

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

| | | |
|-------------------------------|---|-------------------------|
| Suburban Natural Gas Company, |) | |
| |) | |
| Complainant, |) | |
| |) | |
| v. |) | Case No. 17-2168-GA-CSS |
| |) | |
| Columbia Gas of Ohio, Inc., |) | |
| |) | |
| Respondent. |) | |

**PREPARED DIRECT TESTIMONY OF
MELISSA L. THOMPSON
ON BEHALF OF COLUMBIA GAS OF OHIO, INC.**

/s/ Mark S. Stemm

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COLUMBIA GAS OF OHIO, INC.

**PREPARED DIRECT TESTIMONY
OF MELISSA L. THOMPSON**

I. INTRODUCTION

Q. Please state your name and business address.

A. Melissa L. Thompson, 290 W. Nationwide Blvd., Columbus, Ohio 43215.

Q. By whom are you employed?

A. I am employed by Columbia Gas of Ohio, Inc. ("Columbia").

Q. Will you please state briefly your educational background and experience?

A. I attended Marietta College, earned a Bachelor of Arts in Communications and Political Science, and graduated magna cum laude from Capital University Law School. I worked for two years in private practice with law firms in Columbus, and joined the NiSource Legal Department in 2012. In 2015, I transitioned to my role as the Director of Regulatory Policy with Columbia.

Q. What are your job responsibilities as Director of Regulatory Policy?

A. My primary responsibilities include the planning, supervision, preparation and support of Columbia's regulatory filings before the Public Utilities Commission of Ohio ("Commission"). I also develop policy to support Columbia's energy efficiency programs and drive Columbia's regulatory initiatives to ensure execution of Columbia's business strategy.

Q. What is the purpose of your Direct Testimony in this proceeding?

A. The purpose of my direct testimony is to provide the history and current execution of Columbia's EfficiencyCrafted® Homes Program, including the most recent extension of this program in Case Nos. 16-1309-GA-UNC, et al. I will also be providing testimony concerning Columbia's compliance with the 1995 Stipulation between Columbia and Suburban Natural Gas Company ("Suburban"), and certain other Suburban allegations.

II. EFFICIENCYCRAFTED® HOMES PROGRAM HISTORY

Q. What is the purpose of the EfficiencyCrafted® Homes Program?

A. The EfficiencyCrafted® Homes Program's purpose is to encourage builders to construct homes that are more energy efficient than Ohio's building code.

Q. When was the EfficiencyCrafted® Homes Program introduced?

A. Columbia introduced the EfficiencyCrafted® Homes Program with the expansion of Columbia's demand side management portfolio in 2008. As I will explain, the program was originally named the Residential New Construction Program, later renamed the Energy Efficient New Homes Program, and finally renamed the EfficiencyCrafted® Homes Program.

Q. How has the EfficiencyCrafted® Homes Program served customers over the last ten years?

A. Since 2009 through December 31, 2017, Columbia has been meaningfully incentivizing the building of energy efficient homes, as is noted in the table below:

| | Residential New Construction Program | | | Energy Efficient New Homes Program | | | | | Efficiency-Crafted® Homes Program |
|---------------------------|--------------------------------------|------|--------|------------------------------------|--------|--------|--------|--------|-----------------------------------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Total Homes Served | 0 | 0 | 620 | 1,438 | 1,996 | 1,991 | 2,138 | 2,028 | 2,205 |
| Total Mcf Saved | 0 | 0 | 18,867 | 40,920 | 63,428 | 69,571 | 56,190 | 65,648 | 61,919 |

Q. Prior to 2008, did Columbia have a program that incentivized new home builders to build new homes that were more energy efficient than Ohio's building code?

A. No. Prior to 2008, Columbia's only program to promote energy efficiency to its customers was the WarmChoice® Program, which was funded through Columbia's base rates. The WarmChoice® Program is a low-income, whole home weatherization program that partners with local community-based organizations. Columbia agreed to expand its energy efficiency portfolio through the Stipulation in Case No. 05-221-GA-GCR, et al.

1 **Q. What programs did Columbia introduce in 2008 to expand its energy ef-**
 2 **iciency portfolio?**

3 A. In 2008, in Case No. 08-833-GA-UNC, Columbia filed an application to in-
 4 troduce new programs, in addition to the WarmChoice® Program, to pro-
 5 vide energy efficiency services to Columbia customers. These programs in-
 6 cluded: Home Performance Program, Residential New Construction Pro-
 7 gram, Residential Low Cost Product Rebates, Furnace Market Research,
 8 Small Business Energy Efficiency Incentives Program, Small Business En-
 9 ergy Saver Audit Program, Advanced Energy Design Partnership Program,
 10 Innovative Technology Program, and Energy Efficiency Loan Fund Pro-
 11 gram.

12
 13 **Q. Why did Columbia introduce the Residential New Construction Program**
 14 **in 2008?**

15 A. In response to Case No. 05-221-GA-GCR, et al., Columbia, along with the
 16 Demand Side Management (“DSM”) Stakeholder Group, composed of nu-
 17 merous parties,¹ engaged M. Blasnik and Associates to recommend residen-
 18 tial DSM programs. Mr. Blasnik’s recommended residential programs in-
 19 cluded: home performance program, low-cost product rebates, new homes
 20 program, and furnace market research. After reviewing and discussing the
 21 recommended residential DSM programs, the DSM Stakeholder Group
 22 agreed to move forward with these programs, which included the Residen-
 23 tial New Construction Program.

24
 25 The Application from Case No. 08-833-GA-UNC explaining this process of
 26 implementing the Residential New Construction Program is attached to my
 27 testimony as Thompson Attachment A.

28
 29 **Q. Did Columbia extend the Residential New Construction Program in**
 30 **2011?**

31 A. Yes, in Case Nos. 11-5028-GA-UNC, et al., Columbia filed an application to
 32 extend its energy efficiency program, and renamed it the Energy Efficient

¹ The DSM Stakeholder Group included Columbia; Staff of the Public Utilities Commission of Ohio; the Office of the Ohio Consumers’ Counsel; Ohio Partners for Affordable Energy; Honda of America Manufacturing, Inc.; Ohio Farm Bureau Federation; Ground Level Solutions, Inc.; Corporation for Ohio Appalachian Development; Cornerstone Energy Conservation Services; American Society of Heating, Refrigeration and Air Conditioning Engineers – ASHRAE; Industrial Energy Users-Ohio; Mid-Ohio Regional Planning Commission; Ohio Home Builders Association; Ohio Department of Development; Ohio Board of Building Standards; Direct Energy; Air Conditioning Contractors of America – Ohio Chapter; the Building Owners and Managers Association; Neighborhood Housing Services of Toledo; City of Columbus; and Interstate Gas Supply, Inc.

1 New Homes program, for an additional five-year term through December
2 31, 2016. The parties filed a Stipulation on October 31, 2011, and the Com-
3 mission approved the Stipulation by Order dated December 14, 2011. The
4 Application and Stipulation from Case Nos. 11-5028-GA-UNC, et al., are
5 attached to my testimony as Thompson Attachment B and C, respectively.
6

7 **Q. Were there any changes to the program between the Residential New**
8 **Construction Program and the Energy Efficient New Homes Program?**

9 A. Yes, there were minor changes. First, Columbia changed the objective to
10 encourage builders to build housing that was ENERGY STAR® compliant,
11 that had a Home Energy Rating Score (“HERS”) of 80 or less, or that pro-
12 vided energy savings over code minimum levels based on other accepted
13 energy modeling approaches. Columbia also replaced the fixed \$1,000 per
14 qualified home incentive that was established in 2008 with a tiered system,
15 to incentivize more energy efficient building. Finally, Columbia changed
16 the name, from the Residential New Construction Program to the Energy
17 Efficient New Homes Program, and noted that, where possible, Columbia
18 would partner with electric utilities to leverage resources and maximize
19 savings in homes.
20

21 **Q. Did Columbia extend the Energy Efficient New Homes Program in 2016?**

22 A. Yes, in Case Nos. 16-1309-GA-UNC, et al., Columbia filed an application to
23 extend its energy efficiency program, including its renamed EfficiencyCrafted®
24 Homes Program, for an additional six-year term through De-
25 cember 31, 2022. Most of the parties to the case, including Commission Staff;
26 Ohio Partners for Affordable Energy; Interstate Gas Supply, Inc.; Mid-Ohio
27 Regional Planning Commission; Ohio Hospital Association; Retail Energy
28 Supply Association; and Columbia, filed a Stipulation on August 12, 2016,
29 and the Commission approved the Stipulation by Order dated December
30 21, 2016. The Application and Stipulation from Case Nos. 16-1309-GA-
31 UNC, et al., are attached to my testimony as Thompson Attachment D and
32 E, respectively.
33

34 **Q. Were there any differences between the Energy Efficient New Homes**
35 **Program and the EfficiencyCrafted® Homes Program?**

36 A. Yes, there was one minor change. Columbia integrated the energy code
37 training for builders, code officials, and trade allies from a previously sepa-
38 rate program into this program. This change was made to reduce admin-
39 istrative costs and take advantage of the natural synergies between the two
40 programs.

1 **Q. In any of the proceedings referenced above, did Columbia adopt the Ef-**
 2 **iciencyCrafted® Homes Program for the purpose of extending its natural**
 3 **gas facilities and expanding its customer base?**

4 A. No. Columbia did not propose any energy efficiency program, including
 5 the EfficiencyCrafted® Homes Program, as a way to extend its facilities and
 6 serve new customers. Columbia has used, and continues to use, these pro-
 7 grams to help its customers curb the demand on Columbia's system by less-
 8 ening their natural gas usage and, ultimately, lowering the customer's bill
 9 through the construction of more energy efficient new homes.

11 **Q. In any of the proceedings described above, did Columbia propose to**
 12 **adopt or extend the EfficiencyCrafted® Homes Program to help Columbia**
 13 **better compete with Suburban or any other natural gas company?**

14 A. No. Columbia offers its EfficiencyCrafted® Homes Program in all 61 coun-
 15 ties in which it operates, not just in counties where other natural gas com-
 16 panies are located, such as Delaware County. The EfficiencyCrafted®
 17 Homes Program is intended to promote energy efficiency.

19 In terms of competition, customers, builders, and developers have the right
 20 to choose a natural gas company, and may weigh services and programs
 21 offered by competing natural gas companies when making that choice. Co-
 22 lumbia offers the CHOICE program, SCO auction-based commodity ser-
 23 vice, energy efficiency programs and other programs or services that dis-
 24 tinguish Columbia from its competitors. Columbia's new business team in-
 25 forms prospective customers of all Columbia has to offer. This includes the
 26 DSM program of interest to builders and developers. There are many fac-
 27 tors other than DSM that a builder, developer or customer may consider
 28 when choosing a natural gas provider.

30 **III. CURRENT EFFICIENCYCRAFTED® HOMES PROGRAM**

32 **Q. How many homes has the EfficiencyCrafted® Homes Program (and its**
 33 **predecessor programs) served since 2009?**

34 A. As noted above, since 2009 through 2017, Columbia has provided incen-
 35 tives to support the energy efficient construction of 12,416 homes. These
 36 payments are targeted to any new homes within the 61 counties in which
 37 Columbia serves; however, Columbia will provide more incentives to coun-
 38 ties that experience more homebuilding. For example, in 2016, the number
 39 of qualifying homes in Franklin County was more than three times than any
 40 other county and more than double any other county in 2017.

1 **Q. Has the EfficiencyCrafted® Homes Program been recognized as an indus-**
2 **try-leading energy efficiency program?**

3 A. Yes. In 2012 and 2013, U.S. EPA recognized the EfficiencyCrafted® Homes
4 Program as the EPA ENERGY STAR® Partner of the Year. From 2014
5 through 2017, U.S. EPA further recognized the EfficiencyCrafted® Homes
6 Program with its EPA ENERGY STAR® Partner of the Year – Sustained Ex-
7 cellence in Energy Efficiency Program Delivery award. In addition to these
8 accolades, the EfficiencyCrafted® Homes Program also was awarded the
9 2012 and 2013 Leadership in Housing Award (now known as the ENERGY
10 STAR® Certified Homes Market Leader Award), and in 2014 through 2017
11 the ENERGY STAR® Certified Homes Market Leader Award.
12

13 **Q. Were you involved with the drafting of Columbia’s application and stip-**
14 **ulation to continue the energy efficiency program in Case Nos. 16-1309-**
15 **GA-UNC, et al.?**

16 A. Yes. As the Director of Regulatory Policy, I manage and supervise Colum-
17 bia’s energy efficiency team. The energy efficiency team members and I
18 drafted and revised the application in Case Nos. 16-1309-GA-UNC, et al.
19 During the proceeding, I negotiated with the parties to reach a stipulation,
20 assisted in the drafting of the stipulation, and provided testimony at hear-
21 ing to support the stipulation.
22

23 **Q. Are you familiar with phrases in the application and stipulation referenc-**
24 **ing Columbia offering programs in its “service territory”?**

25 A. I am familiar with those references in the application and stipulation.
26

27 **Q. What does Columbia mean when it refers to its “service territory” or “ser-**
28 **vice area”?**

29 A. Columbia considers its service territory or service area to be, at any time,
30 the general geographic area where Columbia has facilities serving or capa-
31 ble of serving Ohio residents. But this geographic area is not fixed. Colum-
32 bia continually extends its mains to serve new areas and reach new poten-
33 tial customers, thereby changing its service area on a regular basis.
34

35 **Q. In this case, Suburban appears to allege that those phrases were intended**
36 **to preclude Columbia from applying EfficiencyCrafted® Homes Program**

incentives to new homes connected to new main line extensions after the application was filed and/or approved. Do you agree with that characterization?

A. I do not. In paragraph 17 of its Complaint, Suburban seems to allege that Columbia's "service territory," for purposes of the EfficiencyCrafted® Homes Program, was established "as of the date of the final order in Case No. 16-1309-GA-UNC...." However, as noted in Suburban's discovery in this proceeding, Suburban changed course and defined Columbia's service territory "as such territory existed at the time Columbia filed its application in Case No. 16-1309-GA-UNC." Suburban's discovery responses are attached to my testimony at Thompson Attachment F.

Notwithstanding these arguments, neither of Suburban's proposed definitions were intended by Columbia or adopted by the Commission. Columbia's Application explained that the key purpose of Columbia's energy efficiency program is to "provide cost-effective, customer-oriented energy efficiency services for residential and commercial customers throughout Columbia's entire service territory." With such language, Columbia was not limiting its ability to serve customers outside the geographic boundaries of Columbia's mains, service lines, and meters as of June 10, 2016 or December 21, 2016 when the Commission ultimately approved Columbia's energy efficiency program.

Instead, this phrase was simply intended to mean that Columbia's energy efficiency programs, including the EfficiencyCrafted® Homes Program, may be offered to Columbia's customers and potential customers. Columbia cannot provide these programs to premises or properties when they're served by other natural gas service providers, such as The East Ohio Gas Company d/b/a Dominion Energy, Vectren Energy Delivery of Ohio or any other LDC – including Suburban. However, if a property switches in northeast Ohio from Dominion Energy to Columbia, for example, then Columbia is able to offer these energy efficiency programs to that customer.

Q. If Suburban's "fixed-in-time" geographic service territory argument in this case is accepted by the Commission, what would be the impact to Columbia's customers?

A. By accepting such an argument, the Commission would be depriving new customers of the ability to participate in Columbia's energy efficiency programs until January 1, 2023. In Case No. 16-1309-GA-UNC, et al., Columbia requested and received approval for a six-year term of its energy efficiency

1 program through December 31, 2022. Under Suburban's theory, new cus-
 2 tomers of Columbia that are connected to main line extensions after June
 3 10, 2016 or December 21, 2016, would not be eligible for a smart thermostat,
 4 an in-home energy audit, an energy efficient appliance rebate, an online
 5 home audit, a home energy usage report, income-eligible home weatheri-
 6 zation, or a new home incentive. Such a restriction on the availability of the
 7 programs was never intended by Columbia, nor would the Commission
 8 have approved such a blatant discrimination against customers.

9

10 **Q. Are there any other pitfalls to Suburban's proposed geographic limita-**
 11 **tion to the EfficiencyCrafted® Homes Program?**

12 A. Yes. Taken to its logical conclusion, only customers in new homes that are
 13 being rebuilt in front of existing Columbia mains would be able to take ad-
 14 vantage of this program. This would presumably prohibit any new home
 15 subdivisions or neighborhoods from participating in the EfficiencyCrafted®
 16 Homes Program and all of Columbia's other energy efficiency program un-
 17 til January 1, 2023.

18

19 **Q. Does Ohio have certified territories for natural gas utilities, similar to**
 20 **electric distribution utilities?**

21 A. No, Ohio does not have certified territories for natural gas utilities. Con-
 22 versely, the electric distribution utilities, pursuant to R.C. §§ 4933.81, et seq.,
 23 may request a certified territory from the Commission. I've been advised
 24 by counsel that there is no corresponding Ohio Revised Code section for
 25 natural gas companies.

26

27 **Q. Are you familiar with the Commission providing any guidance regarding**
 28 **service territories for natural gas companies?**

29 A. Yes. In Case No. 87-1528-GA-ATA, the Commission stated that "any gas
 30 company may service any customer in any part of the state." Such a state-
 31 ment indicates that natural gas companies may serve any person in this
 32 state, unlike the electric distribution utilities which have certificated areas
 33 of service.

34

35 **Q. Do Suburban's arguments align with this precedent?**

36 A. No, they do not. Suburban's arguments ignore that there are no certified
 37 territories in Ohio for natural gas companies. As I stated above, Columbia's
 38 service area changes on a regular basis. Because of its ever-changing nature,
 39 Columbia's references to "service area" or "service territory" would never
 40 be intended to limit Columbia to a "day-in-time" snapshot restriction.

1 **IV. THE 1995 STIPULATION DOES NOT PROHIBIT THE EFFICIEN-**
 2 **CYCRAFTED® HOMES PROGRAM**

3
 4 **Q. Are you familiar with the Stipulation filed between Columbia and Sub-**
 5 **urban in Case Nos. 93-1569-GA-SLF, et al.?**

6 A. Yes. I have read the Second Amended Joint Petition, Application and Stip-
 7 ulation and Recommendation filed on November 9, 1995. I have also re-
 8 viewed the Commission's Entries dated December 7, 1995 and December
 9 14, 1995, and the Commission's Finding and Order dated January 18, 1996.

10
 11 **Q. What does Columbia understand the Stipulation's purpose to be?**

12 A. The document speaks for itself. In the 1995 Stipulation, Columbia agreed to
 13 transfer to Suburban certain natural gas pipelines owned and operated by
 14 Columbia in Delaware County. Columbia also agreed to file certain tariff
 15 changes regarding the payment for, directly or indirectly, for customer ser-
 16 vice lines, house piping, and appliances. Finally, the 1995 Stipulation in-
 17 cludes, as Exhibit 7, a Release and Covenant Not To Sue.

18
 19 **Q. What tariff changes, in particular, did the 1995 Stipulation require?**

20 A. As described in the Commission's Finding and Order in Case Nos. 93-1569-
 21 GA-SLF, et al., the parties agreed to remove provisions from their tariffs
 22 that prevented them from paying for customers' service lines, house piping,
 23 or appliances.

24
 25 **Q. Does the Release and Covenant Not to Sue attached to the 1995 Stipula-**
 26 **tion in any manner restrict Columbia's ability to offer energy efficiency**
 27 **programs?**

28 A. No, it does not. Columbia had no energy efficiency programs, save for the
 29 WarmChoice® Program, at the time of the 1995 Stipulation. The Release
 30 simply precluded further *claims* relating to the named programs and any
 31 then-existing, substantially similar program. This release of claims does not
 32 prohibit the establishment of the EfficiencyCrafted® Homes Program or any
 33 other energy efficiency new homes programs.

34
 35 **Q. Does the 1995 Stipulation include any restriction, limitation, or discus-**
 36 **sion regarding Columbia's ability to offer energy efficiency programs?**

37 A. No, the 1995 Stipulation does not restrict, limit, or even discuss Columbia's
 38 ability to offer energy efficiency programs. This silence further extends to
 39 Columbia's ability to offer incentives to builders to build more energy effi-

1 cient homes. As explained earlier, the Commission has repeatedly ap-
 2 proved Columbia's energy efficiency programs over the last 10 years, and
 3 the programs have won several energy efficiency awards.

4
 5 **Q. Do you agree with Suburban's allegation that the "purpose and intent of**
 6 **the 1995 Stipulation" prohibited Columbia from offering the Efficiency-**
 7 **Crafted® Homes Program?**

8 A. No, I do not. As I noted above, there is nothing in the 1995 Stipulation that
 9 sets out as its purpose or intent to prohibit Columbia from offering Com-
 10 mission-approved energy efficiency programs, including a new homes en-
 11 ergy efficiency program.

12
 13 **Q. What action are you requesting that the Commission take with respect to**
 14 **the 1995 Stipulation?**

15 A. The Commission should make a definitive ruling that the 1995 Stipulation
 16 does not prevent Columbia from offering the new homes energy efficiency
 17 program that the Commission has already approved three times, including
 18 the current EfficiencyCrafted® Homes Program. The Commission should
 19 make a definitive ruling that nothing in the 1995 Stipulation prevents Co-
 20 lumbia from offering service and Commission-approved DSM programs to
 21 customers and potential customers in any portion of Ohio, including Dela-
 22 ware County.

23
 24 The Commission should further affirmatively rule that the 1995 Stipulation
 25 contains no restrictions whatsoever on competition. The Commission
 26 should make these rulings because that is the proper reading of the 1995
 27 Stipulation and because that is in the best interests of natural gas customers
 28 in Ohio. If the Commission does not affirmatively rule that the 1995 Stipu-
 29 lation contains no restrictions on Columbia's ability to compete with Sub-
 30 urban, Columbia will continue to be subjected to variations on the com-
 31 plaints Suburban filed in 2011, 2013, and 2017.

32
 33 **Q. How would customers benefit if the Commission allows Columbia and**
 34 **Suburban to continue competing for customers in Delaware County,**
 35 **without the restrictions suggested by Suburban?**

36 A. The Commission supports the concept of customer choice in selecting both
 37 a natural gas local distribution company and a natural gas service supplier.
 38 Columbia has a CHOICE program that furthers this policy by allowing its
 39 customers to choose a different natural gas supplier even though Columbia
 40 provides the distribution service. To the best of my knowledge, Suburban

1 does not have a choice program that allows its customers the freedom to
2 choose their natural gas supplier.

3
4 If Columbia customers decide not to participate in Columbia's CHOICE
5 program, they receive pricing based upon suppliers competing to serve
6 them via an auction process that is supervised by the Commission. To my
7 knowledge, Suburban does not auction the right to supply its customers.

8
9 Finally, Columbia's rate structure and commodity auction mechanism pro-
10 vide Columbia customers the opportunity for a lower monthly bill. As is
11 shown on Thompson Attachment G, for the twelve-month period from
12 April 2017 through March 2018, a Columbia customer will save \$81.39 as
13 opposed to being served by Suburban during the same months.

14
15 **VI. THE COMPLAINT FILED IN THIS CASE IS PART OF SUBURBAN'S**
16 **ONGOING ANTI-COMPETITIVE TACTICS TO ESTABLISH AN EX-**
17 **CLUSIVE SERVICE TERRITORY AND LIMIT CUSTOMER CHOICE**

18
19 **A. Exclusive Natural Gas Service Agreements**

20
21 **Q. Before becoming the Director of Regulatory Policy, did you work as an**
22 **attorney at NiSource?**

23 **A.** I did. Beginning in August of 2012, I joined the NiSource Legal Department
24 as an attorney in the real estate section. In this position, I primarily served
25 as counsel to Columbia, advising on real estate matters in Ohio.

26
27 **Q. During this time, did you become aware of any real estate documents rec-**
28 **orded in Delaware County by Suburban?**

29 **A.** Yes. During my time in the real estate section, I became aware that Colum-
30 bia had uncovered at least twelve easements and limitations of service
31 agreements recorded by Suburban in Delaware County, from 1993 through
32 2014, which are attached to my testimony as Thompson Attachment H.

33
34 **Q. During the pendency of this proceeding, did you become aware of addi-**
35 **tional real estate documents recorded in Delaware County by Suburban?**

36 **A.** Yes. Between 2014 and 2018, Suburban recorded additional easements and
37 exclusive service agreements in Delaware County, which are attached to
38 my testimony as Thompson Attachment I.

1 **Q. Have you reviewed those documents?**

2 A. Yes, I have.

3

4 **Q. What do these documents show?**

5 A. Each of these documents show Suburban's effort to create an exclusive ser-
6 vice territory for itself by attempting to block any future competition over
7 natural gas utility service. The Exclusive Natural Gas Service Agreements
8 convey to Suburban "the sole and exclusive right to construct a natural gas
9 distribution system" on the property. The agreements further prohibit the
10 landowner from "grant[ing] any easement or other rights to any other per-
11 son or entity for the purpose of providing natural gas service to the Pro-
12 ject..." In the recent natural gas easement for the Evans Farms develop-
13 ment in Delaware County, Suburban included the provision requiring ex-
14 clusive natural gas service. By recording these documents, Suburban evi-
15 dently expects to have this limitation run with the land to permanently re-
16 strict natural gas service to these properties, without regard to the public
17 policy implications for competition and customer choice. Such a restriction
18 of service shows Suburban's intent to create the practical equivalent of a
19 certified territory through the use of easements and exclusive service agree-
20 ments to preclude other natural gas distribution companies from ever serv-
21 ing in those areas.

22

23 Further, Columbia has learned through discovery in this proceeding, that

24

25

26

27 This is at-
28 tached to my testimony as Thompson Attachment J.

29

30

31

32

33 let alone exclusive service agreements.

34

35 In my opinion, the current complaint appears to be just another part of Sub-
36 urban's ongoing effort to create an exclusive service territory for itself and
37 to insulate itself from any competition.

1 Q. Has Suburban

2
3 A.

4
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12 This

is

13 attached to my testimony as Thompson Attachment K.

14
15 Q. Has Suburban

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17
18 A.

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26 This

27 is attached to my testimony as Thompson Attachment L.

28
29
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33
34
35 This

36 is attached to my testimony as Thompson Attachment M.

1 B. Communications with [REDACTED]
2

3 Q. Are you aware of any instances when Suburban [REDACTED]
4 [REDACTED]
5 A. [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED] This [REDACTED] is attached
15 to my testimony as Thompson Attachment N.
16

17 Q. Has Suburban engaged in other tactics than those previously described
18 to discourage builders and developers from utilizing Columbia?

19 A. Yes. Suburban commenced this complaint case when Pulte Homes chose
20 Columbia over Suburban to serve the Glenross South phases of that subdi-
21 vision. Suburban further subpoenaed Pulte Homes' Jeff Thompson, and has
22 added Mr. Thompson to its witness list for hearing. Pulte incurred legal
23 expenses of engaging counsel to defend Mr. Thompson's deposition. Such
24 practices act as a deterrent for builders to cross Suburban when it threatens
25 to take them to court or to bring them into proceedings.
26

27 C. Delaware County [REDACTED]
28

29 Q. Are you aware of any instances when Suburban has [REDACTED]
30 [REDACTED]
31 A. [REDACTED]
32 [REDACTED]
33 [REDACTED]
34 [REDACTED]
35 [REDACTED]
36 [REDACTED]
37 [REDACTED] The [REDACTED] showing this discussion is at-
38 tached to my testimony as Thompson Attachment O.

1 Q. Are there any other instances in which Suburban [REDACTED]

2 [REDACTED]
3 A. [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED] This [REDACTED]
15 [REDACTED] is attached to my testimony as Thompson Attachment P.
16

17 **D. Mischaracterizations of 1995 Stipulation**
18

19 Q. Are you aware of any instances where Suburban has mischaracterized the
20 1995 Stipulation [REDACTED]
21 [REDACTED]
22 A. [REDACTED]
23 [REDACTED]
24 [REDACTED]
25 [REDACTED]
26 [REDACTED]
27 [REDACTED]
28 [REDACTED]

29 **E. Conclusion Regarding Anticompetitive Tactics**
30

31 Q. After reviewing the evidence of Suburban's tactics and its allegations
32 against Columbia, what do you conclude?

33 A. I conclude that the complaint in this case was filed as part of Suburban's
34 ongoing anti-competitive tactics to establish an exclusive service territory
35 and limit customer choice. With the contentious history between Columbia
36 and Suburban, an order from the Commission with clear language reaffirming
37 the right of natural gas utilities to compete for customers in Ohio would
38 help put to rest Suburban's attempts to thwart competition. Further, such a
39 ruling would dissuade Suburban from propagating its theory of certified
40 territories in its day-to-day dealings with customers and public officials.

1 The Commission should answer this question once and for all – can natural
2 gas companies compete for customers when there are no certified territories
3 for natural gas companies – ending the efforts by Suburban to answer this
4 question through its anticompetitive practices.
5

6 **Q. Does this complete your Prepared Direct Testimony?**

7 **A.** Yes, it does. I reserve the right to file rebuttal testimony as warranted based
8 upon further developments in this case.

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 16th day of March, 2018, upon the parties listed below.

/s/ Eric B. Gallon

Eric B. Gallon

**Attorney for
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FILE

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Columbia)
Gas of Ohio, Inc. for Approval of a Demand)
Side Management Program for Residential and)
Commercial Consumers.)

Case No. 08-0833-GA-UNC

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APPLICATION OF COLUMBIA GAS OF OHIO, INC.
TO ESTABLISH
DEMAND SIDE MANAGEMENT PROGRAMS
FOR RESIDENTIAL AND COMMERCIAL CONSUMERS

I. Introduction

In this application, Columbia Gas of Ohio, Inc. ("Columbia") seeks approval to implement the Demand Side Management ("DSM") programs described herein. These proposed programs, to be effective for residential and commercial customers for calendar years 2009 through 2011, were developed with the consensus of the Columbia Demand Side Management Stakeholder Group ("DSMSG"), the Office of the Ohio Consumers' Counsel ("OCC"), and in consultation with the Staff of the Public Utilities Commission of Ohio. This Application further addresses the proposed implementation of a DSM Cost Recovery Rider applicable to Small General Service sales customers.

The DSMSG members include Columbia, OCC, Staff, Honda of America Manufacturing, Inc., Ohio Farm Bureau Federation, Ground Level Solutions, Inc., Corporation for Ohio Appalachian Development ("COAD"), Cornerstone Energy Conservation Services, American Society of Heating, Refrigeration and Air Conditioning Engineers - ASHRAE ("HAWA"),

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Industrial Energy Users-Ohio, Mid Ohio Regional Planning Commission ("MORPC"), Ohio Home Builders Association, Ohio Department of Development ("ODOD"), Ohio Partners for Affordable Energy, Ohio Board of Building Standards, Direct Energy, Air Conditioning Contractors of America - Ohio Chapter (Atlas Butler Heating Cooling), The Building Owners and Managers Association (CB Richard Ellis | Global Corporate Services), Neighborhood Housing Services of Toledo, City of Columbus, and Interstate Gas Supply, Inc. M. Blasnik and Associates, and KEMA served as DSM consultants.

II. Columbia's History in Support of Weatherization Programs

Columbia has been a leader among Ohio utilities in developing energy efficiency and weatherization programs. Since 1984 Columbia has been involved with three distinct program approaches to customer energy conservation. Operation HomeCheck, established in 1984, represented Columbia's first partnership with community-based, nonprofit organizations and provided low income customers with energy audits of their homes. Operation HomeCheck developed the capacity to perform more than 11,000 home energy audits annually.

In November 1986, Columbia and its partners added a weatherization component to the existing energy audit service offered through Operation HomeCheck, and provided both an educational and material installation service for 7,149 eligible customers. The average cost per customer served by this program was approximately \$450, and the total cost of this program for 1986 and 1987 was \$3,217,050. Columbia gained many insights through these programs and, influenced by its results from the original program and several other key events that occurred in other energy conservation programs around the country, Columbia set out to design a new weatherization service. This new program, WarmChoice®, was shaped by three planning considerations:

- A 1987 study conducted by Cleveland State University of Ohio's HWAP docu-

mented that strategic combinations of weatherization measures resulted in consistent reductions in gas consumption of more than 20%. The results of this research suggested that Columbia could increase its investment in each home to accommodate attic and sidewall insulation.

- A need existed to better coordinate Columbia's weatherization program with existing federal, state and local programs rather than to duplicate these efforts.
- Proven new technologies in the energy conservation profession provided an opportunity to improve the effectiveness of weatherization services. More sophisticated techniques for diagnosing air leakage and furnace efficiency could be incorporated into an energy conservation program.

To this end, Columbia and its partners, including the ODOD and five community-based organizations ("CBO"), designed the WarmChoice® program. WarmChoice® is a low-income weatherization service provided to eligible Columbia customers. To participate in the program, customers' incomes must be at or below 150% of the federal poverty guidelines. Customers must also be eligible (or approved) for the Home Energy Assistance Program ("HEAP") at the 150% level, HWAP, or the Percentage of Income Payment Plan ("PIPP"). When possible, WarmChoice® works in conjunction with the ODOD's Home Weatherization Assistance Program to combine resources to maximize energy efficiency opportunities in the homes of low-income customers.

Since its inception, the Company's WarmChoice® program has been among the nation's elite residential weatherization programs. The Program's philosophy of comprehensive service enables the local weatherization community-based organizations administering WarmChoice® to provide eligible participants with a complete set of weatherization measures, helping residents to

manage their energy use and, consequently, save on utility bills. The Program's additional focus on health and safety helps to ensure that low-income residents within Columbia Gas' service territory are insulated from the dangers of antiquated, unsafe heating equipment¹ despite income limitations.

In addition, Columbia's partner CBO's leverage a number of other funding sources to perform electric base load energy conservation measures and home repairs so that houses can be weatherized. These programs include the Electric Partnership Program operated by ODOD, and home repair programs funded through the United States Department of Housing and Urban Development ("USHUD"), the United States Department of Agriculture ("USDA"), and the State of Ohio, among others.

WarmChoice[®] providers employ trained inspectors who use blower doors, combustion analyzers, gas leak detectors, and their analytical skills to determine the appropriate set of energy conservation measures and heating equipment for each home. In addition, inspectors identify and attempt to eliminate potential health and safety risks within the home. Participants in the WarmChoice[®] Program may be eligible to receive diagnostically-driven home energy inspections; space and water heating system repair and/or replacement; attic, wall, floor, duct, water heater and water pipe insulation; sealing of major air leaks; and safety checks on gas-fired appliances.

In many cases, the CBO's or their sub-contractors have trained and licensed technicians on staff to perform such work. Otherwise private, for-profit subcontractors complete the heating and weatherization work. After heating-unit work, and again after envelope measures are completed, final inspectors or field supervisors inspect the work. Most technicians and inspectors

¹ For instance, a cracked heat exchanger that would allow combustion gases to mix with delivery air.

are trained at the Ohio Weatherization Training Center, operated by one of the Program CBOs (COAD) for the ODOD. In addition, the Company itself performs quality control inspections on approximately 5-10% of all completed homes.

Over 48,000 families have participated in WarmChoice[®] since its inception in 1987 and more than \$97 Million has been invested in this program. The most recent energy impact evaluation conducted showed Normalized Annual Consumption (“NAC”)² reduction of approximately 320 ccf per customer per year. Given that insulation measures can last 20 years or more, lifetime energy savings to customers provide substantial and ongoing value.

Exemplary features and results of WarmChoice[®] include:

- **Integral and regular evaluation:** Since 1991, Columbia has sponsored 18 evaluations of WarmChoice[®], including impact, process and persistence of savings evaluations. Columbia, in consultation with M. Blasnik and Associates, automated the impact evaluation process in 2005 and 2006, using an approach equivalent to the Princeton Scorekeeping Method (“PRISM”). Columbia used the approach to conduct impact evaluations of five recent program years, 1999-2004.
- **Marketing:** Columbia provides WarmChoice[®] providers with lists of potentially eligible customers in order to effectively market the program. The lists also contain gas consumption data and PIPP arrearage information to help target customers.
- **Proven energy savings:** WarmChoice[®] improved its average savings to customers from 13% in 1990 to 30.5% of pre-treatment NAC in 1998. With an average investment of approximately \$4000 per household, net savings from the 1999 through 2004

² Normalized Annual Consumption (NAC) is the primary consumption index which provides an estimate of consumption under average weather conditions.

programs averaged approximately 27% of pre-weatherization energy use, even though pre-treatment usage among the treated homes has declined.

- **Arrearage reductions:** The average annual net impact of the program was approximately \$60 and \$147 reduction in arrears during the periods ending August 1999 and April 2001.
- **Effective partnerships:** WarmChoice® was one of the first utility weatherization programs to use the low-income, community-based organization weatherization network to provide services. While WarmChoice® was originally designed as a stand-alone service, in 1994 the program experimented with a cost-share (also referred to as “combo” or “piggyback”) approach in which the program could share resources with the United States Department of Energy Weatherization Assistance Program, and other services offered by the community-based organizations.
- **Data management/warehouse:** Columbia archives energy use, payment, arrearage and other customer data for all eligible low-income customers and participants in a series of data tables in order to be able to provide customer marketing lists and for short and long-term evaluation purposes. This data enabled Columbia to conduct a persistence of savings study of the 1990-2000 period for homes previously weatherized. That 2003 study showed there was little, if any, degradation of energy savings over time. The data warehouse also enabled Columbia to automate impact evaluations for program years 1999 through 2004 and will allow for continued impact evaluations of program years going forward as additional data becomes available. The 2005 program year is scheduled for an impact analysis in 2008.

- **Innovation:** WarmChoice® was one of the first programs in the nation to require the use of blower doors and combustion analyzers during the inspection/audit process. WarmChoice® was an early implementer of replacement high efficiency furnaces for customers whose furnaces could not be repaired. Columbia integrated formal evaluation into its WarmChoice® program design from the start, using the evaluation results to improve and maintain program impacts. The WarmChoice® program focuses heavily on instrumented air sealing and insulation measures, which are a key to achieving energy use reductions in the housing stock treated through the program. In 2005, WarmChoice® received the Ohio Governor's Award for Excellence in Energy Efficiency and was recognized that same year by the American Council for an Energy-Efficient Economy ("ACEEE") as an Exemplary Low-Low Income Energy Efficiency Program. In 2007, WarmChoice® integrated the use of infrared thermography cameras into the program to help assess the quality of insulation and air sealing work.

Clearly, Columbia's successful implementation of WarmChoice® has set the stage for implementing an expanded set of DSM programs that can provide customers with quantifiable value. Beyond the value of energy savings, WarmChoice WarmChoice® and the proposed DSM programs provide other non-energy benefits such as: economic development through hiring of firms and employees to provide DSM services, increased sales of products made in Ohio and sold by Ohio firms, improved health, safety, durability and comfort, reduced greenhouse gas emissions and a lower carbon footprint, and reduced water and electricity consumption. Columbia's DSM proposal also supports Governor Strickland's plan for energy, jobs and progress in Ohio.

III. Columbia's Commitment to New DSM Programs

A. PUCO Case Nos. 05-221-GA-GCR et al

On January 23, 2008, the Public Utilities Commission of Ohio ("Commission") issued an Opinion and Order in Case Nos. 05-221-GA-GCR et al adopting the December 28, 2007 Joint Stipulation and Recommendation ("Stipulation"). This Stipulation was the product of the resolution of comprehensive issues addressed in the aforementioned case which resulted in an extensive agreement between numerous stakeholders. As part of that Stipulation, Columbia agreed to file by July 1, 2008 a DSM application, cooperatively developed by Columbia, OCC, Staff and other stakeholders for approval of comprehensive energy efficiency programs for residential and commercial customers.³ The Stipulation further discussed the DSM application as follows:

- This DSM application shall provide that for calendar years 2009 through 2011, Columbia shall implement comprehensive, ratepayer funded, cost-effective energy efficiency programs made available to all residential and commercial customers.⁴
- This DSM application shall provide that by the end of calendar year 2011, the programs will achieve a verified (based on an impact evaluation) energy usage reduction at a level of three-quarters percent to one percent of Columbia's total annual residential and commercial jurisdictional tariff sales, adjusted for weather.⁵
- As part of this DSM application, funding levels for the residential and commercial energy efficiency programs are anticipated to be up to 1% of Columbia's jurisdictional revenues by 2011, as determined by the test year adjusted revenues set forth on Schedule C-2 in Columbia's base rate case filed in early 2008. Program funding may be increased by up to

³ Joint Stipulation and Recommendation, Case No. 05-221-GA-GCR at 21-22.

⁴ Stipulation at 39.

⁵ Id at 40. The three-quarters to one percent target for energy usage reduction by the end of calendar year 2011

an additional \$1 million per year in 2010 and 2011 assuming that energy efficiency targets are met.⁶

- This DSM application shall provide that the sales volume benchmark will be the total weather adjusted (normalized) annual tariff sales volumes appearing in Columbia's then most recent Ohio Long Term Forecast Report (for example, Total Tariff Sales for 2007 shown in Table (b)(xi) on page 71 of the 2008 report would set the benchmark for 2009).⁷
- The comprehensive energy efficiency programs to be addressed in the DSM application shall be developed through a DSM stakeholder process including Columbia, OCC, Commission Staff, and other interested stakeholders. Columbia shall initiate the DSM Stakeholder process within thirty days of the Commission order adopting this Stipulation and Recommendation. The comprehensive energy efficiency programs shall be cost effective as measured by the Total Resource Cost ("TRC") test as defined by the 2002 "*California Standard Practice Manual: Economic Analysis Of Demand-Side Programs And Projects*," or by other industry-accepted measurement techniques, as determined by the DSM stakeholder group.⁸
- As part of the DSM stakeholder process, Columbia, OCC, Staff and other stakeholders will develop an action plan, using an independent consultant, to determine the potential for energy efficiency savings, suggested programs, and cost-benefit measurement techniques. Other benefits of the programs will be examined including, but not limited to, longer term commodity price decreases resulting from the multi-year program savings.⁹
- Ratepayer funding of administrative expenses and advertising/educational expenses

equates to a volume range of 611,000 Mcf to 815,000 Mcf.

⁶ Id. at 41.

⁷ Id. at 42.

⁸ Id. at 43.

associated with comprehensive energy efficiency programs will be determined in the DSM stakeholder process and the DSM application shall provide that administrative expenses and advertising/educational expenses shall not exceed, in total, 20% of the program cost, unless otherwise modified for a specific program by the DSM stakeholder group.¹⁰

- Based on the above provisions, the Parties anticipate that representative funding levels to be included in the DSM application will approximate those in the table below.

| | 2009 (\$) | 2010 (\$) | 2011 (\$) | 3-Year Total (\$) |
|--|--------------|--------------|--------------|----------------------|
| Current Weatherization Program ¹¹ | 5.5 million | 5.5 million | 5.5 million | 16.5 million |
| Additional DSM Programs | 7.3 million | 8.3 million | 9.3 million | 24.9 million |
| Total Funding | 12.8 million | 13.8 million | 14.8 million | 41.4 million |

However, if future state or federal legislation mandates higher levels of energy savings and/or energy efficiency funding than is contemplated in this settlement, Columbia shall use the existing stakeholder process to achieve the required savings/funding targets.¹²

This filing is the DSM Application contemplated by the Stipulation.

B. PUCO Case Nos. 08-0072-GA-AIR et al

On February 1, 2008, Columbia filed its Notice of Intent to File an Application to Increase Rates and to File an Application for Approval of an Alternative Rate Plan of Columbia in PUCO Case Nos. 08-0072-GA-AIR et al. Columbia also filed its Application for Approval to

⁹ Id. at 44.

¹⁰ Id. at 45.

¹¹ As part of its base rate case application in Case No. 08-0072-GA-AIR et al, Columbia has proposed that funding for Columbia's current weatherization program, WarmChoice[®], will be reflected as a component of the calculation of base rates in that application, consistent with prior treatment of the program's expenses. Columbia proposed to increase its current annual funding for WarmChoice[®] from \$5.5 million to \$7.1 million as a component of the calculation of base rates.

¹² Stipulation at 46.

Change Accounting Methods in PUCO Case No. 08-0074-GA-AAM, in which Columbia requested authority to defer expenses incurred in the development and implementation of the DSM programs.

On March 3, 2008, Columbia filed its Application for Authority to Increase Rates for Gas Distribution Service and for Approval of an Alternative Regulation Plan in PUCO Case Nos. 08-0072-GA-AIR et al. As part of its Alternative Regulation Plan 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. (Attachments 1, 2 and 3 in Appendix C provide detailed descriptions on the operation of the riders.)

The Alternative Regulation Plan (see Alt. Reg. Exhibit A: Alternative Rate Plan Description in the March 3, 2008 Application in Case No. 08-0072-GA-AIR) proposed that Rider DSM will be determined annually based on the actual costs of the program for the previous calendar year with rates to become effective the following May 1. In all annual DSM filings that request recovery of costs, Columbia will provide Commission Staff with audited accounting and billing records, prepared by Columbia's external auditor, in sufficient detail to enable the Commission Staff to analyze Columbia's filing. As part of its determination of actual costs, Columbia herewith also proposes to calculate carrying charges on its monthly deferred balance. The interest rate shall be Columbia's weighted cost of debt (currently 5.4%), exclusive of the equity component, and there will be no compounding of the carrying charge.

Columbia's rate case application in Case Nos. 08-0072-GA-AIR et al proposed that Rider DSM would be applicable to all rate schedules only because at the time of the filing the scope of the DSM programs was not defined. Columbia and the DSMSG have now defined the DSM program portfolio and the customer groups benefiting from the programs, and therefore have been able to more specifically define the applicability of Rider DSM to specified rate schedules. Thus, programs costs will be recovered from those customer classes eligible to participate – Small General Service customers (less than 300 Mcf per year) – with rates being developed based on projected throughput for the recovery period.

The instant application seeks approval of the specific DSM programs that Columbia proposes to implement pursuant to the Stipulation in Case Nos. 05-221-GA-GCR et al. Recovery of DSM costs is part of Columbia's rate case application, as explained above, and implementation of approved DSM programs contained in the instant application shall be contingent on approval of the recovery of DSM costs in Case Nos. 08-0072-GA-AIR et al. Columbia is separately filing on this same date a motion in Case No. 08-0072-GA-AIR, in which Columbia requests that the Commission take administrative notice of the filings in this DSM docket so that the Commission may consider the substance of the DSM programs proposed herein as the Commission deliberates the proposed recovery of DSM costs in the rate case dockets.

C. Columbia's DSM Stakeholder Process

Columbia invited all stakeholders from Case Nos. 05-221-GA-GCR et al and other interested parties to participate in its DSM stakeholder process of developing Columbia's DSM Action Plan. On February 13, 2008, Columbia held the first DSMSG meeting. This meeting consisted of an overview of the DSM stakeholder process, the Stipulation in Case Nos. 05-221-GA-GCR et al, DSM requirements, a review of residential program savings potential, and a discussion about commercial DSM program assessment needs.

On March 12, 2008, Columbia held the second DSMSG meeting. On this date, the DSMSG reviewed the roles of the stakeholder group and consultants, reviewed the California Standard Practice Manual cost tests, received an update on in-progress Residential DSM program analyses, and approved the need for a RFP process to hire a commercial DSM consultant. The RFP for the commercial program consultants was provided to the DSMSG for comment and was issued to a list of potential bidders on March 14, 2008 with proposals due on March 31, 2008.

On May 21, 2008, Columbia held the third DSMSG meeting. On this date, the DSMSG reviewed the primary goals of DSM, participated in a presentation and discussion of the recommended residential DSM programs, and was introduced to the commercial DSM winning proposal team from KEMA. KEMA staff presented the commercial action plan development

process and the action plan template that would be used for all DSM programs. The DSMSG agreed to the Residential Programs recommended by the residential DSM consultant, M. Blasnik and Associates, which include Home Performance Program, Low Cost Product Rebates, New Homes Program and Furnace Market Research.

On June 5, 2008, Columbia held the fourth DSMSG meeting. On this date, the DSMSG reviewed the components of the action plan template and participated in a presentation about and discussion of the proposed commercial DSM programs.

On June 17, 2008, Columbia held the fifth DSMSG meeting. On this date, the DSMSG reviewed the roles of the DSMSG and the consultants, participated in a review and discussion of the recommended commercial DSM programs, and reviewed program cost effectiveness, gas savings and estimated budgets. The DSMSG adopted the final recommendations on the proposed commercial programs, which include Small Business Energy Efficiency Incentives, Small Business Energy Saver Audits, Advanced Energy Design Partnership, and Innovative Technology. The DSMSG also adopted exceeding the 20% limit for administration, education and advertising costs for 3 programs – the Residential Low Cost Measure program, the Small Business Energy Saver Audit, and the Advanced Energy Partnership. Overall, program costs for administration, education and advertising are below 20%.

On June 26, 2008, Columbia held the sixth DSMSG meeting to review the draft DSM application.

IV. Cost-Effectiveness Evaluation and Program Selection

A. General

Columbia believes it is in the best interest of its residential and small commercial consumers of natural gas services to provide incentives through programs that promote the installation and implementation of energy efficiency measures and technologies in a cost effective manner. Columbia has approximately 1.3 million residential customers and 70,000 commercial customers on its Small General Service rate schedule. For many of these customers,

the energy efficiency market has many existing barriers to the adoption of efficient technology, including higher incremental costs for high efficiency equipment, lack of consumer education, lack of contractor trade ally training, lack of equipment supply at time of replacement, lack of monetary resources, fear of change and societal costs not being reflected in prices. Accordingly, Columbia and the DSMSG believe that Columbia and its stakeholders need to continue to play a role in promoting and encouraging energy efficiency. Specifically, Columbia must continue to take a lead role in promoting energy efficiency because it has an existing relationship with the consumers, who often view the utility as their primary source of energy information. Columbia's unique relationship between consumers and stakeholders will allow Columbia to meet consumers' needs for information, education, services and financial assistance through technology and incentives to help remove market barriers and speed the adoption of more efficient technologies. Other stakeholders that help make up the DSMSG, which includes consumer advocate groups, contractors, trade allies and numerous energy related organizations, are also an integral part of creating a successful program as these groups interact with the utility and its consumers.

The cost of natural gas has increased substantially in recent years and is expected to remain high and volatile due to the interrelatedness of the global demand for energy and its effect on the pricing of all fuels, including natural gas. Residential and small consumers will benefit from these proposed energy efficiency programs by providing ready access to energy saving measures, which will directly reduce natural gas usage throughout the calendar year improving the affordability of natural gas service. Additionally, customers will benefit by gaining better safety and reliability of their heating equipment, overall efficiency and comfort and electric and water savings. Non-participating customers will also benefit through the establishment of a network of trained providers and enhanced marketplace with better access and availability to state of the art energy conservation techniques promoted by these DSM programs. Moreover, non-participating customers may benefit from the price dampening effects of energy efficiency and from the positive environmental impacts of the programs.

B. Program Selection

Columbia partnered with the DSMSG and independent consultants to determine all aspects of the DSM programs. M. Blasnik and Associates was selected to provide consulting services for residential DSM programs. KEMA was selected to provide consulting services for the commercial DSM programs. The Consultants evaluated potential for energy savings, suggested programs and the cost-benefit measurement techniques. The Consultants also integrated input from the DSMSG into program designs. The DSMSG has reviewed and accepted the programs proposed in this filing.

C. Methodology

M. Blasnik and Associates and KEMA calculated the potential savings from energy conservation measure technologies and products applied across proposed customer participation rates for each DSM program. The Consultants proposed program budgets to implement the program designs, and cost effectiveness tests were applied to each of the programs. Pursuant to the Stipulation in Case Nos. 05-221-GA-GCR et al, the DSM programs must be cost effective as measured by the Total Resource Cost Test ("TRC"), or other industry accepted measurement techniques as determined by the DSMSG, such as the Utility Cost Test ("UCT"), the Participant Cost Test ("PCT") or the Ratepayer Impact Test ("RIM"). The Consultants applied all four of the standard test methodologies from the California Standard Practice manual to the proposed DSM programs.

TRC measures the net costs of a demand-side management program as a resource option based on the total costs of the program, including both the participants' and the utility's costs.

UCT (also referred to as the Program Administrator Cost Test) measures the net costs of a demand-side management program as a resource option based on the costs incurred by the program administrator (including incentive costs) and excluding any net costs incurred by the

participant. The benefits are similar to TRC benefits, although costs are defined more narrowly under UCT.

PCT is the measure of the quantifiable benefits and costs to the customer due to participation in a program. Since many customers do not base their decision to participate in a program entirely on quantifiable variables, this test cannot be a complete measure of the benefits and costs of a program to a customer. Thus, PCT is not a complete measure of the benefits and costs of a program to a customer.

RIM, also referred to as the Non-Participants Test, measures what happens to customer bills or rates due to changes in utility revenues and operating costs caused by the program. Rates will go down if the change in revenues from the program is greater than the change in utility costs. Conversely, rates or bills will go up if revenues collected after implementation of the program are less than the total costs incurred by the utility to implement the program. RIM indicates the direction and magnitude of the expected change in customer bills or rate levels.

All of the proposed programs pass TRC, UCT and PCT with the exception of the Innovative Technology program and those programs that are purely educational or financial in nature. The cost-effectiveness of the Innovative Technology program will be determined through intensive monitoring, verification and evaluation protocols ("M, V and E") before, during and after implementation.

Non-energy benefits were not included in the cost-effectiveness calculations. With the future potential monetization of carbon dioxide and other greenhouse gas ("GHG") emissions, the emissions reductions associated with the reduced use of natural gas (and electricity) that occur from implementing DSM programs would likely improve program cost-effectiveness. For instance, at \$20 per ton for carbon, Columbia DSM program CO₂ reductions of nearly 458,000

tons over the life of the energy conservation measures could be worth approximately \$9 million.

D. Program Recommendations

M. Blasnik and Associates and KEMA performed energy cost-effectiveness tests based on gas savings and budget projections for all DSM programs. Sources for costs of energy conservation measures included impact evaluation studies, engineering calculations and industry sources. Based upon the results of the Consultants' work and discussions with the DSMSG, Columbia proposes that the following DSM programs be implemented.

Residential Programs

- Home Performance Program
- Low Cost Product Rebates
- New Homes Program
- WarmChoice^{®13}
- Furnace Market Research¹⁴

Commercial Programs

- Small Business Energy Efficiency Incentives
- Small Business Energy Saver Audits¹⁵
- Advanced Energy Design Partnership
- Innovative Technology Program

Financing

- Energy Efficiency Loan Fund

Detailed descriptions and information on each program are provided in the next section. The results for each cost-effectiveness test based on gas savings and budget projections for all DSM programs are provided in Attachment 1, 2, 3 and 4 in Appendix A.

¹³ The WarmChoice[®] Low-Income Weatherization Program is part of Columbia Gas of Ohio's portfolio of DSM programs, but is funded through base rates rather than through the Rider DSM.

¹⁴ The Furnace Market Research program will not initially result in energy savings.

¹⁵ The Small Business Energy Saver Audit and the Advanced Energy Design Partnership are low cost educational programs for which energy savings are not projected, but which could occur.

V. DSM Program Descriptions and Action Plans

A. Summary

Columbia is proposing to implement a portfolio of DSM programs that offer a wide range of services to all of its residential customers, and commercial customers who take service under the Small General Services rate schedule. While Columbia will administer all DSM programs, program implementation services will be bid out to third party vendors. Columbia's DSM portfolio is comprised of three program areas: residential customers, small commercial customers, and financing. Columbia proposes to offer such programs beginning January 1, 2009 through December 31, 2011. Columbia has also proposed budgets for each program that shall not be exceeded unless shifting of funds is appropriate (see Section VII, D DSM Program Funding Levels).

The residential programs include a Residential Home Performance retrofit incentive program similar to WarmChoice[®] for existing dwellings occupied by customers who have incomes greater than 150% of the Federal Poverty Guidelines. The program will work with the existing HVAC contractor network to identify customers who are replacing their furnaces and who may need additional attic and wall insulation and instrumented air sealing. Incentives will be offered to program participants to install these measures, and higher levels of incentives will be offered to customers who install more than one major energy conservation measure. Customers who are just over the 150% FPG level but are at or below 80% of the Area Median Income (USHUD's definition of low income) will be eligible to have 90% of the cost of attic and wall insulation and instrumented air sealing paid for by the program.

With the expiration in 2009 of builder tax incentives for energy efficient new homes, the Residential New Construction Program will offer incentives to homebuilders to continue to build

homes that are 50% more efficient than the 2004 Supplement to the 2003 IECC, which is the basis for the current Federal tax credits offered to builders, equivalent to homes that qualified for the expiring Federal tax credits.

The program will also provide builders with technical assistance and subsidized home energy ratings.

Columbia's Residential Low Cost Measures program will offer rebates to approximately 8,000 customers per year to install Energy Star programmable thermostats and ultra-low flow showerheads. Products will be available on line and/or at local hardware or building supply stores. Eligibility to participate in this program is extended to all customers regardless of income.

Columbia will continue to offer its award-winning WarmChoice[®] program to its low income customers. The expanded funding requested in Case Nos. 08-0072-GA-AIR et al will provide weatherization to 1,750 customers each year.

Columbia is proposing one research project in the first year. The Furnace Market Research project will quantify the high efficiency furnace penetration rate in Columbia's service territory and determine whether there are barriers at the supplier, contractor or customer level that may be overcome in an effort to increase the penetration rate of this technology.

Columbia's primary program for its 70,000 Small General Service commercial customers is the Small Business Energy Efficiency Incentives program. This service will offer rebates for standard and specialty energy conservation measures, including high efficiency heating system, air sealing and improvements to attic and wall insulation, and water heating saving measures. Infrared fryers will also be included for restaurants. Higher use customers will be targeted for services. Energy conservation measures that are not on the standard list of measures can be installed if an energy audit of the facility estimates that such services or energy conservation

measures would be cost effective. Eligibility to participate in this program is extended to all businesses that take service under the Small General Services rate schedule.

In order to move the commercial building market forward, Columbia proposes to offer an education program based on the American Society of Heating, Refrigeration and Air Conditioning Engineers ("ASHRAE") Advanced Energy Design Guides. Educational seminars will be provided to architects, engineers, building developers and owners to help them understand the opportunities beyond first costs¹⁶ to life-cycle costs¹⁷ and energy use of commercial facilities over their life spans as energy prices continue to increase. In addition, Columbia proposes that building science education be part of the training program.

Columbia also proposes an Innovative Technology program that will allow for the testing of both traditional and non-traditional DSM measures in commercial facilities. This could include, for example, solar pre-heating of water in a fire station, rebates and evaluation measurement, and verification assistance to facilities being built to US Green Building Council Leadership in Energy and Environmental Design ("LEED") standards. This program would also include an advisory panel that would rate proposals for competitive matching grants. Because this program is intended to pilot leading edge efficiency technologies, it is proposed that there is no usage limitation for customers participating in this program.

Finally, because of the tightening of credit in the banking industry, Columbia believes that it will need to provide seed capital for an Energy Efficiency Loan Fund so that customers have access to capital to invest in energy efficiency projects. Columbia will work with experts in the finance sector, such as Ohio's Community Development Finance Fund, to determine how a sustainable loan program might be structured to offer low or no interest loans to its DSM participants.

¹⁶ First costs are generally defined as the costs to construct a facility and do not include long term operations and maintenance costs.

¹⁷ Life cycle costs include the costs for operating and maintaining a facility over its useful life.

B. Residential Programs

Home Performance Program

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| Estimated Budget (2009-11) | Incentives: \$4.5 million Program Services: \$3.5 million Administration, Education & Marketing: \$.7 million (8.3 %) Evaluation: \$0.125 million Total: \$ 8.9 million |
| Participation & Savings Targets (2009-11) | Participation – Audits: 6,039; Jobs: 3,627 Mcf Savings – Annual: 27,251; Cum. 3yr 148,982; Lifetime 1,635,054 |
| Cost Effective Metrics (2009-11) | Total Resource Cost BCR = 1.48 Utility BCR = 1.36 Participant BCR = N/A (no average incremental cost) Rate Impact = \$0.022/Mcf (years 1-3) |
| Program Objective | The objective of the Home Performance Program is to encourage the adoption of quality attic and wall insulation and advanced air sealing retrofits in existing homes and to increase the market share of high efficiency furnaces during system replacements. The program offers greater incentives to households with incomes less than 80% of the Area Median who are less likely to be able to afford efficiency upgrades otherwise. |
| Program Theory or Market Barriers and Approaches to Overcome Them | <p>Residential customers encounter many obstacles in improving the energy efficiency of their homes:</p> <ul style="list-style-type: none"> • Customers lack reliable information on the effectiveness and bill savings of efficiency retrofits • The existing market for home energy efficiency upgrades is fragmented, incomplete, and confusing. Advanced diagnostic air sealing work is essentially unavailable and there is usually little oversight of insulation or HVAC contractors in terms of work quality or performance claims • Many customers have limited funds to pursue energy efficiency retrofits or to select higher efficiency equipment when making a replacement • Even when interested in making improvements, many customers lack the time and expertise to solicit and evaluate contractor bids <p>The Home Performance program will simplify the process of identifying and implementing cost-effective energy improvements through the provision of high quality energy audits, customer financial incentives, and project management. The program will work to build the market for quality Home Performance work by structuring incentives to encourage comprehensive work and by providing contractor training, oversight, and</p> |

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| <p>Program Description</p> | <p>quality control to ensure that capacity is available.</p> <p>The program provides low cost diagnostic energy audits and rebates to customers to help offset the costs of energy efficiency upgrades. The program will be operated by a program administrator contractor.</p> <p>Audits will be conducted by the program administrator to ensure a sound and consistent approach. All program auditors will be certified to perform advanced diagnostic audits. The audit will include installation of some lower cost measures including setback thermostats and low flow showerheads, when applicable. The audit fee will be \$50 and will be rebated to the customer if any major measures are performed.</p> <p>Major program measures will be performed by insulation, air sealing, and HVAC contractors. Contractors must attend a program orientation to be qualified to perform work eligible for rebates. The program administrator will provide project management and oversee the contractors' work quality.</p> <p>Rebates will be offered to customers for insulation, air sealing, and HVAC measures that are deemed cost-effective by the energy audit. Rebates will be equal to 40% of the insulation cost, 60% of the air sealing cost, and \$200 for a high efficiency furnace upgrade. More comprehensive retrofits will be encouraged by increasing the rebates if multiple energy conservation measures are installed to: 60% for insulation, 70% for air sealing, and \$400 for a furnace upgrade.</p> <p>Customers with incomes below 80% of area median income will have a \$20 audit fee and receive rebates of 90% of the insulation and air sealing costs and \$1,000 for a high efficiency furnace upgrade.</p> <p>The program may also provide some type of subsidized financing.</p> |
| <p>Target Market</p> | <p>All residential customers are eligible for the Home Performance program, but marketing efforts will target customers with high usage (>140 Mcf per year) and customers already replacing an existing furnace.</p> <p>Furnace sales data indicate that high efficiency furnaces may already have nearly a 50% market share in Ohio. This potential free-rider "problem" will be used as a tool to market the HP program to customers and as a means to enlist HVAC contractors as allies in generating leads. The Home Performance program will be the only way for customer to access furnace rebates. This approach can provide the program with a large number of energy audit leads from customers already committed to a major energy project, i.e., replacing a furnace. It is expected that a large fraction of Home Performance participants will come from the existing heating system replacement market and through HVAC contractor referrals.</p> |

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| | <p>Although the heating system rebates will likely include many customers who would have purchased efficient systems anyway (i.e., free-riders), the program is designed to use that fact as a way to market additional less common energy conservation measures while simultaneously limiting the cost of free-ridership by creating a hurdle (the audit) to receive the rebate.</p> <p>The program may also employ some geographic targeting, potentially pre-qualifying some entire neighborhoods for the <80% area median income program segment. Targeting can reduce the costs of program marketing and delivery and, when combined with the lower income segment, may help address the owner/renter dilemma.</p> |
| Eligible Measures | <p>Attic Insulation and ancillary work (e.g., required venting) Wall Insulation Blower-Door Guided Air Sealing Furnace Replacement: AFUE >92% Programmable thermostats: free during audit Ultra Low Flow Showerheads: free during audit</p> |
| Implementation Strategy | <p>The program will be operated by a single program administrator who will be charged with developing/providing: the audit tool; technical standards for the work; program administrative procedures and forms, marketing materials, the program tracking system database, and quality control procedures. All of these tasks will be overseen by COLUMBIA staff. The administrator will also provide the in-home audits; follow up with customers; train the contractors; oversee the contractors' work; provide quality control through phone calls, field visits and database analysis; and provide regular program management reports to COLUMBIA with detailed information on program marketing and participation and progress compared to goals and budgets.</p> |
| Marketing Strategy | <p>Program incentives and marketing will be structured to encourage participation from high use customers and customers replacing existing heating equipment to build the market penetration of insulation and air sealing work and high efficiency furnaces. Targeted marketing is expected to improve program cost-effectiveness by soliciting participation from households that would benefit most from the program measures</p> <p>The primary marketing methods will include direct mail to high use customers and direct contact with HVAC contractors. Marketing will also include press releases and related media work to publicize the program, and a description of the program at all existing company customer contact points such as offices, the web site, and bill inserts. All customers will be provided access to the program.</p> |

Residential New Construction Program

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| Estimated Budget (2009-11) | Incentives: \$3.6 million Program Services: \$2.8 million Administration, Education & Marketing: \$0.4 million (6%) Evaluation: \$0.135 million Total: \$6.9 million |
| Participation & Savings Targets (2009-11) | Participation – 3,604 homes over 3 years Mcf Savings – Annual: 27,343; Cum. 3 yr 138,033; Lifetime 1,640,579 |
| Cost Effective Metrics (2009-11) | Total Resource Cost BCR = 1.30 Utility BCR = 1.75 Participant BCR = 4.40 Rate Impact = \$0.017/Mcf (years 1-3) |

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| Program Objective | <p>The objective of the Residential New Construction Program is to encourage builders to build homes that are 50% more efficient than the 2004 Supplement to the 2003 IECC, which is the basis for the current Federal tax credits offered to builders, equivalent to homes that qualified for the expiring Federal tax credits.</p> <p>http://www.energystar.gov/index.cfm?c=products.pr_tax_credits#s6</p> |
| Program Theory or Market Barriers and Approaches to Overcome Them | <p>Builders and new home buyers encounter many obstacles to improving the energy efficiency of new homes:</p> <ul style="list-style-type: none"> • Builders may lack reliable information on the best approaches to achieve high efficiency levels cost-effectively • Homebuyers lack information about energy efficiency and may be unsure of the credibility of builder efficiency claims • Homebuyers may not have the funds to pay for the higher efficiency • Builders may not be sure they can recoup the costs of the upgrades in the sales price <p>The Residential New Construction program will provide builders with training, technical assistance, subsidized home energy ratings, direct financial incentives and marketing assistance for producing efficient new homes that meet efficiency levels as defined by current federal tax credits. The program will also provide training to home energy raters and realtors.</p> |

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| Program Description | <p>The program will begin by performing research on how best to build efficient homes in Columbia's territory. This research will include interviewing builders that have already built qualified homes and performing additional research to explore other options for meeting the goals. The next step will be to provide free training to builders on how to build qualifying homes; training Home Energy Raters on the program requirements, and training realtors to promote the homes.</p> <p>The program will offer free technical assistance to builders and will subsidize the cost of the rating. The program will also provide an incentive of \$1,000 per qualified homes to the builder. If Federal Tax credits are extended, program options for a COLUMBIA stakeholder group to consider include: offering higher levels of incentives, encouraging the construction of a greater number of homes to meet the standard by offering incentives for additional home energy ratings, or reallocating some program funds to other DSM programs in this portfolio.</p> |
| Target Market | <p>Builders of new, gas heated single family homes built in the COLUMBIA service territory will be the target market for the program. The program will work extensively to recruit major production builders as well as smaller spec builders. There is already a considerable Energy Star home presence in the service territory of nearly 10% of the new home market. Some of these Energy Star builders have been building homes to Tax Credit levels of efficiency and will provide a good resource for determining current approaches that are being used to meet this higher efficiency level.</p> |
| Eligible Measures | <p>Whatever approaches builders choose to use to qualify for the Federal Tax Credit level of efficiency as determined by a Home Energy Rating.</p> |

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| Implementation Strategy | <p>The program will be operated by a program administrator contractor who will oversee the program implementation. The administrator's work will be overseen by COLUMBIA staff. The research phase of the program start-up may be done by the implementation contractor or separately contracted.</p> <p>The administrator will develop: program procedures and forms for use by raters and builders; marketing materials to promote the program; a program tracking system database for program reporting, management, and evaluation; and quality control procedures. The program administrator will provide training (most likely through a subcontract) and provide a technical staff person to assist builders and raters. The administrator will also promote the program and efficient new homes to builders, realtors, and the public.</p> |
| Marketing Strategy | <p>The program will have marketing strategies for recruiting builders, promoting the homes to realtors, and helping the builders and realtors market the homes to the public. The marketing to builders and realtors will primarily occur through direct contacts and working through existing builder and realtor organizations. Marketing to the general public will primarily consist of providing assistance to the builders' and realtors' marketing efforts and establishing the program's "brand" with the public.</p> <p>Marketing will also include press releases and related media work to publicize the program, and a description of the program at all existing company customer contact points such as offices, the web site, and bill inserts.</p> |

Residential Low Cost Rebates

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| Estimated Budget (2009-11) | Incentives: \$0.45 million Program Services: \$0.3 million Administration, Education & Marketing: \$0.68 million (44.6 %) Evaluation: \$0.09 million Total: \$ 1.4 million |
| Participation & Savings Targets (2009-11) | Participation ~ 26,616 rebates over 3 years Mcf Savings- Annual: 8,108; Cum. 3 yr 42,759; Lifetime 243,236 |
| Cost Effective Metrics (2009-11) | Total Resource Cost BCR = 1.85 Utility BCR = 1.52 Participant BCR = N/A (no average incremental cost) Rate Impact = \$0.004/Mcf (years 1-3) |

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| Program Objective | The objective of the Residential Low Cost Rebate Program is to promote the use of low cost, do-it-yourself efficiency retrofits that are cost-effective for Columbia's residential customers. Programmable setback thermostats and ultra low flow showerheads are the two products specifically included in the program design. |
| Program Theory or Market Barriers and Approaches to Overcome Them | <p>There are some relatively low cost energy efficiency retrofit products that are usually cost-effective for residential customers, but may not be as widely used as they could be. Some reasons for this lack of market share include:</p> <ul style="list-style-type: none"> • Customers may not be aware of the energy savings of some retrofit products • Customers may not be aware of the existence or availability of some retrofit products • Retailers such as home improvement and hardware stores may not stock, or sufficiently promote the benefits of, such products <p>For example, many people are uncertain if a programmable setback thermostat will save them much energy. Many people may also not be aware that ultra low flow showerheads exist that may provide a good quality shower while using much less water than a standard (even low flow) showerhead may use. Local home improvement and hardware stores may not stock such ultra low flow devices.</p> <p>The Low Cost Rebate Program will address these obstacles by providing public education and marketing to enhance the credibility of the energy savings benefits from such products, by offering rebates for the products, and by promoting the availability of qualified products at hardware and home improvement retailers.</p> |

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| Program Description | The program will offer customers rebates of \$25 per Energy Star programmable thermostat and \$10 per ultra low flow showerhead (≤ 1.8 gallons/minute). The products and rebates will be promoted through education and marketing efforts and direct contact with retailers. The program may also provide on-line order fulfillment. |
| Target Market | All residential customers with gas heat or hot water can participate. |
| Eligible Measures | Energy Star Programmable Thermostats Ultra Low Flow Showerheads (≤ 1.8 gallons per minute) Other measures may be added |
| Implementation Strategy | <p>The program will be operated by a program administrator contractor who will oversee the program implementation. The administrator's work will be overseen by COLUMBIA staff.</p> <p>The administrator will develop: program procedures and rebate forms; marketing materials to promote the program; a program tracking system database for program reporting, management, and evaluation; and quality control procedures.</p> <p>The administrator will perform rebate fulfillments and develop an on-line fulfillment option for customers. The administrator will also market the program to the public and retailers.</p> |
| Marketing Strategy | <p>The program will have marketing strategies for promoting the rebated products to customers and promoting the program to retailers. Marketing to retailers will primarily occur through direct contacts with home improvement stores and hardware stores. Marketing to customers will occur primarily using in-store Point-of-Purchase displays and marketing assistance to retailers. The program will also be marketed through educational and promotional activities such as press releases and media work to publicize the program. The program will also be promoted through the COLUMBIA web site and bill inserts.</p> |

Furnace Market Research

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| Estimated Budget (2009-11) | Incentives: \$0 Program Services: \$0 Administration, Education & Marketing: \$.002 million (2.8%) Evaluation: \$0.080 million Total: \$ 0.082 million |
| Participation & Savings Targets (2009-11) | Participation – N/A research project Mcf Savings – N/A research project |
| Cost Effective Metrics (2009-11) | Rate Impact = \$0.0006/Mcf (year 1 only) |

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| Program Objective | The objective of the Furnace Market Research Project is to gain a greater understanding of the heating system market in Columbia's service territory. The results are expected to be used to refine DSM programs and/or develop new programs to capture cost-effective savings. |
| Program Theory or Market Barriers and Approaches to Overcome Them | <p>Sales data from the Gas Appliance Manufacturers Association (GAMA) indicate that high efficiency gas furnaces comprised 40% of the Ohio residential furnace shipments in the year 2000. National sales data since then has shown a growing market share for high efficiency equipment. Based on this existing market share, a general furnace rebate program was not proposed as part of the DSM portfolio to avoid expending a large fraction of DSM resources on rebates to free-riders.</p> <p>Although the current market share for high efficiency furnaces may be approximately 50%, the available data does not include sales by market segment, which may be able to help identify opportunities for DSM program interventions. For example, the market share of high efficiency equipment may be much lower in rental housing or in certain geographic regions or among certain demographic groups. Market shares may also differ between the replacement market and the new construction market. Given the large potential energy savings from increasing the market share of high efficiency furnaces, a market research project is needed to help identify strategies for capturing these savings cost-effectively.</p> |
| Program Description | <p>The Furnace Market Research Project will perform research to identify the market share of efficient furnaces in different market segments and help identify opportunities for potential DSM program designs. The project will involve interviews and/or surveys with key market actors, including equipment distributors and dealers, HVAC contractors, and furnace purchasers (homeowners and landlords). The project may also collect data from industry sources such as GAMA and manufacturers.</p> <p>The research project will be performed by a contractor selected through a</p> |

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| | competitive bidding process and overseen by Columbia's staff. |
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WarmChoice® Low-Income Customer Weatherization Program¹⁸

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| Estimated Budget (2009-11) | Program Services: \$19.6 million Administration, Education & Marketing: \$1.4 million (6.6%) Evaluation: \$0.03 million Total: \$21.3 million |
| Participation & Savings Targets (2009-11) | Participation – Jobs/Households served: 5,250 Mcf Savings – Annual: 56,875; Cum. 3yr 170,625; Lifetime 3,412,500 |
| Cost Effective Metrics (2009-11) | Total Resource Cost BCR = 1.24 Utility BCR = 1.19 Participant BCR = N/A (no cost to participants) |

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| Program Objective | The objective of the WarmChoice® low-income customer weatherization program is to reduce the energy usage and bills of low income customers by installing attic and wall insulation, advanced air sealing and some low cost retrofits such as water heater insulation, pipe insulation and low flow showerheads. Defective heating appliances that can not be repaired are replaced with high efficiency heating appliances, if applicable. Defective water heaters may also be replaced. |
| Program Theory or Market Barriers and Approaches to Overcome Them | <p>Low Income Residential customers encounter many obstacles in improving the energy efficiency of their homes:</p> <ul style="list-style-type: none"> • Customers have limited funds to pursue energy efficiency retrofits or to select higher efficiency equipment when making a replacement • Customers lack reliable information on the effectiveness and bill savings of efficiency retrofits <p>The WarmChoice® program will simplify the process of identifying and implementing cost-effective energy improvements through the provision of diagnostically-driven inspections, no cost energy efficiency retrofits, and project management.</p> |

¹⁸ The WarmChoice® Low-Income Weatherization Program is part of Columbia Gas of Ohio's portfolio of DSM programs, but is funded through base rates rather than through the Rider DSM.

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| Target Market | All low income residential customers at or below 150% of the federal poverty guidelines are eligible for WarmChoice®, but mobile homes must use 1000 ccf annually to be treated by WarmChoice®. Mobile homes using less than that amount are weatherized by the state of Ohio's federally-funded Home Weatherization Assistance Program (HWAP). Providers are encouraged to target PIPP customers and customers with high usage. Program providers frequently combine WarmChoice® with HWAP, the state's Electric Partnership Program, and various HUD or USDA funded home repair programs in addition to Ohio's Housing Trust Fund Home Repair program. |
| Eligible Measures | Attic Insulation and ancillary work (e.g., required venting) Wall Insulation Floor Insulation over Unheated Spaces Water Heater, Pipe and Duct insulation Blower-Door Guided Air Leakage and Duct Sealing Furnace Repair or Replacement (if defective): AFUE >92% for Forced-air Furnaces Water Heater Repair or Replacement (if defective) Low Flow Showerheads |
| Implementation Strategy | The program is be operated by five community-based organizations (providers) that perform the energy inspections; use HWAP and COLUMBIA technical standards for the work; program administrative procedures and forms, marketing materials, the program tracking system database, and quality control procedures. All of these tasks are overseen by COLUMBIA staff. The providers also perform customer education, follow up with customers; train the contractors; oversee the contractors' work; provide quality control through phone calls, field visits and database analysis; and provide regular program management reports to COLUMBIA with detailed information on program participation and progress compared to goals and budgets. |

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| Marketing Strategy | Columbia provides the WarmChoice® providers with a list of potentially eligible customers from its DIS system. Providers also use the HWAP and HEAP intake process and HEAP lists to recruit customers into the program. Providers use tele-recruiting, letters and community events to publicize the availability of the program. |
| Evaluation Plan | <p>The WarmChoice® program evaluation system is an automated program created by Michael Blasnik and Associates in Stata, a statistics software program. The system uses billing data from participant and non-participant (control group) homes with WarmChoice® participant energy conservation measure data (Schedule F) submitted by the WarmChoice® providers to perform a PRISM equivalent, but improved, analysis procedure and estimate of weather adjusted gross and net savings caused by the program. A variety of weather station location data from throughout the service territory in Ohio is used in the weather normalization process. The system output contains an HTML file with links to tables, graphs, and other program metrics.</p> <p>PRISM-type evaluations lag program years due to the preference of obtaining 12 months of actual meter readings for pre- and post-treatment periods. Because Columbia reads meters every other month, the lag period can increase to 2 years after the completion of a program year to obtain the actual, usage data based savings estimates. However, the program has had impact evaluations conducted recently for program years 1999-2004 that indicate remarkable consistency in energy savings from year to year.</p> |

C. Commercial Programs

Small Business Energy Efficiency Incentives Program

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| Estimated Budget (09-11) | Incentives: \$2.4 million Program Services: \$.475 million Administration, Education & Marketing: \$.6 million (17.4 %) Evaluation: \$.125 million Total: \$3.5 million |
| Participation & Savings Targets (09-11) | Participation – 3,600 customers Mcf Savings – Annual: 22,027; Cum. 3 year: 128,958; Lifetime: 660,797 |
| Cost Effective Metrics (09-11) | Total Resource Cost BCR: 1.05 Utility BCR: 1.69 Participant BCR: 2.29 Rate Impact: \$.10/Mcf (years 1-3) |

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| Program Objective | The objective of the Small Business Energy Efficiency Incentives program (“SBEEIP”) is to provide DSM opportunities to businesses using <300 Mcf annually by providing rebates to encourage adoption of select energy efficiency products and services. The program focuses on replacing existing energy inefficient natural gas equipment, and encourages customers to move up to higher than standard efficiency models when purchasing additional equipment for their business. The program also provides incentives to improve thermal integrity of the building shell and other systems. |
| Program Theory or Market Barriers and Approaches to Overcome Them | Business owners are facing increasing energy costs along with other costs that impact the profitability of their business. This is especially true for Business that depends on gas-fired technologies for production and maintaining comfort for their employees and customers. Business customers are not always aware of which product model is the most energy efficient or how choosing higher efficiency models can lower their energy bills. Business owners are also reluctant to move to the higher efficiency model due to the incremental costs. Other barriers to adoption include: <ul style="list-style-type: none"> • Limited facility staff in small businesses, lack of a dedicated energy manager and limited time to dedicate to research of energy efficiency. • The time and costs associated with selecting contractors/vendors to implement energy efficiency measures and projects. • The initial capital investments associated with energy efficiency improvements along with lack of return on investment information • Lack of benchmarking and payback data to help make a case for |

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| | <p>investing in energy efficiency in a competitive market.</p> <p>The SBEEI program will help customers navigate through what is now a complicated and sometimes intimidating process of determining what energy efficiency options they should consider when replacing gas-fired equipment or when upgrading the thermal efficiency of their building. The program will offer: upfront audits to identify specific energy efficiency recommendations, rebates for a menu of appropriate energy efficient products, and, the option of participating via direct install where the contractor will install the measures and reduce the costs by the prescribed rebate or the customer can redeem their rebate directly with COLUMBIA via online or mailed applications.</p> |
| Program Description | <p>The program provides rebates to help offset the incremental cost of moving to higher efficiency models when retrofitting current equipment, or purchasing additional equipment. The program prescribes what measures may be installed in a straightforward and customer-friendly manner that helps ensure customers have a hassle-free, reliable means to make their business more energy efficient. The program design makes customer participation easy and hassle-free because:</p> <ul style="list-style-type: none"> • The program lists specific energy saving products and services, so the customer does not need to take time to search out energy efficiency technologies. • The customer purchases the product from whomever they choose and has it installed at their account address. • The customer can elect to work with a participating contractor for direct installation of the qualifying measure and receive the rebate from the total costs of the project. • The customer can complete the rebate form online, print, and send it in along with the itemized paid invoice and shortly thereafter, receive a rebate check. <p>The program may also target companies that have completed the Small Business Energy Saver on-line energy audit to offer additional assistance.</p> |
| Target Market | <p>Business customers with <300 Mcf annual. Total customers eligible: approximately 70,000. Key building classifications that comprise the small general services commercial segment include: Offices, Retail, Foodservice, and Automotive, among others.</p> |
| Eligible Measures | <p>Low flow fixtures Efficient water heater Programmable thermostats Replacement Heating Systems AFUE>90 Duct Sealing Thermal Envelope Insulation Water heater tank/ Water Pipe Insulation Tankless water heater Infrared Fryer for restaurants</p> |

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| | Other measures as determined by the energy audit process. |
| Implementation Strategy | <p>The program will use multiple delivery channels with minimum work required by the customer.</p> <p>As with other best practices programs, COLUMBIA will rely heavily on vendors and local HVAC contractors to help deliver the program. Local vendor participation is a key driver to successfully bringing eligible products directly to the customer and making the purchase of energy efficient equipment convenient. COLUMBIA or its contractors will develop materials and seminars to educate and train vendors and contractors on qualifying measures and will help them increase their product lines to better meet the needs of business customers.</p> <p>COLUMBIA may offer incentives to contractors who directly install the qualifying measures to address a key market barrier (asymmetrical information) where the contractors may be reluctant to promote the energy efficient equipment if they fear the customer may be resistant to the additional cost.</p> <p>COLUMBIA may bring in third-party contractors to deliver turnkey energy efficiency programs that include direct installation of qualifying measures. Employing energy efficiency contractors experienced in program design and implementation will allow COLUMBIA to launch programs quickly and use existing resources more efficiently versus the alternative of having to recruit and train only new resources.</p> <p>The program may also target companies that have completed the Small Business Energy Saver on-line energy audit to offer additional assistance.</p> |

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| Marketing Strategy | <p>The marketing strategy will employ a multi-faceted approach. This approach involves using a combination of mail-outs, one-on-one contact, media, and coordinated efforts with contractors and vendors. The marketing plan objective is to provide all customers with equitable access to the program. The approach may include:</p> <ul style="list-style-type: none">• Multi-lingual marketing materials including bill inserts, brochures, press releases, e-mail marketing, trade ads, local newspaper ads, etc.• Face-to-face contact with customers via; account executives, contractors, customer service reps, call centers, trade shows, community events, etc.• Web-site information, printable application forms, etc. <p>COLUMBIA may also assist local businesses that sell energy efficient equipment to develop informational pieces for distribution to their own customers.</p> |
| Other Considerations | <p>Other strategies may help supplement the success of this program:</p> <ul style="list-style-type: none">• Financing |

Small Business Energy Saver Audit Program

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| Estimated Budget (09-11) | Administration, Education & Marketing: \$25,964(100%) Program Services: \$24,727 Evaluation Costs: \$0 Total Costs: \$25,964 |
| Savings Targets (09-11) | Total Annual Mcf: N/A 3 Year Cumulative Mcf: N/A |
| Cost Effective Metrics (09-11) | N/A |

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| Program Objective | The objective of the Small Business Energy Saver Audit program is to educate customers on how their businesses use energy and what cost-effective opportunities exist to lower their energy bills. Columbia will use the audit data base to help generate leads for businesses using < 300 Mcf annually to participate in the Small Business Energy Efficiency Retrofit program and the Small Business Targeted Retrofit program. |
| Program Theory or Market Barriers and Approaches to Overcome Them | <p>Small Business owners are facing increasing energy costs along with other costs that impact the profitability of their business. These business customers are not always aware of what actions they can take to help them save on their energy bills. Many small business owners have expressed the need for tools to help them assess their energy use, to identify different energy efficiency options, and to help them determine the return on investment for taking action.</p> <p>Specifically, business owners are looking for tools and resources that:</p> <ul style="list-style-type: none"> • Simplify their research on energy efficiency options, including information on what practices and measures will help reduce their costs. • Provide benchmarking on best practices being used by similar businesses to manage energy costs. • Provide payback data to help them assess the expected return for investing in energy efficiency. <p>The Small Business Energy Saver Audit program will help customers navigate through what is now a complicated and sometimes intimidating process of determining what energy efficient options they should consider when replacing gas-fired equipment or upgrading other building systems. The program will provide an on-line energy audit to identify specific energy efficiency improvements the customer can undertake.</p> |

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| Program Description | <p>The SBES program is a customized version of an energy savings software application offered by Nexus Energy Software and is a web-based tool available at: http://www.business.ohio.gov.</p> <p>The on-line energy audit tool integrates information provided by the customer to produce customized energy saving recommendations. The tool prescribes what energy efficient actions the customer should implement in a very straightforward and customer-friendly manner that helps ensure customers have a reliable means to make energy efficiency decisions. With this information the customer can:</p> <ul style="list-style-type: none"> • Quickly identify basic low-cost energy-saving opportunities. • Get information on actions requiring more investment along with web links to Columbia's available DSM programs • Get information on resources available for project assistance. • Compare their energy use to similar businesses. • View examples of how similar businesses save energy. <p>Customers will be given the opportunity to work directly with COLUMBIA to follow-up on recommendations made regarding measures included in Columbia's other commercial DSM programs. COLUMBIA will help customers to:</p> <ul style="list-style-type: none"> • Create a project plan based on estimated paybacks of detailed recommendations. • Prioritize which specific projects/recommendations they should work on first. • Direct them to qualifying vendors and contractors who will implement the recommendations, including helping them to complete the rebate applications. |
| Target Market | <p>Business customers with <300 Mcf annual usage. Total customers eligible: approximately 70,000.</p> |
| Implementation Strategy | <p>The audit can be customer-activated using the web-tool or offered by contractors implementing Columbia's Small Business Energy Efficiency Incentive Program.</p> <p>Other utility programs have measured that at least 20-30% of customers who complete an audit will also participate in a rebate program based on audit recommendations without active follow-up. COLUMBIA will employ multiple strategies to encourage customers to follow-up on recommendations to install or replace energy efficient measures, and to participate in a DSM program.</p> <p>Actions COLUMBIA will take include compiling a database of recommendations and using this as a lead generator for direct mail solicitations from COLUMBIA. COLUMBIA may also conduct follow-up phone calls</p> |

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| | <p>directed to customers whose recommendations may result in >20% savings on their annual energy bill.</p> <p>Finally, COLUMBIA will employ a “continuous improvement” approach used by other utilities with best practice programs. COLUMBIA will encourage businesses that have previously completed an audit or participated in a rebate program to complete an audit every one to three years to determine if there are more opportunities to improve their energy use profile.</p> |
| Marketing Strategy | <p>Columbia’s marketing strategy for the on-line energy audit tool will be comprised primarily of a combination of mail-outs, one-on-one contact, and web site links. The approach may include:</p> <ul style="list-style-type: none"> • Multi-lingual marketing materials including bill inserts, brochures, press releases, e-mail marketing, trade ads, local newspaper ads, etc. • Face-to-face contact with customers via utility personnel, contractors, customer service reps, call centers, trade shows, community events, etc. • Link to the SBES Website from the COLUMBIA website. |
| Other Considerations | <p>Other strategies may help supplement the success of this program:</p> <ul style="list-style-type: none"> • Co-marketing with other Ohio utilities supporting the Small Business Energy Saver program. |

Advanced Energy Design Partnership Program

| | |
|---------------------------------------|--|
| Estimated Budget (09-11) | Administration, Marketing & Education Costs: \$.232 million (100%) Program Services: \$.167 million Evaluation Costs: N/A Total Costs: \$.232 million |
| Savings Targets (09-11) | N/A |
| Cost Effective Metrics (09-11) | N/A |

| | |
|--|--|
| Program Objective | The objective of this program is to facilitate the education and training of building industry professionals and owners on the benefits of building energy efficient small buildings that are at least 30% more efficient than the commercial energy efficiency building code in place in Ohio during the time of this program. |
| Program Theory or Market Barriers and Approaches to Overcome Them | <p>There currently is a wealth of information and programs available nationwide such as Energy Star High Performance Homes and High Performance Schools and LEED certification that encourages energy efficiency building practices in residential and medium to large commercial new construction. These programs include design assistance, incentives for designers, and builder performance incentives for meeting specific energy efficiency targets that are above the state and national energy standards.</p> <p>While small commercial buildings with up to 20,000 square feet may comprise the majority of office space, there appear to be few energy efficiency programs designed exclusively for the designers, builders, developers and owners of these small buildings. Unlike working with the home builder segment where one builder could represent hundreds of homes, participation from this segment could potentially produce a high volume of new buildings that would most likely require individualized attention. Utility programs that include designer and builder incentives may have a difficult time being cost effective with this segment given the potential for higher costs per unit.</p> <p>Many designers and builders in this category are unaware of, or reluctant to implement, integrating energy efficiency into their designs due to a lack of true understanding of the approach and perceived budget constraints.</p> |

| | |
|----------------------------|---|
| | <p>Other perceived barriers to adoption may include:</p> <ul style="list-style-type: none"> • Limited time to research of energy efficiency options. • Lack of understanding or experience with energy modeling tools. • Low awareness of latest energy efficient technologies and their interactive effects. • Perception that client would not pay for equipment upgrades. <p>Having a program that provides education and training, as well as tools that are easily accessible, will help minimize the time and resources to locate the right information for designing efficient buildings. Studies have shown that designers value the hands on training just as much, if not more, than the incentives. Also, providing one-on-one consultation when planning for construction of multiple units would provide further guidance on efficient design and help keep utility costs down.</p> <p>Small business owners and those who lease small buildings face increasing energy costs along with other costs that impact the profitability and viability of their businesses. Having a high performance building using less energy would be a benefit and produce a win-win to the business owner and to the utilities who are trying to manage resources.</p> |
| Program Description | <p>This program would seek to partner with: the electric utilities in the COLUMBIA service territory that currently have commercial new construction programs, building trade associations such as AIA, BOMA, BIA, and ASHRAE, and, energy efficiency trade groups that are engaged in promoting energy efficiency in new construction. The program would include technical consulting and training (including, potentially, continuing education credits) on incorporating high efficiency natural gas technologies into new, small building construction.</p> <p>There are no direct incentives to customers, designers, or builders under this program; rather the program would provide a funding stream to trade allies and utility partners to support disseminating education and training on how to incorporate the latest energy efficiency technologies into new construction. COLUMBIA will also offer direct technical design assistance for building industry professionals who are engaged in developing new construction plans for multiple small buildings. The program will emphasize incorporating building shell, space heat, water heat and efficient gas appliances.</p> |
| Target Market | <p>Building owners and designers of new, small building construction with estimated square footage of 20,000, including small offices, retail, foodservice, etc. This includes builders who also build strip centers and franchise owners with multiple sites that individually meet the 20,000</p> |

| | |
|--------------------------------|---|
| | square foot threshold. |
| Eligible Measures | N/A |
| Implementation Strategy | <p>The program will leverage existing information and programs from key industry groups that promote energy efficient building design such as; AIA's Sustainable Design Resources available at: http://www.aiacolumbus.org and ASHRAE's Advance Energy Design Guide series available at: http://www.engineeringforsustainability.org. ASHRAE's guides include two guides specifically for designing small retail and small office buildings with footprints of up to 20,000 sq. ft. The guides' 30% energy savings target is above ASHRAE's Standard 90.1. The program will provide education on the integrated design process and advanced technologies to achieve 30% to 50% energy reductions. If federal tax credits for new commercial construction are extended and allow tax deduction for buildings that use 50% less energy than a building designed to ASHRAE 90.1, the program will provide education on how to reach the maximum potential.</p> <p>The program will include developing training modules on whole building and system design practices and tools that incorporate natural gas technologies for presenting at ongoing new construction seminars delivered building trade groups. COLUMBIA will procure building design and building science consultants to provide one-on-one technical consultations for builders and designers engaged in designing small building new construction projects that include multiple units (i.e., strip centers, franchisees with multiple locations) in COLUMBIA territory.</p> <p>Finally, the program will include a recognition award component where a non-monetary reward (i.e., plaque for display, etc.) may be given to builders and owners who build energy efficient buildings that exceed the building energy code by 30% to 50% using knowledge gained from seminars, consultations, demonstrations and/or recommendations from energy efficiency audits.</p> |
| Marketing Strategy | <p>Marketing strategies will seek to tie-in to existing marketing strategies employed by the electric utilities and trade groups promoting sustainable small building new construction. COLUMBIA will provide additional funding to expand the messaging in existing material to include information on high efficiency natural gas technologies. The additional funding should also help with expanding the reach of the outreach strategies to include industry specific medium. The marketing may include:</p> <ul style="list-style-type: none"> • PR releases to building professionals and their associations in the |

| | |
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| | <p>COLUMBIA service territory.</p> <ul style="list-style-type: none">• Ads in building professional trade publications.• Face-to-face contact with customers via contractors, customer service reps, call centers, trade shows, community events, etc.• Information on the COLUMBIA website.• Develop nonresidential small building new construction web portal. |
| Other Considerations | <p>Other strategies may help supplement the success of this program:</p> <ul style="list-style-type: none">• Cooperative education and training with trade associations and educational institutions.• Collaborations with ongoing commercial programs with electric utilities.• Partnering with local governments engaged in building and small municipal buildings.• Partnering with High Performance Schools program from EPA.• Partnering with EPA's Energy Star Commercial Building Design program. |

Innovative Technology Program (ITD)

| | |
|---------------------------------------|--|
| Estimated Budget (09-11) | Administration, Education & Marketing Costs: \$.05 million (8.1 %) Program Services: \$.48 million Evaluation Costs: \$.09 million Total Costs: \$.62 million |
| Savings Targets (09-11) | To be determined on an individual project basis. |
| Cost Effective Metrics (09-11) | To be determined on an individual project basis. |

| | |
|--|---|
| Program Objective | The objective of the Innovative Technology Demonstration (ITD) program is for COLUMBIA to provide opportunities to support research and to showcase leading-edge natural gas conservation approaches and technologies for future program development. By providing direct funding to this program for specific COLUMBIA customer projects and those that have gas efficiency as a secondary benefit, COLUMBIA will ensure that innovative customers will benefit from its DSM program portfolio. |
| Program Theory or Market Barriers and Approaches to Overcome Them | <p>Business owners are facing increasing energy costs along with other costs that impact the profitability of their business. This is especially true for business that depends on gas-fired technologies for production and maintaining comfort for their employees and customers. Some business customers are also seeking more energy efficient options due to their corporate commitment to sustainable environmental practices. These business customers are more likely to fall in early adopter category for innovative energy efficiency products and services. However, as with most businesses, they are not always aware of which product models or approaches are the most energy efficient alternatives available.</p> <p>Providing competitive, live demonstrations, either onsite or at public institutions, provides early adopters with real world experience on what to expect when introducing new or highly efficient technologies into their business. Other utility programs have proven in their evaluations that providing the innovative and early adopter customers the opportunity to view demonstrations and/or providing them the case study results from the demonstrations are more effective in educating and influencing energy efficient product and practice adoptions than simple brochures and information packets that describe the technology.</p> |

| | |
|--------------------------------|---|
| Program Description | <p>COLUMBIA will collaborate with potential partners in its service territory and with other industry groups engaged in researching existing and emerging energy efficient technologies to develop demonstration projects to promote leading edge energy efficiency approaches.</p> <p>The program will seek to partner on projects that demonstrate the highest level of energy efficiency achievable today for a whole premise using the latest energy efficiency technologies alongside electric and water saving technologies; or, COLUMBIA will seek to develop individual projects that demonstrate the energy savings advantage of specific technologies for a particular customer segment (i.e., solar water heating for schools, firehouses, etc.)</p> <p>This will be a competitive award program that provides a matching funding stream to support research into technologies that may be added to the portfolio of programs offered by COLUMBIA in the future. The program may offer funding in the form of award grants to winning projects or proposals submitted by customers or trade groups that demonstrate innovative application of energy efficient technologies. The program will emphasize incorporating emerging high efficiency technologies, existing high efficiency technologies, or use of renewable technologies to off-set or enhance natural gas technologies.</p> |
| Target Market | COLUMBIA commercial customers. |
| Eligible Measures | To be determined on a case-by-case basis. |
| Implementation Strategy | <p>An advisory committee comprised of partners such as other utilities, research institutions (i.e., universities, etc.) trade groups, advocacy groups, and customers, may be established to help provide suggestions for research and project demonstrations. Members of this group could also participate and/or provide funding for demonstrations and review the results of program-funded projects.</p> <p>Once projects are identified, the advisory committee may form subgroups to facilitate implementing the projects. This would include determining products to showcase, the type of demonstration (i.e., case study in a lab or at a customer site), contractor selection as needed, measurement and verification plan, final budget, schedules, marketing plan, etc.)</p> <p>Projects are limited to an eighteen month window for project planning, implementation, and results. As such, most projects will focus on technologies that are commercially-ready, known to produce viable energy savings, but have low market awareness, and possibly high-first costs with the potential of costs coming down as awareness and demand grows.</p> |

| | |
|-----------------------------|--|
| | <p>The advisory committee will monitor the projects to assess whether the funding is adequately supporting research into appropriate technologies.</p> |
| Marketing Strategy | <p>Marketing and outreach strategies may vary depending on the type of projects and the targeted audience. Strategies may include:</p> <ul style="list-style-type: none">• Face-to-face contact with customers to alert them to the demonstration site via; utility staff, contractors, trade shows, community events, etc.• Website information• Direct mail to targeted groups• PR campaign |
| Other Considerations | <p>Other strategies may help supplement the success of this program:</p> <ul style="list-style-type: none">• Availability of tax credits for key technologies such as solar• Cooperative education and training with trade associations• Vendor participation/donation of technologies• Aligning demonstrations/projects with national efforts to promote key technologies |

D. Financing

Energy Efficiency Loan Fund

| | |
|---|--|
| Estimated Budget (2009-11) | Program Services: \$.78 million Administration, Education & Marketing Costs: \$.068 million (5.9 %) Total Costs: \$1.146 million |
| Participation (2009-11) | Participation – Businesses/Households served: 3,000 |
| Cost Effective Metrics (2009-11) | N/A |

| | |
|--|---|
| Program Objective | The objective of the Energy Efficiency Loan Fund is to provide alternative sources of financing of energy conservation measures. |
| Program Theory or Market Barriers and Approaches to Overcome Them | Residential and small commercial customers encounter many obstacles in financing the energy efficiency of their homes and buildings. <ul style="list-style-type: none"> • Credit markets have tightened. • Energy conservation service providers may not have access to financing models for their customers. <p>The Energy Efficiency Loan Fund program will simplify the process of financing cost-effective energy efficiency improvements for customers and contractors who may not have access to standard bank financing.</p> |
| Target Market | Customers/contractors with insufficient access to energy conservation measure financing opportunities. |
| Eligible Measures | Any energy conservation measure that reduces gas use and which is identified in Columbia's Residential or Commercial DSM Action Plans. |
| Implementation Strategy | Columbia will work with the Ohio Community Development Finance Fund and/or other finance organizations to determine the best strategy for capitalizing the loan fund and providing the loans. |
| Marketing Strategy | The loan fund will be marketed with all DSM programs except the Residential Low Cost Measures program and the Small Commercial Advanced Energy Partnership. |
| Evaluation Plan | Loan fund metrics will be tracked and reported on a monthly basis. |

VI. Program Evaluation Plan

Through the stakeholder process, the DSMSG continues to learn what programs have been most effective and how to improve existing programs over time. Columbia realizes that it is imperative to implement a program evaluation plan to achieve the long term success of cost-effective programs. Columbia will use several strategies to evaluate the effectiveness of the proposed programs, including third party independent evaluation.

Interim impact evaluation reports will be prepared based on conservative energy engineering estimates of gas usage reductions using customer participation and energy conservation measure penetration rates. (See Appendix B for Program Evaluation Schedules.) Columbia will also utilize weather normalized, billing analysis based impact evaluations using an improved alternate approach to the PRISM model. This analysis will determine the net savings from programs by comparing participant and equivalent non-participant (control group) changes in gas use. This data will then be used to determine the realization rate of the energy engineering estimates.

Columbia will work with evaluation consultants to automate some of the program impact evaluation processes by building on routines already developed for the WarmChoice® Program. Such routines are written for Stata®, a statistics software program that is used by Columbia in the WarmChoice® program, and make up the existing impact evaluation system that uses actual customer billing data from participant and non-participant (control group) homes. These routines also take into consideration participant energy conservation measure data and other demographic data submitted by the program implementers to perform an improved PRISM equivalent analysis procedure and estimate of weather adjusted gross and net changes in gas usage caused by the DSM program. The weather normalization process uses a variety of weather station location data from throughout Columbia's service territory in Ohio. The system output will contain an HTML file with links to tables, graphs, and other program metrics. Automation of the impact evaluation

process will result in reduced impact evaluation costs (2.3% of total budget costs, compared to the industry accepted practice of 5%).

Using actual metered billing data provides more accurate results and realistic estimates of program impacts as compared to projected savings from energy engineering estimates. PRISM results can then be compared with a secondary econometric model as a cross check of the savings results. Accuracy of the results is crucial in determining program savings and cost-effectiveness, and for determining accurate non-energy benefits such as Green House Gas emissions reductions. PRISM-type evaluations lag program years due to the preference of obtaining 12 months of actual meter readings for pre and post-treatment periods. Because Columbia reads meters every other month, the lag period can increase to 2 years after the completion of a program year to obtain the actual usage data based savings estimates. However, the WarmChoice® program has had impact evaluations conducted recently for program years 1999-2004 that indicate remarkable consistency in energy savings from year to year at a fraction of the cost of non-automated impact evaluations. In addition, we will experiment with processes that use estimated reads and shorter meter reading periods through the WarmChoice® evaluation process to determine whether using less data will still provide statistically robust estimates of savings.

In order to perform evaluations, Columbia will download all residential customer and commercial customer data from its DIS system using a process similar to that used for WarmChoice® customer data. This will require full usage histories and other customer data for the pre treatment years of 2007 and 2008, with monthly updates to be downloaded starting in January of 2009 and appended to the 2007 and 2008 data, and continuing for subsequent months. (See Appendix B for Program Evaluation Schedules.)

In addition to consultant based evaluations, Columbia will provide quality assurance, technical assistance and training as part of its administration of the programs where applicable. As with its current WarmChoice® program, Columbia will target 5% of completed work for quality assurance assessments. Customer satisfaction surveys will be implemented as part of program implementation and evaluation processes. Training and orientation of contractors to enable them to succeed will be conducted on program standards and acceptable installation methods. This will be the primary up front strategy to ensure that quality work is performed for customers. Progressive and corrective improvement processes that contemplate non-compliant work will be established on a program by program basis.

VII. Placeholder for Future DSM Considerations

A. Expansion of DSM

The current filing contains programs that serve Small General Service Customers. It is likely that a number of General Service Customers above the SGS cut off of 300 Mcf/year have similar energy conservation opportunities, but lack the knowledge or resources to take action. Future DSM programs should consider opportunities to offer cost effective energy solutions to larger commercial and industrial customers. To the extent other customers benefit from DSM programs, an expansion of the cost recovery mechanism may be appropriate.

B. DSM Incentives

Columbia has not requested incentives to engage in DSM programs. However, Columbia believes that this approach has merit as it would encourage Columbia to embrace DSM to the maximum extent practical in future years. Columbia is committed to finding the right set of DSM programs that can reduce energy natural gas consumption in a cost-effective manner. However, implementing a set of aggressive DSM programs raises significant risk to Columbia. With most DSM programs, the primary beneficiaries are program participants and Columbia's other consumers. Participants in the programs save in the near and long term through lower bills. In

addition, improvements in energy efficiency reduce the demand for natural gas which can affect the level of natural gas prices.

Columbia and its shareholders are also impacted by DSM programs. Implementing DSM programs reduces both the near and long-term amount of natural gas sold. In the near-term, the reduction in Ccf sold reduces Columbia's recovery of the fixed costs of its distribution network. Columbia is proposing that a set of DSM programs be implemented that are expected to reduce natural gas usage by as much as 815,000 Mcf over the next three years. This is a substantial reduction in natural gas usage which will require a substantial investment by Columbia.

Columbia notes that many industry leading organizations have recognized the important role incentives play in creating long term success within DSM programs at the utility level. For example, the National Action Plan for Energy Efficiency recognizes that "simply eliminating financial penalties will not fundamentally change the utility business model, because that model is premised on the earnings produced by supply-side investment;" and that "providing financial incentives to a utility if it performs well in delivering energy efficiency potential can change the existing business model by making efficiency profitable, rather than merely a break-even activity."¹⁹ In addition, one proponent of energy efficiency, the ACEEE suggests that "enacting these regulatory mechanisms have generally been very positive, with utilities or other program providers governed by such mechanisms often demonstrating strong commitments to meet or exceed established goals for energy efficiency programs."²⁰ The Alliance to Save Energy ("ASE")²¹ recently embraced the American Gas Association ("AGA") and Natural Resources Defense Council ("NRDC") May 22, 2008 joint statement²² which "maintains support for

¹⁹ Environmental Protection Agency, *Aligning Utility Incentives with Investment in Energy Efficiency: A Resource of the National Action Plan for Energy Efficiency*, section 2.4, pages 2-7, 2-8, available at <http://www.epa.gov/cleanenergy/documents/incentives.pdf>.

²⁰ *Aligning Utility Interests with Energy Efficiency Objectives: A Review of Recent Efforts at Decoupling and Performance Incentives*, Report Number U061, October 2006.

²¹ The Alliance to Save Energy, *Alliance Endorses AGA, NRDC Joint Statement Supporting Utility Incentives to Promote Energy Efficiency*, May 22, 2008, available at <http://www.ase.org/content/news/detail/4712>.

²² American Gas Association, *Combating Global Warming with Increased Energy Efficiency Is a Win-Win Says AGA, NRDC*, May 22, 2008 available at <http://www.aga.org/Newsroom/news+releases/2008/CombatingGlobalWarming.htm>.

revenue decoupling, but goes one step further with advocacy for performance-based mechanisms which provide economic incentives for utilities to promote energy efficiency ... The concept of earnings opportunities linked to energy efficiency is at an early stage; however the end result should be a win-win solution for natural gas utilities and their customers.”

C. Partnerships with other Utilities and Funding Sources

Columbia remains flexible and committed to expanding partnerships with others, including electric and water utilities, governmental agencies, and other funding sources that can be leveraged to improve the cost-effectiveness and impacts of delivering demand-side management programs. To that end, Columbia will continue to work with stakeholders to pursue the possibility of establishing a joint DSM program with industry or governmental partners and is including a placeholder for any programs that may be developed in the near future.

D. Beyond 2011

This Application contemplates DSM programs for a three year period. Columbia recommends that a dialogue continue to determine the longer term viability, funding and effectiveness of DSM programs in its service territory.

VIII. Other DSM Considerations

A. DSM Program Funding Levels

Columbia will monitor and evaluate the level of success of all of its DSM programs. If, through program evaluation, it is determined that a particular program design is not likely to invest all of the resources available to it, Columbia requests the flexibility to shift funding between programs without Commission approval.

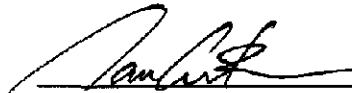
B. DSM Program Time Frames

The proposed time frame for DSM implementation is January 1, 2009 to December 31, 2011. If, for any reason, implementation is delayed and a calendar year implementation time frame cannot be adhered to, Columbia requests that a program year be established as an alternative to a calendar year with each program year beginning on the month and day of approval of the DSM filing, if it is after January 1, 2009.

Columbia hereby respectfully requests the Commission approve its Application for the implementation of Demand Side Management Programs to the extent described above.

Respectfully submitted,

COLUMBIA GAS OF OHIO, INC.



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Appendix A

- 1. DSM Program Cost-Effectiveness Test Results**
- 2. DSM Program Gas Savings Projections**
- 3. DSM Program Projected Budgets**
- 4. Columbia DSM Gas Cost Projections**

Appendix B: Program Evaluation Schedule

Appendix C

- 1. Computation of DSM Rate**
- 2. Computation of DSM Revenue**
- 3. Computation of DSM Income Statement**

APPENDIX A

1. DSM Program Cost Effectiveness Test Results

Estimated Cost-Effectiveness of Columbia DSMSG Adopted Programs

| Program | Cost Effectiveness Test Results | | | | | | |
|---|---------------------------------|------------|---------|------------------------------|------------------------------|------------|-------------------|
| | TRC BCR | UCT BCR | PCT BCR | RIM (Years 1-3) \$/ccf | RIM (levelized) \$/ccf | TRC \$/ccf | Utility \$/ccf |
| Home Performance | 1.48 | 1.36 | * | 0.0022 | 0.0003 | \$0.85 | \$0.95 |
| Low Cost Rebates | 1.85 | 1.52 | * | 0.0004 | 0.0001 | \$0.64 | \$0.79 |
| New Homes | 1.30 | 1.75 | 4.40 | 0.0017 | 0.0003 | \$0.94 | \$0.74 |
| Low Income WarmChoice® | 1.24 | 1.19 | * | | | \$1.03 | \$1.09 |
| Small Business Energy Efficiency Incentives | 1.05 | 1.69 | 2.29 | 0.0101 | 0.0032 | \$1.13 | \$1.32 |
| Advanced Energy Design Partnership | - | - | - | - | - | - | N/A |
| Innovative Technology Program | TBD | TBD | TBD | TBD | TBD | TBD | N/A |
| Small Business Energy Saver Audit | - | - | - | - | - | - | N/A |
| Totals | 1.27 | | | | | \$0.98 | \$1.02 |
| Total including other costs (non-program, Furnace Research and Loan Fund) | 1.22 | | | | | | |

Note: Avoided Cost of Gas = \$1.117/Mcf

Note: * On average, no net incremental costs are projected. This can occur due to negative incremental participation costs for free-riders exceeding the positive incremental costs incurred by other participants.

2. DSM Program Gas Savings Projections

Estimated Gas Savings Impacts of Columbia DSMSG Adopted Programs

| Program | Gas Savings: Cumulative Incremental Mcf/yr | | | |
|--|--|---------|---------|-----------|
| | 2009 | 2010 | 2011 | Total MCF |
| Home Performance | 19,090 | 48,140 | 81,753 | 148,982 |
| Low Cost Rebates | 5,179 | 13,257 | 24,324 | 42,759 |
| New Homes | 10,821 | 45,183 | 82,029 | 138,033 |
| Low Income WarmChoice® | 56,875 | 113,750 | 170,625 | 341,250 |
| Small Business Energy Efficiency Incentives | 19,963 | 42,916 | 66,080 | 128,958 |
| | - | - | - | - |
| Advanced Energy Design Partnership Innovative Technology Program | TBD | TBD | TBD | TBD |
| | - | - | - | - |
| Small Business Energy Saver Audit | | | | |
| Totals | 111,927 | 263,246 | 424,810 | 799,982 |

3. Columbia DSM Program Projected Budgets

Estimated Annual Budgets, Columbia DSMSG Adopted Programs

| Program | 2009 | 2010 | 2011 | Totals |
|----------------------------------|---------------------|---------------------|---------------------|----------------------|
| Home Performance | \$ 2,335,735 | \$ 3,111,141 | \$ 3,476,464 | \$ 8,923,340 |
| Furnace Market Intervention | | | \$ - | |
| Research | \$ 82,316 | \$ - | | \$ 82,316 |
| Low Cost Rebates | \$ 422,188 | \$ 481,589 | \$ 528,142 | \$ 1,431,919 |
| New Construction (tax credit) | \$ 1,570,920 | \$ 2,731,125 | \$ 2,630,241 | \$ 6,932,286 |
| Subtotal: Residential DSM | \$ 4,411,159 | \$ 6,323,854 | \$ 6,634,848 | \$ 17,369,861 |
| Small Business Energy | | | | |
| Efficiency Incentives | \$ 1,078,631 | \$ 1,171,051 | \$ 1,262,435 | \$ 3,512,116 |
| Advanced Energy Design | | | | |
| Partnership | \$ 75,000 | \$ 77,250 | \$ 79,568 | \$ 231,818 |
| Innovative Technology | | | | |
| Program | \$ 206,340 | \$ 206,830 | \$ 207,335 | \$ 620,505 |
| Small Business Energy Saver | | | | |
| Audit Program | \$ 8,400 | \$ 8,652 | \$ 8,912 | \$ 25,964 |
| Subtotal: Commercial DSM | \$ 1,368,371 | \$ 1,463,783 | \$ 1,558,249 | \$ 4,390,402 |
| Collaborative Support/DSM | | | | |
| Planning | \$ 122,000 | \$ 40,000 | \$ 40,000 | \$ 202,000 |
| Admin (non-program specific) | \$ 330,000 | \$ 338,250 | \$ 346,706 | \$ 1,014,956 |
| Total : selected programs | \$ 6,231,530 | \$ 8,165,887 | \$ 8,579,802 | \$ 22,977,219 |
| Energy Efficiency Loan Fund | \$ 1,000,000 | \$ 72,860 | \$ 73,340 | \$ 1,146,000 |
| Total Budget | \$ 7,231,530 | \$ 8,238,547 | \$ 8,653,142 | \$ 24,123,219 |

4. Columbia DSM Gas Cost Projections

Columbia DSM Gas Cost Projections

| Year Number | Year | Nominal Cost of Gas (\$/Mcf) |
|----------------|------|------------------------------------|
| 0 | 2008 | \$ 9.88 |
| 1 | 2009 | \$ 11.15 |
| 2 | 2010 | \$ 11.13 |
| 3 | 2011 | \$ 11.17 |
| 4 | 2012 | \$ 11.17 |
| 5 | 2013 | \$ 11.45 |
| 6 | 2014 | \$ 11.74 |
| 7 | 2015 | \$ 12.03 |
| 8 | 2016 | \$ 12.33 |
| 9 | 2017 | \$ 12.64 |
| 10 | 2018 | \$ 12.96 |
| 11 | 2019 | \$ 13.28 |
| 12 | 2020 | \$ 13.61 |
| 13 | 2021 | \$ 13.95 |
| 14 | 2022 | \$ 14.30 |
| 15 | 2023 | \$ 14.66 |
| 16 | 2024 | \$ 15.02 |
| 17 | 2025 | \$ 15.40 |
| 18 | 2026 | \$ 15.79 |
| 19 | 2027 | \$ 16.18 |
| 20 | 2028 | \$ 16.58 |
| 21 | 2029 | \$ 17.00 |
| 22 | 2030 | \$ 17.42 |
| 23 | 2031 | \$ 17.86 |
| 24 | 2032 | \$ 18.31 |
| 25 | 2033 | \$ 18.76 |

Notes: Inflation rate 2.5%.
GCR based on COLUMBIA
planning
through 2012, inflation thereafter.

APPENDIX B

| Program | Evaluation Type | Earliest Timeframe for Program Year (PY) Report | Latest Timeframe for Program Year (PY) Report |
|---------------------------------|---|--|--|
| Residential Home Performance | Impact, Energy Engineering Estimates | PY09 – April 1, 2010 | PY09 – July 31, 2010 |
| | | PY10 – April 1, 2011 | PY10 – July 31, 2011 |
| | | PY11 – April 1, 2012 | PY11 – July 31, 2012 |
| | Process | PY09 – April 1, 2010 | PY10 – July 31, 2010 |
| | Impact, PRISM-equivalent with control group | PY09 – April 1, 2011 | PY09 – July 31, 2011 |
| | | PY10 – April 1, 2012 | PY10 – July 31, 2012 |
| | | PY11 – April 1, 2013 | PY11 – July 31, 2013 |
| Residential New Construction | Impact, Energy Engineering Estimates | PY09 – April 1, 2010 | PY09 – July 31, 2010 |
| | | PY10 – April 1, 2011 | PY10 – July 31, 2011 |
| | | PY11 – April 1, 2012 | PY11 – July 31, 2012 |
| | Process | PY09 – April 1, 2010 | PY10 – July 31, 2010 |
| | Impact, PRISM-equivalent with comparison group | PY09 – April 1, 2011 | PY09 – July 31, 2011 |
| | | PY10 – April 1, 2012 | PY10 – July 31, 2012 |
| | | PY11 – April 1, 2013 | PY11 – July 31, 2013 |
| Residential Low Cost Rebates | Impact, Energy Engineering Estimates | PY09 – April 1, 2010 | PY09 – July 31, 2010 |
| | | PY10 – April 1, 2011 | PY10 – July 31, 2011 |
| | | PY11 – April 1, 2012 | PY11 – July 31, 2012 |
| | Process | PY19 – April 1, 2010 | PY10 – July 31, 2010 |
| | Impact, PRISM-equivalent with control group | PY09 – April 1, 2011 | PY09 – July 31, 2011 |
| | | PY10 – April 1, 2012 | PY10 – July 31, 2012 |
| | | PY11 – April 1, 2013 | PY11 – July 31, 2013 |
| Furnace Market Research | Research results report | April 1, 2010 | June 30, 2010 |

| | | | |
|---|---|---|---|
| WarmChoice® Low Income Weatherization Program | Impact, Energy Engineering Estimates | PY09 – April 1, 2010 | PY09 – July 31, 2010 |
| | | PY10 – April 1, 2011 | PY10 – July 31, 2011 |
| | | PY11 – April 1, 2012 | PY11 – July 31, 2012 |
| | Impact, PRISM-equivalent with control group | PY09 – April 1, 2011 | PY09 – July 31, 2011 |
| | | PY10 – April 1, 2012 | PY10 – July 31, 2012 |
| | | PY11 – April 1, 2013 | PY11 – July 31, 2013 |
| Small Business Energy Incentives Program | Impact, Energy Engineering Estimates | PY09 – April 1, 2010 | PY09 – July 31, 2010 |
| | | PY10 – April 1, 2011 | PY10 – July 31, 2011 |
| | | PY11 – April 1, 2012 | PY11 – July 31, 2012 |
| | Process | PY09 – April 1, 2010 | PY10 – July 31, 2010 |
| | Impact, PRISM-equivalent with control group | PY09 – April 1, 2011 | PY09 – July 31, 2011 |
| | | PY10 – April 1, 2012 | PY10 – July 31, 2012 |
| | | PY11 – April 1, 2013 | PY11 – July 31, 2013 |
| Small Business Energy Saver Audit Program | N/A | | |
| Advanced Energy Design Partnership | N/A | | |
| Innovative Technology | Impact, Energy Engineering Estimates, International Performance Measurement and Verification Protocols (IPMVP), Pre- and post-treatment gas usage comparisons | To be determined separately for each project. | To be determined separately for each project. |

APPENDIX C

1. Computation of DSM Rate

| Line No. | Description | Rate Effective May 1 | | |
|-------------|----------------------------|----------------------|-------------|-------------|
| | | 2010 | 2011 | 2012 |
| 1 | Deferred Program Costs | 7,231,530 | 8,238,547 | 8,653,142 |
| 5 | SGS/SGTS/FRSGTS Throughput | 122,223,000 | 122,223,000 | 122,223,000 |
| 6 | DSM Rate | 0.0592 | 0.0674 | 0.0708 |

2. Computation of DSM Revenue

| Line No. | Description | Throughput Mcf | 2010-2011 \$ | May 1 - April 30 2011-2012 \$ | 2012-2013 \$ | Total |
|----------|-------------|----------------|-----------------|-------------------------------------|-----------------|------------|
| 1 | May | 23,798,000 | 379,554 | 432,409 | 454,169 | |
| 2 | June | 22,489,000 | 193,712 | 220,687 | 231,793 | |
| 3 | July | 18,704,000 | 133,243 | 151,798 | 159,437 | |
| 4 | August | 13,002,000 | 128,569 | 146,473 | 153,844 | |
| 5 | September | 6,415,000 | 131,646 | 149,978 | 157,526 | |
| 6 | October | 3,274,000 | 178,861 | 203,768 | 214,022 | |
| 7 | November | 2,252,000 | 530,548 | 604,428 | 634,846 | |
| 8 | December | 2,173,000 | 940,573 | 1,071,551 | 1,125,476 | |
| 9 | January | 2,225,000 | 1,408,049 | 1,604,125 | 1,684,850 | |
| 10 | February | 3,023,000 | 1,330,600 | 1,515,890 | 1,592,176 | |
| 11 | March | 8,967,000 | 1,106,654 | 1,260,759 | 1,324,205 | |
| 12 | April | 15,897,000 | 769,285 | 876,411 | 920,515 | |
| | | 122,219,000 | 7,231,293 | 8,238,277 | 8,652,859 | 24,122,430 |

3. Computation of DSM Income Statement

| Line No. | Description | Calendar Year | | | | Total |
|-------------|-----------------------|---------------|-----------|-----------|-----------|------------|
| | | 2010 | 2011 | 2012 | 2013 | |
| 1 | Revenue | 2,616,706 | 7,595,679 | 8,388,297 | 5,521,747 | 24,122,430 |
| 2 | Amortized DSM Expense | 2,616,706 | 7,595,679 | 8,388,297 | 5,521,747 | 24,122,430 |
| 3 | Operating Income | - | - | - | - | - |

NC

FILE

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

| | | |
|---|---|--------------------------|
| In the Matter of the Application of Columbia Gas of Ohio, Inc. for Approval of Demand Side Management Programs for its Residential and Commercial Customers and the Application for Approval to Change Accounting Methods |) | 5028 |
| |) | Case No. 11-__-GA-UNC |
| |) | 5029 |
| |) | Case No. 11-__-GA- AAM ✓ |
| |) | |
| |) | |

APPLICATION OF COLUMBIA GAS OF OHIO, INC.
TO CONTINUE AND EXPAND
DEMAND SIDE MANAGEMENT PROGRAMS FOR RESIDENTIAL AND COMMERCIAL CUSTOMERS AND FOR
APPROVAL OF A CHANGE IN ACCOUNTING METHODS

1. Introduction

In this application, Columbia Gas of Ohio, Inc. ("Columbia") seeks approval to continue and to expand its Demand Side Management ("DSM") program approved by the Public Utilities Commission of Ohio ("Commission") in Case No. 08-833-GA-UNC. Specifically, Columbia seeks approval for the proposed DSM programs described herein. Columbia has been a leader among Ohio utilities in the development of innovative energy efficiency and weatherization programs. Columbia seeks to continue this leadership with an expanded DSM portfolio. Columbia proposes to spend approximately \$20 million annually on the proposed programs which will be effective for residential and commercial customers for calendar years 2012 through 2016.¹ Columbia has shared the costs, savings and a description of the proposed programs with Columbia's Demand Side Management Stakeholder Group ("DSMSG") which has expressed support for the programs proposed herein.

Columbia currently recovers the costs of its DSM programs through Columbia's Rider DSM. Under current procedures approved by the Commission in Case No. 08-0072-GA-AIR *et al.*, Columbia's Rider DSM is adjusted effective May each year to enable Columbia to recover the DSM costs incurred during the prior calendar year. As part of this Application, Columbia seeks to revise this cost recovery procedure.

¹ This number will increase annually by approximately 3% to account for inflation and natural growth in successful programs.

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In November 2011 Columbia will file a Notice of Intent for its next Rider DSM adjustment, followed by an application in February 2012. Commission action upon the February 2012 application will establish a new Rider DSM rate to become effective in May 2012. Thereafter, Columbia proposes to maintain the Rider DSM rate established in May 2012 for the duration of the DSM program, or until all costs have been fully recovered. As more fully described in Section 4 of this Application, Columbia requests authority to defer the difference between costs recovered through Rider DSM and the actual costs of implementing the proposed programs. This will enable Columbia to continue its robust DSM programs while relieving the Commission Staff and other parties of the burden of an annual review of the Rider DSM rate adjustments. Columbia will, however, continue to keep the DSMSG fully engaged as the programs progress.

2. History of Columbia's DSM Programs

Beginning with Operation HomeCheck, Columbia has been a leader among Ohio utilities in developing energy efficiency and weatherization programs over the past three decades. Established in 1984, Operation HomeCheck represented Columbia's first partnership with community-based, non-profit organizations and provided low-income customers with energy audits of their homes. Operation HomeCheck developed the capacity to perform more than 11,000 home energy audits annually. Columbia and its partners further developed this program in 1986 by adding a low-cost weatherization component to the energy audit service through its Columbia Gas of Ohio Weatherization Program, which provided both an educational and material installation service for eligible customers.

Columbia continued its weatherization efforts with the creation of WarmChoice® in 1987. WarmChoice is Columbia's whole-house weatherization program for eligible, low-income customers. The goal of the program is to provide eligible customers with a complete set of weatherization measures, helping residents manage their energy use, and consequently, save on utility bills. Additionally, the program focuses on health and safety to help ensure that low-income residents within Columbia's service territory are insulated from the dangers of antiquated, unsafe heating equipment despite income limitations.

At no cost to the customer, WarmChoice services include diagnostic home energy inspections, safety checks on gas appliances, space and water heating system repairs and/or replacement if needed, furnace replacement, attic, wall and floor insulation, and sealing of major duct and air leakage sites. Since its inception in 1987, WarmChoice has served over 54,000 households. In order to achieve

these results, Columbia contracts with four community-based organizations to manage and operate the program.

2.1. 2009-2011 DSM Program

Columbia expanded its weatherization efforts with its DSM Pilot Program. On January 23, 2008, the Commission issued an Opinion and Order in Case No. 05-221-GA-GCR, *et al.*, adopting the December 28, 2007 Joint Stipulation and Recommendation ("Stipulation"). Pursuant to the stipulation, the parties agreed that Columbia would file by July 1, 2008 a DSM application, cooperatively developed by Columbia, the OCC, Staff and other stakeholders for approval of comprehensive energy efficiency programs for residential and commercial customers. The Stipulation allowed a program funding increase of \$1 million in 2010 and 2011, provided energy efficiency targets were met.

On July 3, 2008, Columbia filed an application in Case No. 08-833-GA-UNC requesting approval of a Demand Side Management Program for residential and commercial customers. In partnership with the DSMSG, Columbia developed an innovative and comprehensive portfolio of energy efficiency programs. While some of the programs proved more successful than others, Columbia created one of the most diverse, innovative and successful DSM portfolios in the utility industry. Columbia strives to maintain that momentum beyond 2011 with the continuation and expansion of its DSM program as described herein.

Perhaps the most popular and robust of Columbia's new DSM Programs has been the Home Performance Solutions ("HPS") program. HPS provides low-cost diagnostic energy audits and rebates to customers to help offset the cost of energy efficiency improvements. The improvements with the highest penetration rates are insulation and air sealing, which are also the two measures that deliver the most energy savings in many existing homes. Columbia has received positive feedback from customers who have had the audit, and the popularity of the program continues to grow as more and more customers request an audit and take advantage of rebates. Currently, the HPS program has a waiting list for audits and services for 2012. By the end of the program, Columbia anticipates exceeding its original three-year energy audit goal by nearly 100%. Columbia has also worked with American Electric Power ("AEP") on a pilot program to integrate each company's energy efficiency improvement rebates into their respective residential energy audit/rebate programs.

Columbia also established its Simple Energy Solutions program. This program provides a \$10 rebate for energy efficient showerheads and a \$25 rebate for programmable thermostats. Columbia has processed a total of 16,471 rebates for energy efficient showerheads and programmable thermostats to date.

The Furnace Market Research project was also developed as part of Columbia's pilot DSM program. This project was designed to identify the market share of efficient furnaces in different market segments and to help identify opportunities for potential DSM program designs. Columbia hired Navigant Consulting to conduct research on the viability of a high efficiency furnace rebate program in 2012. This research identified specific target markets that lag in the installation of high efficiency heating equipment.

Columbia partnered with AEP to jointly offer an Energy Star® New Homes program as part of its New Home Solutions program. This partnership allows both utilities to streamline the process in order to promote the construction of more energy efficient homes. To date, 936 energy efficient new homes have been registered in the program.

Columbia also implemented its Ohio Small Business Energy Saver program, Energy Design Solutions program and Innovative Energy Solutions program. The Ohio Small Business Energy Saver program provided on-line energy audits to commercial customers through a collaboration with the Ohio Department of Development and other investor-owned utilities. Demand for the service has declined in the last year, and the program is scheduled to end at the end of 2011. Through its Energy Design Solutions program, Columbia provided continuing education seminars on how to exceed the minimum commercial building energy efficiency code to over 200 building design professionals, including architects and engineers. The Innovative Energy Solutions program provides rebates to commercial customers for energy audits and energy conservation measures. Currently, the program has over ten projects in progress.

3. Columbia's Proposed 2012-2016 DSM Plan

Columbia believes it is in the best interest of its residential and small commercial consumers of natural gas services to continue to provide DSM services through programs that promote the installation and implementation of energy efficiency measures and technologies in a cost-effective manner. Columbia has approximately 1.3 million residential customers and 70,000 commercial customers on its Small General Service rate schedule. For many of these customers, the energy efficiency market has several existing barriers to the adoption of efficient technology, including higher incremental costs for high efficiency equipment, lack of consumer education, lack of contractor trade ally training, lack of monetary resources, fear of change, and societal costs not being reflected in prices. Accordingly, Columbia and the DSMMSG believe that Columbia needs to continue to play a role in promoting and encouraging energy efficiency.

Specifically, Columbia must continue to take a lead role in promoting energy efficiency because it has an existing relationship with consumers, who often view the utility as their primary source of energy information. Columbia's unique relationship with consumers and stakeholders will allow Columbia to continue to meet consumers' needs for DSM services through technology, education and incentives to help remove market barriers and speed the adoption of more efficient technologies. Other stakeholders that help make up the DSMSG, which includes consumer advocate groups, contractors, trade allies and numerous energy-related organizations, are also an integral part of creating a successful program as these groups interact with the utility and its customers.

Residential and small commercial customers will benefit from these proposed energy efficiency programs by providing ready access to energy saving measures that will directly reduce natural gas usage throughout the calendar year improving the affordability of natural gas service. Additionally, customers will benefit by gaining better safety and reliability of their heating equipment, overall efficiency and comfort and electric and water savings.

Non-participating customers will also benefit through the establishment of a network of trained providers and enhanced marketplace with better access and availability to state of the art energy conservation techniques promoted by these DSM programs. Moreover, non-participating customers may benefit from the price dampening effects of energy efficiency and from the positive environmental impacts of the programs.

3.1. Summary of Programs

Columbia is proposing to continue and expand its implementation of a portfolio of DSM programs that offer a wide range of services to its residential customers and commercial customers. In addition to the energy savings that DSM programs provide to customers, the programs create jobs and economic development in Ohio through direct hiring of personnel and through the purchase of tools, equipment, products and services. Other "non-energy" benefits include improved comfort and safety, and more durable, healthier and affordable homes. While Columbia will continue to administer its DSM portfolio, program implementation services will be provided primarily by third party vendors. Columbia's DSM portfolio is comprised of two program areas: residential and commercial customer programs. Columbia proposes to offer these programs beginning January 1, 2012 through December 31, 2016. Columbia has also proposed budgets for each program based on estimates of likely participation rates and activity within each program.

Columbia proposes to both continue and expand its highly successful Home Performance Solutions program that provides low-cost, computerized and diagnostic energy audits and specific energy conservation measure incentives to residential customers above 150% of the federal poverty guidelines ("FPG"). This program was expected to serve 6,039 customers from 2009-2011, but is now projected to provide audits to 11,766 residential customers during this same time period. For the five year period 2012-2016, the program will provide approximately 6,000 energy audits annually.

In addition to working with the program's pre-qualified insulation contractors, the program will also continue to build the relationship with its pre-qualified HVAC contractor network to identify customers who are replacing their furnaces and who may need additional attic and wall insulation and instrumented air sealing. Incentives will continue to be offered to program participants to install program-eligible measures, and higher levels of incentives will continue to be offered to customers who install more than one major energy conservation measure. Customers who are over the 150% FPG level, but are at or below 80% of the Area Median Income (USHUD's definition of low income) and senior citizens with incomes at or below Area Median Income, will be eligible to have approximately 90% of the cost of attic and wall insulation and instrumented air sealing paid for by the program.

The residential programs include the expansion of Columbia's highly successful WarmChoice program. WarmChoice provides whole house weatherization services to low-income customers at or below 150% of the federal poverty guidelines. Based on the state of the economy and potential declines in both federal weatherization and home energy assistance programs, Columbia proposes to increase WarmChoice funding by approximately \$5 million in 2012, increasing to approximately \$6.5 million in 2016. This funding will enable the WarmChoice program to serve approximately 1,000 customers more per year in addition to the current service level of approximately 1,600 customers per year.

With the expiration of builder tax incentives for energy efficient new homes in 2009 and the sharp downturn in the economy, pressure has been and remains on new home builders to manage and even reduce new home construction costs. This pressure could have resulted in builders exiting EPA's Energy Star qualified new homes program, which continues to ramp up its energy performance criteria well above code minimums. Instead, Columbia's Energy Efficient New Homes program, which offers incentives to home builders to continue to build homes that exceed code minimum levels, has helped to maintain strong participation by builders in the energy efficient home market.

Columbia's Energy Efficient New Homes program has resulted in the retention of thirty-one builders in the Energy Star program, twelve new participat-

ing homebuilders, and commitments from eight market-rate and eleven affordable housing homebuilders to meet Energy Star version 3.0. Columbia proposes to continue this program to include both Energy Star New Homes, and homes built to a Home Energy Rating Scale (HERS) level of 80 or lower. Modifying the performance level of energy efficient new homes using the HERS scale ensures that the homes built to program standards will always exceed code-minimum levels. Columbia will also maintain its partnership with AEP in jointly served counties to match incentives to achieve high levels of energy efficiency in new homes. The program will also provide builders and home energy raters with training and technical assistance.

Columbia will expand its Simple Energy Solutions program and will offer rebates to install approximately 15,000 programmable thermostats, energy efficient showerheads and faucet aerators per year. Products will be available online and/or at local hardware or building supply stores. Eligibility to participate in this program is extended to all customers regardless of income. The program will also include a direct install component for some customers.

Columbia proposes to add five new residential DSM programs, including Home Energy Reports, High Efficiency Heating System rebates, Energy Education for Students, On-line Energy Audits, and Energy Code Training and Evaluation.

The Behavioral Modification/Home Energy Report program will engage at least 100,000 customers per year with information on how to reduce their energy use. This is done by comparing the participant's energy use with others, and then using peer pressure, social norms and potentially other incentives to encourage customers to take action to reduce their usage. This program approach has proven successful for other utilities in obtaining large energy savings and engaging many customers with only a modest investment.

Based on results of independent research conducted in 2010-2011 by Navigant as part of Columbia's DSM portfolio, Columbia proposes a High Efficiency Heating System rebate program. The research showed that high efficiency heating system technology has lower penetration rates in the rental property market and certain counties within Columbia's service territory. The proposed program will provide \$300 to \$400 rebates to landlords and customers in low market penetration areas to encourage the installation of high-efficiency furnaces and boilers.

The Energy Efficiency Education for Students program will provide teachers and students in grades 5 through 12 with energy education materials as a formal part of the school's science curriculum, culminating with a kit of energy conservation materials that is provided to students to install at their home. Columbia will provide this program to up to 18,000 students per year and will partner with AEP on the project in some areas where both utilities offer services.

Columbia will provide its customers with an On-line Energy Audit to enable customers to evaluate their own home and be linked to DSM programs that can provide them with opportunities to reduce their natural gas usage based on their energy usage level. This program will be a good alternative for lower use customers who might otherwise pay for a whole house audit that may not be a cost-effective use of resources.

Columbia also proposes to provide Residential Energy Code Training, possibly in collaboration with other utilities, to homebuilders and code officials, including blower door use training that is proposed as part of the Ohio residential building code. Additionally, Columbia will work with the Ohio Board of Building Standards to measure actual energy usage of homes built to state energy codes standards.

Columbia will continue its Innovative Energy Solutions program that provides rebates for energy audits and energy conservation measures for commercial customers. Building commissioning and re-commissioning services will also be eligible for rebates. This program will also use a review panel to help rate some proposals for competitive matching grants. Custom energy conservation measures for larger buildings will be determined through energy audits or other appropriate energy use reduction estimation methods. For commercial customers with usage levels less than 300 Mcf/year, the program will also integrate prescriptive rebates for certain standard energy conservation measures that will not need review panel approval.

In order to move the commercial building market forward, Columbia proposes to continue its Energy Design Solutions program, an education program based on the American Society of Heating, Refrigeration and Air Conditioning Engineers ("ASHRAE") Advanced Energy Design Guides. Educational seminars will be provided to architects, engineers, building developers and owners to help them understand the opportunities beyond first costs² to life-cycle costs³ and energy use of commercial facilities over their life spans as energy prices continue to increase. In addition, Columbia proposes that building science education be a part of the training program. The program will also provide some individualized project consulting to find energy efficiency opportunities in projects that are proposed to be built, but which may have been designed to code minimum energy efficiency levels.

Columbia will also promote the use of the US Environmental Protection Agency's Portfolio Manager, an interactive energy management tool that allows building owners to track and assess energy and water consumption in a secure

² First costs are generally defined as the costs to construct a facility and do not include long term operations and maintenance costs.

³ Life cycle costs include the costs for operating and maintaining a facility over its useful life.

on-line environment. Portfolio Manager can help building owners set investment priorities, identify under-performing buildings, verify efficiency improvements, and receive EPA recognition for superior energy performance.

3.2. Methodology for Choosing New DSM Programs

Columbia worked with a DSM consultant, M. Blasnik and Associates, to calculate the potential savings from energy conservation measure technologies and products applied across proposed customer participation rates for each DSM program. Program budgets were proposed to implement the program designs, and cost-effectiveness tests were applied to each of the programs. Pursuant to the Stipulation in Case Nos. 05-221-GA-GCR et al, the DSM programs must be cost-effective as measured by the Total Resource Cost Test ("TRC"), or other industry accepted measurement techniques as determined by the DSMSG, such as the Utility Cost Test ("UCT"), the Participant Cost Test ("PCT") or the Ratepayer Impact Test ("RIM"). All four of the standard test methodologies from the California Standard Practice manual were applied to the proposed DSM programs.

TRC measures the net costs of a demand-side management program as a resource option based on the total costs of the program, including both the participants' and the utility's costs.

UCT (also referred to as the Program Administrator Cost Test) measures the net costs of a demand-side management program as a resource option based on the costs incurred by the program administrator (including incentive costs) and excluding any net costs incurred by the participant. The benefits are similar to TRC benefits, although costs are more narrowly defined under UCT.

PCT is the measure of the quantifiable benefits and costs to the customer due to participation in a program. Since many customers do not base their decision to participate in a program entirely on quantifiable variables, this test cannot be a complete measure of the benefits and costs of a program to a customer. Thus, PCT is not a complete measure of the benefits and costs of a program to a customer.

RIM, also referred to as the Non-Participants Test, measures what happens to customer bills or rates due to changes in utility revenues and operating costs caused by the program. Rates will go down if the change in revenues from the program is greater than the change in utility costs. Conversely, rates or bills will go up if revenues collected after implementation of the program are less than the total costs incurred by the utility to implement the program. RIM indicates the direction and magnitude of the expected change in customer bills or rate levels.

All of the proposed programs described herein pass TRC, UCT and PCT with the exception of the Innovative Energy Solutions program and those programs that are purely educational in nature. The cost-effectiveness of the Innovative Energy Solutions program will be determined through energy audits and other monitoring, verification and evaluation protocols ("M, V and E") before and/or after implementation.

Non-energy benefits were not included in the cost-effectiveness calculations. With the potential monetization of carbon dioxide and other greenhouse gas ("GHG") emissions, the emissions reductions associated with the reduced use of natural gas (and electricity) that occur from implementing DSM programs would likely improve program cost-effectiveness. For instance, at \$2 per ton for carbon, Columbia DSM program CO2 reductions of nearly 1.6 million tons over the life of the energy conservation measures could be worth approximately \$3.2 million.

3.3. Program Recommendations

Energy cost-effectiveness tests based on gas savings and budget projections were calculated using M. Blasnik and Associates'. Sources for costs of energy conservation measures included impact evaluation studies, engineering calculations and industry sources. Based upon the results of the Consultant's work and discussions with the DSMSG, Columbia proposes that the following DSM programs be continued, expanded or added. A full description of each program is contained in **Appendix A**.

Residential Programs

- Home Performance Solutions
- Energy Efficient New Homes
- Simple Energy Solutions
- High Efficiency Heating System Rebates
- Behavior Modification/Home Energy Reports
- On-Line Energy Audit
- WarmChoice
- Energy Efficiency Education for Students
- Residential Code Training

Commercial Programs

- Innovative Energy Solutions
- Energy Design Solutions
- EPA Portfolio Manager⁴

Stakeholder Process

Columbia met with its DSM Stakeholder Group in 2010 and 2011. At these meetings, the DSMSG discussed DSM program performance and twice worked with Columbia to reallocate funding between programs in order to meet consumer demand. At its May 20, 2011 stakeholder group meeting, Columbia informed the stakeholder group that it was working on its next DSM plan, and that it would provide details of the program plan at its next meeting. On August 16, 2011, Columbia presented its proposed 2012-2016 DSM program plan and asked for feedback from the DSM Stakeholder Group. The DSM Stakeholder Group supports this filing.

3.4. Evaluation

Columbia has a long history of conducting program evaluations to determine how its energy efficiency programs are performing and how they might be improved. Columbia will continue to use multiple strategies to evaluate the effectiveness of the proposed DSM programs, including continuous tracking of, and feedback on, contractor program metrics, and independent impact and process evaluations.

Annual, interim impact evaluation reports will be prepared based on conservative energy engineering estimates of gas usage reductions using customer participation and energy conservation measure penetration rates. Columbia will also utilize weather-normalized, billing analysis-based impact evaluation processes based upon an improved alternate approach to the Princeton Scorekeeping Method ("PRISM"). This analysis will help determine the savings from programs by comparing participant and equivalent non-participant (control group) changes in natural gas use. This information will be used to help determine the realization rate of the energy engineering estimates and will provide feedback into program design, implementation and quality assurance procedures. PRISM-type evaluations lag program years due to the preference of obtaining twelve months of actual meter readings for pre- and post-treatment periods.

⁴ The Energy Design Solutions program is a low cost educational program for which energy savings are not projected, but which could occur.

Using actual metered billing data can provide additional accuracy in impact evaluation results and can improve estimates of program impacts. These results can then be compared with secondary econometric models as a cross check of the savings results.

In addition to independent evaluations, Columbia will provide quality assurance, technical assistance and training as part of its administration of the programs where applicable. In addition to quality assurance conducted by program implementers, Columbia will evaluate work completed by contractors for quality assurance purposes. Customer satisfaction surveys will also be implemented as part of some program implementation and evaluation processes. Training and orientation of contractors to enable them to succeed will be conducted on program standards and acceptable installation methods. This will be the primary up front strategy to ensure that quality work is performed for customers. Progressive and corrective improvement processes that contemplate non-compliant work will be established on a program by program basis.

The program evaluation process includes interim engineering estimates of savings, billing analysis and process evaluations. For residential programs that provide installed energy conservation measures, each program will conduct an annual interim evaluation of estimated energy savings based on planning assumptions as well as other known resources, including the TRM, within three to six months of the end of the program year. Each program will also have a billing analysis based evaluation conducted within 13-16 months of the end of the program year. These programs will also have process evaluations conducted at the end of years two and four for existing programs, with reports due within six months of the end of the program year, and at the end of years one and three for new programs, with reports due within 6 months of the end of the program year.

For the Behavior Modification/Home Energy Report program, billing analysis based evaluations will be conducted continuously for program years one and two, with a year-end composite report of savings, to determine whether the program approach is cost effective and should be continued. A process evaluation will be conducted at the end of year one.

Impacts from the Innovative Energy Solutions program will be determined from energy audit or TRM projections of savings, or from billing analysis or the International Performance Measurement and Verification Protocol.

3.5. Shared Savings

Columbia notes that many industry leading organizations have recognized the important role incentives play in creating long term success within DSM programs at the utility level. For example, the National Action Plan for En-

ergy Efficiency recognizes that “simply eliminating financial penalties will not fundamentally change the utility business model, because that model is premised on the earnings produced by supply-side investment;” and that “providing financial incentives to a utility if it performs well in delivering energy efficiency potential can change the existing business model by making efficiency profitable, rather than merely a break-even activity.”⁵

In addition, one proponent of energy efficiency, the American Council for an Energy Efficient Economy (“ACEEE”), suggests that “enacting these regulatory mechanisms have generally been very positive, with utilities or other program providers governed by such mechanisms often demonstrating strong commitments to meet or exceed established goals for energy efficiency programs.”⁶ The Alliance to Save Energy (“ASE”)⁷ embraced the American Gas Association (“AGA”) and Natural Resources Defense Council (“NRDC”) May 22, 2008 joint statement which “maintains support for revenue decoupling, but goes one step further with advocacy for performance-based mechanisms which provide economic incentives for utilities to promote energy efficiency [...] [t]he concept of earnings opportunities linked to energy efficiency is at an early stage; however the end result should be a win-win solution for natural gas utilities and their customers.”⁸

In order to encourage Columbia to continue to invest in DSM while still being prudent with shareholders dollars, Columbia is proposing to create a shared savings incentive for its DSM programs. Columbia’s proposal is a significant expansion of its DSM programs, and Columbia maintains responsibility for implementing its DSM portfolio and programs in a cost-effective manner. Columbia believes that a modest shared savings incentive ranging from 5% to 8.5% of program net benefits is appropriate to incentivize the company to expand and fully implement the DSM programs.

The proposed shared savings mechanism is based on Columbia earning a share of the net benefits as calculated under the Utility Cost Test (“UCT”). The UCT is similar to the Total Resource Cost Test (“TRC”), but includes utility spending on incentives while excluding customer costs. The UCT shows im-

⁵ Environmental Protection Agency, *Aligning Utility Incentives with Investment in Energy Efficiency: A Resource of the National Action Plan for Energy Efficiency*, section 2.4, pages 2-7, 2-8, available at <http://www.epa.gov/cleanenergy/documents/incentives.pdf>.

⁶ *Aligning Utility Interests with Energy Efficiency Objectives: A Review of Recent Efforts at Decoupling and Performance Incentives*, Report Number U061, October 2006.

⁷ The Alliance to Save Energy, *Alliance Endorses AGA, NRDC Joint Statement Supporting Utility Incentives to Promote Energy Efficiency*, May 22, 2008, available at <http://www.ase.org/content/news/detail/4712>.

⁸ American Gas Association, *Combating Global Warming with Increased Energy Efficiency Is a Win-Win Says AGA, NRDC*, May 22, 2008 available at <http://www.aga.org/Newsroom/news+releases/2008/CombatingGlobalWarming.htm>.

provement if a program can produce the same results with fewer participant incentives or lower operating costs. By ignoring participant spending, the UCT also avoids the problem of non-energy benefits that may influence customer purchases. If some customers value being more energy efficient as part of an environmental commitment, customers should be free to spend their money on those improvements without making the utility program appear less cost-effective. A similar situation can arise for customers who want to address problems with comfort, moisture or air quality in their homes or buildings that may be resolved through DSM programs. The UCT is also simpler to evaluate since the costs are all accounting items from the utility and does not require customer spending information.

Shared savings are computed on the difference between the net present value of program lifetime energy savings, determined from the same process used to create the values in Appendix B, Exhibit 2, minus the net present value of the program costs calculated from the Utility Cost Test. The energy estimates of savings are calculated using the formulas identified in the State of Ohio Energy Efficiency Technical Reference Manual, except where historic billing analyses provide well-documented savings of program performance. The recovery of the shared savings incentive will be 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.

The shared savings are the equivalent of a return of approximately 1% to 3% on the investment. The shared savings approach provides Columbia incentives for properly managing the programs and for meeting the ambitious program participation and impact goals.

4. Recovery of Costs Related to DSM

Consistent with SFAS 71-Accounting for the Effects of Certain Types of Regulation, Columbia seeks authority to revise its accounting treatment to provide for the deferral of DSM program expenses resulting from the expansion and continuation of the programs approved by the Commission in Case No. 08-833-GA-UNC as described herein. Columbia also requests modification of its recovery mechanism approved by the Commission in Case No. 08-0072-GA-AIR.

Section 4905.13 Ohio Revised Code, authorizes the Commission to establish systems of accounts to be kept by the public utilities of Ohio and to prescribe the manner in which these accounts shall be kept. Pursuant to Chapter 4901:1-13-01, Ohio Administrative Code, the Commission adopted the Uniform System of Accounts ("USOA") for gas utilities established by the Federal Energy Regulatory Commission ("FERC") for use in Ohio. For Ohio regulatory purposes, the system of accounts is only applicable to the extent that it has been adopted by the Commission. Therefore, the Commission may modify the USOA prescribed by FERC as it applies to utilities within the state of Ohio.

As noted previously, pursuant to the Stipulation in Case No. 05-221-GA-GCR *et al.*, Columbia agreed to file a DSM application. On March 3, 2008, Columbia filed an Application for Authority to Increase Rates for Gas Distribution Service and approval of an Alternative Rate Regulation Plan in Case No. 08-0072-GA-AIR *et al.* As part of its alternative regulation plan, Columbia requested approval of a proposed Rider DSM to recover DSM costs, including those deferred expenses incurred in development and implementation of the DSM programs. This Alternative Rate Plan further included a proposal that Rider DSM be determined annually based on the actual costs of the program for the previous calendar year with rates to become effective the following May 1 and Columbia be permitted to defer related carrying costs until such time rate recovery commences.

Concurrently, on March 3, 2008, Columbia filed for approval an Application for Approval to Change Accounting Methods. Columbia, in part, requested therein authority to modify its accounting to provide for the deferral of all DSM

program expenses in special subaccounts of Account 182-Other Regulatory Assets for recovery through Rider DSM.

On July 3, 2008, Columbia filed an application in Case No. 08-833-GA-UNC for Approval of a Demand Side Management Program for Residential and Commercial Customers as described in detail above which was approved by the Commission on July 23, 2008.⁹

On October 24, 2008 the parties of record in Case No. 08-0072-GA-AIR et al. filed a Joint Stipulation and Recommendation that included therein a recommendation that Columbia be authorized to establish a Demand Side Management Rider ("Rider DSM") for the Small General Service Class. Pursuant to the terms of the Stipulation Columbia must file its Rider DSM pre-filing notice by November 30 of each year which shall contain estimated schedules for the Rider to become effective the following May. By the following February 28, Columbia must file an updated application and schedules that reflects the use of actual data supporting the proposed Rider DSM. The Stipulation further included a recommendation for the Commission's approval of Columbia's request for authority to modify its accounting to give effect to the terms of the DSM provisions as described in the Staff Report and Columbia's Application.

Columbia did not spend the full 2009 DSM amount contemplated in the 2008 rate case order due to 2009 being the implementation year. As a result, the parties in Case No. 09-1036-GA-RDR (2009 IRP/DSM Rider Case) recommended and the Commission approved that all unspent DSM amounts be rolled into the expense caps for the calendar years 2010 and 2011. This treatment will result in estimated DSM expenditure of approximately \$15.0 million during the calendar year 2011.

Columbia seeks authority from the Commission to: (1) continue its DSM program for an additional five years; (2) expand its DSM program to include new DSM programs for customers; (3) increase the total DSM funding level to approximately \$20.0 million for the calendar year 2012; (4) increase the annual the DSM funding level by approximately 3% each calendar year thereafter for the balance of the five-year period; (5) establish Rider DSM for the five-year period based on calendar year 2011 DSM expenditures; and (6) modify its accounting to provide for the deferral of the difference between actual calendar year DSM program expenses, including Columbia's portion of shared savings, incurred during the calendar years 2012 through 2016 and recoveries during those same years at the Rider DSM level to be established in the Rider DSM adjustment case to be filed in February 2012 .

⁹ The Commission issued a Finding and Order that provided for approval of Columbia's DSM application subject to approval of the DSM cost recovery rider proposed in the rate case and any additional conditions imposed therein.

Columbia will defer expenses in special sub-accounts of Account 182-Other Regulatory Assets for recovery through Rider DSM. DSM expenses eligible for deferral will include all expenses incurred through implementation of comprehensive, ratepayer funded, cost-effective, energy efficient programs made available to all customers served under Columbia's Small General Service rate schedule during the years 2012-2016. Consistent with its current program and the Commission's Entry in Case No. 0072-GA-AIR *et al.*, Rider DSM will further include carrying costs to be computed at the Company's current cost of long-term debt and any incentives approved by the Commission. The recovery of the remaining deferred account balance will be addressed through a separate proceeding or Columbia's next base rate case proceeding. Columbia's portion of shared savings during each calendar year will be calculated and supported through an annual filing based on actual data for the previous calendar year. This report will be filed by Columbia no later than June 30 of the subsequent calendar year with deferral authority assumed to be granted absent an objection by Staff within thirty days of the filing. Columbia will recognize its portion of shared savings upon receipt of authority to defer these amounts.¹⁰

The requested expansion and continuation of Columbia's DSM program and proposed change in accounting procedure does not result in any increase in rate or charge, and the Commission can therefore approve this application without a hearing.

5. Other DSM Considerations

5.1. DSM Program Funding Levels

Columbia will monitor and evaluate the level of success of all of its DSM programs. If, through program analysis, it is determined that a particular program design is not likely to invest all of the resources available to it, Columbia retains the flexibility to shift funding between and within programs without Commission approval in order to maximize program performance and customer benefits.

5.2. DSM Program Time Frames

The proposed time frame for DSM implementation is January 1, 2012 to December 31, 2016. Columbia's current DSM program expires on December 31, 2011; therefore, expedited treatment of this application is requested, with approval requested within 60 days of this application. Because Columbia has the support of the DSMSG, Columbia does not anticipate any hardship posed by an

¹⁰ The DSM Deferral-Account 182 will be debited and Revenue or Contra-Expense will be credited.

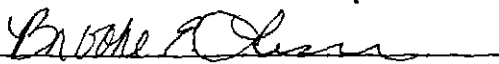
expedited procedural schedule. If, for any reason, implementation is delayed and a calendar year implementation time frame cannot be adhered to, Columbia requests that a program year be established as an alternative to a calendar year with each program year beginning on the month and day of approval of the DSM filing, if it is after January 1, 2012.

6. Conclusion

Columbia hereby respectfully requests the Commission approve its Application for the Implementation of Demand Side Management Programs and the Recovery of Costs and Change in Accounting Methods as described in the instant Application and establish an expedited procedural schedule to ensure implementation of the new programs within 60 days of the date of this filing.

Respectfully submitted,

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APPENDIX A

DSM Program Descriptions and Operating Plan

Residential Programs

Residential Weatherization Program - Home Performance Solutions

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| Estimated Budget | Incentives: \$29.4 million Program Services: \$13.5 million Administration, Education & Marketing: \$3.1 million Evaluation: \$0.265 million Total: \$46.3 million |
| Participation & Savings Targets | Participation – Audits: 29,409; Conversions: 19,586 Mcf Savings – Annual: 73,532; Cum. 5yrs.: 367,661; Lifetime: 8,445,954 |
| Cost Effectiveness Metrics | Total Resource Cost BCR = 1.20 Utility BCR = 1.31 Participant BCR = 9.07 Rate Impact = \$0.0015/Mcf (years 1-5) |
| Program Objective | The objective of the Home Performance Solutions program is to help customers lower their natural gas usage through the adoption of quality attic and wall insulation and advanced air sealing retrofits in existing homes and to increase the market share of high efficiency heating systems during system replacements. The program offers greater incentives to senior citizens at or below Area Median Income and households with incomes less than or equal to 80% of the Area Median Income who are less likely to be able to afford energy efficiency upgrades. |
| Program Theory or Market Barriers and Approaches to | Residential customers encounter many obstacles in improving the energy efficiency of their homes: <ul style="list-style-type: none"> • Customers lack reliable information on the effectiveness and bill savings of energy conservation meas- |

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| <p>Overcome Them</p> | <p>ures. Many customers are not aware of the potential energy savings from the installation of insulation, air sealing and high-efficiency natural gas appliances.</p> <ul style="list-style-type: none"> • The existing market for home energy efficiency upgrades is fragmented, incomplete, and confusing and is still in its infancy in Ohio. Advanced diagnostic air sealing work is essentially unavailable and there is usually little oversight of insulation or HVAC contractors in terms of work quality or performance claims. • Many customers have limited funds to pursue energy efficiency retrofits or to select high-efficiency equipment when making a replacement. • Even when interested in making improvements, many customers lack the time and expertise to solicit and evaluate contractor bids. <p>The Home Performance Solutions program will simplify the process of identifying and implementing cost-effective energy conservation measures through the provision of high-quality, low-cost computerized and diagnostic energy audits, customer financial incentives, and project management. The program will work to build the market for quality Home Performance Solutions services by continuing incentives to encourage comprehensive energy efficiency work and by providing contractor training, oversight, and quality control to ensure that capacity and quality work is available.</p> |
| <p>Program Description</p> | <p>The Home Performance Solutions program provides low-cost, computerized, diagnostic energy audits and rebates for energy conservation measures to customers to help offset the costs of rebate-eligible energy efficiency upgrades. The program will be operated by a program implementation contractor.</p> <p>Energy audits will be conducted by the program implementer which will ensure a technically sound and consistent approach. All program energy auditors will be certified to per-</p> |

form advanced diagnostic audits. The energy audit process will include installation of some lower cost measures including programmable thermostats, energy efficient showerheads and faucet aerators, when applicable. The energy audit fee will be \$50 and may be refunded to the customer if any major energy conservation measures are performed.

Major program-eligible energy conservation measures will be installed by insulation, air sealing, and HVAC contractors. Contractors must attend program orientation and training to be qualified to perform work eligible for rebates. Contractors will also be required to participate in continuing education seminars, including certification of employees performing work on residences. The program implementer will provide project management and oversee the contractors' work quality. In addition, Columbia staff will also perform random and/or targeted quality assurance inspections of contractors' completed work.

Rebates will be offered to customers for insulation, air sealing, and HVAC measures that are deemed cost-effective by the energy audit. Rebates will be equal to: up to 40% of the insulation cost, 60% of the air sealing cost, and \$200 for a high-efficiency furnace upgrade. More comprehensive retrofits of energy conservation measures will be encouraged by increasing the rebates if multiple program-eligible measures are installed. These bonus rebates increase from the standard rebate level to up to 60% for insulation, 70% for air sealing, and \$400 for a furnace upgrade.

Customers with incomes at or below 80% of area median income and senior citizens with incomes at or below area median income will pay a \$20 energy audit fee and receive rebates of up to 90% of the insulation and air sealing costs and \$1,000 for a high-efficiency heating system upgrade.

The program may also make available subsidized financing in collaboration with banks and the state of Ohio.

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| Target Market | <p>All residential customers are eligible for the Home Performance Solutions program, but marketing efforts will target customers with high usage (>100 Mcf per year) and higher use customers already replacing an existing furnace.</p> <p>The program may also continue to employ geographic targeting, potentially pre-qualifying some entire neighborhoods for the ≤80% area median income customer population. Targeting can reduce the costs of program marketing and delivery and, when combined with the lower-income segment, may help address the owner/renter dilemma.</p> <p>Recent market research conducted by Columbia indicates that high-efficiency furnaces may already have nearly a 70% market share in Ohio. As in previous years, this potential free-rider “problem” will be used as a tool to market the Home Performance Solutions program to customers and as a means to enlist HVAC contractors as allies in generating leads.</p> <p>Although the heating system rebates will likely include some customers who would have purchased efficient systems anyway (i.e., free-riders), the program is designed to use that fact as a way to market additional less commonly installed energy conservation measures while simultaneously limiting the cost of free-ridership by creating a hurdle (the energy audit) to receive the rebate.</p> |
| Eligible Energy Conservation Measures | <ul style="list-style-type: none"> • Attic Insulation and ancillary work (e.g., required venting) • Wall Insulation • Blower-door guided air sealing • Furnace/Boiler replacement: AFUE ≥95%/86% • Programmable thermostats: free during audit • Energy efficient showerheads: free during audit |

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| Implementation Strategy | <p>The program will be operated by a single program implementation contractor that will be charged with developing/providing: the energy audit tool; technical standards for the work; program procedures and forms, marketing materials, the program tracking system database, and quality control procedures. All of these tasks will be overseen by Columbia staff. The program implementer will also provide the in-home energy audits; follow up with customers; train the contractors; oversee the contractors' work; provide quality control through phone calls, field visits and database analysis; and provide regular program management reports to Columbia with detailed information on program marketing and participation and progress compared to goals and budgets.</p> <p>Homes that have previously received an energy audit through the program during 2009-2011 will not be eligible to receive an audit again unless a new customer has moved into the home, but the dwelling may still be eligible for rebates on eligible energy conservation measures identified in the previous audit if all eligible measures were not previously installed.</p> |
| Marketing Strategy | <p>Program incentives and marketing are structured to encourage participation from high use customers and customers replacing existing heating equipment to build the market penetration of insulation and air sealing work and, to a lesser degree, high-efficiency heating systems. Targeted marketing is expected to improve program cost-effectiveness by soliciting participation from households that would benefit most from the program energy conservation measures.</p> <p>The primary marketing methods will include direct mail to high use customers and direct contact with insulation and HVAC contractors. Marketing will also include press releases and related media work to publicize the program, and a description of the program at all existing company customer contact points such as the internet, Columbia's</p> |

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| | web site and bill inserts. All customers will be provided access to the program, but customers with lower usage may be steered to other appropriate programs such as a proposed on-line energy audit or the Simple Energy Solutions program. |
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Residential New Construction Program - Energy Efficient New Homes

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| Estimated Budget | Incentives: \$4.6 million Program Services: \$3.4 million Administration, Education & Marketing: \$1.9 million Evaluation: \$0.313 million Total: \$10.2 million |
| Participation & Savings Targets | Participation – 10,013 homes over 5 years Savings – Annual: 40,847 ; Cum. 5 yrs.: 204,236; Lifetime: 4,646,220 |
| Cost Effectiveness Metrics | Total Resource Cost BCR = 1.25 Utility BCR = 3.28 Participant BCR = 2.44 Rate Impact = \$0.015/Mcf (years 1-5) |
| Program Objective | The objective of the Energy Efficient New Homes program is to encourage builders to build housing that exceeds code minimum energy efficiency levels and which are either Energy Star compliant, have a Home Energy Rating Score of 80 or less, or provide energy savings over code minimum levels based on other accepted energy modeling approaches. |

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| <p>Program Theory or Market Barriers and Approaches to Overcome Them</p> | <p>Builders and new home buyers encounter many obstacles to improving the energy efficiency of new homes:</p> <ul style="list-style-type: none"> • First costs continue to drive a significant proportion of customers to buy homes that are code minimum compliant. • Builders may lack reliable information on the best approaches to achieve high-efficiency levels cost-effectively. • Homebuyers lack information about energy efficiency and may be unsure of the credibility of energy efficiency claims. • Homebuyers may not have the funds to pay for higher efficiency levels in new homes. • Builders may not be sure they can recoup the costs of the upgrades in the sales price. <p>The Energy Efficient New Homes program will provide builders with training, technical assistance, subsidized home energy ratings, direct financial incentives and marketing assistance for producing efficient new homes that exceed state code minimum. The program will also provide training to home energy raters and realtors.</p> |
| <p>Program Description</p> | <p>The Energy Efficient New Homes program will provide incentives to home builders within Columbia Gas of Ohio's service territory to build homes that exceed state energy code minimum levels.</p> <p>The program will offer free technical assistance to builders and will help subsidize the cost of the home energy rating and/or a share of the incremental costs to cost-effectively increase the energy efficiency of the homes above code minimum to program energy efficiency levels.</p> <p>Where possible, Columbia and/or its program implementer will partner with electric utilities to leverage resources and maximize energy savings in new homes.</p> <p>Columbia proposes two "tiers" of energy efficiency levels for new homes. Tier 1 will include homes that have a HERS</p> |

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| | score of 80 or less, but which are not qualified for Energy Star. Tier 2 will be homes that are Energy Star version 3.0 (or later) compliant and have a HERS score of 75 or less. |
| Target Market | Builders and buyers of new, gas-heated, single-family homes built in the Columbia service territory will be the target market for the program. The program will seek to maintain participation by existing builders participating in the Energy Star program, as well as increase participation by Affordable Housing developers and “value” builders currently building to code minimum. |
| Eligible Energy Efficiency Measures | <ul style="list-style-type: none">• Energy Star compliant homes Non-Energy Star homes using approaches builders choose to use to qualify the home at a HERS score of 80 or less.• Multi-family buildings that qualify under Energy Star. |

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| Implementation Strategy | <p>The program may be operated by a program implementation contractor that will manage the program operations. The implementation contractor's work will be overseen by Columbia staff.</p> <p>The program implementer will develop and maintain: program procedures and forms for use by raters and builders; marketing materials (in collaboration with Columbia's DSM marketing contractor) to promote the program; a program tracking system database for program reporting, management, and evaluation; and quality control procedures. The program implementer will provide training and provide technical staff to assist builders and raters and provide quality assurance. The implementer will also promote the program and efficient new homes to builders, realtors, and the public.</p> |
| Marketing Strategy | <p>The program will provide marketing strategies for recruiting builders, promoting the homes to realtors and lenders, and helping the builders and realtors market the homes to the public. The marketing to builders and realtors will primarily occur through direct contacts and working through existing builder and realtor organizations. Marketing to the general public will primarily consist of providing assistance to the builders' and realtors' marketing efforts and establishing the program's "brand" with the public.</p> <p>Marketing will also include press releases and related media work to publicize the program, and a description of the program at all existing company customer contact points such as the internet, Columbia's web site, and bill inserts.</p> |

Residential Low Cost Measure Rebate Program - Simple Energy Solutions

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| Estimated Budget | Incentives: \$0.583 million Program Services: \$0.546 million Administration, Education & Marketing: \$1.35 million Evaluation: \$0.160 million Total: \$ 2.64 million |
| Participation & Savings Targets | Participation – 75,795 rebates over 5 years Mcf Savings – Annual: 14,595; Cum. 5 yrs.: 72,976; Lifetime: 732,864 |
| Cost Effectiveness Metrics | Total Resource Cost BCR = 3.07 Utility BCR = 2.96 Participant BCR = N/A (no average incremental cost) Rate Impact = \$0.0004/Mcf (years 1-5) |

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| Program Objective | The objective of the Simple Energy Solutions program is to promote the purchase, installation and use of low-cost, energy conservation measures that are cost-effective for Columbia's residential customers. Programmable thermostats, energy efficient showerheads and faucet aerators are the products specifically included in the program design. Other low-cost products may be added if appropriate. |
| Program Theory or Market Barriers and Approaches to Overcome Them | There are several relatively low-cost energy efficiency retrofit products that are cost-effective for most residential customers, but may not be as widely used as they could be. Some reasons for this lack of market share include: <ul style="list-style-type: none"> • Customers may not be aware of the energy savings of some retrofit products. • Customers may not be aware of the existence or availability of some retrofit products. • Retailers such as home improvement and hardware stores may not stock, or sufficiently promote the benefits of, such products. • Customers may not be able to install products on their own. • Apartment complexes and multi-family building management may have no incentive to help renters |

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| | <p>manage their energy use.</p> <p>For example, many people are uncertain if a programmable thermostat will save them much energy. Many people may also not be aware that energy efficient showerheads exist that may provide a good quality shower while using much less water than a standard (even low-flow) showerhead may use. Local home improvement and hardware stores may not stock a wide selection of improved, high-quality energy efficient showerheads and aerators.</p> <p>The Simple Energy Solutions program addresses these obstacles by providing public education and marketing to enhance the credibility of the energy savings benefits from such products, by offering rebates for the products, and by promoting the availability of qualified products at hardware and home improvement retailers, and at public events. In addition, the program will include a direct install component for customers in rental properties and may provide direct install services for customers unable to install the products on their own.</p> |
| Program Description | <p>The program will offer customers rebates of \$25 per programmable thermostat, \$10 per energy efficient showerhead and up to \$1 per faucet aerator. The products and rebates will be promoted through education and marketing efforts and direct contact with retailers. The program will also provide on-line and mail order fulfillment through its e-store.</p> |
| Target Market | <p>All Columbia residential customers with natural gas space heating or hot water heating can participate, unless they have participated in the program previously.</p> |
| Eligible Measures | <ul style="list-style-type: none"> • Programmable thermostats • Energy efficient showerheads (≤1.8 gallons per minute) • Faucet aerators (≤1.5 gallons per minute) |

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| Implementation Strategy | <p>The program may be operated by Columbia staff in conjunction with its e-store and marketing contractors. Other third party contractors may provide direct installation of measures in apartment buildings and for customers unable to install products on their own, including senior citizens.</p> <p>Columbia and its contractors will develop: program procedures and rebate forms; marketing materials to promote the program; a program tracking system database for program reporting, management, and evaluation; and quality control procedures.</p> <p>Columbia's contractors will perform rebate fulfillments and maintain an on-line fulfillment option for customers. Columbia and its marketing contractor will also market the program to the public and owners of multi-family buildings.</p> |
| Marketing Strategy | <p>The program will continue to use targeted and community/event based marketing strategies for promoting the rebate-eligible products to customers.</p> <p>Columbia may also revisit marketing to retailers, which would primarily occur through direct contacts with home improvement stores and hardware stores. The program will also be marketed through educational and promotional activities such as press releases and media work to publicize the program. The program will also be promoted through the internet, Columbia's web site, and bill inserts.</p> |

Residential High-Efficiency Heating System Rebate Program

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| Estimated Budget | Incentives: \$5 million Program Services: \$1.2 million Administration, Education & Marketing: \$1.1 million Evaluation: \$.225 million Total: \$7.6 million |
| Participation & Savings Targets | Participation – 16,706 furnaces Mcf Savings - Annual: 26,881; Cum. 5 yrs.: 134,404; Lifetime: 2,419,270 |
| Cost Effectiveness Metrics | Total Resource Cost BCR = 1.61 Utility BCR = 2.44 Participant BCR = 3.50 Rate Impact = \$0.0006/Mcf (years 1-5) |

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| Program Objective | The purpose of the High-Efficiency Heating System Rebate program is to increase the penetration rate of high-efficiency, natural gas heating equipment in the replacement market in rental properties and other markets where recent research indicates that there are low penetration rates of this technology. |
| Program Theory or Market Barriers and Approaches to Overcome Them | <p>Recent research conducted by Navigant for Columbia ¹¹ indicated that penetration rates of high-efficiency heating systems in rental and low-income customer markets, as well as in select counties within Columbia's 61-county service territory, continue to lag other market segments.</p> <p>There are numerous reasons for this lag in certain markets:</p> <ul style="list-style-type: none"> • Landlords who do not pay the natural gas heating bills of their tenants have little incentive to purchase high-efficiency equipment when replacing older, defective equipment. • The high incremental cost of upgrading from mini- |

¹¹ "Residential Furnace Market Assessment, Final Report," Navigant, June 3, 2011

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| | <p>mum to high-efficiency heating equipment is a key barrier for some homeowners to take advantage of the energy savings opportunities that high-efficiency technology provides.</p> <ul style="list-style-type: none"> • Some residential customers may not be aware of the savings that high-efficiency technology provides. • The decline of federal tax credits for high-efficiency heating equipment may make first cost a bigger barrier than in recent years. <p>Columbia will provide rebates to landlords to install high-efficiency heating equipment in rental properties where minimum efficiency equipment would otherwise be installed. Columbia will also target low market share counties to provide residential customers with incentives to upgrade to high-efficiency heating systems. Columbia will also provide high-efficiency heating equipment information on its web site and at public events.</p> |
| <p>Program Description</p> | <p>The High Efficiency Heating System Rebate program will provide rebates to stimulate the installation of high-efficiency, natural gas heating systems in rental properties and in select markets in Columbia's service territory where installation rates of the technology lag other markets.</p> <p>In 2012-2013, the program will provide a rebate of \$300 toward the purchase of high-efficiency furnaces/boilers with an AFUE of $\geq 92\%/85\%$. If the United State Department of Energy ("USDOE") implements a minimum residential furnace standard of 90% in 2013, the program will raise the minimum forced air furnace efficiency level to $\geq 95\%$ AFUE (or CEE Tier 3) to qualify for the rebate. Rebates can be combined with Federal Tax Incentives to help continue to transform the market. The rebate level could change depending on changes in the price of natural gas and heating equipment over the duration of the program.</p> <p>The incentive will only be available for a primary heating system. The program may target high use residential dwell-</p> |

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| | ings where energy savings opportunities are highest. |
| Target Market | The target market for the program includes the rental property market, and residential customers in counties with low penetration rates of high-efficiency equipment. |
| Eligible Energy Conservation Measures | <ul style="list-style-type: none"> • Residential furnaces with AFUE \geq 92%. • Residential furnaces with AFUE \geq 95% in years 3 through 5 of the program if USDOE raises the minimum AFUE to 90%. • Residential boilers with AFUE \geq 85%AFUE. |
| Implementation Strategy | <p>The program may be contracted to a program implementation vendor. Columbia and its contractor(s) will develop: program procedures and rebate forms; marketing materials to promote the program; a program tracking system database for program reporting, management, and evaluation; and quality control procedures.</p> <p>The rebate incentive may be a direct deduction from the customer's invoice for the heating system replacement work performed by a qualified, participating contractor.</p> <p>Columbia, or its contractors, will perform rebate fulfillment. Columbia and its marketing contractor will market the program to the public and owners of rental properties, as well as residential customers in other target markets.</p> |

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| Marketing Strategy | The primary marketing methods will include direct mail to higher use customers who appear to live in rental properties and direct contact with HVAC contractors and landlord/rental associations. Marketing will also include press releases and related media work to publicize the program, and a description of the program at all existing company customer contact points such as the internet, Columbia's web site, and bill inserts. |
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Behavior Modification/Home Energy Report Program

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| Estimated Budget | Incentives: \$0 Program Services: \$5.2 million Administration, Education & Marketing: \$.146 million Evaluation: \$.150 million Total: \$5.5 million |
| Participation & Savings Targets | Participation: – up to 175,000 customers per year Mcf Savings: – Annual: 127,915; Cum. 5 yrs.: 639,577; lifetime: 639,577 |
| Cost Effectiveness Metrics | Total Resource Cost BCR = 1.11 Utility BCR = 1.11 Participant BCR = N/A (no average incremental cost) Rate Impact = \$0.0009/Mcf (years 1-5) |
| Program Objective | The purpose of the Behavior Modification/Home Energy Report program is to provide a large number of residential customers with energy usage information and, potentially, rewards, that will result in them taking action to lower their energy use. |
| Program Theory or Market Barriers and Approaches to Overcome Them | Limited resources make it impractical to weatherize all of the customers in a utility service territory in a short period of time. In addition, some customers will not want to engage in the intrusive process of weatherization. Research in psychology and behavioral economics suggests that non-price interventions such as behavior-based energy efficiency can be a powerful way to change consumer choices. Some of these behavioral approaches, which include |

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| | <p>providing information that appeals to social norms, are relatively inexpensive per program participant and are effective at getting customers to take action to save energy.</p> <p>Home Energy Reports have proven to be a cost-effective way for utilities to engage with large numbers of customers to produce large and measureable energy savings.</p> |
| Program Description | <p>The Behavior Modification/Home Energy Report program targets specific and relevant energy efficiency recommendations to each utility customer, making it easier for them to take action on recommendations and programs most relevant to them. The main elements of the program may include direct-mailed Home Energy Reports, a customer web portal, and analytics to derive insights about customer segments. The program may also include e-mail communications, reminder and engagement calls, a customer service interface, targeted on-line advertising, and program performance measurement and reporting, to drive customers to take actions to lower their natural gas use. Other potential behavioral models include rewards for customers as well.</p> <p>The program approach selects random participants from a target population to participate in the program based on an energy usage profile, with an equivalent-sized, non-participant group for comparison purposes to measure energy savings.</p> <p>The program will engage at least 75,000 customers in year 1, and 150,000 customers in year 2, most likely in the top 10-30% usage tier and 25,000 customers each year in a middle or average usage tier.</p> <p>Depending on how successful the program is in years 1 and 2, the program may be continued for years 3 through 5 and will be considered for expansion to serve additional customers.</p> |

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| Target Market | Higher use households in the top 10-30% natural gas usage level, and “middle” user households. |
| Eligible Measures | Home Energy Reports and/or rewards will be provided directly to customers. |
| Implementation Strategy | Columbia will seek a third party vendor to provide the services under this program. |
| Marketing Strategy | The program will be marketed by the third party vendor chosen to implement the program. |

On-Line Energy Audit

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| Estimated Budget | Incentives: \$0 Program Services: \$530,914 Administration, Education & Marketing: \$125,000 Evaluation: \$55,000 Total: \$710,914 |
| Participation & Savings Targets | Participation – Audits: TBD Mcf Savings – N/A |
| Cost Effectiveness Metrics | N/A Rate Impact = \$0.00001/Mcf (years 1-5) |
| Program Objective | The purpose of the On-Line Energy Audit is to provide a simple, easy-to-use energy audit for customers who want to determine how efficient their homes are and provide information on low-cost actions as well as DSM programs that are appropriate for them to participate in. |
| Program Theory or Market Barriers and Approaches to Overcome Them | Some customers prefer to engage with utilities via the internet. Other customers participate in DSM program when all they may want or need is a simple analysis of their energy use to help them make decisions. Columbia proposes to interact with these customers through an On-line Energy Audit tool. The tool will be a simplified, but highly accurate energy audit that will provide customers with quick feedback on the performance of their home. Customers will be referred to Columbia’s DSM programs if their usage level and |

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| | energy audit results indicate that they are in need of program services. For customers with already efficient homes, the tool may result in lower costs to other DSM programs by avoiding a more expensive, on-site energy audit. |
| Program Description | The On-line Energy Audit will be an internet-based tool that will provide an energy score, a customized action plan, and links to energy rebates, tax credits, and energy contractors. |
| Target Market | Customers who prefer to interact with Columbia on-line and customers with lower than average usage. |
| Eligible Measures | N/A |
| Implementation Strategy | Columbia will hire a third party vendor to provide an on-line energy audit tool on the company's web site. |
| Marketing Strategy | The on-line audit will be marketed to customers on-line, through bill inserts and company newsletters, e-mail, and through social media. |

Residential Low-Income Customer Weatherization Program – WarmChoice^{®12}

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| Estimated Budget | Program Measures: \$39.8 million Program Services: \$20 million Administration, Education & Marketing: \$4 million Evaluation: \$0.25 million Total: \$64 million |
| Participation & Savings Targets | Participation – Households served: 13,000 Mcf Savings – Annual: 78,000; Cum. 5yr 1,170,000; Lifetime: 9,750,000 |
| Cost Effectiveness Metrics | Total Resource Cost BCR = 1.11 Utility BCR = 1.06 Participant BCR = N/A (no cost to participants) Rate Impact: \$.0010 |

¹² The WarmChoice[®] Low-Income Weatherization Program is part of Columbia Gas of Ohio's portfolio of DSM programs. Part of the program is funded through base rates rather than through the Rider DSM.

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| Program Objective | <p>The objective of the WarmChoice® low-income customer weatherization program is to reduce the energy usage and bills of low-income customers by installing attic, wall, and floor insulation, advanced duct and air sealing and some low cost retrofits such as water heater insulation, pipe insulation and energy efficient showerheads. Defective heating appliances that cannot be repaired are replaced with high-efficiency heating appliances, if applicable. Defective water heaters may also be repaired or replaced.</p> |
| Program Theory or Market Barriers and Approaches to Overcome Them | <p>Low Income Residential customers encounter obstacles in improving the energy efficiency of their homes:</p> <ul style="list-style-type: none"> • Customers have limited funds to pursue energy efficiency retrofits or to select high efficiency space and water heating equipment when a replacement is necessary. • Customers lack reliable information on the effectiveness and bill savings of efficiency retrofits. <p>The WarmChoice® program will simplify the process of identifying and implementing cost-effective energy improvements through the provision of diagnostically-driven inspections, no cost energy efficiency retrofits, and project management services.</p> |
| Target Market | <p>All low income residential customers at or below 150% of the federal poverty guidelines are eligible for WarmChoice®, but mobile homes must use 100 Mcf annually to be eligible for the program. Mobile homes using less than that amount are weatherized by the state of Ohio's federally-funded Home Weatherization Assistance Program ("HWAP"). Providers are encouraged to target high arrearage Percentage of Income Payment Plan ("PIPP") customers and customers with high usage. Program providers frequently leverage WarmChoice® with HWAP, the Ohio Department of Development's Electric Partnership Program, and various HUD or USDA funded home repair programs in addition to Ohio's</p> |

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| | Housing Trust Fund Home Repair program in order to maximize savings and services. |
| Eligible Energy Conservation Measures | <ul style="list-style-type: none"> • Attic insulation and ancillary work (e.g., required venting) • Wall insulation • Floor insulation over unheated spaces • Water heater, pipe and duct insulation • Blower-door guided air leakage and duct sealing • Heating system repair or replacement (if defective): AFUE\geq92% for forced-air furnaces/\geq85% for boilers • Water heater repair or replacement (if defective) • Energy efficient showerheads |
| Implementation Strategy | <p>The program is implemented by four community-based organizations (providers) that: perform the energy inspections; use applicable state weatherization and Columbia technical standards to perform inspections and the installation of energy conservation and other measures; provide program administrative procedures and forms, marketing materials, the program tracking system database, and quality control procedures. All of these tasks are overseen and administered by Columbia staff. The providers also perform customer education, follow up with customers; train the contractors; oversee the contractors' work; provide quality control through phone calls, field visits and database analysis; and provide regular program management reports to Columbia with detailed information on program participation and progress compared to goals and budgets.</p> |

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| Marketing Strategy | Columbia provides the WarmChoice® providers with a list of potentially eligible customers from its DIS system. Providers also use the HWAP and Low-Income Home Energy Assistance Program ("HEAP") intake process and HEAP lists to recruit customers into the program. Providers use telemarketing, direct mail and community events to publicize the availability of the program. |
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Residential Energy Efficiency Education for Students

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| Estimated Budget | Incentives: \$0 Program Services: \$1.95 million Administration, Education & Marketing: \$0 Evaluation: \$0.08 million Total: \$2 million |
| Participation & Savings Targets | Participation – Student kits: 18,000; Measures: 63,149 Mcf Savings – Annual: 8,653; Cum. 5yrs.: 34,613; Lifetime: 216,365 |
| Cost Effectiveness Metrics | Total Resource Cost BCR = 1 Utility BCR = 1 Participant BCR = N/A (no average incremental cost) Rate Impact = \$0.0003/Mcf (years 1-5) |
| Program Objective | The purpose of the Residential Energy Efficiency Education and for Students program is to provide school teachers in grades 5-12 with a kit of equipment to teach the science of energy and efficiency through classroom labs and to provide students with an energy kit, including energy efficient showerheads and faucet aerators that they will install in their homes. Students will be empowered as the energy leaders of their families. Students will also help make their families aware of other Columbia residential DSM programs. |
| Program Theory or Market Barriers | Energy efficiency and conservation is not usually on the minds of many school age children. |

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| ers and Approaches to Overcome Them | <p>Helping students learn about energy, how they use it, what it costs, and its impacts on society will help make them aware of what is otherwise an often invisible product. The program will inform and educate customers and their children to enable them to use energy more efficiently.</p> <p>Providing students with a kit to install will engage them directly in energy conservation and may result in the household taking additional actions to reduce their energy use.</p> |
| Program Description | The Residential Energy Efficiency Student Education and Installation program will provide teachers with educational materials to teach students about natural gas and energy conservation. Students will receive a kit of materials to install as part of the curriculum. |
| Target Market | Teachers of students and students in the 5 th through 12 th grade level. |
| Eligible Measures | A kit of energy conservation materials, including energy efficient showerheads and aerators that can be installed at the student's home. |
| Implementation Strategy | The program will be contracted to a third party vendor to deliver in some markets within Columbia's service territory. Columbia will collaborate with AEP in some overlapping counties, as well as provide the program to students in some non-overlapping counties. |
| Marketing Strategy | The program will be marketed to school systems and teachers by the program contractor through a series of professional workshops and direct outreach. |

Residential Energy Code Training and Evaluation

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| Estimated Budget | <p>Incentives: \$0</p> <p>Program Services: \$.625 million</p> <p>Administration, Education & Marketing: \$0</p> <p>Evaluation: \$0.100 million</p> <p>Total: \$.725million</p> |
| Participation & Savings Targets | <p>Participation – Seminars/Participants: TBD</p> <p>Mcf Savings – TBD</p> |
| Cost Effectiveness Metrics | <p>Total Resource Cost BCR = N/A</p> <p>Utility BCR = N/A</p> <p>Participant BCR = N/A (no average incremental cost)</p> <p>Rate Impact = \$0.00001/Mcf (years 1-5)</p> |
| Program Objective | <p>The purpose of the Residential Energy Code Training and Evaluation program is to provide training to Ohio home builders, code officials and other stakeholders on Ohio's energy code and advanced, energy efficient building practices and to help determine residential energy use as a result of implementing new codes in Ohio.</p> |
| Program Theory or Market Barriers and Approaches to Overcome Them | <p>Ohio will likely adopt the 2009 International Energy Conservation Code in the near future. Home builders indicate one of the main challenges they face is training for employees on code changes and new requirements for air tightness testing with a blower door. In addition the Ohio Board of Building Standards ("OBBS") is required to demonstrate code compliance to the US Department of Energy.</p> <p>Columbia will help builders, code officials, and other stakeholders overcome code implementation and building science related barriers by providing training seminars on the code, building science, and blower door use and results interpretation. Columbia will help OBBS show code compliance by tracking and measuring new home energy use compared to homes built under previous code levels.</p> |

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| Program Description | The Residential Energy Code and Evaluation program will provide energy code-related training to homebuilders, code officials and other stakeholders in the housing industry, as well as research regarding the actual energy usage of homes built to past and present code levels. Columbia will coordinate its program with other utilities where possible. |
| Target Market | The target market for code training includes homebuilders, code officials, and other stakeholders in the housing industry. The target market for the energy use research is the Ohio Board of Building Standards and other stakeholders. |
| Eligible Energy Conservation Measures | Not applicable. |
| Implementation Strategy | <p>Columbia will coordinate development and implementation of energy code related training classes with stakeholders and other utilities with similar DSM programs or objectives. Columbia may hire third party vendors to provide energy code training and course logistics services.</p> <p>Columbia will work with an independent evaluator to prepare an evaluation report that quantifies energy use of code built homes.</p> |
| Marketing Strategy | Code training seminars and classes will be marketed by Columbia's marketing contractor through OBBS, Building Industry Associations, Ohio homebuilder associations, code offices, the state energy office, and other stakeholders through direct outreach including mail and email, as well as through Columbia's web site. |

Commercial Programs

Commercial – Innovative Energy Solutions

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| Estimated Budget | Program Services: \$.2.5 million Administration, Education & Marketing Costs: \$.275 million Evaluation Costs: \$.150 million Total Costs: \$2.9 million |
| Savings Targets | To be determined on an individual project basis. |
| Cost Effectiveness Metrics | To be determined on an individual project basis. |

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| Program Objective | The purpose of the Innovative Energy Solutions program is for Columbia to provide energy conservation opportunities to their commercial customers for energy efficiency projects that provide measureable, cost-effective savings. |
| Program Theory or Market Barriers and Approaches to Overcome Them | <p>Commercial customers are facing increasing energy costs along with other costs that impact the profitability of their business. Some commercial customers are also seeking more energy efficient options due to their corporate commitment to sustainable environmental practices. These business customers are more likely to fall in early adopter category for innovative energy efficiency products and services. However, as with most businesses, they are not always aware of which product models or approaches are the most energy efficient alternatives available.</p> <p>Many commercial customers have little access to capital for energy audits or to move cost-effective projects forward.</p> |

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| Program Description | <p>Columbia will collaborate with customers in its service territory and with other industry partners engaged in energy efficiency, including, but not limited to, researching existing and emerging energy efficient technologies to develop demonstration projects to promote leading edge energy efficiency approaches.</p> <p>The program will seek to partner on projects that demonstrate the highest level of energy efficiency achievable today for a whole premise using the latest energy efficient technologies alongside electric and water saving technologies; or, Columbia will seek to develop individual projects that demonstrate the energy savings advantage of specific technologies for a particular customer segment (i.e., solar water heating for schools, firehouses, etc.).</p> <p>This will be a competitive award program that provides a matching funding stream to support implementation of energy audits and energy conservation measures, evaluation measurement and verification of savings, as well as research into technologies that may be added to the portfolio of programs offered by Columbia in the future. The program may offer funding in the form of award grants to winning projects or proposals submitted by customers or trade groups that demonstrate innovative application of energy efficient technologies. The program will emphasize incorporating emerging high-efficiency technologies, existing high-efficiency technologies and energy conservation measures, or use of renewable technologies to off-set or enhance natural gas technologies.</p> |
| Target Market | <p>Columbia commercial customers.</p> |
| Eligible Measures | <p>For customers with usage >300 Mcf/year, to be determined on a case-by-case basis through an energy audit.</p> <p>For customers with usage ≤300 Mcf/year, measures can be determined through an energy audit, or the following measures may be installed with no audit and will be eligible for a rebate:</p> |

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| | <ul style="list-style-type: none"> • Programmable thermostats • Water heater insulation • Hot water saving devices, including pre-rinse spray valves, faucet aerators and energy efficient shower-heads • Attic and wall insulation • High-efficiency heating equipment • Infrared Fryers • Radiant Heaters • Efficient water heater • Duct insulation/sealing |
| Implementation Strategy | <p>Columbia staff will manage the program, and develop and maintain forms and tracking systems. Columbia will use a project review advisory team to rate or assess large projects that require an investment of more than \$50,000.</p> <p>Large projects may be limited to an eighteen month window for project planning, implementation, and results. As such, most projects will focus on technologies that are commercially-ready, known to produce viable energy savings, but have low market awareness/penetration, and possibly high-first costs.</p> <p>The review committee will monitor projects that require an investment of more than \$50,000 in conjunction with Columbia staff to assess whether the funding is adequately supporting cost-effective energy efficiency projects.</p> |
| Marketing Strategy | <p>Marketing and outreach strategies may vary depending on the type of projects and the targeted audience. Strategies may include:</p> <ul style="list-style-type: none"> • Face-to-face contact with customers to alert them of the demonstration site via: utility staff, contractors, trade shows, community events, etc. • Website information • Direct mail to targeted groups • PR campaign |

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| Other Considerations | <p>Other strategies may help supplement the success of this program include:</p> <ul style="list-style-type: none">• Availability of tax credits for key technologies such as solar• Cooperative education and training with trade associations• Vendor participation/donation of technologies• Aligning demonstrations/projects with national efforts to promote key technologies |

Commercial Customers - Energy Design Solutions

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| Estimated Budget | Program Services: \$.637 million Administration, Marketing & Education Costs: \$.115 million Evaluation Costs: N/A Total Costs: \$.752 million |
| Savings Targets | N/A |
| Cost Effectiveness Metrics | To be determined |

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| Program Objective | The objective of this program is to facilitate the education and training of building industry professionals and owners on the benefits of building energy efficient small buildings that are at least 30% more efficient than the commercial energy efficiency building code. |
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Program Theory or Market Barriers and Approaches to Overcome Them

There currently is a wealth of information and programs available nationwide such as Energy Star High Performance Homes and High Performance Schools and LEED certification that encourage energy efficient building practices in residential and medium to large commercial new construction. These programs include design assistance, incentives for designers, and builder performance incentives for meeting specific energy efficiency targets that are above the state and national energy standards.

While small commercial buildings with up to 20,000 square feet may comprise the majority of office space, there are few energy efficiency programs designed exclusively for the designers, builders, developers and owners of these smaller buildings. Unlike working with the home builder segment where one builder could represent hundreds of homes, participation from this segment could potentially produce a high volume of new buildings that would most likely require individualized attention. Utility programs that include designer and builder incentives may have a difficult time being cost-effective with this segment given the potential for higher costs per unit.

Many designers and builders in this category are unaware of, or reluctant to implement, the positive impacts of integrating cost-effective energy efficiency into their designs due to a lack of true understanding of the approach and perceived budget constraints.

Other perceived barriers to adoption may include:

- Limited time to research energy efficient options.
- Lack of understanding or experience with energy modeling tools.
- Low awareness of the latest energy efficient technologies and their interactive effects.
- Perception that clients would not pay for equipment upgrades.

Providing a program that provides education and training, as

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| | <p>well as tools that are easily accessible, will help minimize the time and resources to locate the right information for designing efficient buildings. Building professionals value the hands on training. Also, providing one-on-one consultation when planning for construction of multiple units would provide further guidance on efficient design and help keep utility costs down.</p> <p>Small business owners and those who lease small buildings may face increasing energy costs along with other costs that impact the profitability and viability of their businesses. Having a high performance building using less energy would be a benefit and produce a win-win to the business owner, the building owner who wants full occupancy, and to the utilities that are encouraging energy efficiency.</p> |
| <p>Program Description</p> | <p>The Energy Design Solutions program will provide energy/code education to building professionals, including architects, engineers, and developers, involved in the development of smaller new buildings. In addition, the program will provide building project energy design and review assistance to determine whether cost-effective, energy efficient practices have been maximized.</p> <p>This program would seek to partner with electric utilities in the Columbia service territory that currently have commercial new construction programs, building trade associations such as AIA, BOMA, BIA, USGBC, AEE and ASHRAE, and, energy efficiency trade groups that are engaged in promoting energy efficiency in new construction. The program would include technical consulting and training (including continuing education credits) on incorporating high-efficiency natural gas technologies into new, small building construction.</p> |

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| | <p>The program will provide educational seminars to support disseminating education and training on how to incorporate the latest energy efficiency technologies into new construction. The program will also offer direct technical design assistance for building industry professionals who are engaged in developing new construction plans for multiple small buildings. The program will emphasize incorporating building shell, space heat, water heat and efficient natural gas appliances.</p> |
| Target Market | <p>Building owners/developers and designers of new, small building construction with estimated square footage of 20,000, including small offices, retail, foodservice, etc. This includes builders who also build strip centers and franchise owners with multiple sites that individually meet the 20,000 square foot threshold.</p> |
| Eligible Energy Conservation Measures | <p>N/A</p> |
| Implementation Strategy | <p>The program will leverage existing information and programs from key industry groups that promote energy efficient building design through AIA's Sustainable Design Resources and ASHRAE's Advance Energy Design Guide series. ASHRAE's guides include two guides specifically for designing small retail and small office buildings with footprints of up to 20,000 sq. ft. The guides' current 30% energy savings target is above ASHRAE's Standard 90.1. The program will provide education on the integrated design process and advanced technologies to achieve 30% to 50% energy reductions.</p> <p>The program will include training modules on whole building and system design practices and tools that incorporate natural gas technologies for presenting at ongoing new construction seminars delivered by building trade groups. Columbia will procure building design and building science consultants to provide one-on-one technical consultations for builders and designers engaged in designing small building</p> |

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| | <p>new construction projects that include multiple units (i.e., strip centers, franchisees with multiple locations) in Columbia's service territory.</p> <p>Finally, the program will include a recognition award component where a non-monetary reward (i.e., plaque for display, etc.) may be given to builders and owners who build energy efficient buildings that exceed the building energy code by 30% to 50% using knowledge gained from seminars, consultations, demonstrations and/or recommendations from energy efficiency audits.</p> |
| Marketing Strategy | <p>Marketing strategies will seek to tie-in to existing marketing strategies employed by the electric utilities and trade groups promoting sustainable small building new construction. Columbia will provide funding to expand the messaging in existing material to include information on high-efficiency natural gas technologies. Marketing may include:</p> <ul style="list-style-type: none"> • Press releases to building professionals and their associations in the Columbia service territory. • Ads in building professional trade publications. • Face-to-face contact with customers via contractors, customer service reps, call centers, trade shows, community events, etc. • Information on Columbia and partners' websites. |
| Other Considerations | <p>Other strategies that may help supplement the success of this program include:</p> <ul style="list-style-type: none"> • Cooperative education and training with trade associations and educational institutions. • Collaborations with ongoing commercial programs with electric utilities. • Partnering with local governments engaged in building small municipal facilities. • Partnering with the High Performance Schools program from EPA. • Partnering with EPA's Energy Star Commercial Building Design program. |

United States Environmental Protection Agency Portfolio Manager

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| Estimated Budget | Program Services: \$0 Administration, Education & Marketing: \$49,000 Evaluation Costs: \$0 Total Costs: \$49,000 |
| Savings Targets | N/A |
| Cost Effectiveness Metrics | N/A |

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| Program Objective | The purpose of the EPA Portfolio Manager is to educate commercial customers on how their businesses use energy and what cost-effective opportunities exist to lower their energy bills. |
| Program Theory or Market Barriers and Approaches to Overcome Them | <p>Business owners are facing increasing energy costs along with other costs that impact the profitability of their business. These business customers are not always aware of what actions they can take to help them save on their energy bills. Many small business owners have expressed the need for tools to help them assess their energy use, to identify different energy efficiency options, and to help them determine the return on investment for taking action.</p> <p>Specifically, business owners are looking for tools and resources that:</p> <ul style="list-style-type: none"> • Simplify their research on energy efficient options, including information on what practices and measures will help reduce their costs. • Provide benchmarking on best practices being used by similar businesses to manage energy costs. <p>EPA's Portfolio Manager will help customers navigate through what is now a complicated and sometimes intimidating process of determining what energy efficient options they should consider when replacing gas-fired equipment or upgrading other building systems.</p> |

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| Program Description | EPA's Portfolio Manager is an interactive energy management tool that enables building owners to track and assess energy and water consumption across their entire portfolio of buildings in a secure on-line environment. Whether they own, manage, or hold properties for investment, Portfolio Manager can help them set investment priorities, identify under-performing buildings, verify efficiency improvements, and receive EPA recognition for superior energy performance. |
| Target Market | Commercial customers. Total customers eligible: approximately 110,000. |
| Implementation Strategy | Columbia will provide a link to EPA's Portfolio Manager web site and encourage commercial customers to use the EPA web site. |
| Marketing Strategy | <p>Columbia's marketing strategy for EPA's Portfolio Manager will be comprised primarily of a combination of direct mail, one-on-one contact, and web site links. The approach may include:</p> <ul style="list-style-type: none"> • Multi-lingual marketing materials including bill inserts, press releases, and e-mail marketing. • Face-to-face contact with customers via utility personnel, contractors, customer service reps, call centers, trade shows, community events, etc. • Link to the EPA Web site from the Columbia web site. |

APPENDIX B

1. Columbia DSM Program Cost Effectiveness Test Results

Estimated Cost-Effectiveness, Columbia Gas of Ohio DSM programs

| Program | Cost Effectiveness Test Results | | | | | |
|--|---------------------------------|------------|------------|----------------------------|------------|---------------|
| | TRC BCR | UCT BCR | PCT BCR | RIM (Years 1-5), \$/ccf | TRC \$/ccf | UCT \$/ccf |
| Home Performance Solutions | 1.20 | 1.31 | 9.07 | \$ 0.0035 | \$1.03 | \$0.96 |
| WarmChoice | 1.11 | 1.06 | * | \$ 0.0050 | \$1.14 | \$1.20 |
| HE HVAC Rebates | 1.61 | 2.44 | 3.50 | \$ 0.0006 | \$0.74 | \$0.49 |
| Energy Efficient New Homes | 1.25 | 3.28 | 2.44 | \$ 0.0015 | \$0.92 | \$0.37 |
| Home Energy Reports | 1.11 | 1.11 | * | \$ 0.0004 | \$0.75 | \$0.75 |
| Simple Energy Solutions | 3.07 | 2.96 | N/A | \$ 0.0004 | \$0.67 | \$0.69 |
| Residential Energy Code | - | - | - | - | - | - |
| Student Education | 1.00 | 1.00 | * | \$ 0.0003 | \$1.05 | \$1.05 |
| On Line Audit | - | - | - | - | - | - |
| Innovative Energy Solutions | TBD | TBD | TBD | TBD | TBD | TBD |
| Energy Design Solutions | TBD | TBD | TBD | TBD | TBD | TBD |
| EPA Portfolio Manager | - | - | - | - | - | - |
| Totals | 1.19 | | | | \$ 0.94 | \$ 0.84 |
| Total including other costs (non-program and DSMMSG) | 1.17 | | | | | |

Note: Avoided Cost of Gas=\$9.26/Mcf

Note: * On average, no incremental costs are projected. This can occur due to negative incremental participation costs for free-riders exceeding the positive incremental costs by other participants.

2. Columbia DSM Program Gas Savings Projections

Estimated Gas Savings Impacts, Columbia Gas of Ohio DSM Programs

| Program | Gas Savings: Cumulative Incremental Mcf/yr | | | | | Total MCF |
|-----------------------------|--|---------|---------|-----------|-----------|-----------|
| | 2012 | 2013 | 2014 | 2015 | 2016 | |
| Home Performance Solutions | 70,207 | 144,000 | 218,156 | 292,708 | 367,661 | 1,092,733 |
| WarmChoice | 78,000 | 156,000 | 234,000 | 312,000 | 390,000 | 1,170,000 |
| HE HVAC Rebates | 26,881 | 53,762 | 80,642 | 107,523 | 134,404 | 403,212 |
| Energy Efficient New Homes | 31,018 | 66,528 | 106,957 | 152,766 | 204,236 | 561,504 |
| Home Energy Reports | 58,226 | 145,338 | 145,338 | 145,338 | 145,338 | 639,577 |
| Simple Energy Solutions | 14,450 | 28,969 | 43,560 | 58,227 | 72,976 | 218,182 |
| Residential Energy Code | TBD | TBD | TBD | TBD | TBD | - |
| Student Education | 8,654 | 17,309 | 25,966 | 34,623 | 43,281 | 129,833 |
| On Line Audit | - | - | - | - | - | - |
| Innovative Energy Solutions | TBD | TBD | TBD | TBD | TBD | - |
| Energy Design Solutions | TBD | TBD | TBD | TBD | TBD | - |
| EPA Portfolio Manager | - | - | - | - | - | - |
| Totals | 287,436 | 611,905 | 854,618 | 1,103,185 | 1,357,896 | 4,215,040 |

3. Columbia DSM Program Projected Budgets

Estimated Annual Budgets, Columbia Gas of Ohio DSM Programs

| Program | 2012 | 2013 | 2014 | 2015 | 2016 | Totals |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|
| Home Performance Solutions | \$ 8,706,469 | \$ 9,026,922 | \$ 9,275,159 | \$ 9,533,076 | \$ 9,799,464 | \$ 46,341,090 |
| WarmChoice | \$ 4,972,254 | \$ 5,334,422 | \$ 5,707,454 | \$ 6,091,678 | \$ 6,487,428 | \$ 28,593,236 |
| HE HVAC Rebates | \$ 1,509,931 | \$ 1,519,248 | \$ 1,528,265 | \$ 1,538,100 | \$ 1,523,214 | \$ 7,618,759 |
| Energy Efficient New Homes | \$ 1,856,717 | \$ 1,784,133 | \$ 1,767,324 | \$ 2,150,776 | \$ 2,641,285 | \$ 10,200,235 |
| Home Energy Reports | \$ 716,150 | \$ 1,192,775 | \$ 1,193,625 | \$ 1,194,500 | \$ 1,195,401 | \$ 5,492,451 |
| Simple Energy Solutions | \$ 495,669 | \$ 520,535 | \$ 530,723 | \$ 541,247 | \$ 552,118 | \$ 2,640,292 |
| Residential Energy Code | \$ 200,000 | \$ 125,000 | \$ 200,000 | \$ 100,000 | \$ 100,000 | \$ 725,000 |
| Student Education | \$ 415,000 | \$ 415,000 | \$ 390,000 | \$ 405,000 | \$ 405,000 | \$ 2,030,000 |
| On Line Audit | \$ 140,000 | \$ 138,000 | \$ 141,090 | \$ 144,273 | \$ 147,551 | \$ 710,914 |
| Subtotal: Residential DSM | \$ 19,012,190 | \$ 20,056,035 | \$ 20,733,640 | \$ 21,698,650 | \$ 22,851,462 | \$ 104,351,976 |
| Innovative Energy Solutions | \$ 585,000 | \$ 585,000 | \$ 585,000 | \$ 585,000 | \$ 585,000 | \$ 2,925,000 |
| Energy Design Solutions | \$ 137,171 | \$ 143,504 | \$ 150,242 | \$ 157,183 | \$ 164,331 | \$ 752,431 |
| EPA Portfolio Manager | \$ 9,168 | \$ 9,441 | \$ 9,741 | \$ 10,025 | \$ 10,317 | \$ 48,691 |
| Subtotal: Commercial DSM | \$ 731,339 | \$ 737,945 | \$ 744,983 | \$ 752,207 | \$ 759,648 | \$ 3,726,122 |
| DSM Stakeholder Group Support/DSM Planning | \$ 70,000 | \$ 70,000 | \$ 70,000 | \$ 70,000 | \$ 70,000 | \$ 350,000 |
| Admin (non-program specific) | \$ 440,000 | \$ 451,000 | \$ 462,275 | \$ 473,832 | \$ 485,678 | \$ 2,312,785 |
| Total : selected programs | \$ 20,253,529 | \$ 21,314,980 | \$ 22,010,897 | \$ 22,994,689 | \$ 24,166,788 | \$ 110,740,882 |
| Total Budget | \$ 20,253,529 | \$ 21,314,980 | \$ 22,010,897 | \$ 22,994,689 | \$ 24,166,788 | \$ 110,740,882 |

4. Columbia DSM Gas Cost Projections

Gas Cost Estimates, Columbia Gas of Ohio DSM Programs

| Year Number | Year | Nominal Cost of Gas \$/Mcf |
|----------------|------|-------------------------------|
| 0 | 2011 | \$8.20 |
| 1 | 2012 | \$9.26 |
| 2 | 2013 | \$9.67 |
| 3 | 2014 | \$9.97 |
| 4 | 2015 | \$10.13 |
| 5 | 2016 | \$10.29 |
| 6 | 2017 | \$10.55 |
| 7 | 2018 | \$10.81 |
| 8 | 2019 | \$11.08 |
| 9 | 2020 | \$11.36 |
| 10 | 2021 | \$11.65 |
| 11 | 2022 | \$11.94 |
| 12 | 2023 | \$12.23 |
| 13 | 2024 | \$12.54 |
| 14 | 2025 | \$12.85 |
| 15 | 2026 | \$13.18 |
| 16 | 2027 | \$13.50 |
| 17 | 2028 | \$13.84 |
| 18 | 2029 | \$14.19 |
| 19 | 2030 | \$14.54 |
| 20 | 2031 | \$14.91 |
| 21 | 2032 | \$15.28 |
| 22 | 2033 | \$15.66 |
| 23 | 2034 | \$16.05 |
| 24 | 2035 | \$16.45 |
| 25 | 2036 | \$16.87 |
| 26 | 2037 | \$17.29 |
| 27 | 2038 | \$17.72 |
| 28 | 2039 | \$18.16 |
| 29 | 2040 | \$18.62 |
| 30 | 2041 | \$19.08 |
| 31 | 2042 | \$19.56 |
| 32 | 2043 | \$20.05 |
| 33 | 2044 | \$20.55 |
| 34 | 2045 | \$21.06 |
| 35 | 2046 | \$21.59 |

Note: Gas cost based in Columbia estimates through 2015,
inflation thereafter

Note: Inflation rate, 2.5%

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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)
Demand Side Management Programs for its) Case No. 11-5028 -GA-UNC
Residential and Commercial Customers and)
the Application for Approval to Change) Case No. 11-5029-GA-AAM
Accounting Methods)
)

JOINT STIPULATION AND RECOMMENDATION

Rule 4901-1-30, Ohio Administrative Code ("O.A.C.") provides that any two or more parties to a proceeding may enter into a written stipulation covering the issues presented in such proceeding. The purpose of this document is to set forth the understanding of Columbia Gas of Ohio, Inc. ("Columbia"), the Office of the Ohio Consumers' Counsel ("OCC"), Ohio Partners for Affordable Energy ("OPAE"), the Ohio Farm Bureau Federation ("OFBF") and the Staff of the Public Utilities Commission of Ohio ("Staff") (which for the purpose of entering into this Joint Stipulation and Recommendation, will be considered a party by virtue of O.A.C. Section 4901-1-10(C)) and to recommend that the Public Utilities Commission of Ohio ("Commission") approve and adopt this Joint Stipulation and Recommendation ("Stipulation"), resolving all issues in the above captioned matter.¹

The Signatory Parties believe that this Stipulation represents a reasonable compromise of varying interests. This Stipulation is expressly conditioned upon adoption in its entirety by the Commission without material modification. Should the Commission reject or materially modify all or any part of this Stipulation, the Parties shall have the right, within thirty (30) days of issuance of the Commission's order, to file an application for rehearing or to terminate and withdraw from the Stipulation by filing a notice with the Commission in this proceeding, including service to all the Parties. The Parties agree that they will not oppose or argue against any other Party's application for rehearing that seeks to uphold the original unmodified Stipulation. Upon the Commission's issuance of any entry on rehearing that does not adopt the Stipulation without material modification, any party may terminate and withdraw from the Stipulation by filing a notice with the Commission within thirty (30) days of the

¹ Cornerstone Energy Conservation Services, the Ohio Home Builders Association and IGS Energy, Inc., fully support this stipulation as members of Columbia's Demand Side Management Stakeholder Group.

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Commission's entry on rehearing. Upon notice of termination or withdrawal by any party, pursuant to the above provisions, the Stipulation shall immediately become null and void. In such event, the Signatory Parties agree that a hearing shall go forward, and the Signatory Parties should be afforded the opportunity to present evidence through any witnesses for whom pre-filed direct testimony was filed, to cross-examine all witnesses, to present rebuttal testimony, and to brief all issues which shall be decided based upon the record and briefs as if this Stipulation had never been executed.

The Signatory Parties hereby recommend that the Commission adopt Columbia's Application for Approval of Demand Side Management Programs for its Residential and Commercial Customers and the Application for Approval to Change Accounting Methods ("Application") as filed on September 9, 2011 with the following modifications:

- Columbia shall be permitted to realize and recover a shared savings incentive as described in its Application; however, such savings shall not exceed a cumulative total of \$3.9 million over the five year period of the program.
- Columbia will spend approximately \$20 million annually, adjusted for inflation, as proposed in its Application; however, Columbia will continue to file for an adjustment to the Rider DSM rate annually to allow for the recovery and review of the DSM costs incurred and shared savings realized during the prior calendar year.
- Columbia agrees to discuss agricultural DSM opportunities with the DSMSG when considering future program designs beyond the current five year proposal.
- Columbia is authorized to continue to defer the difference between actual DSM program expenses, including carrying costs² and Columbia's portion of shared savings, incurred during the calendar years 2012 through 2016 and recoveries during those same years at the Rider DSM rate established annually in DSM adjustment cases.

All other aspects of the Application remain unchanged and the Signatory Parties recommend that Commission adopt Columbia's Application otherwise as filed.

This Stipulation is supported by adequate data and information; represents a just and reasonable resolution of the issues in this proceeding; violates no regulatory principle or precedent; and is the product of serious bargaining among knowledgeable and capable parties. Although this Stipulation is not binding on the Commission, it is


² Carrying Costs will be calculated using the Columbia's current cost of long-term debt and any incentives approved by the Commission.

entitled to careful consideration by the Commission, where, as here, it is sponsored by Parties representing a wide range of interests, including Staff.

Except for enforcement purposes, neither this Stipulation nor the information and data contained herein or attached, shall be cited as precedent in any future proceedings for or against any Party, or the Commission itself, if the Commission approves the Stipulation.

Agreed to on this 28th day of October, 2011 by:

Parties

| | |
|--|--|
|  _____ Brooke E. Leslie Stephen B. Seiple On Behalf of Columbia Gas of Ohio, Inc. | <u>/s/ Devin Parram (per email authorization)</u> _____ Devin Parram, Assistant Attorney General On Behalf of the Staff of the Public Utilities Commission of Ohio |
|--|--|

Intervenors

| | |
|--|---|
| <u>/s/ Joseph Serio (per email authorization)</u> _____ Joseph Serio Larry Sauer On Behalf of the Ohio Consumers' Counsel | <u>/s/ Colleen L. Mooney (per email authorization)</u> _____ Colleen L. Mooney On Behalf of the Ohio Partners for Affordable Energy |
|--|---|

/s/ Chad Endsley (per email authorization)

Chad Endsley
Ohio Farm Bureau Federation

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Case No(s). 17-2168-GA-CSS

Summary: Testimony of Melissa Thompson (PUBLIC VERSION) and Attachments A through C electronically filed by Cheryl A MacDonald on behalf of Columbia Gas of Ohio, Inc.