

Exhibit No.:  
Issues: Energy Efficiency  
Witness: Kyle Shoff  
Sponsoring Party: Union Electric Company  
Type of Exhibit: Surrebuttal Testimony  
Case No.: GT-2011-0410  
Date Testimony Prepared: September 21, 2011

**MISSOURI PUBLIC SERVICE COMMISSION**

**CASE NO. GT-2011-0410**

**SURREBUTTAL TESTIMONY**

**OF**

**KYLE SHOFF**

**ON**

**BEHALF OF**

**UNION ELECTRIC COMPANY**

**d/b/a Ameren Missouri**

**St. Louis, Missouri  
September, 2011**

## TABLE OF CONTENTS

I. <u>INTRODUCTION</u> .....	1
II. <u>PURPOSE AND SUMMARY OF TESTIMONY</u> .....	1
III. <u>REBUTTAL OF MR. STAHLMAN</u> .....	2
IV. <u>REBUTTAL OF MR. BUCHANAN</u> .....	6
V. <u>REBUTTAL OF MR. KIND</u> .....	8
VI. <u>SUMMARY</u> .....	10

1                                   **SURREBUTTAL TESTIMONY**  
2   **OF**  
3   **KYLE SHOFF**

4  
5                                   **CASE NO. GT-2011-0410**  
6

7                                   **I.     INTRODUCTION**

8           **Q.     Please state your name and business address.**

9           A.     Kyle Shoff, Ameren Services Company (“Ameren Services”), One  
10   Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63103.

11          **Q.     What is your position with Ameren Services?**

12          A.     I am a Planning Consultant – DSM in Corporate Planning.

13          **Q.     Are you the same Kyle Shoff who filed direct testimony in this**  
14 **proceeding?**

15          A.     Yes.

16                               **II.    PURPOSE AND SUMMARY OF TESTIMONY**

17          **Q.     What is the purpose of your surrebuttal testimony in this proceeding?**

18          A.     The purpose of my surrebuttal testimony is to respond to various  
19   components of rebuttal testimonies filed by Michael Stahlman of the Staff of the  
20   Missouri Public Service Commission (Staff), John Buchanan of Missouri Department of  
21   Natural Resources (DNR), and Ryan Kind of Office of the Public Counsel (OPC).

22          **Q.     Please summarize your testimony and conclusions.**

23          A.     My testimony will defend the validity of the methodologies used by  
24   Ameren Missouri to conduct cost-effectiveness screening for the natural gas energy  
25   efficiency measures and programs. While it is true there are multiple cost-effectiveness

1 testing calculations that can be utilized, Ameren Missouri believes the Total Resource  
2 Cost (TRC) test is the most appropriate test to use as it measures the benefits and costs to  
3 the natural gas system on a holistic basis. Ameren Missouri followed methodologies  
4 used by other natural gas utilities, found in national planning guides, and the  
5 process/methodology used for electric energy efficiency in Missouri.

6 While I will address the specific arguments raised by other parties in this case  
7 below, it is worth pointing out that no party disputes the validity of the TRC calculations  
8 which are set forth in my direct testimony and, in addition, at least two of the parties to  
9 this case agree that the TRC is the appropriate cost benefit test to use when evaluating  
10 cost-effectiveness at the program level (Buchanan rebuttal, p. 21, l. 8 – 9, and response of  
11 Ryan Kind to data request Ameren-OPC 003, question 1, attached as Schedule KFS1 to  
12 this testimony).

13 **III. REBUTTAL OF MR. STAHLMAN**

14 **Q. Mr. Stahlman disagrees with the definition of “cost effective” that was**  
15 **included in the tariff, arguing that neither the Stipulation from Ameren Missouri’s**  
16 **previous rate case nor the Commission’s Promotional Practices regulations require**  
17 **the use of TRC as the basis for determining cost effectiveness. (Stahlman rebuttal,**  
18 **p. 7, l. 17-22.) Do you agree?**

19 **A.** I do not. First of all, this very dispute is exactly why the Commission  
20 should include a definition of cost-effective within Ameren Missouri’s tariff. I encourage  
21 the Commission to approve the definition in order to prevent disagreements in the future.  
22 As I pointed out above, there is not disagreement about the test results, just about what  
23 (and when, addressed below) the test should be performed.

1           Additionally, it appears Mr. Stahlman, and others, have focused on the definition  
2           section of the promotional practices rule to the exclusion of the rest of the rule. It is true  
3           that the promotional practices rule discusses the utility cost test (UCT)? Reading further  
4           along in the rule, 4 CSR 240-14.030(1) explicitly requires all promotional practices to  
5           benefit customers as well as the utility. This section of the rule reads:

6           All promotional practices of a public utility or its affiliate shall be  
7           just and reasonable, reasonable as a business practice,  
8           economically feasible and compensatory and reasonably calculated  
9           to benefit both the utility and its customers.

10  
11          The TRC looks at the benefit to both the utility and its customers, making it the most  
12          appropriate test to be used, even under the Commission's Promotional Practices rule.

13           **Q.     If, as Mr. Stahlman says, the Company is not required to update its**  
14          **cost benefit tests during a program year, why did Ameren Missouri choose to re-**  
15          **analyze the programs and revisit measure level assumptions after the Unanimous**  
16          **Stipulation and Agreement in Case No. GR-2010-0363 (Stipulation) was approved?**

17           A.     Ameren Missouri chose to revisit the measure level assumptions for  
18          several reasons. First, there were several meetings with the stakeholders in early 2011  
19          where various parties identified questions with the ceiling/wall insulation cost values  
20          Ameren Missouri had provided. The Company agreed to revisit these assumptions based  
21          on primary market data gathered by Ameren Illinois' implementation contractor. After  
22          the insulation measures were updated, further review indicated the measure level TRC  
23          results for Residential tankless water heaters and Tier II water heaters had not been  
24          updated. This was further supported by an email from Ryan Kind on May 17, 2011 to  
25          Greg Lovett summarizing Arkansas' findings from CenterPoint Energy's analysis on  
26          water heaters having a TRC result less than one (see Schedule KFS2 attached to this  
27          testimony). In summary, Ameren Missouri gathered updated information and was

1 encouraged by stakeholders to review their assumptions, which is why various TRC  
2 scores changed after the Stipulation was filed on January 4, 2011.

3 **Q. Mr. Stahlman discusses a specific portion of Ameren Missouri's**  
4 **energy efficiency portfolio, building shell measures. Do you agree with**  
5 **Mr. Stahlman's assertion that, "The program requires that, before Ameren**  
6 **Missouri provides a rebate for a measure, an audit must be performed on the**  
7 **residence and the measure must be shown to be cost-effective for the residence."**  
8 **(Stahlman rebuttal, p. 9, l. 20 – 22)?**

9 A. No, I believe there is a different type of standard applied at that level, even  
10 if the language used to describe it is similar. While it is true that an audit is required for  
11 Ameren Missouri to issue a rebate for residential audit measures, I disagree that a  
12 measure is deemed cost-effective solely based on an auditor recommending the measure.  
13 There is relatively little chance, if any, these contractors have access to Ameren  
14 Missouri's avoided costs of natural gas, so the life cycle benefits, and therefore cost-  
15 effectiveness, of the energy efficiency measure cannot be calculated in the same manner  
16 as required by the Promotional Practices rules or as defined by the TRC. Typically,  
17 auditors calculate paybacks based on the retail rate of the energy, which is higher than the  
18 avoided cost of energy.

19 **Q. Mr. Stahlman also discusses how a measure installed is unlikely to be**  
20 **installed on a "typical" home. He then argues that this makes the TRC calculations**  
21 **irrelevant. How do you respond?**

22 A. A logical extension of Mr. Stahlman's argument would require that a cost  
23 effectiveness analysis be performed on each installation of each measure within Ameren

1 Missouri's residential program. That would be administratively unfeasible and an unwise  
2 use of ratepayer funds.

3 **Q. Would it be logical to use a single residence's building characteristics**  
4 **to calculate the cost-effectiveness of measures for the entire Ameren Missouri**  
5 **service territory?**

6 A. No, it would not, which is why these calculations are done at the measure  
7 and program level. Practically, residential homes vary in size, heat and cooling system  
8 size/efficiency, and other building characteristics. In order to most accurately reflect the  
9 entire customer base, it is most appropriate to use average home characteristics as found  
10 within the Ameren Missouri service territory.

11 **Q. Turning to the use of the TRC as your primary cost benefit test, do**  
12 **you agree with Mr. Stahlman's statement that, "Natural gas resource utility**  
13 **planning is different from electric utility planning in that natural gas companies**  
14 **deliver a commodity directly to its customers where as electric companies take a**  
15 **commodity to generate electricity to deliver to customers." (Stahlman rebuttal,**  
16 **p. 12, l. 16 – 19)?**

17 A. While it is true that natural gas utility planning is not governed by the  
18 same rules as the electric utility planning rules, the methodology used to calculate cost-  
19 effectiveness is identical. The avoided cost benefit for each fuel source is the market  
20 price of the commodity. Neither Mr. Stahlman nor any other witness in this case has  
21 provided an explanation as to why natural gas energy efficiency programs should be  
22 analyzed using a different methodology than what is used for electric energy efficiency  
23 programs, except to point to a definition in the Commission's promotional practices rule  
24 (and ignoring later portions of the rule).

1           **Q.     Does Mr. Stahlman acknowledge “regulators of most states use the**  
2 **TRC as the primary cost test for evaluating their energy efficiency programs.”**  
3 **(Stahlman rebuttal, p. 13, l. 20 – 21)?**

4           A.     Yes, he does.

5           **Q.     Does NAPEE indicate the TRC is the most utilized measurement for**  
6 **cost-effectiveness?**

7           A.     Yes, in fact the NAPEE guide states, “Nationwide, the most common  
8 primary measurement of energy efficiency cost-effectiveness is the TRC.”<sup>5</sup>

9           **Q.     Do any other jurisdictions use the TRC in calculating the cost-**  
10 **effectiveness of energy efficiency measures, programs, or portfolios?**

11          A.     Yes. The New Mexico Public Utilities Commission developed new  
12 energy efficiency rules which define cost-effectiveness in terms of the total resource cost  
13 test.<sup>6</sup> Furthermore, the following states utilize TRC as the primary screening  
14 methodology for energy efficiency programs: California, Colorado, Delaware, Illinois,  
15 Massachusetts, New Hampshire, New Jersey, Rhode Island, and Utah.<sup>7</sup>

16                               **IV.     REBUTTAL OF MR. BUCHANAN**

17          **Q.     Does Mr. Buchanan indicate DNRs’ support of the TRC as the**  
18 **primary method to determine cost effectiveness or benefit/cost score for energy**  
19 **efficiency at the program level (Buchanan rebuttal, p. 21, l. 8 – 9)?**

20          A.     Yes. On this topic, it appears the parties are all in agreement.

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<sup>5</sup> “Understanding Cost-Effectiveness of Energy Efficiency Programs.” November 2008. Page 5-1.

<sup>6</sup> N.M. Stat. § 62-17-4 “Definitions.”

[http://www.conwaygreene.com/nmsu/lpext.dll/nmsa1978/9a1/1f666/1faaf/1fac1?f=templates&fn=document-frame.htm&2.0#JD\\_62-17-4](http://www.conwaygreene.com/nmsu/lpext.dll/nmsa1978/9a1/1f666/1faaf/1fac1?f=templates&fn=document-frame.htm&2.0#JD_62-17-4)

<sup>7</sup> “Total Resource Cost (TRC) Test and Avoided Costs.” Public Utilities Commission of Ohio Workshop. Electricity Markets and Policy Group, Environmental Energy Technologies Division, Lawrence Berkley National Laboratory. 2009.



1           **Q.     Is it logical to use a cost-effectiveness screen at the measure level?**

2           A.     Yes. Contrary to Mr. Buchanan's assertion, there needs to be some type  
3 of initial screening methodology in order to narrow down the available set of measures to  
4 include with the program (Buchanan rebuttal, p. 21, l. 15-18; although Mr. Buchanan  
5 uses the word "evaluation," it appears from the context that he is discussing initial  
6 screening analysis). A simple example will help clarify this point. First, assume a  
7 program has 20 measures included in it, whose TRCs are unknown at the measure level.  
8 The program TRC is then calculated and it is determined to be less than 1. To rectify this  
9 problem, some measures may need to be removed, incentive levels changed, or  
10 participation levels altered. To most accurately and efficiently choose those measures  
11 that need adjustment, a measure level TRC would be able to identify those measures that  
12 do not generate value for the natural gas distribution system, making it easier to develop  
13 cost-effective programs.

14           **Q.     Did Ameren calculate the TRC only at the measure level, as**  
15 **Mr. Buchanan alleges (Buchanan rebuttal, p. 22, l. 6 – 9)?**

16           A.     No. While it is true Ameren Missouri calculated TRCs at the measure  
17 level, program level TRCs were also calculated for both the Residential and Commercial  
18 programs. In fact, Ameren Missouri provided the Program Level TRC in response to  
19 data request OPC 029. In addition Ameren Missouri has calculated the program level  
20 TRC for programs using the existing measure mix. The residential program, as can be  
21 seen in the table below, has a TRC result of less than 1, indicating the program is not  
22 benefiting the customers, utility, or the natural gas distribution system in a cost-effective  
23 manner. Accordingly, using the standard upon which all of the parties in the case agree,  
24 it is prudent to make changes to the residential program.

<b>Program</b>	<b>Existing TRC</b>	<b>New Programs TRC</b>
Residential	0.72	1.27
Business	4.77	5.1

1

2           **Q.     The business program TRC was above one before the Company**  
3 **removed any measures. Why remove these measures?**

4           A.     While it is possible to have non cost-effective measures in programs, it is  
5 also true these measures must satisfy criteria to be included in the programs. These  
6 criteria include potential non-energy benefits such as: reduce per unit marketing and/or  
7 administrative costs, reduce measure cost via a market transformation delivery  
8 mechanism, and support for an emerging technology or practice. The non cost-effective  
9 measures removed on the business program did not fulfill these requirements. As an  
10 added benefit of removing these measures, the program TRC increased.

11                               **V.     REBUTTAL OF MR. KIND**

12           **Q.     In Mr. Kind's rebuttal testimony, he indicates Ameren Missouri plans**  
13 **to remove all Building Shell measures for both residential and commercial**  
14 **programs, is his statement accurate (Kind rebuttal, p. 11, l. 15 – 16 and p. 12,**  
15 **l. 2 - 3)?**

16           A.     No. Ameren Missouri is not proposing to remove all Building Shell  
17 measures. For both programs, Ameren Missouri is only proposing to remove ceiling/wall  
18 insulation, windows, Energy Star Doors, and weather-stripping. Measures staying in the  
19 [audit] programs include heater wraps, pipe wraps, faucet aerators, and shower heads.

1           **Q.     Is Ameren Missouri proposing to remove measures due to its**  
2           **sensitivity to, “erosion of earnings from decreases in usage resulting from its energy**  
3           **efficiency programs” (Kind rebuttal, p. 12, l. 15 – 16)?**

4           A.     No. The current residential rate design, approved in the last rate case,  
5           greatly limits the erosion of earnings from decreases in usage resulting from its energy  
6           efficiency programs. Contrary to Mr. Kind’s assertion, the removal of energy efficiency  
7           measures is based on a lack of cost-effectiveness as measured by the TRC. In short,  
8           Ameren Missouri is excluding measures where the benefits to customers do not exceed  
9           the costs.

10          **Q.     The definition of the cost-effectiveness test found in the Promotional**  
11          **Practices rules, which Mr. Kind proposes in his rebuttal testimony, appears to be**  
12          **very similar to the definition of the UCT, or Program Administrator Cost test (Kind**  
13          **rebuttal p. 15, l. 23 – 24 and p. 16, l. 1 – 5). Do you feel they are one in the same?**

14          A.     Yes. The definition Mr. Kind proposes, “...the Commission’s Utility  
15          Promotional Practice rule only includes incremental costs to the utility,” which mimics  
16          the UCT definition in the California Standard Practice Manual, “...measures the net costs  
17          of a demand-side management program as a resource option based on the costs incurred  
18          by the program administrator (including incentive costs) and excluding any net costs  
19          incurred by the participant.”<sup>8</sup>

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<sup>8</sup> “California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects.” p. 23. 2002.

1           **Q.       Are there any short-comings of using the cost-effectiveness definition**  
2   **found in the Promotional Practices (the UCT)?**

A. Yes. According to the California Standard Practice Manual, “defining device costs exclusively in terms of costs incurred by the administrator, the Program Administrator Test [California’s name for the UCT] results reflect only a portion of the full costs of the resource.”<sup>9</sup> This indicates that by using the UCT to calculate cost-effectiveness, the costs associated with the participant purchasing the measure are excluded and the overall cost of the energy efficient resource is understated.

9           **Q.**       So are you indicating that the cost-effectiveness test, as defined by  
10   **Mr. Kind**, excludes costs to the customers?

A. That is precisely what I am implying. Ameren Missouri believes cost effectiveness for measures or programs should be determined on a holistic basis, which would include customer costs. Further, Mr. Kind's assertion that measures would have a higher UCT result than TRC result is not fully accurate. Typically, programs with high administration costs or high incentive costs have lower UCT results when compared to the program level TRC. Some programs that fall into this category include Appliance Recycling and Home Energy Performance.

18

VI. SUMMARY

19           **Q.     Please summarize your findings.**

A. My findings support my direct testimony. The Total Resource cost test is a nationally accepted method used to calculate cost-effectiveness at the measure, program, and portfolio levels. The cost-effectiveness of Ameren Missouri's electric energy efficiency programs is determined using the TRC test, and natural gas energy

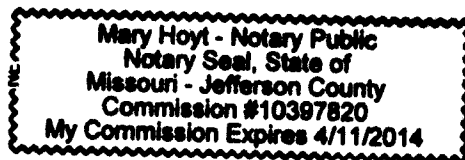
<sup>9</sup> “California Standard Practice Manual”. Page 23. 2001.

Surrebuttal Testimony of  
Kyle Shoff

1 efficiency programs and measures should not be analyzed any differently. Ameren  
2 Missouri uses the TRC because it measures each energy efficient resource on a holistic  
3 basis, quantifying the benefits and costs to not only the utility, but also the participants  
4 (customers).

5 **Q. Does this conclude your surrebuttal testimony?**

6 **A.** Yes, it does.



Data Information Request  
From Union Electric Company d/b/a Ameren Missouri  
OPC File No. GT-2011-0410  
Tariff No. JG-2011-0620

Requested From: OPC  
Requested By: Wendy Tatro  
Date of Request: July 22, 2011

**Information Requested:**

1. Please define the calculation and/or methodology(s) OPC believes should be used to determine the cost-effectiveness of a natural gas energy efficiency measure.
2. At what point in a natural gas energy efficiency program's life should cost-effectiveness be determined?
3. Would OPC use the same or different calculation or methodology to determine cost-effectiveness at different stages in a natural gas energy efficiency measure's life?
  - A) At pre implementation, before a tariff is filed?
  - B) While tariff is effective?
  - C) At end of program's life?

**Response:**

1. Cost-effectiveness evaluation should rely primarily on the total resource cost (TRC) test.
2. Subject to OPC's objection, Public Counsel believes some of the important factors to consider include: the specific program being addressed, the status of any program modifications, the history and current status of promotional efforts, and the amount of time it has been and will be implemented.
3. Subject to OPC's objection, Public Counsel believes some of the important factors to consider include: the specific program being addressed, the status of any program modifications, the history and current status of promotional efforts, and the amount of time it has been and will be implemented.

Response Provided By: Ryan Kind Date: 8/4/1

**Moentmann, Jeanine**

---

**From:** Lovett, Greg W  
**Sent:** Tuesday, May 17, 2011 5:51 PM  
**To:** Danahy, Dan B; Shoff, Kyle  
**Subject:** FW: Other Utility's Building Shell TRC values  
**Attachments:** Arkansas Center Point 07-081-tf\_142\_1.pdf; Arkansas Center Point Exhibit 07-081-tf\_143\_1.pdf

For your reference.

.....  
**GREG LOVETT**  
 T 314.554.6415  
 C 314.602.9653

.....  
**Ameren Missouri**

---

**From:** Kind, Ryan [mailto:ryan.kind@ded.mo.gov]  
**Sent:** Tuesday, May 17, 2011 3:00 PM  
**To:** Lovett, Greg W  
**Cc:** Henry Warren; Buchanan, John; Stahlman, Michael; Laurent, Dan G  
**Subject:** RE: Other Utility's Building Shell TRC values

Greg,

I mentioned documentation yesterday from an Arkansas case showing low TRCs (.64) for water heating programs. I mentioned this documentation since UE has stated that it is trying to eliminate programs that are not cost effective. This same documentation may also contain some information on building shell measure TRCs but I have not reviewed it. The documents I referred to yesterday are attached.

The consultant that you are using to evaluate electric DSM programs, Cadmus, has also performed analysis for a MO gas LDC showing that water heater programs are not cost effective.

Ryan

---

**From:** Lovett, Greg W [mailto:GLovett@ameren.com]  
**Sent:** Tuesday, May 17, 2011 10:39 AM  
**To:** Kind, Ryan  
**Subject:** Other Utility's Building Shell TRC values

You mentioned yesterday that you had documentation for other utility's N Gas Building Shell measure TRC values. This is just a reminder to send it to me.

Thanks.

.....  
**GREG LOVETT**  
 Managing Supervisor  
 Energy Efficiency & Demand Response  
 T 314.554.6415



C 314.602.9653

E [glovett@ameren.com](mailto:glovett@ameren.com)

.....  
**Ameren Missouri**

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Ameren Corporation

BEFORE THE  
ARKANSAS PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE )  
APPLICATION OF CENTERPOINT )  
ENERGY ARKANSAS GAS FOR )  
APPROVAL OF ITS "QUICK START" )  
ENERGY EFFICIENCY PROGRAM, )  
PORTFOLIO AND PLAN INCLUDING )  
ITS COST RECOVERY RIDER )

DOCKET NO. 07-081-TF

DIRECT TESTIMONY

OF

RICHARD C. LEGER  
MARKETING & SALES CIP MANAGER  
REGION 1

ON BEHALF OF

CENTERPOINT ENERGY RESOURCES CORP. d/b/a  
CENTERPOINT ENERGY ARKANSAS GAS

Filed: March 14, 2011

## Table of Contents

I.	INTRODUCTION .....	1
II.	PURPOSE OF TESTIMONY .....	2
III.	CIP PORTFOLIO DESCRIPTION .....	2
IV.	COMPREHENSIVE CHECKLIST .....	10
V.	COST-EFFECTIVENESS .....	14
VI.	COST RECOVERY .....	20
VII.	CONCLUSION .....	20

**I. INTRODUCTION**

**Q. Please state your name, business address, and position.**

A. My name is Richard C. Leger, and I am currently the Marketing & Sales Conservation Improvement Program ("CIP") Manager for CenterPoint Energy Resources Corp. ("CenterPoint Arkansas" or the "Company") for the States of Arkansas, Oklahoma, Louisiana, and Mississippi (Region 1). My business address is 401 W. Capitol Avenue, Suite 102, Little Rock, AR, 72201.

**Q. Please state your educational background, professional qualifications, and work experience.**

A. I graduated with a Bachelor of Science degree in Marketing and a Bachelor of Science Degree in Accounting from McNeese State University. Upon graduation in December 2000, I began my career at CenterPoint Energy in January 2001 as a Marketing Consultant in New Iberia, Louisiana and, after a move to Shreveport, was promoted to Marketing & Sales Manager in August 2007. In April of 2011, I assumed the role of Marketing & Sales CIP Manager and moved to Little Rock, Arkansas to implement the comprehensive Arkansas energy efficiency programs. In addition to my CIP implementation duties, I work with our District Directors and assist them in managing the day-to-day marketing functions of the Marketing Consultants. Part of my duties as the Marketing & Sales Manager is to serve as a consultant to CenterPoint Energy's Regulatory Policy and External Affairs department for modeling energy usage, cost calculations, and greenhouse gas emission impacts of natural gas end-use applications.

**Q. Have you previously testified before the Arkansas Public Service Commission (the "Commission")?**

1 A. Yes, I have provided oral and written testimony in this Docket and in Docket Nos. 08-  
2 137-U, 08-144-U, and 10-010-U. I have also provided oral and written testimony before  
3 the Oklahoma Corporation Commission in Cause No. PUD201000148.

4 **II. PURPOSE OF TESTIMONY**

5 **Q. What is the purpose of your testimony?**

6 A. The purpose of my testimony is, first, to describe our proposed July 2011-2013  
7 Conservation Improvement Program Portfolio (the "CIP Portfolio"), the individual  
8 energy efficiency programs within the CIP Portfolio, and the budgets associated with the  
9 programs. Second, I address the "comprehensive factors" set forth by the Commission  
10 and explain why the CIP Portfolio can be considered comprehensive based upon these  
11 factors. Third, I present the results of the California Standard Practice Manual cost-  
12 effectiveness tests that I performed on the portfolio of programs and on each of the  
13 Company's proposed direct-impact programs. Finally, I briefly address cost recovery of  
14 the programs.

15 **III. CIP PORTFOLIO DESCRIPTION**

16 **Q. Please summarize the Company's proposed CIP Portfolio.**

17 A. The Company's proposed CIP Portfolio consists of the following programs:

- 18 • Arkansas Weatherization Program (AWP)<sup>1</sup>
- 19 • Energy Efficiency Arkansas Program (EEA)<sup>2</sup>
- 20 • Residential Home Energy Reports

---

<sup>1</sup> Program details will be filed for approval in Docket No. 07-079-TF; this filing requests approval of the budget associated with the program.

<sup>2</sup> Program details will be filed for approval in Docket No. 07-083-TF; this filing requests approval of the budget associated with the program.

- Water Heating Conservation Improvement Program
- Space Heating Systems Conservation Improvement Program
- Low-Flow Showerhead and Faucet Aerator Conservation Improvement Program
- Arkansas Home Energy Affordability Loan (HEAL) Program Partnership
- Commercial Boiler Conservation Improvement Program
- Commercial Food Service Conservation Improvement Program
- Natural Gas Commercial Solutions Program

A detailed description of each of these programs (including, to the extent applicable, their eligibility criteria, annual budgets, and projected participation levels and energy savings) is contained in Exhibit RCL-1 attached to my testimony.

Table 1 provides a list of these programs and their proposed budgets, which are addressed in more detail in Exhibit RCL-2.

<b>Table 1. Proposed Budget</b>			
<b>Program Name</b>	<b>July 1, 2011 to December 31, 2011</b>	<b>2012 Budget</b>	<b>2013 Budget</b>
Residential Home Energy Reports	\$ 277,364	\$ 475,079	\$ 379,688
Statewide Education Program	\$ 84,832	\$ 172,419	\$ 174,950
Arkansas Weatherization Program	\$ 308,896	\$ 686,316	\$ 753,910
HEAL Program Partnership	\$ 129,620	\$ 141,431	\$ 154,509
Water Heating CIP	\$ 393,012	\$ 1,287,097	\$ 1,292,864
Space Heating Systems CIP	\$ 528,145	\$ 1,646,962	\$ 1,657,299
Low-Flow Showerhead and Faucet Aerator CIP	\$ 76,415	\$ 158,395	\$ 165,227

Commercial Boiler CIP	\$ 187,930	\$ 464,618	\$ 551,650
Commercial Food Service CIP	\$ 128,102	\$ 293,854	\$ 331,595
Natural Gas Commercial Solutions Program	\$ 1,152,104	\$ 1,257,083	\$ 1,811,073
Total	\$ 3,266,421	\$ 6,583,254	\$ 7,272,763

1 Table 2 provides projected savings for the CIP Portfolio as a result of the programs.

<b>Table 2. Projected Savings</b>			
<b>MCF Saved Gas to Gas</b>			
<b>Program Name</b>	<b>July 1, 2011 to December 31, 2011</b>	<b>2012</b>	<b>2013</b>
Residential Home Energy Reports	13,600	50,600	59,300
Statewide Education Program	0	0	0
Arkansas Weatherization Program	12,188	27,700	30,225
HEAL Program Partnership	2,219	2,438	2,686
Water Heating CIP	4,696	9,392	9,392
Space Heating Systems CIP	17,033	34,066	34,066
Low-Flow Showerhead and Faucet Aerator CIP	7,753	16,142	16,992
Commercial Boiler CIP	17,429	46,462	58,090
Commercial Food Service CIP	13,216	32,469	38,505
Natural Gas Commercial Solutions Program	56,476	65,134	102,031
<b>Gross Savings Total</b>	144,611	284,404	351,287
<b>Net Savings Total</b>	118,409	237,643	292,890

2

1    **Q.    Have you added any new programs to your portfolio filed in 2009?**

2    A.    Yes. CenterPoint Arkansas has added three new programs: Residential Home Energy  
3       Reports, Arkansas HEAL Program Partnership, and the Natural Gas Commercial  
4       Solutions program.

5    **Q.    Please explain your proposed Residential Home Energy Reports program.**

6    A.    CenterPoint Arkansas plans to contract with OPOWER, a provider of applications that  
7       combine technology, direct marketing and behavioral science, to utilize its patented  
8       Home Energy Reporting System. As described in Exhibit RCL-1, OPOWER will  
9       annually send each participating customer four home energy reports designed to alter  
10      customer behavior and reduce overall energy use. We will enroll approximately 50,000  
11      customers in the program. In order to ascertain the energy savings associated with this  
12      program, the energy usage of participating customers will be compared to a control group  
13      of the same number of customers. In other jurisdictions, OPOWER has reported savings  
14      of approximately 1 MCF annually per customer, which results in a very cost-effective  
15      program. A number of utilities across the country have implemented the program,  
16      including Puget Sound Energy, CenterPoint Energy Minnesota, Southern California Gas,  
17      Connexus Energy, Austin Public Utilities, Owatonna Public Utilities, and Lake Country  
18      Power in Minnesota.

19   **Q.    Do you plan to apply the Commission-imposed 80% net-to-gross (NTG) ratio to the**  
20   **savings achieved by the Residential Home Energy Report?**

21   A.    No. While CenterPoint Arkansas did apply the 80% NTG ratio to all other program  
22       savings, due to the fact that OPOWER performs comprehensive EM&V by comparing  
23       participants to a control group of non-participating customers to determine/verify actual



1 energy savings, CenterPoint Arkansas believes that it would be unnecessary to apply the  
2 NTG ratio to this program.

3 **Q. Please explain your proposed partnership with HEAL Arkansas.**

4 A. The HEAL Program is an innovative program implemented by the William J. Clinton  
5 Foundation to significantly reduce greenhouse gas emissions by improving energy  
6 performance in residential buildings and, to a lesser extent, commercial/industrial  
7 buildings selected as project hosts in the pilot demonstration. CenterPoint Arkansas will  
8 partner with the existing HEAL Arkansas program to provide financial incentives to  
9 residential HEAL participants, thereby reducing energy usage through air infiltration,  
10 duct repair and insulation. CenterPoint Arkansas's goal in partnering with the HEAL  
11 Arkansas program is to increase the energy efficiency of residential homes among  
12 CenterPoint Arkansas participants in the program. The partnership also allows  
13 CenterPoint Arkansas to pilot the utilization of air infiltration reduction, duct repair and  
14 insulation as energy efficiency measures.

15 **Q. Please describe the Natural Gas Commercial Solutions Program.**

16 A. The Natural Gas Commercial Solutions Program will provide cash incentives to  
17 commercial and industrial (C&I) customers installing or implementing cost-effective  
18 energy efficiency measures through the Direct-Install, Prescriptive, or Custom measures  
19 components of the program. In order to achieve savings goals, the following three  
20 components will provide a comprehensive program appealing to the small commercial  
21 (SCS) and large commercial (LCS) customer classes. The addition of this program  
22 allows CenterPoint Arkansas to comply with Order Nos. 10 & 1 in Docket Nos. 10-010-U

1           and 10-101-R, respectively, which “require the Utilities to offer ‘Standard Offer’ or  
2           Customized Programs for large C&I customers” and which  
3                   requires Utilities to consider proposals by large C&I customers to  
4                   implement EE programs designed by the large C&I customer to be  
5                   incorporated as part of a utilities EE programs as opposed exercise  
6                   of the [Self-Direct] Option and requiring the Utility to notify the  
7                   large C&I customer whether the Utility will or will not include the  
8                   C&I customer’s proposed EE program as a part of the Utilities EE  
9                   programs pursuant to the C&EE Rules.<sup>3</sup>

10   **Q.     Does CenterPoint Arkansas plan to make any changes to its current CIP offerings?**

11   A.     Yes. Due to the impending expiration at the end of 2011 of the Federal tax credits for  
12           customer installation of water heating and HVAC systems, CenterPoint Arkansas  
13           proposes to significantly increase the rebate levels within the Water Heating and Space  
14           Heating CIPs for 2012 & 2013. That being said, CenterPoint Arkansas plans to keep the  
15           rebates of the current programs the same for all of 2011 to avoid customer/trade ally  
16           confusion. See Table 3 below for details.

17           Additionally, in the past CenterPoint Arkansas has not allowed the LCS customer class to  
18           participate in the Water Heating and Space Heating CIPs. This provision recently  
19           prohibited CenterPoint Arkansas from partnering with the Little Rock Air Force Base on  
20           their housing upgrade project in 2010. While we do not foresee significant participation  
21           in these programs from the large commercial customer classes, from this point forward,  
22           we certainly want to make sure such customers have access to the programs. Therefore,  
23           we propose to allow the LCS customer class to participate in these programs. We will  
24           track customer participation and ensure that each customer class taking advantage of a  
25           particular program will be allocated the appropriate costs.

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<sup>3</sup>     Order Nos. 10 & 1, Docket Nos. 10-010-U and 10-101-R, pages 29-30.

<b>Table 3 Proposed Rebate Changes</b>		
<b>Measure</b>	<b>2011 (Current)</b>	<b>2012 &amp; 2013</b>
Natural Gas Storage Tank (.62)	\$50	\$75
Natural Gas Tankless (.80)	\$250	\$500
Direct Vent Wall Furnace	\$200	\$0
Natural gas forced-air furnace (90% - 94.9% AFUE)	\$200	\$400
Natural gas forced-air furnace (95% AFUE or greater)	\$300	\$600
Hydronic Heating System	\$300	\$400

1

2    **Q.    Are you no longer going to rebate direct vent wall furnaces?**

3    A.    That is correct. We have actively promoted the direct vent wall furnace as an energy-  
 4        efficient alternative to unvented space heaters and have experienced very little  
 5        participation. Therefore, we plan to remove this measure as an offering in 2012 and  
 6        2013.

7    **Q.    Does CenterPoint Arkansas plan to make any additional changes to its current CIP**  
 8        **portfolio?**

9    A.    Yes. With the addition of the Residential Home Energy Reports and continued  
 10       participation in Energy Efficiency Arkansas, we have decided to no longer offer the  
 11       CenterPoint Energy Education Program (CEEP). Additionally, since the Natural Gas  
 12       Commercial Solutions program offers an audit, we have chosen to discontinue the  
 13       Commercial Natural Gas Energy Audit (CNGEA) program as well.

14   **Q.    Are you proposing any changes to the Low Flow Showerhead and Faucet Aerator,**  
 15       **Commercial Boiler, or Commercial Food Service CIPs?**

1 A. No.

2 **Q. Does CenterPoint Arkansas plan to continue offering rebates for trade allies?**

3 A. Yes. Equipment dealers, whom CenterPoint Arkansas regards as trade allies, exert  
4 significant influence in the selection of equipment by consumers and have proven to be  
5 an integral part of program success. Therefore, CenterPoint Arkansas proposes to  
6 continue offering rebates to trade allies to encourage their active participation in the  
7 promotion and sale of high-efficiency natural gas water heating, space heating, and food  
8 service equipment. The dealer rebate amounts are detailed in the applicable program  
9 description provided in my Exhibit RCL-1.

10 **Q. Considering these changes and the higher rebate costs, is CenterPoint Arkansas's**  
11 **CIP Portfolio still cost-effective?**

12 A. Yes, as is addressed in more detail below in the cost-effectiveness section of my  
13 testimony.

14 **Q. How does CenterPoint Arkansas plan to verify and evaluate its rebate programs?**

15 A. CenterPoint Arkansas will review the CIP rebate form and sales invoice to verify that the  
16 equipment purchased qualifies under the program guidelines. In addition, as formal  
17 EM&V guidelines and rules are developed in Docket No. 10-101-R, CenterPoint  
18 Arkansas will work with the EM&V Monitor to assure that programs meet the approved  
19 EM&V guidelines set forth by the Commission.

20 **Q. Are you proposing to retain budget flexibility in the event certain programs are**  
21 **over- or under-subscribed?**

22 A. Yes. CenterPoint Arkansas requests the authority to amend the budgets within any  
23 program so long as the overall annual spending for the CIP Portfolio does not exceed ten

1       percent (10%) of the approved budget. If the Company anticipates that the overall budget  
2       variance will exceed ten percent (10%) of the approved budget, the Company will make a  
3       filing with the Commission requesting approval of the increased expenditures.  
4       Additionally, CenterPoint Arkansas asks the Commission to recognize that uncertainty  
5       associated with commercial/industrial opt-out and impending EM&V guidelines could  
6       greatly affect budget proposals and savings achieved.

7                                   **IV.    COMPREHENSIVE CHECKLIST**

8    **Q.    Have you reviewed the checklist of factors that can be used as a guide to determine**  
9       **whether a utility's energy efficiency programs are in fact "Comprehensive"?**

10   A.    Yes. These factors were set forth in Order No. 17 in Docket No. 08-144-U.

11   **Q.    In your opinion, do believe CenterPoint Arkansas's CIP portfolio to be**  
12       **comprehensive in nature, as defined in Order No. 17?**

13   A.    Yes.

14   **Q.    Would you briefly describe how CenterPoint Arkansas's CIP portfolio meets each**  
15       **factor?**

16   A.    Sure.

17       **Factor 1** – Whether the programs and/or portfolio provide either directly or through  
18       identification and coordination, the education, training, marketing, or outreach needed to  
19       address market barriers to the adoption of cost-effective energy efficiency measures.

20       **Response:** CenterPoint Arkansas plans to continue to participate in and fund the Energy  
21       Efficiency Arkansas program, which includes all of the aforementioned elements of  
22       Factor 1. Additionally, each program has dollars budgeted for education, marketing, and  
23       outreach that will be used to market the programs and train the contractor market.

1 Further, the Residential Home Energy Reports program has elements of education built in  
2 to transform customer behavior.

3 **Factor 2** - Whether the programs and/or portfolio, have adequate budgetary,  
4 management, and program delivery resourced to plan, design, implement, oversee and  
5 evaluate energy efficiency programs.

6 **Response:** CenterPoint Arkansas has developed its budget to adequately manage and  
7 deliver its energy efficiency programs in the State of Arkansas. Starting in 2010,  
8 CenterPoint Arkansas created an entire energy efficiency department consisting of 4 full-  
9 time employees and has begun and will continue training the 8 marketing consultants  
10 currently located in the state of Arkansas to assist in the delivery of its CIP portfolio.  
11 Further, CenterPoint Arkansas has trained and will continue to train its service  
12 technicians to identify possible CIP opportunities to maximize participation.

13 **Factor 3** – Whether the programs and/or portfolio, reasonably address all major end-uses  
14 of electricity or natural gas, or electricity and natural gas as appropriate.

15 **Response:** CenterPoint Arkansas's CIP portfolio has programs that address all major end  
16 uses of natural gas, which include water heating, space heating, food service equipment,  
17 and a custom energy program that is designed to address any other major end use of  
18 natural gas that may not be covered in our direct rebate programs. Additionally,  
19 CenterPoint Arkansas's portfolio has elements that address weatherization, water  
20 conservation, and education.

21 **Factor 4** – Whether the programs and/or portfolio, to the maximum extent reasonable,  
22 comprehensively address the needs of the customers at one time, in order to avoid cream-  
23 skimming and lost opportunities.

1       **Response:** CenterPoint Arkansas's CIP portfolio is not only designed to directly address  
2       all major end uses of natural gas, but we have also designed programs such as the Natural  
3       Gas Commercial Solutions Program to offer customized solutions for the achievement of  
4       energy efficiency. Further, as previously mentioned, CenterPoint Arkansas has proposed  
5       programs that address weatherization, behavior changes, education, and water  
6       conservation.

7       **Factor 5** - Whether such programs take advantage of opportunities to address the  
8       comprehensive needs of targeted customer sectors (for example, schools, large retail  
9       stores, agricultural users, or restaurants) or to leverage non-utility program resources (for  
10      example, state or federal tax incentive, rebate, or lending programs).

11      **Response:** CenterPoint Arkansas's CIP portfolio is adequately designed to address all  
12      major end uses for all major customer sectors. Our energy efficiency consultants, in  
13      conjunction with our marketing consultants, have been and will continue to educate trade  
14      allies, food service vendors, restaurants, school maintenance superintendents, housing  
15      authorities, and other customer sectors to maximize participation. Additionally,  
16      CenterPoint Arkansas will leverage all available tax credits and work with the HEAL  
17      Arkansas partnership, as described further in Exhibit RCL-1, to maximize energy  
18      efficiency opportunities.

19      **Factor 6** – Whether the programs and/or portfolio enables the delivery of all achievable,  
20      cost-effective energy efficiency within a reasonable period of time and maximizes net  
21      benefits to customers and to the utility system.

22      **Response:** CenterPoint Arkansas has proposed a cost-effective, comprehensive portfolio  
23      of programs that addresses all major end uses of natural gas. Our comprehensive

1 portfolio of programs maximizes net benefits by offering an array of measures and  
2 programs designed to reduce natural gas usage and demand.

3 **Factor 7** – Whether the programs and/or portfolio, have evaluation, measurement, and  
4 verification (“EM&V”) procedures adequate to support program management and  
5 improvement, calculation of energy, demand and revenue impacts, and resource planning  
6 decisions.

7 **Response:** CenterPoint Arkansas will continue to require customers to provide adequate  
8 proof of installation, such as paid invoices that contain, at a minimum, model numbers  
9 and serial numbers of installed equipment that will be verified through the Air-  
10 Conditioning Heating and Refrigeration Institute (AHRI) to ensure that the installed  
11 measure meets program guidelines. In some cases, such as food service and boiler  
12 program measure installations, CenterPoint Arkansas employees will physically verify  
13 installation and efficiency. Further, CenterPoint Arkansas has allocated approximately  
14 7% of its CIP portfolio budget for EM&V and will collaborate with Staff to develop  
15 EM&V guidelines in accordance with NAEPP best practices.<sup>4</sup>

16 **Q. Finally, does the proposed CIP Portfolio meet the energy savings targets set**  
17 **for natural gas utilities in Order No. 17 of Docket No. 08-144-U?**

18 A. Yes. The referenced order requires natural gas utilities to submit portfolio filings  
19 designed to reach or exceed targeted energy savings in the amount of 0.20% of  
20 2010 sales in 2011, 0.30% of 2010 sales in 2012, and 0.40% of 2010 sales in  
21 2013. As set forth more fully in Exhibit RCL-1, the CIP Portfolio is designed to  
22 meet these targets.

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<sup>4</sup> As further addressed in Docket Nos. 07-152-TF, 08-137-U, 10-010-U, 10-100-R, and 10-101-R, Order Nos. 7, 16, 18, 13, 1, and 2, respectively.



**V. COST-EFFECTIVENESS**

**Q. Would you please provide an overview of your approach for determining the cost-effectiveness of the Company's proposed energy efficiency programs?**

**A.** Yes. I analyzed the cost-effectiveness of the proposed rebate programs and the Residential Home Energy Reports program using the Ratepayer Impact Measure ("RIM") Test, the Participant Test, the Utility Cost Test ("UCT"), the Total Resource Cost ("TRC") Test, and the Societal Test (collectively, the "California Tests"). These tests are derived from the 2002 California Standard Practice Manual, which is widely accepted around the country as the best resource for the details and calculations of benefit-cost analysis for energy efficiency programs. I applied those same tests to the Company's total CIP Portfolio. The results of my analyses are presented in Exhibit RCL-1, which also contains the program descriptions. The results show that, with the exception of the Water Heating CIP, each program passes the Participant Test, the UCT, the TRC Test, and the Societal Test. All programs fail the RIM Test. Overall, the CIP Portfolio passes all the tests with the exception of the RIM Test. Additionally, the net benefits created by the CIP Portfolio are provided in the chart below:

<b>Test Results - Overall Portfolio</b>	<b>Triennial NPV</b>	<b>Triennial B/C</b>
<b>Ratepayer Impact Measure Test</b>	(\$45,045,130)	0.59
<b>Utility Cost Test</b>	\$49,656,212	4.10
<b>Societal Test</b>	\$38,111,067	2.01
<b>Participant Test</b>	\$82,732,437	3.62
<b>Total Resource Cost Test</b>	\$35,353,708	1.933

**Q. How were the cost-effectiveness tests applied to the Company's CIP Portfolio?**

1 A. All five of the California Tests were applied to each applicable program and to the overall  
2 CIP Portfolio using the cost-benefit model developed for CenterPoint Minnesota and  
3 modified to suit Arkansas's needs.

4 **Q. Please describe the data inputs that you used in conducting your cost-benefit**  
5 **evaluations?**

6 A. Some of the data inputs that I used for the programs are the same inputs used in  
7 CenterPoint Minnesota. However, several of the inputs were modified to address  
8 differences from the State of Minnesota and are CenterPoint Arkansas-specific. These  
9 data inputs are used to analyze all natural gas energy efficiency programs that use a  
10 standard-efficiency natural gas base case versus a high-efficiency natural gas option to  
11 generate natural gas energy savings. I have attached these inputs as Exhibit RCL-3.

12 **Q. Would you briefly describe each of the California Tests in which these data inputs**  
13 **were used?**

14 A. Yes.

- 15 • The Participant Test is the measure of the quantifiable benefits and costs to the  
16 customer due to participation in the program. This particular test is a good first  
17 look at the benefit and desirability of the program to participating customers.
- 18 • The UCT, also known as the Program Administrator Test, measures the net cost  
19 of a demand-side management program as a resource option based on the cost  
20 incurred by the utility and excludes any net costs incurred by the participant.
- 21 • The RIM Test, formerly known as the Non-Participant Test, measures the impact  
22 in changes to utility revenues and operating costs caused by the programs on  
23 those customers that do not participate in the energy efficiency programs. The

1 RIM Test is not a reliable measure on which to base cost-effectiveness because  
2 few, if any, natural gas programs pass this test. For electric utilities, avoidance of  
3 costly generation facilities substantially benefits non-participating customers and  
4 may result in more favorable RIM Test results. For natural gas utilities, however,  
5 energy efficiency does not enable such utilities to avoid expensive investment in  
6 facilities such as generation plants, and therefore the benefits to non-participating  
7 customers are less and cause the RIM Test results to look less favorable. While  
8 this test is effective at measuring the direction and magnitude of the expected  
9 change in customer bills or rate levels, it should not serve as a litmus test for  
10 viability of a natural gas program.

- 11 • The TRC Test measures the net cost of energy efficiency programs as a resource  
12 option based on the total costs of the program, including both the participants' and  
13 the utility's costs.
- 14 • The Societal Test measures net benefits from the point of view of the utility,  
15 consumers, and society as a whole. The Societal Test is virtually identical to the  
16 TRC Test, except that it also includes the effects of energy efficiency programs on  
17 environmental externalities (including greenhouse gas emission reductions).  
18 Given the policy issues of climate change at both the state and federal level, it is  
19 likely that there will be an increased emphasis on the greenhouse gas emissions  
20 impact of energy efficiency programs in the future, and thus, we believe this test  
21 is particularly helpful in assessing the cost-effectiveness of natural gas energy  
22 efficiency programs.

23 **Q. Is it significant that none of the Company's programs passed the RIM Test?**

1 A. No, it is not significant. For natural gas utilities that have no pre-existing capacity  
2 constraints that would be relieved by the implementation of demand-side programs, their  
3 energy efficiency programs would almost never pass the RIM  
4 Test.

5 **Q. You mentioned one exception to the programs that passed all the California Tests**  
6 **except the RIM Test. What is that exception?**

7 A. Yes, that exception is the Water Heating CIP. That program only passed the Participant  
8 Test.

9 **Q. Why did that program not pass any tests other than the Participant Test?**

10 A. For the most part, the test results are heavily dependent upon the commodity cost of  
11 natural gas. The primary reason for test failure rests upon the fact that the current price  
12 of natural gas is relatively low compared to years past. The only way to improve the  
13 program test results in today's gas cost environment would be to reduce the customer  
14 rebate and/or lower the non-rebate costs associated with running this program. Neither  
15 option is viable because a reduced rebate will either be insufficient to move customers to  
16 take action, or reducing non-rebate costs would result in the Company not having enough  
17 money available to effectively administer the program. If natural gas prices rise during  
18 the term of the program, however, the program's cost effectiveness should increase.

19 **Q. Why is the Company asking the Commission to approve the Water Heating CIP**  
20 **even though it only passes the Participant Test?**

21 A. The Company believes that it is important to support the market for this program in order  
22 to encourage and accelerate the manufacture and installation of higher-efficiency natural  
23 gas water heaters – in other words, to encourage and accelerate the market transformation

1 process for high-efficiency water heaters. Customer incentives will lower the initial  
2 incremental cost of high-efficiency equipment to end-use customers, thereby encouraging  
3 more manufacturers to enter the market and, ultimately, accelerating reductions in the  
4 cost of the technology. For instance, with its growth in popularity and its eligibility for  
5 tax incentives, the tankless water heater has grown its water heater market share  
6 tremendously over the last 5 years. That being said, the tankless water heater still owns  
7 only a small percentage of the water heater market; therefore, more incentives are needed  
8 to overcome the higher incremental cost associated with the technology. It is anticipated  
9 that in the long-term the Water Heating CIP will continue to leverage the Energy Star  
10 brand and will ultimately become cost-effective.

11 **Q. Rather than attempt to transform the market, would it not be better to wait to offer**  
12 **such a program until gas prices are higher and the program passes more of the**  
13 **tests?**

14 **A.** In my opinion, waiting is the reason we are here today. Problems like the escalating cost  
15 of energy and inefficiencies in consumption are chronic and could become critical  
16 without much warning. For instance, tankless units have been the norm in Japan for  
17 decades because energy and space have been at a premium for some time. However, in  
18 the U.S., only after the rise in energy prices did tankless water heaters and other forms of  
19 more efficient products become popular. My point is that I would rather develop the  
20 market now and try to head off a potential problem rather than wait until we have a  
21 problem to solve, as will be the case if natural gas prices rise again.

22 **Q. Did CenterPoint Arkansas factor lost contributions to fixed costs (LCFC) into its**  
23 **cost-benefit evaluation?**

1 A. Yes, as appropriate. I included all non-gas margin including revenues associated with the  
2 Billing Determinant Adjustment (BDA), which would inherently include LCFC, in the  
3 calculation of the retail rate. The retail rate is recognized as a cost in the RIM test and a  
4 benefit in the Participant Test. LCFC was not included in the UCT as it measures the  
5 *benefit* of avoided supply costs of energy and demand and the *costs* of the incentives paid  
6 to the participant. Also, LCFC was not included in the TRC as this test measures the  
7 *benefit* of avoided commodity costs, variable O&M, and demand against the *costs* of  
8 equipment installation and program administration. Further, LCFC was not included in  
9 the Societal test as this test is virtually the same as the TRC but includes environmental  
10 benefits.

11 **Q. Did CenterPoint Arkansas factor the costs of shareholder incentives into its cost-**  
12 **benefit evaluation?**

13 A. Yes. Following the requirement to do so in Order No. 15 of Docket No. 08-137-U,  
14 CenterPoint Arkansas recognized a shareholder incentive in the amount of 7% of its  
15 budget in the calculation of the cost-benefit analysis at the portfolio level. The  
16 shareholder incentive was recognized as an additional *cost* to the customer in the TRC,  
17 Participant Test and in the RIM Test. However, it should be noted that this is a deviation  
18 from the California Standard Practice Model.

19 **Q. Would you please summarize what you are recommending to the Commission as a**  
20 **result of the analyses that you have presented in your testimony and exhibits?**

21 A. I am recommending that the Commission find the Company's proposed CIP Portfolio is  
22 cost-effective and should be approved on that basis. In addition, the Commission should

1 find that the individual programs comprising the CIP Portfolio are, in fact, either cost-  
2 effective or otherwise in the public interest.

3 **VI. COST RECOVERY**

4 **Q. How does CenterPoint Arkansas propose to recover the costs of its CIP Portfolio?**

5 A. CenterPoint Arkansas currently recovers CIP Portfolio costs via its Energy Efficiency  
6 Cost Rate (EECR) rider. Pursuant to the EE Rules, CenterPoint Arkansas will propose a  
7 redetermined EECR rate on April 1, 2011. Also at that time, CenterPoint Arkansas will  
8 propose certain revisions to its EECR and BDA that will enable it to recover LCFC and a  
9 utility incentive via those tariffs. The redetermined EECR rate filed on April 1, 2011 will  
10 include a rate designed to recover the proposed 2011 budget, a true-up of 2010 program  
11 costs and recoveries, and projected lost contributions to fixed costs (LCFC) for 2011.

12 **VII. CONCLUSION**

13 **Q. In summary, are there any other points that you would like to make?**

14 A. Yes. CenterPoint Arkansas takes energy efficiency very seriously and will work  
15 diligently to make our proposed comprehensive CIP Portfolio as successful as possible.

16 **Q. Does this conclude your testimony?**

17 A. Yes, it does.

CERTIFICATE OF SERVICE

I, Stephanie J. Self, hereby certify that a copy of the foregoing has been served on the below-listed persons by hand delivery, first class, postage prepaid, U. S. mail, and/or electronic mail on the 14<sup>th</sup> day of March 2011.

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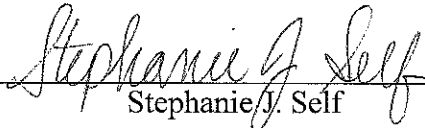
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BEFORE THE  
ARKANSAS PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE )  
APPLICATION OF CENTERPOINT )  
ENERGY ARKANSAS GAS FOR )  
APPROVAL OF ITS "QUICK START" )  
ENERGY EFFICIENCY PROGRAM, )  
PORTFOLIO AND PLAN INCLUDING )  
ITS COST RECOVERY RIDER )

DOCKET NO. 07-081-TF

DIRECT EXHIBITS

OF

RICHARD C. LEGER  
MARKETING & SALES CIP MANAGER  
REGION 1

ON BEHALF OF

CENTERPOINT ENERGY RESOURCES CORP. d/b/a  
CENTERPOINT ENERGY ARKANSAS GAS

Filed: March 14, 2011

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS DOCKET NO 07-081-TF

### Table of Contents

I. Introduction .....	2
A. Conservation Improvement Program Portfolio Objective .....	2
B. Program Development .....	3
C. Overall Benefit Cost Analysis .....	3
D. Evaluation, Measurement, and Verification .....	4
E. Deemed Savings.....	4
F. Program Termination and Amendment.....	4
G. Overall Budget.....	5
H. Estimated Savings Goals .....	6
I. Estimated Participation .....	7
II. Program Descriptions .....	8
A. Residential Home Energy Reports.....	8
B. Water Heating Conservation Improvement Program.....	12
C. Space Heating Systems Conservation Improvement Program .....	16
D. Low-Flow Showerhead and Faucet Aerator Conservation Improvement Program.....	21
E. Arkansas Home Energy Affordability Loan (HEAL) Program Partnership .....	23
F. Commercial Boiler Conservation Improvement Program.....	27
G. Commercial Food Service Conservation Improvement Program.....	32
H. Natural Gas Commercial Solutions Program .....	37

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

## I. Introduction

CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Arkansas Gas ("CenterPoint Arkansas" or the "Company") is pleased to submit the CenterPoint Energy July 2011-2013 Conservation Improvement Program Portfolio ("CIP Portfolio") pursuant to the Arkansas Public Service Commission's (the "Commission") Rules for Conservation and Energy Efficiency Programs ("EE Rules"). This filing contains CenterPoint Arkansas's program plan for implementation of the following energy efficiency programs:

- Residential Home Energy Reports
- Water Heating Conservation Improvement Program
- Space Heating Systems Conservation Improvement Program
- Low-Flow Showerhead and Faucet Aerator Conservation Improvement Program
- Arkansas Home Energy Affordability Loan (HEAL) Program Partnership
- Commercial Boiler Conservation Improvement Program
- Commercial Food Service Conservation Improvement Program
- Natural Gas Commercial Solutions Program

### A. Conservation Improvement Program Portfolio Objective

The proposed portfolio of programs is cost-effective based on the assumptions made in the filing and will contribute to the energy efficiency goals of CenterPoint Arkansas, the Commission, and the state of Arkansas.

Specific objectives associated with the programs are to:

- Reduce end-use natural gas consumption in a cost-effective manner to minimize the long-term cost of utility service and to conserve resources;
- Protect the environment by encouraging installation of efficiency measures that help reduce carbon dioxide emissions and other greenhouse gases;
- Increase residential, commercial, and industrial customer awareness of available energy efficiency opportunities including equipment upgrades and behavioral changes;
- Generate customer awareness of energy efficiency programs available through CenterPoint Arkansas to support their energy efficiency objectives;
- Support a more robust local and state-wide economy by using local labor (when possible), and helping Arkansas residents reduce monthly energy expenses.

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CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

## **B. Program Development**

When developing Arkansas's CIP Portfolio, CenterPoint Arkansas relied on its extensive energy efficiency experience in Minnesota and Texas, along with more recent experience with the new Arkansas program launched in 2010.

CenterPoint Energy's Minnesota utility has the longest involvement with natural gas utility energy efficiency programs, pursuant to an "Energy Conservation Improvement" statute enacted in 1991 and applicable to both natural gas and electric utilities. We currently administer 21 separate energy efficiency programs in Minnesota for all customer segments, with a combined annual budget of about \$18 million for 2010 and increasing to \$22 million for 2012.

CenterPoint Energy Houston Electric currently operates 14 different electric energy efficiency programs. The total budget for all of CenterPoint Energy Houston Electric's energy efficiency programs in Texas for 2010 is just over \$30 million, and those programs are expected to achieve approximately 125 MW in demand savings in 2010 alone.

## **C. Overall Benefit Cost Analysis**

CenterPoint Arkansas performed the following benefit-cost analyses on each of the proposed programs, market segments, and the entire program portfolio:

- Ratepayer Impact Measure Test (also known as the Non-Participant Test);
- Utility Cost Test;
- Societal Test;
- Participant Test; and
- Total Resource Cost Test

These tests are derived from a variation of the 2002 California Standard Practice Manual, which is widely accepted as the resource for the details and calculations of benefit-cost analysis for energy efficiency programs around the country.

In general, the various tests for each program and portfolio of programs were calculated using the net present value of the program's costs and avoided costs.

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

	Triennial	Triennial
Test Results - Overall Portfolio	NPV	B/C
Ratepayer Impact Measure Test	(\$45,045,130)	0.59
Utility Cost Test	\$49,656,212	4.10
Societal Test	\$38,111,067	2.01
Participant Test	\$82,732,437	3.62
Total Resource Cost Test	\$35,353,708	1.933

#### D. Evaluation, Measurement, and Verification

CenterPoint Arkansas intends to work with the EM&V Monitor (established in Docket No. 10-100-R) to evaluate its energy efficiency portfolio of programs to:

CenterPoint Arkansas will assess the program on annual basis to evaluate the following:

- Customer satisfaction
- Timely delivery of the CIP rebates
- Effectiveness of program promotional material and media
- Program cost-effectiveness

Additionally, as rules and other guidance concerning EM&V are developed in Docket No. 10-100-R, CenterPoint Arkansas will revise its EM&V plan to conform to such rules.

The information collected will help CenterPoint Arkansas adjust to and better influence the market.

#### E. Deemed Savings

Deemed savings represent the best estimates of the average impact of a measure on the natural gas utility's system at the customer's meter. These deemed savings values provide estimates of the energy savings and demand reduction expected to be realized through various natural gas efficiency measures in typical applications. CenterPoint Arkansas proposes to use the deemed savings calculations approved by the Arkansas Public Service Commission in Docket No. 07-152-TF.

#### F. Program Termination and Amendment

CenterPoint Arkansas is requesting the authority to amend the budgets within any program so long as the overall annual spending for the CIP Portfolio does not exceed ten percent (10%) of

## EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

the approved budget. If the Company anticipates that the overall budget variance will exceed ten percent (10%) of the approved budget, the Company will make a filing with the Commission requesting approval of the increased expenditures.

**G. Overall Budget**

<b>Table 1. Proposed Budget</b>			
<b>Program Name</b>	<b>July 2011</b>	<b>2012 Budget</b>	<b>2013 Budget</b>
Residential Home Energy Reports	\$ 277,364	\$ 475,079	\$ 379,688
Statewide Education Program	\$ 84,832	\$ 172,419	\$ 174,950
Arkansas Weatherization Program	\$ 308,896	\$ 686,316	\$ 753,910
Arkansas Home Energy Affordability Loan (HEAL) Program Partnership	\$ 129,620	\$ 141,431	\$ 154,509
Water Heating CIP	\$ 393,012	\$ 1,287,097	\$ 1,292,864
Space Heating Systems CIP	\$ 528,145	\$ 1,646,962	\$ 1,657,299
Low-Flow Showerhead and Faucet Aerator CIP	\$ 76,415	\$ 158,395	\$ 165,227
Commercial Boiler CIP	\$ 187,930	\$ 464,618	\$ 551,650
Commercial Food Service CIP	\$ 128,102	\$ 293,854	\$ 331,595
Natural Gas Commercial Solutions Program	\$ 1,152,104	\$ 1,257,083	\$ 1,811,073
<b>Total</b>	<b>\$ 3,266,421</b>	<b>\$ 6,583,254</b>	<b>\$ 7,272,763</b>

See Exhibit RCL-2 for further details.

EXHIBIT- RCL-1

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CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

**H. Estimated Savings Goals**

<b>Table 2. Projected Savings</b>			
<b>MCF Saved Gas to Gas</b>			
<b>Program Name</b>	<b>July 2011</b>	<b>2012</b>	<b>2013</b>
Residential Home Energy Reports	13,600	50,600	59,300
Statewide Education Program	0	0	0
Arkansas Weatherization Program	12,188	27,700	30,225
Arkansas Home Energy Affordability Loan (HEAL) Program Partnership	2,219	2,438	2,686
Water Heating CIP	4,696	9,392	9,392
Space Heating Systems CIP	17,033	34,066	34,066
Low-Flow Showerhead and Faucet Aerator CIP	7,753	16,142	16,992
Commercial Boiler CIP	17,429	46,462	58,090
Commercial Food Service CIP	13,216	32,469	38,505
Natural Gas Commercial Solutions Program	56,476	65,134	102,031
<b>Gross Savings Total</b>	144,611	284,404	351,287
<b>Net Savings Total</b>	118,409	237,643	292,890

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

**I. Estimated Participation**

<b>Table 3. Estimated Participation</b>			
<b>Program Name</b>	<b>July 2011</b>	<b>2012 Budget</b>	<b>2013 Budget</b>
Residential Home Energy Reports	50,000	50,000	50,000
Statewide Education Program	NA	NA	NA
Arkansas Weatherization Program	250	560	620
Arkansas Home Energy Affordability Loan (HEAL) Program Partnership	304	334	368
Water Heating CIP	2,095	2,095	2,095
Space Heating Systems CIP	2,095	2,095	2,095
Low-Flow Showerhead and Faucet Aerator CIP	3,650	3,800	4,000
Commercial Boiler CIP	212	280	352
Commercial Food Service CIP	260	305	350
Natural Gas Commercial Solutions Program	2,469	2,077	2,257



EXHIBIT- RCL-1

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CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

## II. Program Descriptions

### A. Residential Home Energy Reports

#### 1. Intent of Program

##### Description

CenterPoint Arkansas plans to contract with OPOWER, a provider of applications that combine technology, direct marketing and behavioral science, to procure its patented Home Energy Reporting System. The Home Energy Reporting System is a proven energy efficiency program that successfully leverages large-scale consumer engagement to drive measureable, predictable and sustainable demand reduction.

The Home Energy Reporting System is a unique software platform that combines energy usage data with customer demographic, housing and GIS data to develop specific, targeted recommendations that educate and motivate consumers to reduce their energy consumption. The program has been implemented by a number of utilities across the country, such as Puget Sound Energy, CenterPoint Energy Minnesota and Southern California Gas, as well as Connexus Energy, Austin Public Utilities, Owatonna Public Utilities, and Lake Country Power in Minnesota.

The diagram below illustrates the process of how savings are determined by the Residential Home Energy Reports.

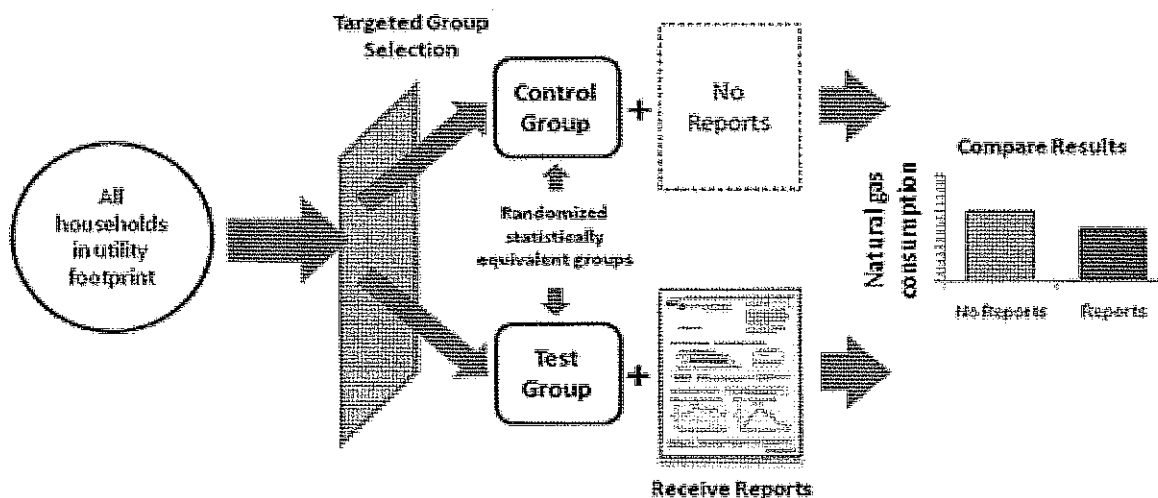
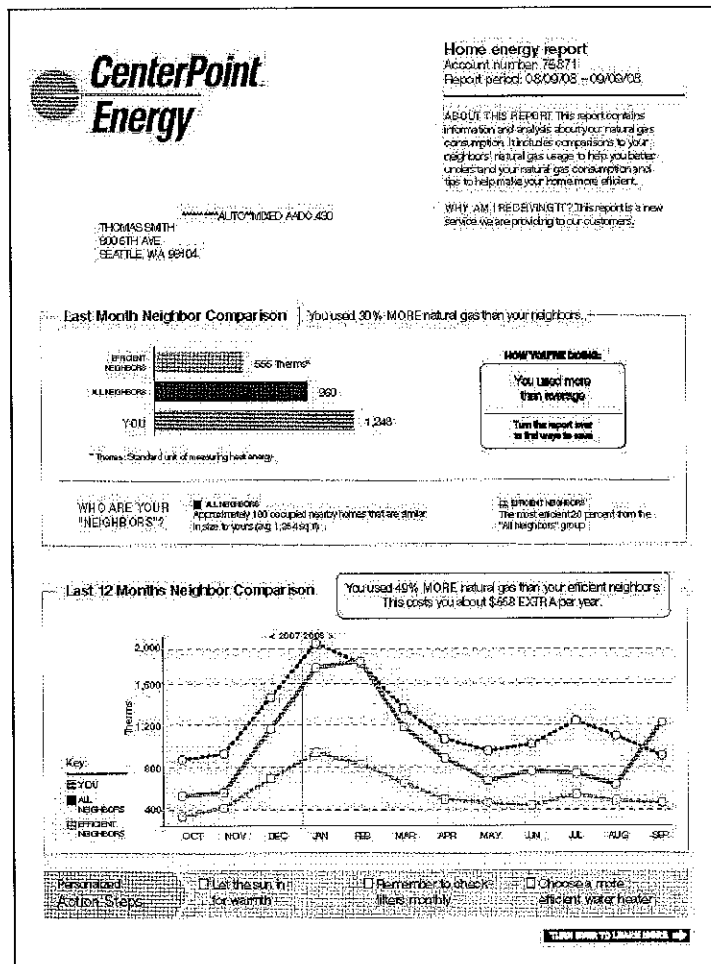


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 CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

### Personalized Home Energy Reports

The Home Energy Reports are a targeted direct mailing to CenterPoint Arkansas customers that provide specific recommendations and incentives to motivate recipients to reduce their energy consumption. The individualized Home Energy Reports show customers:

- Gas use compared to the average of 100 neighbors in similar-sized homes with similar characteristics.
- Targeted efficiency recommendations based on analysis of the household's energy usage, demographics and housing characteristics.
- How report recipients can easily take action to reduce their consumption based on their individual circumstances.



### Online Community of Action

The program also includes an online tool suite that gives customers participating in the Residential Home Energy Reports Program greater insight into their energy consumption and educates them about what they can do to become more energy efficient. The online suite includes:

- Customer gas data;
- Efficiency recommendation database with community ratings and reviews; and
- Customer comments, collected and analyzed regionally, on which tips work best for customers in Arkansas.

## 2. Target Market

CenterPoint Arkansas plans to use the Home Energy Reporting System to target a certain number (e.g., 50,000 in the first year) of test homes and an equivalent number of control homes within the service territory to participate in the program and be measured. In order to maximize

## EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

measureable energy savings, the program targets a higher-use population by using and analyzing consumption, demographic, and housing data. CenterPoint Arkansas will work with OPOWER to select specific customer segments to target.

CenterPoint Arkansas plans to focus the program on maximizing the potential for energy savings. When the program is targeted toward higher-use customer segments, the opportunity for savings grows significantly.

### 3. State of the Market

CenterPoint Arkansas believes there is a lack of information and awareness of energy efficiency in Arkansas. Arkansas customers lack tools designed to educate customers on their energy use, highlight cost-effective methods to reduce their overall energy consumption, and change consumers' overall behavior so that they are more aware of energy use.

### 4. Market Barriers

The table below identifies the market barriers to consumers becoming more energy efficient and highlights mitigation strategies that CenterPoint Arkansas plans to implement to overcome these market barriers.

Market Barriers	Mitigation Strategies
Customers not aware of the program.	Set up as an opt-out program, customers will be proactively enrolled and informed about the ways to use the program. Initial outreach will occur by mail.
Customers do not understand the value of energy efficiency behavior.	Through the program's channels of communication, the Company will be able to educate and engage customers with their energy consumption.
Customers do not understand the long-term value of high-efficiency equipment and other energy saving strategies.	Effective market education of program benefits and general efficiency awareness to customers through the utilization of direct marketing and behavioral science.

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

**5. Benefit-Cost Analysis**

<b>Test Results - Residential Home Energy Reports</b>	<b>Triennial</b>	<b>Triennial</b>
	<b>NPV</b>	<b>B/C</b>
<b>Ratepayer Impact Measure Test</b>	(\$2,212,378)	0.43
<b>Utility Cost Test</b>	\$631,887	1.59
<b>Societal Test</b>	\$719,405	1.66
<b>Participant Test</b>	\$2,906,528	NA
<b>Total Resource Cost Test</b>	\$652,972	1.603

**6. Evaluation, Measurement, and Verification**

CenterPoint Arkansas and OPOWER are committed to ensuring that the program drives real reductions in energy consumption. Continuous measurement and verification (M&V) of the program impact – from the implementation of specific tips to the bottom line reduction in energy consumption – are central to program success. OPOWER, as part of the program, will work with CenterPoint Arkansas to provide statistically-sound analysis of the impact of the program.

**7. Budget****Residential Home Energy Reports**

Planning/Design	\$ 2,457	\$ 2,530	\$ 2,606
Marketing/Delivery	\$ 251,159	\$ 439,069	\$ 47,819
Incentives/Rebates	\$ -	\$ -	\$ -
EM&V	\$ 13,208	\$ 22,623	\$ 18,080
Administration	\$ 10,540	\$ 10,856	\$ 11,182
<b>Total Program Budget</b>	<b>\$ 277,364</b>	<b>\$ 475,079</b>	<b>\$ 379,688</b>

For detailed budget information, please see Exhibit RCL-2.

EXHIBIT- RCL-1

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CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

## **B. Water Heating Conservation Improvement Program**

### **1. Intent of Program**

The CenterPoint Energy Water Heating Conservation Improvement Program ("Water Heating CIP") is designed to promote efficient water heating solutions to all customer classes. Rebate incentives will be offered to consumers to encourage the purchase and installation of new high efficiency natural gas storage tank water heaters and natural gas tankless water heaters.

According to the American Council for an Energy-Efficient Economy ("ACEEE"), after heating and cooling, water heating is the largest consumer of energy in a home<sup>1</sup>. The goal of the Water Heating CIP is to assist consumers in lowering their overall energy use while simultaneously decreasing greenhouse gas emissions.

Rebate incentives will only be rewarded for the purchase of new, qualified natural gas storage and natural gas tankless water heaters installed at a location eligible for service from CenterPoint Arkansas.

### **Eligibility Requirements**

Eligible consumers must:

- Commit to natural gas service from CenterPoint Arkansas;
- Have a new, qualified natural gas storage tank or tankless water heater installed at a location served by CenterPoint Arkansas;
- Complete the appropriate Water Heating CIP rebate application form and return to CenterPoint Arkansas, including purchaser information, equipment information (including brand, model number, serial number, and EF rating), dealer information and/or installer information; and
- Provide a copy of the dated invoice from the retail water heating dealer or installer.

### **Incentives**

CenterPoint Arkansas will offer CIP rebates to encourage the purchase and installation of more efficient water heating solutions. This rebate is designed to offset a portion of the incremental cost of purchasing and installing a qualified high-efficiency natural gas water heater.

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<sup>1</sup> <http://www.aceee.org/node/3068>.

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CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

<b>Equipment 2011</b>	<b>Efficiency</b>	<b>Consumer Rebate</b>	<b>Trade Ally Rebate</b>
Natural Gas Storage Tank	.62 EF or Higher	\$50	\$0
Natural Gas Tankless	.80 EF or Higher	\$250	\$50

<b>Equipment 2012 - 2013</b>	<b>Efficiency</b>	<b>Consumer Rebate</b>	<b>Trade Ally Rebate</b>
Natural Gas Storage Tank	.62 EF or Higher	\$75	\$0
Natural Gas Tankless	.80 EF or Higher	\$500	\$50

CenterPoint Arkansas will issue cash rebates in the form of checks, not utility bill credits. Only installers of the high efficiency equipment (licensed plumbers) are eligible to receive the trade ally rebate.

## 2. Target Market

CenterPoint Arkansas will promote the Water Heating CIP to all customer classes through local publications, bill inserts, various media avenues, and direct contact with customers and trade allies.

CenterPoint Arkansas will continue to utilize the Company's website to promote the CIP rebates available for qualifying natural gas equipment, information on how to secure those rebates, and all applicable forms. A toll-free phone number is also provided for customers and trade allies that do not have access to the internet.

CenterPoint Arkansas will also work with trade allies and retail businesses to promote this program by providing collateral material to help such dealers and businesses educate their consumers on the benefits of high efficiency water heaters and how to qualify for CIP rebates.

## 3. State of the Market

According to ACEEE, after space heating and cooling, water heating is the most energy intense application in the home today. Most Arkansas residents heat their water with some form of tank water heater using natural gas or electric resistance technology. We designed our programs to drive Arkansas residents to make more efficient water heating choices. Our efficient water heating measures are designed to offset the following standard installations:

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<b>Efficiency Measure</b>	<b>Baseline</b>
<b>Water Heating CIP</b>	<b>Comparison</b>
Natural Gas Storage Tank .62	40 Gallon .59 EF Natural Gas Storage Tank
Natural Gas Tankless .80	40 Gallon .59 EF Natural Gas Storage Tank

#### 4. Market Barriers

The table below identifies the market barriers to consumers choosing more efficient equipment and highlights mitigation strategies that CenterPoint Arkansas plans to implement to overcome these market barriers.

<b>Market Barriers</b>	<b>Mitigation Strategies</b>
High initial cost of energy efficient equipment	Provide rebates to help offset a portion of the incremental cost incurred.
Time required to fill out rebate form	Provide simple rebate forms through a variety of mediums (mail-in, on-line); Encourage trade allies to help customers fill out form at the time of purchase. The trade ally rebate provides an incentive for trade allies to help customers with forms and to provide informational invoices.
Trade allies not up-selling to high-efficiency equipment	Trade ally training to help customers quickly identify appropriate measures and products; In-store brochures and collateral; Market programs and general awareness to customer; Provide energy education to customers; Offer rebates to dealers that up-sell higher efficiency equipment.
Customers do not understand the long-term value of high-efficiency equipment	Train trade allies to explain life-cycle costs to customers; Market program and general efficiency awareness to customers
Trade allies unaware of program	Provide outreach and marketing to trade allies.

EXHIBIT- RCL-1

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**5. Benefit-Cost Analysis**

<b>Test Results - Residential Water Heating</b>	<b>Triennial NPV</b>	<b>Triennial B/C</b>
<b>Ratepayer Impact Measure Test</b>	(\$3,628,255)	0.32
<b>Utility Cost Test</b>	(\$742,094)	0.70
<b>Societal Test</b>	(\$1,005,151)	0.66
<b>Participant Test</b>	\$2,730,288	2.10
<b>Total Resource Cost Test</b>	(\$1,076,387)	0.641
<b>Test Results - SCS Water Heating</b>	<b>Triennial NPV</b>	<b>Triennial B/C</b>
<b>Ratepayer Impact Measure Test</b>	(\$360,134)	0.37
<b>Utility Cost Test</b>	(\$94,004)	0.69
<b>Societal Test</b>	(\$126,551)	0.65
<b>Participant Test</b>	\$298,045	1.98
<b>Total Resource Cost Test</b>	(\$135,264)	0.631

**6. Evaluation, Measurement, and Verification**

CenterPoint Arkansas will assess the program on an annual basis to evaluate the following:

- Customer satisfaction;
- Timely delivery of the CIP rebates;
- Effectiveness of program promotional material and media; and
- Program cost-effectiveness.

In addition, CenterPoint Arkansas will review the CIP rebate form and sales invoice to verify that the equipment purchased qualifies under the program guidelines.



EXHIBIT- RCL-1

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**7. Budget****Water Heating CIP****Rebates**

Natural Gas Storage Tank .62	\$ 5,761	\$ 17,283	\$ 17,283
Natural Gas Tankless .80	\$ 279,672	\$1,025,463	\$1,025,463
<b>Total Gas to Gas</b>	<b>\$ 285,433</b>	<b>\$1,042,746</b>	<b>\$1,042,746</b>

Planning/Design	\$ 2,953	\$ 6,082	\$ 6,265
Marketing/Delivery	\$ 73,244	\$ 150,883	\$ 155,410
Incentives/Rebates	\$ 285,433	\$1,042,746	\$1,042,746
EM&V	\$ 18,715	\$ 61,290	\$ 61,565
Administration	\$ 12,667	\$ 26,095	\$ 26,878
<b>Total Program Budget</b>	<b>\$ 393,012</b>	<b>\$ 287,097</b>	<b>\$1,292,864</b>

For detailed budget information, please see Exhibit RCL-2.

**C. Space Heating Systems Conservation Improvement Program****1. Intent of Program****Description**

The CenterPoint Energy Space Heating Systems Conservation Improvement Program ("Space Heating Systems CIP") is designed to promote efficient space heating solutions to all customer classes. Rebate incentives will be offered to consumers to encourage the purchase and installation of new highly efficient natural gas furnaces with an Annual Fuel Utilization Efficiency ("AFUE") rating of 80% or higher, direct vent wall furnaces with an AFUE rating of 80% or higher (through the end of 2011 only), and hydronic heating systems.

The goal of the Space Heating Systems CIP is to assist consumers in lowering their overall energy use and to decrease greenhouse gas emissions.

Rebate incentives will only be rewarded for the purchase of new, qualified natural gas furnaces installed at a location eligible for service from CenterPoint Arkansas.

EXHIBIT- RCL-1

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CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

**Eligibility Requirements**

Eligible consumers must:

- Commit to natural gas service from CenterPoint Arkansas;
- Have a new qualified natural gas furnace installed at a location served by CenterPoint Arkansas;
- Complete the appropriate furnace CIP rebate application form and return to CenterPoint Arkansas, including purchaser information, equipment information (including brand, model number, serial number, and AFUE rating), dealer information, and installer information; and
- Provide a copy of the dated invoice from the retail outlet or HVAC dealer.

**Incentives**

CenterPoint Arkansas will offer CIP rebates to encourage the purchase and installation of more efficient space heating solutions. This rebate is designed to offset a portion of the incremental cost of purchasing and installing a qualified higher AFUE natural gas furnace. Additionally, CenterPoint Arkansas will offer an incentive to HVAC dealers/installers to encourage the promotion of higher efficiency natural gas furnaces to consumers.

<b>Equipment</b>	<b>Efficiency</b>	<b>Rebate</b>	<b>Trade Ally Rebate</b>
<b>2011</b>			
Direct Vent Wall Furnace	80% or higher	\$200	\$50
Natural gas forced-air furnace	90% to 94.9%	\$200	\$50
Natural gas forced-air furnace	95% or higher	\$300	\$50
Hydronic Heating System	82% or higher	\$300	\$50

<b>Equipment</b>	<b>Efficiency</b>	<b>Rebate</b>	<b>Trade Ally Rebate</b>
<b>2012-2013</b>			
Natural gas forced-air furnace	90% to 94.9%	\$400	\$50
Natural gas forced-air furnace	95% or higher	\$600	\$50
Hydronic Heating System	82% or higher	\$400	\$50

CenterPoint Arkansas will also offer CIP rebates to customers that install high efficiency natural gas heat as a back-up to a heat pump. Back-up heating rebates apply only to new natural gas furnaces used as a back-up system to heat pumps for new construction or natural gas retrofits--not for electric heating back up retrofits to a natural gas furnace. This rebate is designed to offset a portion of the incremental cost of purchasing and installing a qualified AFUE natural gas furnace. Additionally, CenterPoint Arkansas will offer an incentive to HVAC dealers/installers to encourage the promotion of natural gas furnaces, as backup to heat pumps, to customers.

EXHIBIT- RCL-1

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CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

Equipment 2011-2013	Efficiency	Rebate	Trade Ally Rebate
Natural gas forced-air furnace	80% to 89.9%	\$125	\$50
Natural gas forced-air furnace	90% or higher	\$175	\$50

CenterPoint Arkansas will issue cash rebates in the form of checks, not utility bill credits.

## 2. Target Market

CenterPoint Arkansas will promote the Space Heating Systems CIP to all customer classes through local publications, bill inserts, various media avenues, and direct contact with customers and dealers.

CenterPoint Arkansas will continue to utilize its website to provide information about CIP rebates available for qualifying natural gas equipment, information on how to secure those rebates, and all applicable forms. A toll-free phone number is also provided for customers and trade allies that do not have access to the internet.

CenterPoint Arkansas will work with dealers and retail businesses in the promotion of this program by providing collateral material to help educate consumers on the benefits of high efficiency furnaces and how to qualify for CIP rebates.

## 3. State of the Market

According to ACEEE, heating is the largest energy expense in most homes, accounting for 35-50% of annual energy usage in colder parts of the country.<sup>2</sup> In Arkansas, most residents are either heating their homes with forced air furnaces, air source heat pumps, or electric resistance heaters. We designed our programs to drive Arkansas residents to make more efficient space heating choices. Our efficient space heating measures are designed to offset the following standard installations:

Efficiency Measure Heating CIP	Baseline Comparison
Natural Gas Forced Air .90	.78 EF Natural Gas Furnace
Natural Gas Forced Air .95	.78 EF Natural Gas Furnace
Hydronic Heating	.59 EF Natural Gas Hydronic Heating System

<sup>2</sup> <http://www.aceee.org/node/3065>.

## EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

Natural Gas Forced Air .80 (Back-up)	.78 EF Natural Gas Furnace
Natural Gas Forced Air .90 (Back-up)	.78 EF Natural Gas Furnace

**4. Market Barriers**

The table below identifies the market barriers to consumers choosing more efficient equipment and highlights mitigation strategies that CenterPoint Arkansas plans to implement to overcome these market barriers.

<b>Market Barriers</b>	<b>Mitigation Strategies</b>
High initial cost of energy efficient equipment	Provide rebates to help offset a portion of the incremental cost incurred.
Time required to fill out rebate form	Provide simple rebate forms through a variety of mediums (mail-in, on-line); Encourage trade allies to help fill out form at the time of purchase. The trade ally rebate provides an incentive for trade allies to help customers with forms and to provide informational invoices.
Trade allies not up-selling to high-efficiency equipment	Trade ally training to help customers quickly identify appropriate measures and products; In-store brochures and collateral; Market programs and general awareness to customer; Provide energy education to customers; Offer rebates to dealers that up-sell higher efficiency equipment.
Customers do not understand the long-term value of high-efficiency equipment	Train trade allies to explain life-cycle costs to customers; Market program and general efficiency awareness to customers.
Dealers unaware of program	Provide outreach and marketing to dealers

**5. Benefit-Cost Analysis**

<b>Test Results - Residential Space Heating</b>	<b>Triennial NPV</b>	<b>Triennial B/C</b>
<b>Ratepayer Impact Measure Test</b>	(\$8,041,441)	0.47
<b>Utility Cost Test</b>	\$4,025,121	2.27

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

<b>Societal Test</b>	\$4,209,360	1.99
<b>Participant Test</b>	\$12,665,020	4.71
<b>Total Resource Cost Test</b>	\$3,908,106	1.915
	<b>Triennial</b>	<b>Triennial</b>
<b>Test Results - SCS Space Heating</b>	<b>NPV</b>	<b>B/C</b>
<b>Ratepayer Impact Measure Test</b>	(\$633,852)	0.58
<b>Utility Cost Test</b>	\$478,792	2.23
<b>Societal Test</b>	\$499,496	1.96
<b>Participant Test</b>	\$1,136,683	3.72
<b>Total Resource Cost Test</b>	\$462,649	1.89

## 6. Evaluation, Measurement, and Verification

CenterPoint Arkansas will assess the program on an annual basis to evaluate the following:

- Customer satisfaction;
- Timely delivery of the CIP rebates;
- Effectiveness of program promotional material and media; and
- Program cost-effectiveness.

CenterPoint Arkansas will review the CIP form and sales invoice to verify that the equipment purchased qualifies under the program guidelines.

## 7. Budget

### Space Heating System CIP

#### Rebates

Natural Gas Forced Air .90	\$ 43,208	\$ 155,548	\$ 155,548
Natural Gas Forced Air .95	\$ 274,958	\$ 1,021,274	\$ 1,021,274
Hydronic Heating	\$ 18,331	\$ 47,136	\$ 47,136
<b>Total Gas to Gas</b>	<b>\$ 336,497</b>	<b>\$ 1,223,957</b>	<b>\$ 1,223,957</b>

## EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

Natural Gas Forced Air .80	\$ 3,666	\$ -	\$ -
Natural Gas Forced Air .90	\$ 3,535	\$ 16,425	\$ 16,425
<b>Total Gas Back-up</b>	<b>\$ 7,201</b>	<b>\$ 16,425</b>	<b>\$ 16,425</b>
Planning/Design	\$ 3,555	\$ 7,324	\$ 7,544
Marketing/Delivery	\$ 140,489	\$ 289,408	\$ 298,090
Incentives/Rebates	\$ 343,698	\$ 1,240,382	\$ 1,240,382
EM&V	\$ 25,150	\$ 78,427	\$ 78,919
Administration	\$ 15,253	\$ 31,422	\$ 32,364
<b>Total Program Budget</b>	<b>\$ 528,145</b>	<b>\$ 1,646,962</b>	<b>\$ 1,657,299</b>

For detailed budget information, please see Exhibit RCL-2.

## **D. Low-Flow Showerhead and Faucet Aerator Conservation Improvement Program**

### **1. Intent of Program**

The CenterPoint Energy Low-Flow Showerhead and Aerator Conservation Improvement Program will provide free energy-saving low-flow showerheads and faucet aerators to CenterPoint Arkansas consumers.

The showerheads and aerators will be available to residential customers who reside within CenterPoint Arkansas's service territory and who receive individual natural gas bills from CenterPoint Arkansas or are provided residential natural gas service from a housing authority or multi-family dwelling served by CenterPoint Arkansas.

Customers will be given the option to request multiples of each low-flow unit type, within prescribed limits, to enable each household shower or faucet to perform up to the same energy-saving potential.

### **2. Target Market**

CenterPoint Arkansas will primarily promote the program through bill inserts steering customers to a fulfillment website. For those customers without internet access, a toll free number will be provided and a call center representative will input the customer's information. The customer will then be mailed the requested number of low-flow units (up to prescribed limits), along with comprehensive installation directions.

Secondary benefits include water conservation and lower impact on critical water distribution infrastructure.

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

### 3. State of the Market

Water conservation is a very important element of energy efficiency programs. When water conservation is addressed through promotion of efficient shower heads and faucet aerators, the conservation of water and of energy are simultaneously accomplished. The program is designed to drive Arkansas residents to make more efficient choices. The low-flow showerhead and faucet aerator measures are designed to offset the following standard installations:

Efficiency Measure Heating CIP	Baseline Comparison
Low-Flow Showerheads	Existing 2.5 GPM
Faucet Aerators	Existing 2.5 GPM

### 4. Market Barriers

The table below identifies the market barriers to consumers choosing more efficient equipment and highlights mitigation strategies that CenterPoint Arkansas plans to implement to overcome these market barriers.

Market Barriers	Mitigation Strategies
Time required to fill out request form	Provide simple request forms through a variety of mediums (on-line, phone center); Use a third party to increase timely delivery of item.
Installation Knowledge	Provide an instructional sheet and Teflon tape with delivery of equipment.
Customers do not understand the long-term value of high-efficiency equipment	Market program and general efficiency awareness to customers.

### 5. Benefit-Cost Analysis

Test Results - Low Flow	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	(\$1,416,649)	0.52
Utility Cost Test	\$1,170,964	4.13
Societal Test	\$1,518,334	9.96

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

<b>Participant Test</b>	\$2,934,607	#DIV/0!
<b>Total Resource Cost Test</b>	\$1,456,745	9.592

## 6. Evaluation, Measurement, and Verification

CenterPoint Arkansas will assess the program on an annual basis to evaluate the following:

- Customer satisfaction;
- Timely delivery of the shower heads and aerators;
- Effectiveness of program promotional material and media; and
- Program cost-effectiveness.

## 7. Budget

### Low Flow Showerhead and Faucet Aerator CIP

Planning/Design	\$ 435	\$ 896	\$ 923
Marketing/Delivery	\$ 28,424	\$ 58,554	\$ 60,311
Incentives/Rebates	\$ 42,051	\$ 87,557	\$ 92,166
EM&V	\$ 3,639	\$ 7,543	\$ 7,868
Administration	\$ 1,866	\$ 3,844	\$ 3,960
<b>Total Program Budget</b>	<b>\$ 76,415</b>	<b>\$ 158,395</b>	<b>\$ 165,227</b>

For detailed budget information, please see Exhibit RCL-2.

## E. Arkansas Home Energy Affordability Loan (HEAL) Program Partnership

### 1. Intent of the Program

#### Description

The Home Energy Affordability Loan (HEAL) program is an innovative program implemented by the William J. Clinton Foundation to significantly reduce greenhouse gas emissions by improving energy performance in residential buildings and, to a lesser extent, commercial/industrial buildings selected as project hosts in the pilot demonstration. The program works with commercial partners to provide low- or no-interest loans to employees for retrofitting their homes to become more energy efficient. In some cases, HEAL may also offer



EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

the program to non-employees living in neighborhoods adjacent to participating employers. CenterPoint Arkansas will partner with the HEAL AR program to provide financial incentives to residential HEAL participants reducing energy usage through air infiltration reduction, duct repair and insulation. CenterPoint Arkansas's goal in partnering with the HEAL AR program is to increase the number of energy efficiency retrofits among CenterPoint Arkansas participants in the program. The partnership also allows CenterPoint Arkansas to pilot the utilization of air infiltration reduction, duct repair and insulation as energy efficiency measures in a natural gas efficiency program.

The HEAL AR program provides a financing mechanism for energy saving home improvements that are repaid through payroll deductions. Residential participants receive a free home energy audit that includes blower door and duct testing and utilizes the RESNET accredited REM/Rate software to provide participants with a Personal Energy Plan (PEP). The PEP provides recommendations for energy saving improvements and estimated energy reductions. CenterPoint Arkansas's financial assistance for reducing air infiltration, repairing ductwork and increasing insulation will be scaled according to energy savings and can be applied to the participant's loan repayment or directly to the participant if no loan exists. In order to qualify for CenterPoint Arkansas incentives, the measure must be recommended in the participant's PEP. After the retrofit has been completed, the HEAL AR program will re-test the home as a quality assurance measure and to verify the energy savings.

### **Eligibility Requirements**

Eligible participants in the program must:

- Receive natural gas service from CenterPoint Arkansas;
- Have received a Personal Energy Plan from the HEAL AR program that includes a recommendation for air sealing, insulation and/or duct repair;
- Have air sealing, insulation and/or duct repair work performed at a location served by CenterPoint Arkansas according to the qualifications and standards outlined in the Arkansas Deemed Savings for those measures;<sup>3</sup>
- Complete the appropriate CIP rebate application form and return to CenterPoint Arkansas with proof that the work has been performed.

### **Incentives**

CenterPoint Arkansas will offer CIP rebates to encourage energy savings retrofits among HEAL AR's residential participants. This rebate is designed to offset a portion of the incremental cost of the home retrofit and encourage adoption of home retrofits among participants. CIP rebates

<sup>3</sup> The Arkansas Deemed Savings are provided in Docket No. 07-152-TF.

## EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

will be scaled according to the estimated energy savings and can be applied directly to a participant's loan repayment.

Measure	Rebate per MCF Gas Reduced
Air Infiltration	\$45
Duct Efficiency	\$45
Attic Knee Wall Insulation	\$45
Ceiling Insulation	\$45
Wall Insulation	\$45
Floor Insulation	\$45

## 2. Target Market

The residential portion of the HEAL AR program targets low- to moderate-income homeowners and employees of partnering businesses. All educational outreach will be provided through the HEAL AR program personnel. HEAL AR's educational outreach occurs through a variety of avenues including employer promotion and energy counseling with a trained energy coach.

## 3. State of the Market

Air infiltration, duct improvements and insulation installations can result in significant energy savings but often require substantial capital investments that may not be affordable or achievable for low- to moderate-income residents. Many residential consumers are unaware of the impact that leaky homes and ducts or un-insulated homes can have on their energy bills or whether the savings would justify the costs of the measures.

CenterPoint Arkansas's proposed partnership with the HEAL AR program addresses both of these barriers to the market. The home energy audit, Personal Energy Plan (PEP) and energy counseling educates participants in the program about the retrofit needs of their home and whether a measure would be a good investment. The incentives provided by CenterPoint Arkansas increase the payback period for the participants, lowers the capital investment required for the retrofit and reduces the participant's debt burden. The incentives provided by CenterPoint Arkansas are designed to partially offset the retrofit measures so that the measures are adopted by participants.

## 4. Market Barriers

The table below identifies the market barriers to consumers implementing home energy retrofits and highlights mitigation strategies that CenterPoint Arkansas plans to implement to overcome these market barriers.

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

<b>Market Barriers</b>	<b>Mitigation Strategies</b>
Understanding the benefits of implementing energy saving home retrofits	HEAL AR's program provides a free home energy audit, a customized Personal Energy Plan with recommended measures and cost savings and energy counseling.
High initial cost of energy saving home retrofits	CenterPoint Energy will provide rebates to help offset a portion of the incremental cost incurred. The HEAL AR program provides a financing mechanism for participants.
Time required to fill out rebate form	Provide simple rebate forms through a variety of medium (mail-in, on-line); Encourage HEAL AR staff to help participants fill out forms or direct participants to CenterPoint resources for assistance.
Homeowners are unsure that the energy savings estimated will be realized	HEAL AR will re-test the home as a quality assurance measure and to verify the energy savings.

### 5. Benefit-Cost Analysis

<b>Test Results - HEAL AR</b>	<b>Triennial NPV</b>	<b>Triennial B/C</b>
<b>Ratepayer Impact Measure Test</b>	(\$790,077)	0.42
<b>Utility Cost Test</b>	\$174,054	1.43
<b>Societal Test</b>	\$107,852	1.20
<b>Participant Test</b>	\$921,207	3.00
<b>Total Resource Cost Test</b>	\$84,178	1.152

### 6. Evaluation, Measurement, and Verification

CenterPoint Arkansas will assess the program on an annual basis to evaluate the following:

- Customer satisfaction
- Timely delivery of the CIP rebates
- How closely energy estimates correspond to post-retrofit testing data
- Program cost-effectiveness

Consumer must complete and submit the CIP rebate form with proof of work performed. CenterPoint Arkansas will work with HEAL AR to confirm that the measure is recommended in the participant's Personal Energy Plan. Once CenterPoint Arkansas has verified the information

## EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

and ensured that all eligibility requirements have been met by the consumer, CenterPoint Arkansas will issue a check to the customer if no financing was needed for the project.

CenterPoint Arkansas will review the CIP form and proof of work performed to verify the home energy improvement qualifies under the program guidelines. CenterPoint Arkansas will also collect post-retrofit testing data from HEAL AR to confirm work performed.

**7. Budget****HEAL Arkansas**

Planning/Design	\$ 1,033	\$ 1,064	\$ 1,096
Marketing/Delivery	\$ 18,119	\$ 19,348	\$ 20,465
Incentives/Rebates	\$ 99,864	\$ 109,719	\$ 120,888
EM&V	\$ 6,172	\$ 6,735	\$ 7,358
Administration	\$ 4,432	\$ 4,565	\$ 4,702
<b>Total Program Budget</b>	<b>\$ 129,620</b>	<b>\$ 141,431</b>	<b>\$ 154,509</b>

For detailed budget information, please see Exhibit RCL-2.

**F. Commercial Boiler Conservation Improvement Program****1. Intent of Program****Description**

The CenterPoint Energy Commercial Boiler Conservation Improvement Program ("Commercial Boiler CIP") is designed to promote efficient heating and/or water heating solutions to all commercial customer classes. Rebate incentives will be offered to consumers to encourage the purchase and installation of new high efficiency natural gas boiler equipment.

The goal of the Commercial Boiler CIP is to assist consumers in lowering their overall energy use and to decrease greenhouse gas emissions.

Rebate incentives will only be rewarded for the purchase of new, qualified natural gas boilers installed at a location eligible for service from CenterPoint Arkansas.

**Eligibility Requirements**

Eligible commercial consumers must:

- Commit to natural gas service from CenterPoint Arkansas;
- Have new qualified natural gas commercial boiler equipment installed at a location eligible for service from CenterPoint Arkansas;

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

- Complete the appropriate commercial boiler CIP rebate application form and return to CenterPoint Arkansas, including purchaser information, equipment information (including manufacturer brand, model number, serial number, Btu/hr input, boiler efficiency rating, and equipment cost), date of installation, quantity, dealer information, and installer information; and
- Provide a copy of the dated invoice from the equipment dealer.

### **Incentives**

CenterPoint Arkansas will offer CIP rebates to encourage the purchase and installation of more efficient natural gas boilers. This rebate is designed to offset a portion of the incremental cost of purchasing and installing a qualified higher AFUE natural gas boiler.

<b>Equipment</b>	<b>Efficiency</b>	<b>Rebate</b>
Boilers	85% or Higher	\$1,400 per 1 MMBTU, up to 25% of equipment cost
Boilers	92% or Higher	\$2,000 per 1 MMBTU, up to 25% of equipment cost
Burner Replacements	Fully modulating or 6 step modulation	\$1,000 per 1 MMBTU, up to 25% of equipment cost
Boiler Reset Controls		Up to \$150 per control system, not to exceed equipment cost
Boiler Cut Out Controls		Up to \$150 per control system, not to exceed equipment cost
Boiler Vent Damper		Up to \$250 per boiler, not to exceed 25% of equipment cost

CenterPoint Arkansas will issue cash rebates in the form of checks, not utility bill credits.

## **2. Target Market**

CenterPoint Arkansas will promote the commercial boiler CIP to all commercial customers through local publications, various media avenues, and direct contact with dealers.

CenterPoint Arkansas will continue to utilize its website to include information about CIP rebates available for qualifying natural gas equipment, information on how to secure those rebates, and all applicable forms.

CenterPoint Arkansas will work with dealers in the promotion of this program by providing collateral material to educate consumers on the benefits of high efficiency commercial boilers and how to qualify for CIP rebates.

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

### 3. State of the Market

The long equipment life, high capital cost, and reality that commercial boiler systems are not being fixed until broken leads most customers to install standard efficiency boiler equipment; therefore, incentives are necessary to encourage the installation of high-efficiency commercial/industrial heating equipment.

The Commercial Boiler CIP will provide incentives to all commercial customers who replace, install or retrofit their boiler system with high-efficiency options to buy down the incremental cost of this equipment. Our rebate program measures are designed to offset the following standard installation measures:

<b>Efficiency Measure Commercial Boiler CIP</b>	<b>Baseline Comparison</b>
Boiler .85 to .91	.75 EF Gas Fired Boiler
Boiler .92 or Higher	.75 EF Gas Fired Boiler
Burner Replacements	70% Measure Baseline combustion efficiency
Boiler Reset Controls	70% Measure Baseline combustion efficiency
Boiler Cut Out Controls	70% Measure Baseline combustion efficiency
Boiler Vent Damper	70% Measure Baseline combustion efficiency

### 4. Market Barriers

The table below identifies the market barriers to consumers choosing more efficient equipment and highlights mitigation strategies that CenterPoint Arkansas plans to implement to overcome these market barriers.

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

<b>Market Barriers</b>	<b>Mitigation Strategies</b>
High initial cost of energy efficient equipment	Provide rebates to help offset a portion of the incremental cost incurred.
Time required to fill out rebate form	Provide simple rebate forms through a variety of medium (mail-in, on-line); Encourage trade allies to help fill out form at the time of purchase.
Trade allies not up-selling to high-efficiency equipment	Trade ally training to help customers quickly identify appropriate measures and products; In-store brochures and collateral; Market programs and general awareness to customer; Provide energy education to customers.
Lack of availability of qualifying equipment	Promote programs to customers so they ask for qualifying equipment and dealers stock it; Trade ally training and outreach.
Customers do not understand the long-term value of high-efficiency equipment	Train trade allies to explain life-cycle costs to customers; Market program and general efficiency awareness to customers.
Dealers unaware of program	Provide outreach and marketing to dealers

**5. Benefit-Cost Analysis**

<b>Test Results - SCS Boiler</b>	<b>Triennial NPV</b>	<b>Triennial B/C</b>
<b>Ratepayer Impact Measure Test</b>	(\$2,040,091)	0.73
<b>Utility Cost Test</b>	\$4,887,736	10.49
<b>Societal Test</b>	\$4,485,485	3.30
<b>Participant Test</b>	\$6,524,410	4.64
<b>Total Resource Cost Test</b>	\$4,254,922	3.179
<b>Test Results - LCS Boiler</b>	<b>Triennial NPV</b>	<b>Triennial B/C</b>
<b>Ratepayer Impact Measure Test</b>	(\$745,964)	0.89
<b>Utility Cost Test</b>	\$5,478,236	10.04

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

<b>Societal Test</b>	\$4,934,942	3.15
<b>Participant Test</b>	\$5,440,731	3.58
<b>Total Resource Cost Test</b>	\$4,663,570	3.029

## 6. Evaluation, Measurement, and Verification

CenterPoint Arkansas will assess the program on an annual basis to evaluate the following:

- Customer satisfaction;
- Timely delivery of the CIP rebates;
- Effectiveness of program promotional material and media; and
- Program cost-effectiveness

CenterPoint Arkansas will review the CIP rebate form and sales invoice to verify that the equipment purchased qualifies under the program guidelines.

## 7. Budget

### Commercial Boiler CIP

#### Rebates

Boiler .85 to .91	\$ 42,000	\$ 112,000	\$ 140,000
Boiler .92 0r Higher	\$ 60,000	\$ 160,000	\$ 200,000
Burner Replacements	\$ 12,500	\$ 35,000	\$ 42,000
Boiler Reset Controls	\$ 2,250	\$ 6,000	\$ 7,500
Boiler Cut Out Controls	\$ 1,875	\$ 4,500	\$ 6,000
Boiler Vent Damper	\$ 1,500	\$ 3,750	\$ 5,000
<b>Total Rebates</b>	<b>\$ 120,125</b>	<b>\$ 321,250</b>	<b>\$ 400,500</b>
Planning/Design	\$ 1,243	\$ 2,560	\$ 2,637
Marketing/Delivery	\$ 52,282	\$ 107,702	\$ 110,933
Incentives/Rebates	\$ 120,125	\$ 321,250	\$ 400,500
EM&V	\$ 8,949	\$ 22,125	\$ 26,269
Administration	\$ 5,331	\$ 10,982	\$ 11,312
<b>Total Program Budget</b>	<b>\$ 187,930</b>	<b>\$ 464,618</b>	<b>\$ 551,650</b>

For detailed budget information, please see Exhibit RCL-2.



EXHIBIT- RCL-1

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CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

## **G. Commercial Food Service Conservation Improvement Program**

### **1. Intent of Program**

#### **Description**

The CenterPoint Energy Commercial Food Service Conservation Improvement Program ("Commercial Food Service CIP") is designed to promote the installation of high-efficiency food service equipment. Rebate incentives will be offered to food service operators to encourage the purchase and installation of new, qualifying natural gas food service equipment.

The goal of the Commercial Food Service CIP is to assist food service operators in lowering their overall energy use and to decrease greenhouse gas emissions.

Rebate incentives will only be rewarded for the purchase of new, qualified natural gas food service equipment installed at a location eligible for service from CenterPoint Arkansas.

#### **Eligibility Requirements**

Eligible Commercial Food Service Operators must:

- Commit to natural gas service from CenterPoint Arkansas;
- Have new qualified natural gas food service equipment installed at a location eligible for service from CenterPoint Arkansas;
- Complete the appropriate commercial food service CIP rebate application form and return to CenterPoint Arkansas, including purchaser information, equipment information (including brand and model number), dealer information, and installer information; and
- Provide a copy of the dated invoice from the food service equipment dealer and distributors.

#### **Incentives**

CenterPoint Arkansas will pay CIP rebates to encourage the purchase and installation of more efficient natural gas food service equipment. This rebate is designed to offset a portion of the incremental cost of purchasing and installing qualified higher efficiency food service equipment.

## EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

Equipment	Consumer Rebate	Trade Ally Rebate
Broiler (Infrared upright)	\$600	\$50
Char broiler (Infrared)	\$300	\$50
Combi Oven	\$1000	\$50
Convection Oven	\$500	\$50
Conveyer Oven	\$750	\$50
Fryer (High Efficiency or Infrared)	\$250	\$50
Rotating Rack Ovens	\$500	\$50
Rotisserie Ovens (Infrared)	\$500	\$50
Salamander Broilers	\$150	\$50
Pasta Cooker	\$200	\$50

CenterPoint Arkansas will issue cash rebates in the form of checks, not utility bill credits.

## 2. Target Market

CenterPoint Arkansas will promote the Commercial Food Service CIP to commercial food service operators and dealers through local publications, various media avenues, and direct contact.

CenterPoint Arkansas will update its website to include information about CIP rebates available for qualifying natural gas equipment, information on how to secure those rebates, and all applicable forms.

CenterPoint Arkansas will work with dealers and retail businesses to promote this program by providing collateral material to help educate consumers on the benefits of high efficiency commercial food service equipment and how to qualify for CIP rebates.

## 3. State of the Market

The food service market segment traditionally has high start-up and operational costs and higher energy intensity per square foot as compared to other commercial market segments. The increased costs associated with high-efficiency equipment presents an almost insurmountable burden for many food service operators and business owners; therefore, many purchase the least expensive equipment available. The food service rebates for high-efficiency equipment will help offset the initial purchase cost and will provide overall operational savings for the customer. Our rebate program measures are designed to offset the following standard installation measures:

## EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

<b>Efficiency Measure</b> <b>Commercial Boiler CIP</b>	<b>Baseline</b> <b>Comparison</b>
Broiler (Infrared, Upright)	Standard Broiler
Char broiler (Infrared)	Standard CharBroiler
Combi Oven	Steamer
Convection Oven	Standard Deck Oven
Conveyer Oven	Pizza Deck Oven
Fryer (High EF of Infrared)	Standard Fryer
Rotating Rack Ovens	Base Deck Oven
Rotisserie Ovens (Infrared)	Open Flame Rotisserie
Salamander Broilers (Infrared)	Radiant Salamander
Pasta Cooker	Range

**4. Market Barriers**

The table below identifies the market barriers to consumers choosing more efficient equipment and highlights mitigation strategies that CenterPoint Arkansas plans to implement to overcome these market barriers.

<b>Market Barriers</b>	<b>Mitigation Strategies</b>
High initial cost of energy efficient equipment	Provide rebates to help offset a portion of the incremental cost incurred.
Time required to fill out rebate form	Provide simple rebate forms through a variety of mediums (mail-in, on-line); Encourage trade allies to help fill out form at the time of purchase.
Trade allies not up-selling to high-efficiency equipment	Trade ally training to help customers quickly identify appropriate measures and products; In-store brochures and collateral; Market programs and general awareness to customer;

## EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

	Provide energy education to customers Offer rebates to dealers that up-sell higher efficiency equipment.
Lack of availability of qualifying equipment	Promote programs to customers so they ask for qualifying equipment and dealers stock it; Trade ally training and outreach.
Customers do not understand the long-term value of high-efficiency equipment	Train trade allies to explain life-cycle costs to customers; Market program and general efficiency awareness to customers.
Dealers unaware of program	Provide outreach and marketing to dealers.

**5. Benefit-Cost Analysis**

<b>Test Results - SCS Food Service</b>	<b>Triennial NPV</b>	<b>Triennial B/C</b>
<b>Ratepayer Impact Measure Test</b>	(\$1,979,454)	0.71
<b>Utility Cost Test</b>	\$4,139,097	7.55
<b>Societal Test</b>	\$2,839,927	2.10
<b>Participant Test</b>	\$4,752,785	3.03
<b>Total Resource Cost Test</b>	\$2,642,574	2.025
<b>Test Results - LCS Food Service</b>	<b>Triennial NPV</b>	<b>Triennial B/C</b>
<b>Ratepayer Impact Measure Test</b>	(\$81,936)	0.86
<b>Utility Cost Test</b>	\$437,005	7.22
<b>Societal Test</b>	\$287,767	2.00
<b>Participant Test</b>	\$350,054	2.35
<b>Total Resource Cost Test</b>	\$265,839	1.928

EXHIBIT- RCL-1

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CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

**6. Evaluation, Measurement, and Verification**

CenterPoint Arkansas will assess the program on an annual basis to evaluate the following:

- Customer satisfaction;
- Timely delivery of the CIP rebates;
- Effectiveness of program promotional material and media;
- Program cost-effectiveness.

CenterPoint Arkansas will review the CIP rebate form and sales invoice to verify that the equipment purchased qualifies under the program guidelines.

**7. Budget****Commercial Food Service CIP**

Broiler (Infrared, Upright)	\$ 16,250	\$ 32,500	\$ 32,500
CharBriolier (infrared)	\$ 5,250	\$ 15,750	\$ 21,000
Combi Oven	\$ 15,750	\$ 47,250	\$ 63,000
Convection Oven	\$ 13,750	\$ 27,500	\$ 27,500
Conveyer Oven	\$ 12,000	\$ 36,000	\$ 48,000
Fryer (High EF of Infrared)	\$ 7,500	\$ 15,000	\$ 15,000
Rotating Rack Ovens	\$ 1,375	\$ 2,750	\$ 2,750
Rotisserie Ovens (Infrared)	\$ 1,375	\$ 2,750	\$ 2,750
Salamander Broilers	\$ 500	\$ 1,000	\$ 1,000
Pasta Cooker	\$ 625	\$ 1,250	\$ 1,250
<b>Total Rebates</b>	<b>\$ 74,375</b>	<b>\$ 181,750</b>	<b>\$ 214,750</b>

Planning/Design	\$ 769	\$ 1,585	\$ 1,632
Marketing/Delivery	\$ 43,557	\$ 89,727	\$ 92,419
Incentives/Rebates	\$ 74,375	\$ 181,750	\$ 214,750
EM&V	\$ 6,100	\$ 13,993	\$ 15,790
Administration	\$ 3,301	\$ 6,800	\$ 7,003
<b>Total Program Budget</b>	<b>\$ 128,102</b>	<b>\$ 293,854</b>	<b>\$ 331,595</b>

For detailed budget information, please see Exhibit RCL-2.

EXHIBIT- RCL-1  
CENTERPOINT ENERGY RESOURCES CORP. d/b/a  
CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

## **H. Natural Gas Commercial Solutions Program**

### **1. Intent of Program**

#### **Description**

The purpose of the Natural Gas Commercial Solutions Program is to encourage Commercial and Industrial (C&I) customers to use natural gas efficiently by installing cost-effective energy-efficient equipment, adopting energy-efficient designs and using energy-efficient operations at their facilities.

The Natural Gas Commercial Solutions Program will help participants achieve significant natural gas savings at their facilities, service providers and vendors in selling and designing more energy-efficient equipment, and participating utilities in achieving their regulatory goals while strengthening customer relationships. This will be accomplished by:

- Developing and implementing strategies to further engage the C&I market and achieve Mcf goals.
- Providing assistance to participants through opportunity assessments, facility audits, technical training and workshops.
- Providing a clear and persuasive argument that energy efficiency projects are a sound investment, especially when budgets are tight
- Working with program participants and service providers to identify custom measures and introduce more energy-efficient designs into new construction and renovation plans.
- Building market-based activity that captures near- and long-term natural gas savings.
- Encouraging equipment vendors and contractors to actively promote and install energy efficient technologies for their C&I customers.

The Natural Gas Commercial Solutions Program will provide cash incentives to C&I customers installing or implementing cost-effective energy efficiency measures through the Direct-Install, Prescriptive, or Custom measures components of the program. In order to achieve savings goals, the following three components will provide a comprehensive program appealing to all C&I customer sectors.

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

- **Direct-Install Measures** will target small to mid-sized customers. Direct Install is a turn-key equipment replacement program designed to reduce energy usage customer costs. Equipment is directly installed by program contractors.
- **Prescriptive Measures** will provide C&I customers a predefined project incentive list based on a fixed-cost per unit installed.
- **Custom Measures** will target large commercial and industrial customers. Projects identified will be eligible for custom incentives after applying documentable and defensible calculated savings values.

The program will also provide the direct support, calculation tools, and training necessary for customers to independently evaluate energy efficiency opportunities, secure budgets through their internal financial planning processes, and oversee those opportunities to their completion. The program will help companies that do not have the in-house capacity or expertise to: 1) identify, evaluate, and undertake efficiency improvements, 2) properly evaluate energy efficiency proposals from vendors, and/or 3) understand how to leverage their energy savings to finance projects.

### **Eligibility**

Any CenterPoint Arkansas Commercial natural gas customer, owner, or tenant with appropriate owner consent, of a commercial or industrial facility receiving natural gas service from CenterPoint Arkansas under the following customer class categories:

- Small Commercial Sales
- Large Commercial Sales
- Large Commercial Transportation

### **Incentives**

Program participants will receive both cash and non-cash incentives.

The cash incentives will be provided at levels intended to incent customers to move forward with implementation of recommended energy efficiency measures.

- For Direct Install customers, the incentives are intended to pay up to 100% of the measure cost.

## EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

- For Prescriptive Measures, incentives are intended to cover approximately 50% to 70% of incremental costs of upgrading to higher efficiency equipment at time of replacement or purchase of new equipment.
- For Custom Measures, the target incentive levels will be set to cover approximately 35% of the customer's implementation costs.

Non-cash incentives will be provided in the form of technical assistance and training as outlined above in the implementation section to promote market transformation.

Incentive application and processing procedures will be created and include thorough application tracking, verification, reporting, and customer eligibility verification. The incentive payment process developed will:

- Receive and process Natural Gas Commercial Solutions Program applications
- Forecast incentives, create a transparent account to track all funds, and pay customers directly and quickly for performing upgrades for Direct-Install, Prescriptive, and Custom Measures customers.
- Reconcile incentives paid with account balances.

## 2. Target Market

The program will target commercial and industrial customers, trade allies, and industry groups. This will be accomplished by developing marketing messages and materials and determining the most effective marketing channels to generate customer interest and participation. Further, the program will capitalize on all C&I customer touch points, such as the direct-Install measures that will provide access to smaller and harder to reach customers like restaurants and small businesses, thereby creating a network of customers to whom other savings opportunities may be marketed.

While all business customers will be eligible to receive technical support such as walkthrough energy audits and financial assistance, the program will proactively solicit opportunities within industries where high yield energy savings measures are most prevalent. A target list of potential customers and installation contractors from the utility C&I customer base will be developed.

These prospects will be chosen from a variety of possible sources, including:

- Customers who have already received audits
- Customers identified by the utilities as "Key Accounts"
- Past participants in utility programs – both trade allies and customers
- Current ENERGY STAR program participants
- Customers that participated in C&I programs previously offered



EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

- Trade ally associations and advisory groups such as builder's associations, local Chambers of Commerce and other associations and organizations.

### 3. State of the Market

Many commercial and industrial customers do not undergo energy efficiency projects because of a variety of barriers such as a lack of understanding about energy efficiency opportunities, technical expertise needed to effectively implement a project or the availability of capital needed for efficiency upgrades. Certain industries are thought to have significant opportunities for natural gas savings, and the barriers to energy efficiency projects will vary depending on the industry. For example, food services, such as restaurants, may not be aware of the opportunities available while many manufacturing businesses may have technical staff that are aware of efficiency opportunities but that may not be able to financially estimate their value. For many C&I customers, the initial capital cost required for efficiency upgrades is a significant barrier.

### 4. Market Barriers

The Natural Gas Commercial Solutions Program is designed to address market barriers preventing participation in energy efficiency opportunities. The following mitigation strategies will be in place to combat identified common market barriers:

Market Barriers	Mitigation Strategies
High initial cost of energy efficient projects	Providing incentives utilizing three different measure approaches (direct-install, prescriptive, and custom measures) will help off-set the initial cost of projects while targeting a variety of C&I customer sectors.
Understanding program offerings	Outreach and training will be provided to help vendors and customers understand the program offerings, eligibility and how to participate.
Ease of participation	Forms and applications will be easy to obtain, understand and fill out. Further, technical assistance will be made available to answer general questions about the application process.

## EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

Technical assistance needed for project development	Participants will have access to a team of energy efficiency engineers to help them develop identified projects. Their expertise will help customers calculate energy savings potential for complex energy efficiency installations and make recommendations on equipment choices.
Understanding the long-term value of energy efficiency	The non-cash incentive component of the program is designed to promote market transformation by providing training to educate customers and trade allies on industry best practices in areas such as monitoring energy savings, leveraging savings to fund additional projects, and evaluating project cost-effectiveness.

**5. Benefit-Cost Analysis**

<b>Test Results - SCS Commercial Solutions</b>	<b>Triennial NPV</b>	<b>Triennial B/C</b>
<b>Ratepayer Impact Measure Test</b>	(\$6,930,903)	0.67
<b>Utility Cost Test</b>	\$10,738,426	4.53
<b>Societal Test</b>	\$10,468,979	2.91
<b>Participant Test</b>	\$17,310,563	5.70
<b>Total Resource Cost Test</b>	\$9,890,816	2.804
<b>Test Results - LCS Commercial Solutions</b>	<b>Triennial NPV</b>	<b>Triennial B/C</b>
<b>Ratepayer Impact Measure Test</b>	(\$1,016,251)	0.80

EXHIBIT- RCL-1

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

<b>Utility Cost Test</b>	\$3,248,944	4.53
<b>Societal Test</b>	\$3,151,005	2.86
<b>Participant Test</b>	\$4,012,598	4.45
<b>Total Resource Cost Test</b>	\$2,967,736	2.752

## 6. Evaluation, Measurement and Verification

The guiding principles of the program's Evaluation, Measurement and Verification (EMV) Plan are to:

- Assess the effectiveness of program delivery mechanisms
- Assess customer satisfaction with the program
- Determine the program impacts in terms of deemed energy and demand savings
- Assess the effectiveness of marketing and advertising
- Assess program cost-effectiveness

Detailed documentation will be provided by a contracted program implementer regarding completed projects, calculated energy savings using accepted methodologies and corresponding incentive amounts.

## 7. Budget

### Commercial Gas Solutions

Planning/Design	\$ 58,838	\$ 21,007	\$ 15,104
Marketing/Delivery	\$ 456,758	\$ 506,347	\$ 683,141
Incentives/Rebates	\$ 450,399	\$ 519,447	\$ 813,694
EM&V	\$ 166,120	\$ 189,694	\$ 277,929
Administration	\$ 19,989	\$ 20,588	\$ 21,206
<b>Total Program Budget</b>	<b>\$ 1,152,104</b>	<b>\$ 1,257,083</b>	<b>\$ 1,811,073</b>

<b>Overall Program Budgets</b>	<b>Jul 1 2011</b>	<b>2012</b>	<b>2013</b>
<b>Residential Home Energy Reports</b>			
Planning/Design	\$ 2,457	\$ 2,530	\$ 2,606
Marketing/Delivery	\$ 251,159	\$ 439,069	\$ 347,819
Incentives/Rebates	\$ -	\$ -	\$ -
EM&V	\$ 13,208	\$ 22,623	\$ 18,080
Administration	\$ 10,540	\$ 10,856	\$ 11,182
<b>Total Program Budget</b>	<b>\$ 277,364</b>	<b>\$ 475,079</b>	<b>\$ 379,688</b>

<b>Statewide Energy Education Project</b>			
Planning/Design	\$ 751	\$ 1,548	\$ 1,594
Marketing/Delivery	\$ 76,818	\$ 156,019	\$ 158,184
Incentives/Rebates	\$ -	\$ -	\$ -
EM&V	\$ 4,040	\$ 8,210	\$ 8,331
Administration	\$ 3,224	\$ 6,641	\$ 6,840
<b>Total Program Budget</b>	<b>\$ 84,832</b>	<b>\$ 172,419</b>	<b>\$ 174,950</b>

<b>Arkansas Weatherization Project</b>			
Planning/Design	\$ 2,736	\$ 5,636	\$ 5,805
Marketing/Delivery	\$ 279,712	\$ 623,817	\$ 687,297
Incentives/Rebates	\$ -	\$ -	\$ -
EM&V	\$ 14,709	\$ 32,682	\$ 35,900
Administration	\$ 11,738	\$ 24,181	\$ 24,907
<b>Total Program Budget</b>	<b>\$ 308,896</b>	<b>\$ 686,316</b>	<b>\$ 753,910</b>

<b>HEAL Arkansas</b>			
Planning/Design	\$ 1,033	\$ 1,064	\$ 1,096
Marketing/Delivery	\$ 18,119	\$ 19,348	\$ 20,465
Incentives/Rebates	\$ 99,864	\$ 109,719	\$ 120,888
EM&V	\$ 6,172	\$ 6,735	\$ 7,358
Administration	\$ 4,432	\$ 4,565	\$ 4,702
<b>Total Program Budget</b>	<b>\$ 129,620</b>	<b>\$ 141,431</b>	<b>\$ 154,509</b>

**Flow Showerhead and Faucet Aerator CIP**

Planning/Design	\$ 435	\$ 896	\$ 923
Marketing/Delivery	\$ 28,424	\$ 58,554	\$ 60,311
Incentives/Rebates	\$ 42,051	\$ 87,557	\$ 92,166
EM&V	\$ 3,639	\$ 7,543	\$ 7,868
Administration	\$ 1,866	\$ 3,844	\$ 3,960
<b>Total Program Budget</b>	<b>\$ 76,415</b>	<b>\$ 158,395</b>	<b>\$ 165,227</b>

	Jul 1 2011	2012	2013
<b>Commercial Gas Solutions</b>			
Planning/Design	\$ 58,838	\$ 21,007	\$ 15,104
Marketing/Delivery	\$ 456,758	\$ 506,347	\$ 683,141
Incentives/Rebates	\$ 450,399	\$ 519,447	\$ 813,694
EM&V	\$ 166,120	\$ 189,694	\$ 277,929
Administration	\$ 19,989	\$ 20,588	\$ 21,206
<b>Total Program Budget</b>	<b>\$ 1,152,104</b>	<b>\$ 1,257,083</b>	<b>\$ 1,811,073</b>

<b>Water Heating CIP</b>			
<b>Rebates</b>			
Natural Gas Storage Tank .62	\$ 5,761	\$ 17,283	\$ 17,283
Natural Gas Tankless .80	\$ 279,672	\$ 1,025,463	\$ 1,025,463
<b>Total Gas to Gas</b>	<b>\$ 285,433</b>	<b>\$ 1,042,746</b>	<b>\$ 1,042,746</b>
Planning/Design	\$ 2,953	\$ 6,082	\$ 6,265
Marketing/Delivery	\$ 73,244	\$ 150,883	\$ 155,410
Incentives/Rebates	\$ 285,433	\$ 1,042,746	\$ 1,042,746
EM&V	\$ 18,715	\$ 61,290	\$ 61,565
Administration	\$ 12,667	\$ 26,095	\$ 26,878
<b>Total Program Budget</b>	<b>\$ 393,012</b>	<b>\$ 1,287,097</b>	<b>\$ 1,292,864</b>

<b>Space Heating System CIP</b>			
<b>Rebates</b>			
Natural Gas Forced Air .90	\$ 43,208	\$ 155,548	\$ 155,548
Natural Gas Forced Air .95	\$ 274,958	\$ 1,021,274	\$ 1,021,274
Hydronic Heating	\$ 18,331	\$ 47,136	\$ 47,136
<b>Total Gas to Gas</b>	<b>\$ 336,497</b>	<b>\$ 1,223,957</b>	<b>\$ 1,223,957</b>
Natural Gas Forced Air .80	\$ 3,666	\$ -	\$ -
Natural Gas Forced Air .90	\$ 3,535	\$ 16,425	\$ 16,425
<b>Total Gas Back-up</b>	<b>\$ 7,201</b>	<b>\$ 16,425</b>	<b>\$ 16,425</b>
Planning/Design	\$ 3,555	\$ 7,324	\$ 7,544
Marketing/Delivery	\$ 140,489	\$ 289,408	\$ 298,090
Incentives/Rebates	\$ 343,698	\$ 1,240,382	\$ 1,240,382
EM&V	\$ 25,150	\$ 78,427	\$ 78,919
Administration	\$ 15,253	\$ 31,422	\$ 32,364
<b>Total Program Budget</b>	<b>\$ 528,145</b>	<b>\$ 1,646,962</b>	<b>\$ 1,657,299</b>

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

	Jul 1 2011	2012	2013
<b>Commercial Boiler CIP</b>			
<b>Rebates</b>			
Boiler .85 to .91	\$ 42,000	\$ 112,000	\$ 140,000
Boiler .92 Or Higher	\$ 60,000	\$ 160,000	\$ 200,000
Burner Replacements	\$ 12,500	\$ 35,000	\$ 42,000
Boiler Reset Controls	\$ 2,250	\$ 6,000	\$ 7,500
Boiler Cut Out Controls	\$ 1,875	\$ 4,500	\$ 6,000
Boiler Vent Damper	\$ 1,500	\$ 3,750	\$ 5,000
<b>Total Rebates</b>	<b>\$ 120,125</b>	<b>\$ 321,250</b>	<b>\$ 400,500</b>
Planning/Design	\$ 1,243	\$ 2,560	\$ 2,637
Marketing/Delivery	\$ 52,282	\$ 107,702	\$ 110,933
Incentives/Rebates	\$ 120,125	\$ 321,250	\$ 400,500
EM&V	\$ 8,949	\$ 22,125	\$ 26,269
Administration	\$ 5,331	\$ 10,982	\$ 11,312
<b>Total Program Budget</b>	<b>\$ 187,930</b>	<b>\$ 464,618</b>	<b>\$ 551,650</b>
<b>Commercial Food Service CIP</b>			
Broiler (Infrared, Upright)	\$ 16,250	\$ 32,500	\$ 32,500
CharBriolier (infrared)	\$ 5,250	\$ 15,750	\$ 21,000
Combi Oven	\$ 15,750	\$ 47,250	\$ 63,000
Convection Oven	\$ 13,750	\$ 27,500	\$ 27,500
Conveyer Oven	\$ 12,000	\$ 36,000	\$ 48,000
Fryer (High EF of Infrared)	\$ 7,500	\$ 15,000	\$ 15,000
Rotating Rack Ovens	\$ 1,375	\$ 2,750	\$ 2,750
Rotisserie Ovens (Infrared)	\$ 1,375	\$ 2,750	\$ 2,750
Salamander Broilers	\$ 500	\$ 1,000	\$ 1,000
Pasta Cooker	\$ 625	\$ 1,250	\$ 1,250
<b>Total Rebates</b>	<b>\$ 74,375</b>	<b>\$ 181,750</b>	<b>\$ 214,750</b>
Planning/Design	\$ 769	\$ 1,585	\$ 1,632
Marketing/Delivery	\$ 43,557	\$ 89,727	\$ 92,419
Incentives/Rebates	\$ 74,375	\$ 181,750	\$ 214,750
EM&V	\$ 6,100	\$ 13,993	\$ 15,790
Administration	\$ 3,301	\$ 6,800	\$ 7,003
<b>Total Program Budget</b>	<b>\$ 128,102</b>	<b>\$ 293,854</b>	<b>\$ 331,595</b>
<b>Total CIP Budget</b>	<b>\$ 3,266,421</b>	<b>\$ 6,583,254</b>	<b>\$ 7,272,763</b>

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

<b>Budget Expenses by Category</b>	<b>Jul 1 2011</b>	<b>2012</b>	<b>2013</b>
Planning/Design	\$ 74,770	\$ 50,232	\$ 45,206
Marketing/Delivery	\$ 1,420,564	\$ 2,440,875	\$ 2,614,069
Incentives/Rebates	\$ 1,415,944	\$ 3,502,852	\$ 3,925,126
EM&V	\$ 266,802	\$ 443,321	\$ 538,009
Administration	\$ 88,341	\$ 145,974	\$ 150,353
<b>Total</b>	<b>\$ 3,266,421</b>	<b>\$ 6,583,254</b>	<b>\$ 7,272,763</b>

<b>Percentage of Budget</b>			
Planning/Design	2%	1%	1%
Marketing/Delivery	43%	37%	36%
Incentives/Rebates	43%	53%	54%
EM&V	8%	7%	7%
Administration	3%	2%	2%

Residential	\$ 1,672,834	\$ 4,197,002	\$ 4,205,246
SCS	\$ 1,276,251	\$ 1,853,055	\$ 2,180,615
LCS	\$ 317,336	\$ 533,197	\$ 886,903
<b>Total</b>	<b>\$ 3,266,421</b>	<b>\$ 6,583,254</b>	<b>\$ 7,272,763</b>
Compared to Total Budget	\$ -	\$ -	\$ -

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

<b>Detailed Residential Program Budgets</b>	<b>Jul 1 2011</b>	<b>2012</b>	<b>2013</b>
<b>Residential Home Energy Reports</b>			
Planning/Design	\$ 2,457	\$ 2,530	\$ 2,606
Marketing/Delivery	\$ 251,159	\$ 439,069	\$ 347,819
Incentives/Rebates	\$ -	\$ -	\$ -
EM&V	\$ 13,208	\$ 22,623	\$ 18,080
Administration	\$ 10,540	\$ 10,856	\$ 11,182
<b>Total Program Budget</b>	<b>\$ 277,364</b>	<b>\$ 475,079</b>	<b>\$ 379,688</b>

<b>Statewide Energy Education Project</b>			
Planning/Design	\$ 529	\$ 1,091	\$ 1,123
Marketing/Delivery	\$ 54,125	\$ 109,929	\$ 111,454
Incentives/Rebates	\$ -	\$ -	\$ -
EM&V	\$ 2,846	\$ 5,785	\$ 5,870
Administration	\$ 2,271	\$ 4,679	\$ 4,819
<b>Total Program Budget</b>	<b>\$ 59,772</b>	<b>\$ 121,484</b>	<b>\$ 123,267</b>

<b>Arkansas Weatherization Project</b>			
Planning/Design	\$ 2,736	\$ 5,636	\$ 5,805
Marketing/Delivery	\$ 279,712	\$ 623,817	\$ 687,297
Incentives/Rebates	\$ -	\$ -	\$ -
EM&V	\$ 14,709	\$ 32,682	\$ 35,900
Administration	\$ 11,738	\$ 24,181	\$ 24,907
<b>Total Program Budget</b>	<b>\$ 308,896</b>	<b>\$ 686,316</b>	<b>\$ 753,910</b>

<b>HEAL Arkansas</b>			
Planning/Design	\$ 1,033	\$ 1,064	\$ 1,096
Marketing/Delivery	\$ 18,119	\$ 19,348	\$ 20,465
Incentives/Rebates	\$ 99,864	\$ 109,719	\$ 120,888
EM&V	\$ 6,172	\$ 6,735	\$ 7,358
Administration	\$ 4,432	\$ 4,565	\$ 4,702
<b>Total Program Budget</b>	<b>\$ 129,620</b>	<b>\$ 141,431</b>	<b>\$ 154,509</b>

<b>Water Heating CIP</b>			
<b>Rebates</b>			
Natural Gas Storage Tank .62	\$ 5,133	\$ 15,400	\$ 15,400
Natural Gas Tankless .80	\$ 249,192	\$ 913,706	\$ 913,706
<b>Total Gas to Gas</b>	<b>\$ 254,326</b>	<b>\$ 929,105</b>	<b>\$ 929,105</b>

Planning/Design	\$ 2,631	\$ 5,419	\$ 5,582
Marketing/Delivery	\$ 65,262	\$ 134,440	\$ 138,473
Incentives/Rebates	\$ 254,326	\$ 929,105	\$ 929,105
EM&V	\$ 16,675	\$ 54,611	\$ 54,855
Administration	\$ 11,287	\$ 23,251	\$ 23,948

Schedule KFS2



EXHIBIT- RCL-2

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CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

**Total Program Budget   \$   350,180   \$ 1,146,826   \$ 1,151,964**

	Jul 1 2011	2012	2013
<b>Space Heating System CIP</b>			
<b>Rebates</b>			
Natural Gas Forced Air .90	\$ 38,499	\$ 138,596	\$ 138,596
Natural Gas Forced Air .95	\$ 244,993	\$ 909,972	\$ 909,972
Hydronic Heating	\$ 16,333	\$ 41,999	\$ 41,999
<b>Total Gas to Gas</b>	<b>\$ 299,824</b>	<b>\$ 1,090,567</b>	<b>\$ 1,090,567</b>
Natural Gas Forced Air .80	\$ 3,267	\$ -	\$ -
Natural Gas Forced Air .90	\$ 3,150	\$ 14,635	\$ 14,635
<b>Total Gas Back-up</b>	<b>\$ 6,416</b>	<b>\$ 14,635</b>	<b>\$ 14,635</b>
Planning/Design	\$ 3,168	\$ 6,526	\$ 6,721
Marketing/Delivery	\$ 125,178	\$ 257,867	\$ 265,603
Incentives/Rebates	\$ 306,241	\$ 1,105,202	\$ 1,105,202
EM&V	\$ 22,409	\$ 69,880	\$ 70,318
Administration	\$ 13,591	\$ 27,997	\$ 28,837
<b>Total Program Budget</b>	<b>\$ 470,586</b>	<b>\$ 1,467,471</b>	<b>\$ 1,476,682</b>
<b>Low Flow Showerhead and Faucet Aerator CIP</b>			
Planning/Design	\$ 435	\$ 896	\$ 923
Marketing/Delivery	\$ 28,424	\$ 58,554	\$ 60,311
Incentives/Rebates	\$ 42,051	\$ 87,557	\$ 92,166
EM&V	\$ 3,639	\$ 7,543	\$ 7,868
Administration	\$ 1,866	\$ 3,844	\$ 3,960
<b>Total Program Budget</b>	<b>\$ 76,415</b>	<b>\$ 158,395</b>	<b>\$ 165,227</b>
<b>Total CIP Budget</b>	<b>\$ 1,672,834</b>	<b>\$ 4,197,002</b>	<b>\$ 4,205,246</b>

**Detailed SCS Program Budgets****Jul 1 2011****2012****2013****Commercial Gas Solutions**

Planning/Design	\$ 48,672	\$ 16,995	\$ 11,090
Marketing/Delivery	\$ 377,842	\$ 408,414	\$ 480,670
Incentives/Rebates	\$ 372,581	\$ 417,442	\$ 562,218
EM&V	\$ 137,419	\$ 152,444	\$ 192,034
Administration	\$ 16,535	\$ 17,031	\$ 17,542
<b>Total Program Budget</b>	<b>\$ 953,049</b>	<b>\$ 1,012,326</b>	<b>\$ 1,263,553</b>

**Statewide Energy Education Project**

Planning/Design	\$ 188	\$ 387	\$ 398
Marketing/Delivery	\$ 19,192	\$ 38,980	\$ 39,521
Incentives/Rebates	\$ -	\$ -	\$ -
EM&V	\$ 1,009	\$ 2,051	\$ 2,081
Administration	\$ 805	\$ 1,659	\$ 1,709
<b>Total Program Budget</b>	<b>\$ 21,194</b>	<b>\$ 43,077</b>	<b>\$ 43,709</b>

**Water Heating CIP****Rebates**

Natural Gas Storage Tank .62	\$ 628	\$ 1,884	\$ 1,884
Natural Gas Tankless .80	\$ 30,479	\$ 111,758	\$ 111,758
<b>Total Gas to Gas</b>	<b>\$ 31,107</b>	<b>\$ 113,641</b>	<b>\$ 113,641</b>

Planning/Design	\$ 322	\$ 663	\$ 683
Marketing/Delivery	\$ 7,982	\$ 16,444	\$ 16,937
Incentives/Rebates	\$ 31,107	\$ 113,641	\$ 113,641
EM&V	\$ 2,040	\$ 6,680	\$ 6,710
Administration	\$ 1,381	\$ 2,844	\$ 2,929
<b>Total Program Budget</b>	<b>\$ 42,832</b>	<b>\$ 140,271</b>	<b>\$ 140,900</b>

**Space Heating System CIP****Rebates**

Natural Gas Forced Air .90	\$ 4,709	\$ 16,952	\$ 16,952
Natural Gas Forced Air .95	\$ 29,966	\$ 111,301	\$ 111,301
Hydronic Heating	\$ 1,998	\$ 5,137	\$ 5,137
<b>Total Gas to Gas</b>	<b>\$ 36,672</b>	<b>\$ 133,390</b>	<b>\$ 133,390</b>

Natural Gas Forced Air .80	\$ 400	\$ -	\$ -
Natural Gas Forced Air .90	\$ 385	\$ 1,790	\$ 1,790
<b>Total Gas Back-up</b>	<b>\$ 785</b>	<b>\$ 1,790</b>	<b>\$ 1,790</b>

Planning/Design	\$ 387	\$ 798	\$ 822
Marketing/Delivery	\$ 15,311	\$ 31,540	\$ 32,487
Incentives/Rebates	\$ 37,457	\$ 135,180	\$ 135,180
EM&V	\$ 2,741	\$ 8,547	\$ 8,601
Administration	\$ 1,662	\$ 3,424	\$ 3,527

EXHIBIT- RCL-2

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CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

**Total Program Budget \$ 57,559 \$ 179,490 \$ 180,617**

<b>Commercial Boiler CIP</b>	<b>Jul 1 2011</b>	<b>2012</b>	<b>2013</b>
<b>Rebates</b>			
Boiler .85 to .91	\$ 19,293	\$ 51,447	\$ 64,309
Boiler .92 0r Higher	\$ 27,561	\$ 73,496	\$ 91,870
Burner Replacements	\$ 5,742	\$ 16,077	\$ 19,293
Boiler Reset Controls	\$ 1,034	\$ 2,756	\$ 3,445
Boiler Cut Out Controls	\$ 861	\$ 2,067	\$ 2,756
Boiler Vent Damper	\$ 689	\$ 1,723	\$ 2,297
<b>Total Rebates</b>	<b>\$ 55,179</b>	<b>\$ 147,566</b>	<b>\$ 183,969</b>
Planning/Design	\$ 571	\$ 1,176	\$ 1,211
Marketing/Delivery	\$ 24,016	\$ 49,473	\$ 50,957
Incentives/Rebates	\$ 55,179	\$ 147,566	\$ 183,969
EM&V	\$ 4,111	\$ 10,163	\$ 12,067
Administration	\$ 2,449	\$ 5,045	\$ 5,196
<b>Total Program Budget</b>	<b>\$ 86,326</b>	<b>\$ 213,422</b>	<b>\$ 253,400</b>
<b>Commercial Food Service CIP</b>			
Broiler (Infrared, Upright)	\$ 14,625	\$ 29,250	\$ 29,250
CharBriolier (infrared)	\$ 4,725	\$ 14,175	\$ 18,900
Combi Oven	\$ 14,175	\$ 42,525	\$ 56,700
Convection Oven	\$ 12,375	\$ 24,750	\$ 24,750
Conveyer Oven	\$ 10,800	\$ 32,400	\$ 43,200
Fryer (High EF of Infrared)	\$ 6,750	\$ 13,500	\$ 13,500
Rotating Rack Ovens	\$ 1,238	\$ 2,475	\$ 2,475
Rotisserie Ovens (Infrared)	\$ 1,238	\$ 2,475	\$ 2,475
Salamander Broilers	\$ 450	\$ 900	\$ 900
Pasta Cooker	\$ 563	\$ 1,125	\$ 1,125
<b>Total Rebates</b>	<b>\$ 66,938</b>	<b>\$ 163,575</b>	<b>\$ 193,275</b>
Planning/Design	\$ 692	\$ 1,426	\$ 1,469
Marketing/Delivery	\$ 39,201	\$ 80,754	\$ 83,177
Incentives/Rebates	\$ 66,938	\$ 163,575	\$ 193,275
EM&V	\$ 5,490	\$ 12,594	\$ 14,211
Administration	\$ 2,971	\$ 6,120	\$ 6,303
<b>Total Program Budget</b>	<b>\$ 115,292</b>	<b>\$ 264,469</b>	<b>\$ 298,435</b>
<b>Total CIP Budget</b>	<b>\$ 1,276,251</b>	<b>\$ 1,853,055</b>	<b>\$ 2,180,615</b>

<b>Detailed LCS Program Budgets</b>	<b>Jul 1 2011</b>	<b>2012</b>	<b>2013</b>
<b>Commercial Gas Solutions</b>			
Planning/Design	\$ 10,166	\$ 4,012	\$ 4,014
Marketing/Delivery	\$ 78,916	\$ 97,933	\$ 202,470
Incentives/Rebates	\$ 77,818	\$ 102,005	\$ 251,476
EM&V	\$ 28,701	\$ 37,250	\$ 85,895
Administration	\$ 3,454	\$ 3,557	\$ 3,664
<b>Total Program Budget</b>	<b>\$ 199,055</b>	<b>\$ 244,757</b>	<b>\$ 547,520</b>
<b>Statewide Energy Education Project</b>			
Planning/Design	\$ 34	\$ 71	\$ 73
Marketing/Delivery	\$ 3,501	\$ 7,111	\$ 7,209
Incentives/Rebates	\$ -	\$ -	\$ -
EM&V	\$ 184	\$ 374	\$ 380
Administration	\$ 147	\$ 303	\$ 312
<b>Total Program Budget</b>	<b>\$ 3,866</b>	<b>\$ 7,858</b>	<b>\$ 7,973</b>
<b>Commercial Boiler CIP</b>			
<b>Rebates</b>			
Boiler .85 to .91	\$ 22,707	\$ 60,553	\$ 75,691
Boiler .92 Or Higher	\$ 32,439	\$ 86,504	\$ 108,130
Burner Replacements	\$ 6,758	\$ 18,923	\$ 22,707
Boiler Reset Controls	\$ 1,216	\$ 3,244	\$ 4,055
Boiler Cut Out Controls	\$ 1,014	\$ 2,433	\$ 3,244
Boiler Vent Damper	\$ 811	\$ 2,027	\$ 2,703
<b>Total Rebates</b>	<b>\$ 64,946</b>	<b>\$ 173,684</b>	<b>\$ 216,531</b>
Planning/Design	\$ 672	\$ 1,384	\$ 1,425
Marketing/Delivery	\$ 28,267	\$ 58,229	\$ 59,976
Incentives/Rebates	\$ 64,946	\$ 173,684	\$ 216,531
EM&V	\$ 4,838	\$ 11,962	\$ 14,202
Administration	\$ 2,882	\$ 5,937	\$ 6,116
<b>Total Program Budget</b>	<b>\$ 101,605</b>	<b>\$ 251,196</b>	<b>\$ 298,250</b>

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS, DOCKET NO. 07-081-TF

	Jul 1 2011	2012	2013
<b>Commercial Food Service CIP</b>			
Broiler (Infrared, Upright)	\$ 1,625	\$ 3,250	\$ 3,250
CharBriolier (infrared)	\$ 525	\$ 1,575	\$ 2,100
Combi Oven	\$ 1,575	\$ 4,725	\$ 6,300
Convection Oven	\$ 1,375	\$ 2,750	\$ 2,750
Conveyer Oven	\$ 1,200	\$ 3,600	\$ 4,800
Fryer (High EF of Infrared)	\$ 750	\$ 1,500	\$ 1,500
Rotating Rack Ovens	\$ 138	\$ 275	\$ 275
Rotisserie Ovens (Infrared)	\$ 138	\$ 275	\$ 275
Salamander Broilers	\$ 50	\$ 100	\$ 100
Pasta Cooker	\$ 63	\$ 125	\$ 125
<b>Total Rebates</b>	<b>\$ 7,438</b>	<b>\$ 18,175</b>	<b>\$ 21,475</b>
Planning/Design	\$ 77	\$ 158	\$ 163
Marketing/Delivery	\$ 4,356	\$ 8,973	\$ 9,242
Incentives/Rebates	\$ 7,438	\$ 18,175	\$ 21,475
EM&V	\$ 610	\$ 1,399	\$ 1,579
Administration	\$ 330	\$ 680	\$ 700
<b>Total Program Budget</b>	<b>\$ 12,810</b>	<b>\$ 29,385</b>	<b>\$ 33,159</b>
<b>Total CIP Budget</b>	<b>\$ 317,336</b>	<b>\$ 533,197</b>	<b>\$ 886,903</b>

EXHIBIT- RCL-3

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS DOCKET NO 07-081-TF

## INPUTS APPLIED FOR CALIFORNIA TESTS

**Input 1:** *The Retail Rate* (\$/MCF) is the natural gas rate for the specific customer class or classes (residential, commercial, industrial) that are expected to participate in the project. The *Retail Rate* is calculated by adding the following components:

- The utility's currently approved tariffed non-natural gas margin in the customer class that is expected to participate in the project;
- The *Commodity Cost* of \$/ Mcf, which is described further in Input 3 below; and
- The *Annual Escalation Rate*, which in this particular filing was 2.35 percent, which is based on the average projected annual change from 2008-2029 of a projected natural gas price index entitled "Chained Price Index-Household Natural Gas" as established by the Data Resources Incorporated (DRI).

**Input 3:** The Commodity Cost (\$/MCF) is \$XX/Mcf.

**Input 4:** The *Demand Cost* (\$XX/MCF/Year) is the estimated annual fixed demand costs that the utility would save from buying one fewer MCF of demand services in the peaking season.

**Input 5:** The *Peak Reduction Factor* (1 percent) is the estimated annual effect of the project on the system peak. The factor is presented as the percent of natural gas commodity savings on peak demand, which is estimated at one percent for most projects. Although the 1 percent is not the peak reduction factor for each and every project, it is representative of the entire portfolio of energy efficiency programs that CenterPoint Arkansas will offer its customers in Arkansas, and is considered the industry standard for natural gas energy efficiency programs around the country.



**Input 6:** *Variable O&M* (\$0.01/MCF) is the variable costs, other than fuel and purchased energy costs, that are included as expenses in delivering energy to the end-use customer. In the case of CenterPoint Arkansas, the variable costs are \$0.01 for the odorant associated with the distribution of natural gas.

**Input 9:** The *Natural Gas Environmental Damage Factor* (\$0.33/Mcf) is the long-term “external” cost to society and the environment of burning natural gas. This environmental damage factor was based on the findings of multiple regulatory proceedings in Minnesota, and is likely understated given the current policy debates about climate change and potential cap and trade provisions for addressing greenhouse gas emissions on either the federal or state level.

Given that the environmental externalities for natural gas are essentially the same for any natural gas utility in any given state, CenterPoint Arkansas determined that using the environmental damage factor that was established in a regulatory proceeding in another CenterPoint Energy jurisdiction was representative of the environmental externalities for Arkansas.

**Input 11:** The *Participant Discount Rate* (4.25%) is the Societal Discount Rate of 4.26 percent, as described below in Input 13. This discount rate would reflect a customer’s likely opportunity costs (i.e., the return on investment that a residential customer would likely give up in order to invest in energy efficiency).

**Input 12:** The *Utility Discount Rate* (5.73%) is the utility’s after-tax weighted cost of capital approved in the utility’s most recent rate case. This rate is used to value, in current dollars, the future stream of internal benefits and costs (excluding benefits resulting from avoided environmental externalities) resulting from a utility investment. Since the *Utility Discount Rate* is the utility’s cost for its capital, it is a reasonable measure of the value society places on a utility investment.

**Input 13:** The *Societal Discount Rate* (4.25%) is the rate used to discount the future stream of benefits resulting from avoided environmental damage of natural gas. Since environmental costs are not captured and reflected in market prices at this time, it is necessary to impute and impose a

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS DOCKET NO 07-081-TF

societal discount rate for these costs. The *Societal Discount Rate* is equal to the United State Department of the Treasury's (Treasury) 20-year Daily Treasury Long-Term Rate, which averaged 4.26 percent as of July 30, 2010. The Treasury's 20-year Daily Treasury Long-Term Rate captures the market's expectations regarding inflation, along with a small risk factor.

**Input 14:** The *General Input Data Year* for the 2011-2013 cost benefit analysis is 2010, which is the basis for many of the general inputs of commodity, demand costs and retail rate.

**Input 15a:** *Project Analysis Year 1* is 2011.

**Input 15b:** *Project Analysis Year 2* is 2012.

**Input 15c:** *Project Analysis Year 3* is 2013.

**Input 16:** The *Utility Project Costs* is the sum of all of the utility's estimated project costs, including administrative, project delivery, evaluation and incentives for customers and trade allies.

**Input 17:** The *Direct Participant Costs* (\$/Participant) is the incremental "out of pocket" expenses that a customer would pay to install the high-efficiency conservation measure. For example, the cost to a customer to install a high-efficiency furnace is the difference in equipment costs between high-efficiency equipment and standard equipment that just meets the energy code.

**Input 20:** The *Project Life* is the expected lifetime of a particular energy conservation measure, expressed in number of years. The *Project Life* is based on the project life established in the Deemed Savings Docket (No. 152-TF) as approved by the Arkansas Public Service Commission.

**Input 21:** The *Average MCF/Participant Saved* is the estimated annual amount of MCFs saved from the energy conservation measure. Many of claimed energy savings are derived from the Arkansas Deemed Savings Database, although two measures' energy savings are calculated using standard engineering calculations given that they were not included in the initial Arkansas

CENTERPOINT ENERGY RESOURCES CORP. d/b/a

CENTERPOINT ENERGY ARKANSAS GAS DOCKET NO 07-081-TF

Deemed Savings estimates, but are measures that have an opportunity to realize natural gas energy savings for residential and commercial customers.

**Input 23:** The *Number of Participants* is the estimated number of participants based on the utility's expected market penetration level, based on past experience in a similar project in another jurisdiction.

**Input 24:** The *Total Annual MCF Saved* is the total amount of energy savings projected for a year and multiplying Input Number 23 by Input Number 21.

**Input 25:** The *Incentive per Participant* is the utility incentive costs identified in Input Number 16 divided by the *Number of Participants* identified in Input Number 23, and is computed within the model.

CERTIFICATE OF SERVICE

I, Stephanie J. Self, hereby certify that a copy of the foregoing has been served on the below-listed persons by hand delivery, first class, postage prepaid, U. S. mail, and/or electronic mail on the 14<sup>th</sup> day of March 2011.

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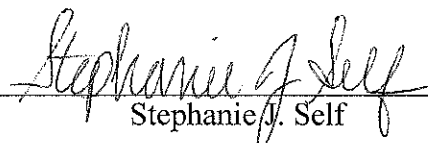
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