenses incurred in the development, implementation, and administration of the comprehensive energy efficiency programs are deferred using actual costs as incurred. In addition, carrying costs were deferred as actual costs and calculated using Columbia's actual 2016 weighted cost of debt rate, 5.47%. The Commission Orders in Case Nos. 08-0833-GA-UNC and 11-5028-GA-UNC authorize the inclusion of carrying costs.

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18 Q. What is included in the DSM revenue requirement?

19 A. Deferred expenses incurred through December 31, 2016 have been 20 included in the DSM revenue requirement.

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Q. How is the DSM revenue requirement allocated to Columbia's customer base?

A. Pursuant to the Commission's Order in Case No. 08-0833-GA-UNC, the DSM program costs will be recovered from those customer classes primarily eligible to participate – Small General Service customers. The total revenue requirement calculated on Schedule DSM-1 is divided by the projected annual throughput of Small General Service customers for the twelve months rates will be in effect and the resulting rate will be billed volumetrically.

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- Q. What is the basis for including all of the items described in the paragraphs above in the development of the DSM revenue requirement?
- A. Each item included in the revenue requirement is a reasonable, necessary, business-related expense directly resulting from the development, administration, and implementation of the DSM program.

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Q. What is the source for the actual data shown on these schedules?

A. Generally, the information came from either the General Ledger or the supporting sub-ledgers of Columbia. When data came from another source, it was indicated on the appropriate schedule or elsewhere in this testimony.

- Q. Please describe the shared savings mechanism approved in Case 11-5028-GA-UNC.
- A. Columbia's shared savings are computed on the difference between the net present value of program lifetime energy savings and the net present value of the program costs calculated from the Utility Cost Test. The recovery of the shared savings incentive is based on the following tiered levels of program achievement:
 - 1. No shared savings are earned for a program that does not meet 75% of the program impacts at its prorated budgeted cost level.
 - 2. 5% of the savings is earned once the program meets 75% of the projected program impacts at its prorated budgeted cost level up to 85% of budgeted expenditures.
 - 3. 5.5% of the savings is earned once the program meets 80% of the projected program impacts at its prorated budgeted cost level up to 90% of budgeted expenditures.
 - 4. 6% of the savings is earned once the program meets 85% of the projected program impacts at its prorated budgeted cost level up to 95% of budgeted expenditures.
 - 5. 6.5% of the savings is earned once the program meets 90% of the projected program impacts at its prorated budgeted cost level.
 - 6. 7% of the savings is earned once the program meets 95% of the projected program impacts at its prorated budgeted cost level.
 - 7. 7.5% of the savings is earned once the program meets 100% of the projected program impacts at its prorated budgeted cost level.
 - 8. 8.0% of the savings is earned once the program meets 105% of the projected program impacts at its prorated budgeted cost level.
 - 9. 8.5% of the savings is earned once the program meets 110% of the projected program impacts at its prorated budgeted cost level.

- Q. Please describe the process used to track and verify shared savings.
- A. Columbia developed a process to track and calculate its shared savings incentive. The process gathered and tracked data for energy conservation measures installed and/or energy savings achieved through each DSM program. Columbia, along with its DSM evaluation consultant, Scott Pigg

of Seventhwave used this data to calculate the projected lifetime natural gas savings estimates using the formulas identified in the State of Ohio Energy Efficiency Technical Reference Manual, except for the Warm-Choice program where historic billing analysis was used, the Home Energy Reports program where guaranteed contract savings with adjustments for measured actual savings were used, and Innovative Energy Solutions where the energy audit projected natural gas savings were used. Columbia's shared savings were computed by taking the difference between the net present value of the program lifetime energy savings and the value of the program costs calculated from the Utility Cost Test. Columbia provided the data tracking tool, including DSM program data, to Mr. Pigg, to verify that the natural gas savings complied with the approved methods for determining savings. Mr. Pigg's testimony discusses the process used and the results of the shared savings verification process.

Q. Did Columbia earn shared savings from its DSM programs in 2016?

A. Yes. Columbia exceeded 110% of its annual natural gas savings target, making it eligible to earn 8.5% of the net benefit value of the natural gas savings.

EXPLANATION OF REMAINING SCHEDULES

Q. Would you please provide a brief explanation of each of the schedules?

A. Attachment A computes the proposed combined volumetric Rider DSM rate for each rate schedule. It also computes the monthly Rider IRP rate, which Columbia witness Beil is also sponsoring. Attachment B details the rate schedules to which Rider DSM applies. Attachment C compares typical bills for each rate schedule between current rates and the proposed Riders IRP and DSM rates.

REASONABLENESS OF REQUESTED INCREASE AND BENEFITS TO RATEPAYERS AND THE PUBLIC INTEREST

- Q. Do you have an opinion regarding whether Columbia's request to adjust the Rider DSM is reasonable?
- A. Yes. I believe Columbia's request to adjust its Rider DSM is fair and reasonable. These are prudent, necessary business expenses incurred in the day-to-day operations of the DSM Program. It should be further noted that this filing provides for a reduction in the current DSM Rider rate.

2 Q. Do the DSM programs benefit ratepayers and the public interest?

3 A. Yes. The DSM programs will provide residential and small commercial 4 customers easy access to energy saving measures, which will directly reduce natural gas usage, improving the affordability of natural gas service. 5 Beyond the value of energy savings, DSM programs provide other bene-6 7 fits such as: economic development through hiring of firms and employ-8 ees to provide DSM services, increased sales of products made in Ohio 9 and sold by Ohio firms, improved health, safety, durability and comfort, reduced greenhouse gas emissions and a lower carbon footprint, and re-10 duced water and electricity consumption. 11

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- 13 Q. Does this complete your Prepared Direct Testimony?
- 14 A. Yes.

CERTIFICATE OF SERVICE

The Public Utilities Commission of Ohio's e-filing system will electronically serve notice of the filing of this document on the parties referenced on the service list of the docket card who have electronically subscribed to the case. In addition, the undersigned hereby certifies that a copy of the foregoing document is also being served via electronic mail on the 27th day of February, 2017 upon the parties listed below.

/s/ Joseph M. Clark
Joseph M. Clark

Attorney for **COLUMBIA GAS OF OHIO, INC.**

SERVICE LIST

William Wright, Esq.
Assistant Attorney General
Public Utilities Section
180 East Broad Street
Columbus, OH 43215
Email: William.wright@puc.state.oh.us

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Summary: Testimony of John A. Laverty electronically filed by Cheryl A MacDonald on behalf of Columbia Gas of Ohio, Inc.