



January 10, 2014

VIA E-MAIL
VIA U.S. MAIL

Mr. Brian U. Ray
Executive Secretary
Mississippi Public Service Commission
501 North West Street, Suite 201A
Jackson, MS 39201

Re: **NOTICE OF INTENT OF MISSISSIPPI POWER COMPANY TO ESTABLISH THE
ENERGY EFFICIENCY QUICK START PLAN AND COST RECOVERY RATE
CLAUSE**

Dear Brian:

On behalf of Mississippi Power Company, I have enclosed the original and twelve (12) copies of the Company's Notice of Intent to Establish the Energy Efficiency Quick Start Plan and Cost Recovery rate clause.

Also enclosed is a copy of this letter and the first page of the Notice, which I will appreciate your file-stamping and returning to me in the enclosed, self-addressed, stamped envelope. Please let me know if you have any questions regarding this matter.

Very truly yours,

A handwritten signature in dark ink, appearing to read "B. Stone".
Ben H. Stone

BHS:tjb

Attachments

cc: Shawn Shurden , Esq.
Katherine Collier, Esq.
Mr. Virden Jones
Chad Reynolds, Esq.
Mr. Billy Thornton
Mr. Stephen Stiglets

BEFORE THE MISSISSIPPI PUBLIC SERVICE COMMISSION

**MISSISSIPPI POWER COMPANY
EC-120-0097-00**

DOCKET NO. _____

**IN RE: NOTICE OF INTENT OF MISSISSIPPI POWER COMPANY TO
ESTABLISH THE ENERGY EFFICIENCY QUICK START PLAN AND
COST RECOVERY RATE CLAUSE**

RULE 9 DESIGNATION: APPLICANT DESIGNATES THIS FILING AS A
MISCELLANEOUS FILING UNDER COMMISSION
RULES 9.100(7) AND 29.

PROPOSED EFFECTIVE DATE: SIX MONTHS FOLLOWING COMMISSION
APPROVAL

TEST YEAR: NOT APPLICABLE

NOTICE OF INTENT TO CHANGE RATES

COMES NOW, Mississippi Power Company, ("MPC" or the "Company"), through its undersigned counsel and pursuant to Section 77-3-37 of the *Mississippi Code of 1972, as amended*, and Rules 9.100(7) and 29 of the Mississippi Public Service Commission's ("Commission") Public Utilities Rules of Practice and Procedure ("Rules") respectfully files this its Notice of Intent to Establish the Energy Efficiency Quick Start Plan and Cost Recovery Rate Clause, which will be applicable to MPC's customers in its certificated areas in the twenty-three (23) counties of southeast Mississippi, and in support thereof would show unto the Commission the following:

INTRODUCTION

1. MPC is a public utility as defined in Section 77-3-3(d)(i) of the *Mississippi Code of 1972, as amended*, and is engaged in the business of providing electric service to and for the public for compensation in twenty-three (23) counties of southeastern Mississippi, having its

principal place of business at Gulfport, Mississippi. MPC's mailing address is Post Office Box 4079, Gulfport, Mississippi, 39502-4079.

2. MPC is the holder of a Certificate of Public Convenience and Necessity issued in Docket No. U-99, as supplemented from time to time, authorizing its operations in specified areas of the twenty-three (23) counties of southeastern Mississippi and is rendering service in accordance with its service rules and regulations and in accordance with schedules of rates and charges, all of which are a part of its tariff that has been previously approved by order of this Commission.

3. MPC is a Mississippi corporation. A copy of its corporate charter, articles of incorporation, the names and addresses of its board of directors and officers, and the names of all persons owning fifteen percent (15%) or more of its stock are on file with the Commission and are hereby incorporated by reference.

FACTS

4. In July 11, 2013, the Commission adopted Rule 29, an addition to the Commission's Rules of Practice and Procedure governing conservation and energy efficiency programs. This Rule establishes a "Quick Start Plan" requirement intended to encourage the rapid implementation of energy efficiency programs and to provide experience on which Mississippi's service providers and the Commission can build Comprehensive Portfolios. RP 29 102.1(a) requires that a utility's "Quick Start Plan be filed not later than six (6) months following the Order adopting the Rule."

5. MPC has supported energy efficiency programs for decades and looks forward to building on those efforts through the implementation of its proposed Plan. The Plan is compatible with MPC's philosophy that helping customers use electricity wisely is in the best interest of customers and the Company, and enhances customer satisfaction.

6. MPC now seeks Commission approval of its Quick Start Energy Efficiency Program Plan and of MPC's recovery of costs associated with the Plan's implementation. Section 106 of the Commission's July 11th Order in Docket 2010-AD-2 indicates that a utility may request recovery of costs from approved program budgets. MPC's programs, their budgets, and all other relevant information are discussed in greater detail in the attached Direct Testimony of Chad Ihrig and Lawrence J. Vogt.

7. Mississippi Power has developed a proposed rate schedule allowing MPC's requested recovery. This rate schedule, the Energy Efficiency Cost Recovery (EECR) clause is presented as Exhibit ____ (LJV-1).

SUPPORTING DOCUMENTATION AND INFORMATION

8. In support of this Notice of Intent, the Company hereby submits:

(a) The sworn pre-filed direct testimony and exhibits of Mr. Chad Ihrig, Marketing Principal, Mississippi Power Company.

(b) The sworn pre-filed direct testimony and exhibits of Mr. Lawrence J. Vogt, Manager, Rates, Mississippi Power Company.

(c) The sworn pre-filed direct testimony and exhibits of Ms. Michele P. Negley, Vice President, CLEAResult Consulting, Inc.

(d) The sworn pre-filed direct testimony and exhibits of Mr. James E. Kapsis, Vice President, OPower, Inc.

(e) MPC incorporates by reference all pleadings and testimony filed by the Company with the Commission in Docket No. 2010-AD-2.

9. MPC has provided herewith all of the remaining information relevant to its Notice, which information is sufficient so as to allow for a full, fair and adequate evaluation of

the merits of the requested change, satisfying the requirements of Commission Rules 9.100(7) and 29.

10. The name, address and telephone number of the MPC employee responsible for the Notice of Intent and from whom information may be obtained is:

Mr. Billy F. Thornton
Vice President, Regulatory and Governmental Affairs
Mississippi Power Company
2992 West Beach Boulevard
Post Office Box 4079
Gulfport, MS 39502-4079
Phone: (228) 865-5295
bfthornt@southernco.com

with copy to:

Ben H. Stone, Esq.
Balch & Bingham LLP
1310 25th Avenue
Post Office Box 130
Gulfport, MS 39501
Phone: (228) 214-0402
bstone@balch.com

11. The proposed establishment of the Energy Efficiency Cost Recovery rate clause is being requested pursuant to Rule 29.106, and, therefore, does not otherwise fall within the categories of rate proceedings contained in Rule 9. In addition, the Company's request herein pertains to a rate for a new service for which no rate has previously been established. Therefore, to extent considered a rate proceeding under the law, the Company designates this filing as a miscellaneous filing pursuant to Rule 9.100(7) of the Commission's Rules.

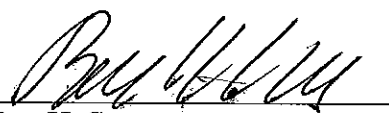
12. The proposed are just and reasonable and should be approved by the Commission. The Company proposes that the changes requested be six months following Commission approval.

WHEREFORE, PREMISES CONSIDERED, Mississippi Power Company hereby requests that this Notice be received and filed; that notice be given in the manner prescribed by law; and that the Commission approve same to become effective six months following Commission approval.

RESPECTFULLY SUBMITTED, this the 10th day of January, 2014.

MISSISSIPPI POWER COMPANY

BY: BALCH & BINGHAM LLP

BY: 
Ben H. Stone

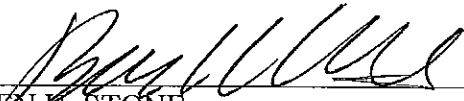
BEN H. STONE
Mississippi Bar No. 7934
TIMOTHY A. FORD
Mississippi Bar No. 5415
RICKY J. COX
Mississippi Bar No. 9606
LEO E. MANUEL
Mississippi Bar No. 101985
BALCH & BINGHAM LLP
P.O. Box 130
Gulfport, MS 39502-0130
228-864-9900
228-864-8221 FAX

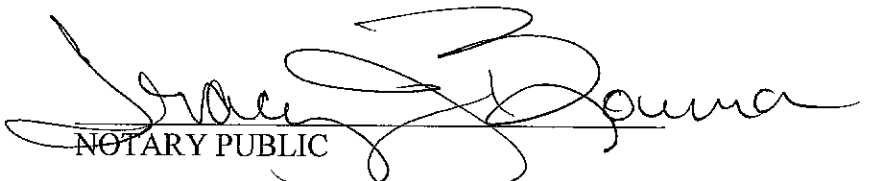
STATE OF MISSISSIPPI

COUNTY OF HARRISON

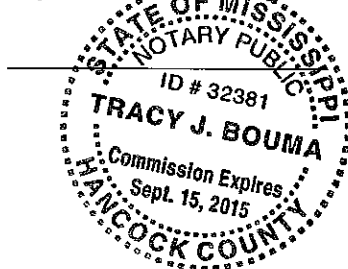
PERSONALLY appeared before me, the undersigned authority in and for the said County and State, within my jurisdiction, the within named BEN H. STONE, who after being duly sworn on oath acknowledged that he is Attorney for MISSISSIPPI POWER COMPANY and that for and on behalf of the said MISSISSIPPI POWER COMPANY and as its act and deed, he signed and delivered the above and foregoing instrument of writing for the purposes mentioned on the day and year therein mentioned, after first having been duly authorized by said MISSISSIPPI POWER COMPANY so to do, and that the statements contained in the foregoing instrument are true and correct to the best of his knowledge, information and belief.

SWORN TO AND SUBSCRIBED BEFORE ME, this the 10th day of January, 2014.


BEN H. STONE


NOTARY PUBLIC

My Commission Expires:



CERTIFICATE OF SERVICE

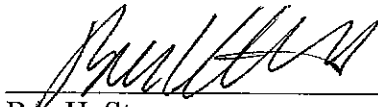
I, BEN H. STONE, counsel for Mississippi Power Company in the Notice of Intent to Change Rates (the "Notice") filed with the Mississippi Public Service Commission (the "Commission") of even date herewith do hereby certify that in compliance with Rule 6 of the Commission's Public Utilities Rules of Practice and Procedure (the "Rules"):

(1) An original and twelve (12) copies of the Notice and testimony have been filed with the Commission by delivery to:

Mr. Brian U. Ray
Executive Secretary
Mississippi Public Service Commission
501 North West Street, Suite 201A
Post Office Box 1174
Jackson, MS 39215-1174

(2) Petitioner has complied with or requested a waiver of all other requirements of the Commission's rules.

THIS, the 10 day of January, 2014.



Ben H. Stone

1 **DIRECT TESTIMONY**

2 **OF**

3 **CHAD IHRIG**

4 **On Behalf of**

5 **MISSISSIPPI POWER COMPANY**

6 **BEFORE THE MISSISSIPPI PUBLIC SERVICE COMMISSION**

7 **DOCKET NO. _____**

8
9 **Q. Please state your name, position, and business address.**

10 **A.** My name is Chad Ihrig. I am employed by Mississippi Power Company (“MPC” or
11 “Company”) in the position of Marketing Principal. My business address is 2605 13th
12 Street, Gulfport, Mississippi 39502.

13 **Q. Mr. Ihrig, what is your background, and what is your job function?**

14 **A.** I am a graduate of the University of Texas at Austin with a Bachelor of Business
15 Administration in Finance. I started with Southern Company in 1998 and have held
16 numerous positions in wholesale commodity trading, risk management, and finance. In
17 2012, I joined Mississippi Power as a Marketing Principal and have focused on the
18 development of energy efficiency programs.

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

20 **A.** The purpose of this testimony is to support MPC’s Application seeking Commission
21 approval of its Quick Start Energy Efficiency Program Plan and recovery of all
22 associated costs. My testimony explains how MPC has complied with the Commission’s

1 filing requirements, provides an overview of the Plan and its objectives, and a summary
2 of the budgeted expenses that MPC is requesting to recover through a rider mechanism.
3 The testimony of Lawrence J. Vogt will support the Company's proposed cost recovery
4 methodology, impacts, and the associated rider schedule.

5 **Q. Are you sponsoring any exhibits?**

6 **A.** Yes. I am sponsoring three (3) exhibits:

7 Exhibit____(CI-1) Energy Efficiency Quick Start Program Descriptions

8 Exhibit____(CI-2) Quick Start Program Projected Energy and Demand
9 Savings

10 Exhibit____(CI-3) Quick Start Program Budgets

11 **Q. Were these exhibits developed and/or compiled under your supervision and control?**

12 **A.** Yes, they were.

13 **QUICK START PLAN**

14 **Q. Please summarize the Company's Quick Start Energy Efficiency Plan.**

15 **A.** MPC's Quick Start Energy Efficiency Plan is the latest manifestation of MPC's
16 longstanding commitment to providing energy efficiency programs for our customers.
17 MPC's Plan is comprised of seven distinct programs designed to develop increased utility
18 program capabilities and infrastructure, expand energy efficiency in Mississippi, identify
19 locally successful (and unsuccessful) energy efficiency program delivery strategies, and
20 deliver energy savings benefits to a large cross-section of MPC customers. To
21 accomplish these objectives and provide value to participating customers, Mississippi
22 Power proposes the following programs:

- 1 • MPC Neighborhood Efficiency Program – This program is an extension and
2 enhancement of the pilot program filed September 5, 2013, to educate and
3 promote energy efficiency to income-qualified customers. For the Quick Start
4 Program, MPC plans to audit 100 homes per month and install efficient lighting
5 and, in more inefficient homes, may also provide insulation upgrades, HVAC
6 tune-ups, and duct sealing.
- 7 • MPC School Kits and Education Program – MPC intends to target 4th and 5th
8 grade students to educate on the benefits of energy conservation. Students will
9 receive a kit of items to install at home and will be encouraged to adopt energy-
10 saving behaviors.
- 11 • Residential Energy Audit and Direct Install Program – This program will increase
12 energy awareness by offering home energy assessments to MPC's residential
13 customers. The program will seek to help homeowners achieve savings by
14 consulting with a participating trade ally or contractor who will help customers
15 analyze their energy use, identify energy efficiency improvement projects and
16 install low-cost, energy saving measures in the residence.
- 17 • Residential and Commercial Air Conditioning Tune-Up and Replacement
18 Program – This program will achieve energy and demand savings by offering
19 incentives toward advanced digital high performance tune-ups and HVAC unit
20 replacements.
- 21 • Small Business Direct Install and Incentive Program – This program will educate
22 and provide direct-installed efficiency measures to business customers that fall

1 under a 100kW peak demand threshold. In addition, incentives will be provided
2 toward the purchase of measures such as efficient lighting products and
3 EnergyStar kitchen appliances.

- 4 • Large Commercial and Industrial Prescriptive and Custom Program – This
5 program will provide facility walkthroughs and incentives toward a suite of
6 energy efficiency measures, allowing for simple approaches to customers with
7 peak demand in excess of 100kW. Prescriptive measures may be installed at the
8 facility and incented on a per unit basis, while the custom program assists
9 customers in identifying opportunities, analyzing associated costs and savings,
10 and provides incentives toward the installation of custom measures.
- 11 • Behavioral Analysis Program - This program is designed to bridge the “customer
12 engagement gap,” providing MPC customers with the tools to understand how
13 they can become better managers of their energy usage. The program will also
14 encourage participation in other programs in MPC’s Quick Start portfolio.

15 These programs are discussed comprehensively my Exhibit____(CI-1).

16 **Q. How were the Plan’s seven unique programs selected?**

17 **A.** Executive management, marketing staff, and customer service employees ultimately
18 selected each of the Plan’s programs. Before deciding to implement any programs, MPC
19 conducted industry research and consulted with nationally-recognized energy efficiency
20 design and implementation firms to discuss program offerings, design, and best practices.
21 While selecting and designing programs, MPC also relied on Gulf Power and Georgia

1 Power (MPC's sister companies) as well as MPC's own pilot programs, for lessons
2 learned.

3 **Q. Have any of the Plan's programs been successfully implemented in other**
4 **jurisdictions?**

5 **A.** Many of MPC's programs have already been successfully implemented in other parts of
6 the country and, in fact, many of MPC's programs will utilize third-party consultants who
7 have implemented similar programs elsewhere. MPC has retained the services of
8 CLEAResult Consulting, Inc. ("CLEAResult"), the largest private North American
9 company exclusively focused on energy efficiency and demand-side management
10 solutions, and OPower, the leading global provider of behavioral energy efficiency and
11 customer engagement solutions for the utility industry, to assist in the design,
12 development and implementation of many of MPC's programs. CLEAResult administers
13 programs in 34 states and provinces in the U.S. and Canada, and OPower's home energy
14 reporting solution is already an approved energy efficiency resource in 30 states.

15 **Q. How does MPC expect to market programs to customers?**

16 **A.** MPC will collaborate with program vendors and trade allies to develop a strategy for the
17 cost effective channels and messages for reaching potential participants. Those may
18 include print collateral, direct mail pieces, door hangers, radio, web, and social media.
19 Customizable marketing collaterals will also be provided to participating contractors.
20 Additionally, MPC will identify potential program participants by cross-promoting the
21 programs when there are opportunities for customers to participate in more than one

1 offering. The promotional marketing portion of the annual Quick Start budget is
2 expected to be approximately \$400,000.

3 **Q. Will the program employ Mississippi contractors or otherwise contribute to the**
4 **local economy?**

5 **A.** Yes. Certain programs will rely on Mississippi trade allies who will conduct audits and
6 home improvements during the operation of particular programs, and the costs to
7 customers of these improvements are expected to be partially funded by the program.
8 Trade allies will be expected to meet Mississippi Power contractor requirements and be
9 technically qualified to perform program upgrades before participating in the program.

10 **PLAN FILING AND IMPLEMENTATION**

11 **Q. When does MPC plan to implement the programs and when will they end?**

12 **A.** MPC intends to begin the Neighborhood Efficiency Program in May 2014 and continue
13 through the end of 2016. Our experience with this program (through a pilot initiated in
14 September 2013) has allowed us to determine an effective design and implementation
15 plan such that a relatively quick roll-out is achievable. All other programs are intended to
16 begin by September 1, 2014 and continue through the end of 2016. MPC will need at
17 least 6 months to complete start-up activities including, but not limited to, the
18 identification and development of promotional channels and material, local allies and
19 contractors, measurement and verification methodology, and reporting and tracking.
20 Therefore, to achieve an implementation date of September 1, 2014, MPC would need to
21 receive MPSC approval of the programs by March 1, 2014.

1 **Q. Is MPC prepared to conduct the Evaluation, Measurement, and Verification**
2 **required for Quick Start Programs in Section 29.103(4) of the Commission's Rules?**

3 **A.** Yes. MPC has EM&V plans in place for each program, as described in Exhibit____(CI-
4 1). MPC intends to select an independent evaluation firm to assist with the measurement
5 and verification of energy savings after programs are launched.

6 **Q. Can you summarize the estimated demand and energy savings for each program by**
7 **year?**

8 **A.** Yes. We estimate total Quick Start program energy savings will total 4,362,271 kWh in
9 2014 before rising to 17,969,384 kWh in 2015 and 15,381,229 kwh in 2016. Demand
10 savings are expected to increase from 1,436 kW to 5,048 kW in 2015 and 4,478 kW in
11 2016. Please see Exhibit____(CI-2) for additional detail, including a breakout of
12 estimated savings by program.

13 **Q. Why do the Quick Start program's estimated energy savings decline from 2015 to**
14 **2016?**

15 **A.** This apparent decline in savings is due to the rapid, one-time response we expect will be
16 generated by OPower's behavioral program. We anticipate that program participants will
17 recognize the majority of the behavioral program-related energy savings by 2015, such
18 that there will be fewer incremental behavioral-related savings—beyond those already
19 realized—available in the program's final year.

20 **Q. Please provide a summary of the estimated budget for each program by year.**

21 **A.** Yes. Mississippi Power expects to spend approximately \$1.54 million to fund its Quick
22 Start programs in 2014 and \$3.90 million annually to fund those programs in 2015 and

1 2016. The budgets for 2015 and 2016 reflect the fact that the programs will be effective
2 for the entire year. See Exhibit____(CI-3) for additional detail concerning the
3 Company's proposed Quick Start Program budget.

4 **Q. Does the portfolio of Quick Start Programs in MPC's Plan serve all customer**
5 **classes?**

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

7 **Q. Do the proposed Quick Start Programs comply with the Commission's**
8 **requirements contained in the newly adopted Rule 29 of the Commission's Public**
9 **Utilities Rules of Practice and Procedure?**

10 **A.** Yes.

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

12 **A.** Yes, it does.

BEFORE THE MISSISSIPPI PUBLIC SERVICE COMMISSION

MISSISSIPPI POWER COMPANY
EC-120-0097-00

DOCKET NO. _____

IN RE: NOTICE OF INTENT OF MISSISSIPPI POWER COMPANY TO
ESTABLISH THE ENERGY EFFICIENCY QUICK START PLAN AND
COST RECOVERY RATE CLAUSE

AFFIDAVIT OF CHAD B. IHRIG

PERSONALLY appeared before the undersigned officer authorized to administer oaths, CHAD B. IHRIG, who being duly sworn, deposes and says; that the foregoing direct testimony was prepared by him or under his supervision; that said testimony was prepared for use as direct testimony on behalf of Mississippi Power Company in the captioned proceeding; that the facts stated therein are true to the best of his knowledge, information and belief; and that if asked the questions appearing therein, his answers, under oath, would be the same.

Dated at Gulfport, Mississippi, the 10th day of January, 2014.

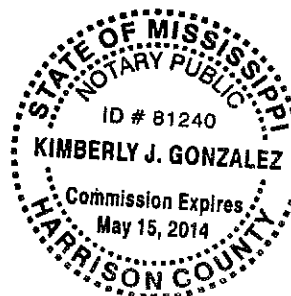
Chad B. Ihrig
CHAD B. IHRIG

Sworn to and subscribed before me this the 10 day of January, 2014.

Kimberly J. Gonzalez
Notary Public

My Commission Expires:

May 15, 2014



Residential Energy Audit and Direct Install

Quick Start Program

a) General Description of the Program and Services to Be Provided:

The Residential Energy Audit and Direct Install Program will be implemented by CLEAResult and will seek to promote energy efficiency by offering home energy assessments to MPC's residential customers. The program will help homeowners achieve savings by consulting with a participating trade ally or contractor who will help customers analyze their energy use, identify energy efficiency improvement projects and install low-cost, energy saving measures in the residence.

Customers will select from three assessment tiers which will all include 1) a consultation about the customer's energy usage issues, 2) a visual inspection of the key components of a home including: living space, attic, crawl space/basement, and exterior of the home, and 3) installation of measures such as compact fluorescent (CFL) and light emitting diode (LED) lighting, faucet aerators, hot water pipe insulation, and advanced power strips. The table provides an example of what may be included in each assessment level:

| Measure | Tier 1 Survey | Tier 2 Assessment | Tier 3 Assessment |
|---|---------------|-------------------|-------------------|
| Direct Install Devices ⁽¹⁾ | ✓ | ✓ | ✓ |
| Walk-through Inspection ⁽²⁾ | ✓ | ✓ | ✓ |
| Duct Leakage Test ⁽³⁾ | | ✓ | ✓ |
| Envelope Air Infiltration Test ⁽⁴⁾ | | ✓ | ✓ |
| Combustion Safety Education ⁽⁵⁾ | | ✓ | ✓ |
| Home Energy Report ⁽⁶⁾ | ✓ | ✓ | ✓ |
| Tier 2 Report ⁽⁷⁾ | | ✓ | ✓ |
| Tier 3 Report ⁽⁷⁾ | | | ✓ |

Notes to table above:

⁽¹⁾Examples of Direct Install Devices include:

- CFL and LED bulbs in high use areas (2 bulbs each per home)
- Hot Water Pipe Wrap
- Showerhead – 1.5 GPM (avg 1 unit per home)

- Kitchen Aerator – 1.5 GPM (avg 1 per home)
- Bath Aerator – 1.0 GPM (avg 1 per home)
- Advanced Power Strip (avg 1.5 per home)

⁽²⁾Walk through inspection: A participating contractor thoroughly inspects the customer's home, equipment and appliances. The contractor interviews the customer to determine lifestyle and other practices that pertain to home energy use. Using standard industry energy auditing practices the contractor inspects the home and uses a CLEAResult-designed software tool to record the condition of the customer's:

- Ceiling, walls, floors, doors, windows, openings, and ventilation
- HVAC equipment and systems to estimate its efficiency
- Kitchen and laundry appliances
- Lighting

⁽³⁾Duct Leakage Test: Determines the leakage rate of the duct system and using a pressure pan, identifies the source(s) of the leakage.

⁽⁴⁾Envelope Air Infiltration Test (blower door test): Determines the leakage rate of the home and identifies the source(s) of the leakage.

⁽⁵⁾Combustion Safety Education: The participating trade ally discusses combustion safety issues with the customer as necessary.

⁽⁶⁾Tier 1 Report: Provides results of the visual inspection and analysis. The participating contractor may recommend that the customer upgrade to a Tier 2 Assessment to be eligible for additional program incentives to implement multiple measures.

⁽⁷⁾Tier 2 and 3 Reports: Provide results of the visual inspection and analysis and all diagnostic tests performed. The report includes recommended measures, provides payback calculations and identifies program incentives available to offset installation costs. A Tier 2 Report provides for either an envelope air infiltration test or a duct leakage test. A Tier 3 Report provides for both an envelope air infiltration test and a duct leakage test.

MPC, in conjunction with CLEAResult, plans to develop a network of locally-based trade allies to conduct all home assessments. Participating trade allies are expected to be trained on program and assessment requirements and that proper background checks and licensing will be in place before enrolling trade allies in the program. Trade allies will be expected to meet MPC contractor requirements and be technically qualified to perform program upgrades before participating in the program.

b) Target Customer Population Addressed by the Program:

The program will target MPCs residential customers that a) live in a single-family home or a multifamily residence with no more than two units (renters and owners eligible) and b) live in a home that is at least one year old.

c) Program Objectives:

The objectives for the Residential Energy Audit and Direct Install program are to:

- Help homeowners better understand their energy consumption, identify opportunities for energy savings specific to their home, and prioritize a wide range of energy conservation measures.
- Train and certify a network of locally-based contractors to provide home energy services in the MPC service territory.

d) Evaluation, Measurement, and Verification (EM&V) Procedures:

The trade ally will use CLEAResult's Open tool to record observations about the assessment, make measure recommendations, and provide the customer with their report. Open is a tablet-based software that uses industry standard protocols and follows home performance industry standard audit practices. The tool also provides energy savings calculations for eligible direct install measures specific to MPC's service territory. Open also integrates seamlessly with a data tracking and management system. In addition, MPC intends to select an independent evaluation firm to assist with the measurement and verification of energy savings after program launch.

e) Anticipated Implementation Barriers:

The market barriers that the Residential Energy Audit and Direct Install program may observe are: 1) customers' lack of understanding of how energy is used within the home and how an audit can benefit them, and 2) the lack of motivation or financial capability for customers to take immediate action to implement the recommended measures. The incentives, marketing efforts, and the audit report are designed to address these market barriers. This program will also seek to provide education and technical tools to participating contractors to help them demonstrate benefits to potential participants.

f) Proposed Customer Incentives:

The customer cost of the audit will vary depending upon Tier and is intended to be finalized with contractors prior to program launch. MPC plans to rebate 50% of the audit cost to customers. Charging customers for a small portion of the audit cost ensures that the program generates well-qualified customer leads that result in high rates of customer action on recommended improvements. To encourage implementation of improvements, MPC will also provide customer incentives to offset the cost of home energy efficiency measures such as installing

ceiling and pipe insulation and duct sealing. The table below provides an example of how customer incentives might be applied in the program.

| Audits | Incentives |
|--|---|
| Tier 1 Audit | \$50 incentive / \$100 cost |
| Tier 2 Audit | \$63 incentive / \$125 cost |
| Tier 3 Audit | \$125 incentive / \$250 cost |
| | |
| Direct Install Measures: | |
| CFL Bulbs (2) | Installed at no cost during audit |
| LED Bulbs (2) | Installed at no cost during audit |
| Advanced Power Strip | Installed at no cost during audit |
| Low Flow Showerhead (<= 2.0 GPM) | Installed at no cost during audit |
| Faucet Aerator (<= 1.5 GPM) | Installed at no cost during audit |
| Pipe Insulation | Installed at no cost during audit |
| | |
| Discounted Efficiency Measures: | |
| Programmable Thermostat | \$30 / home |
| Heat Pump Water Heater | \$300 / unit |
| Pool Pump | \$300 / unit |
| | |
| Weatherization Measures: | |
| Duct Sealing | \$250 incentive / \$500 cost – 25% > 10% leakage |
| Air Infiltration Sealing | \$250 incentive / \$350 cost – 25% reduction |
| Ceiling Insulation | \$250/\$300/\$350 per 1,000 square foot, depending on building type |
| Wall Insulation | \$200/\$300/\$350 per 1,000 square foot, depending on building type |
| Floor Insulation | \$250/\$300/\$350 per 1,000 square foot, depending on building type |
| Window Film | \$20 per 15 square foot window |
| Solar Screen | \$20 per 15 square foot window |

Note: Final incentive levels are subject to change pending completion of final program design.

g) Timeframe for Program

This program is expected to be effective September 1, 2014 assuming the receipt of MPSC approval by March 1, 2014 and is intended to continue through December 31, 2016 or until such time MPC and/or the MPSC determines the program is no longer a practical offering.

h) Plan for Addressing Oversubscriptions:

Oversubscription of the program will be managed by adjusting marketing outreach. Once the budget for the current year is expended, a waiting list will be established for program participation in the following budget year.

i) Program Budget, Demand, and Energy Savings Estimates:

| Program Year | Program Budget | kW Demand Savings | kWh Savings |
|-------------------------|----------------|-------------------|-------------|
| Sept. through Dec. 2014 | \$87,176 | 61 | 174,107 |
| 2015 | \$331,563 | 240 | 677,075 |
| 2016 | \$331,563 | 240 | 677,075 |

j) Estimated program costs and its proportion of the Quick Start budget:

The Residential Energy Audit and Direct Install program budget of \$750,303 for the Quick Start period is approximately 11% of total program budget dollars.

**Residential and Commercial Air-Conditioning Tune-Up and Replacement
Quick Start Program**

a) General Description of the Program and Services to Be Provided:

The Residential and Commercial Air Conditioning Tune-Up and Replacement Program will be implemented by CLEAResult and will achieve energy and demand savings associated with improving the performance of the customer's HVAC (Heating, Ventilating, & Air Conditioning) system. Customer acquisition will include both customers being brought into the program via the participating contractors and through MPC marketing efforts.

Customers who receive an HVAC tune up will have their units' refrigerant charge measured and adjusted and system airflow measured and adjusted, condenser cleaned, evaporator (if accessible) coils cleaned, air filter replaced, and blower cleaned. Contractors collect data while on-site during the tune-up. The entire tune-up process consists of three steps: system visual assessment, tune up of the HVAC system, and partial test-out analysis. The customer receives a report that shows the unit's improved efficiency and capacity achieved as a result of the tune-up. Once the tune-up process is complete MPC will provide cash incentives to the contractor based on building type.

Customers can also benefit from incentives to upgrade their HVAC system which may be offered directly to the customer or through participating contractors.

MPC, in conjunction with CLEAResult, plans to develop a network of locally-based trade allies to perform the HVAC tune-ups. Participating trade allies are expected to be trained on program and assessment requirements and that proper background checks and licensing will be in place before enrolling trade allies in the program. Trade allies will be expected to meet MPC contractor requirements and be technically qualified to perform program upgrades before participating in the program.

b) Target Customer Population Addressed by the Program:

The program will target MPC's residential customers that a) live in a single-family home or a multifamily residence with no more than two units (renters and owners eligible) and b) live in a home that is at least one year old. The program will also target businesses that fall under a 100kW peak demand threshold.

c) Program Objectives:

The objective of the Residential and Commercial Air Conditioning Tune-Up and Replacement Program is to encourage MPC customers to make the most efficient use of energy by operating

their HVAC systems as close as possible to peak performance levels. The program will also seek to encourage replacement of inefficient HVAC systems through the use of incentives.

d) Evaluation, Measurement, and Verification (EM&V) Procedures:

Contractors use CLEAResult's automated Data Collection and Verification Form (DCVF) software to collect data on-site. The DCVF includes an embedded expert system to validate the data and guide the contractor through the process. Each contractor will install and use this software to record measurements, which they can automatically upload to facilitate tracking of program, customer, and contractor data. In addition, MPC intends to select an independent evaluation firm to assist with the measurement and verification of energy savings after program launch.

e) Anticipated Implementation Barriers:

The Residential and Commercial Air Conditioning Tune-Up and Replacement program has broad customer reach and low barriers to adoption. Compared to other programs that require capital improvements to the building envelope or replacement HVAC systems to achieve energy efficiency gains, HVAC tune-ups are relatively inexpensive and therefore require lower financial commitment from customers. This leads to greater adoption and a high level of effectiveness.

f) Proposed Customer Incentives:

Residential and Commercial Air Conditioning Tune-Up and Replacement Program example measures and incentives:

| Measures | Incentives |
|---|--------------------|
| CoolSaver – Single Family tune-up | \$150 / home |
| CoolSaver – School / Commercial tune-up | \$150 / unit |
| 15 SEER 3 Ton Central Air Conditioner | \$150 / 3 ton unit |
| 16 SEER 3 Ton Central Air Conditioner | \$200 / 3 ton unit |
| 17 SEER 3 Ton Central Air Conditioner | \$300 / 3 ton unit |
| 18 SEER 3 Ton Central Air Conditioner | \$350 / 3 ton unit |
| 15 SEER / 8.5 Heat Pump 3 Ton | \$200 / 3 ton unit |
| 16 SEER / 9.0 Heat Pump 3 Ton | \$300 / 3 ton unit |
| 17 SEER / 9.0 Heat Pump 3 Ton | \$350 / 3 ton unit |
| 18 SEER / 9.0 Heat Pump 3 Ton | \$450 / 3 ton unit |
| 16 SEER Ductless Heat Pump (whole house, ASHP13 baseline) | \$450 / 3 ton unit |
| 18 SEER Ductless Heat Pump (resistance heat displacement) | \$450 / 1 ton unit |
| 20 SEER Ductless Heat Pump (resistance heat displacement) | \$450 / 1 ton unit |
| 16 SEER 3 Ton Central Air Conditioner upstream | \$200 / 3 ton unit |

| | |
|--|--------------------|
| 17 SEER 3 Ton Central Air Conditioner upstream | \$250 / 3 ton unit |
| 16 SEER 3 Ton Heat Pump upstream | \$300 / 3 ton unit |
| 17 SEER 3 Ton Heat Pump upstream | \$300 / 3 ton unit |

Note: Final incentive levels are subject to change pending completion of final program design.

g) Timeframe for Program

This program is expected to be effective September 1, 2014 assuming the receipt of MPSC approval by March 1, 2014 and is intended to continue through December 31, 2016 or until such time MPC and/or the MPSC determines the program is no longer a practical offering.

h) Plan for Addressing Oversubscriptions:

Oversubscription of the program will be managed by adjusting marketing outreach. Once the budget for the current year is expended, a waiting list will be established for program participation in the following budget year.

i) Program Budget, Demand, and Energy Savings Estimates: (kW demand and kWh energy savings are based on deemed savings)

| Program Year | Program Budget | kW Demand Savings | kWh Savings |
|-------------------------|----------------|-------------------|-------------|
| Sept. through Dec. 2014 | \$122,735 | 129 | 227,377 |
| 2015 | \$335,013 | 388 | 680,390 |
| 2016 | \$335,013 | 388 | 680,390 |

j) Estimated program costs and its proportion of the Quick Start budget:

The Residential and Commercial Air Conditioning Tune-Up and Replacement Program budget of \$792,761 for the Quick Start period is approximately 11% of total program budget dollars.

**Small Business Direct Install and Incentive
Quick Start Program**

a) General Description of the Program and Services to Be Provided:

The Small Business Direct Install and Incentive Program will be implemented by CLEAResult. The program will use a model that engages contractors to deliver measures in customer facilities through the use of field tools that greatly streamline and simplify program participation while also improving data collection and data accuracy. The program will allow businesses to achieve savings by helping them analyze their energy use, installing low-cost measures in the business, and identifying energy efficiency improvement projects. The program will also offer incentives toward the cost of implementing energy savings measures.

Contractors use CLEAResult's proprietary Open tablet-based field audit tool to provide customers with attractive project proposals with the cost and payback data customers need to make informed decisions. Open will be provided to local contractors in order to streamline and simplify program participation for both the contractor and the customer. Open was designed to support contractors to propose projects that optimize efficiency for the customer, build small business customer confidence in the customer proposals and manage quality while streamlining the participation process.

MPC, in conjunction with CLEAResult, plans to develop a network of locally-based trade allies to deliver the Small Business Direct Install and Incentive program. Participating trade allies are expected to be trained on program and assessment requirements and that proper background checks and licensing will be in place before enrolling trade allies in the program. Trade allies will be expected to meet MPC contractor requirements and be technically qualified to perform the service before participating in the program.

b) Target Customer Population Addressed by the Program:

The target market for the Small Business Direct Install and Incentive Program is commercial customers in MPC's service territory that fall under a 100kW peak demand threshold. The most common participants in small business programs are offices, restaurants, lodging, retail and convenience stores.

c) Program Objectives:

The objectives of the Small Business Direct Install and Incentive Program are to:

- Help businesses with peak demand less than 100 kW to better understand their energy consumption, identify opportunities for energy savings specific to their business, and prioritize a wide range of energy conservation measures.
- Train and certify a network of locally-based contractors to provide business energy services in the MPC territory.

d) Evaluation, Measurement, and Verification (EM&V) Procedures:

Contractors use CLEAResult's automated Data Collection and Verification Form (DCVF) software to collect data on-site. The DCVF includes an embedded expert system to validate the data and guide the contractor through the process. Each contractor will install and use this software to record measurements, which they can automatically upload to facilitate tracking of program, customer, and contractor data. In addition, MPC intends to select an independent evaluation firm to assist with the measurement and verification of energy savings after program launch.

e) Anticipated Implementation Barriers:

The majority of small business owners do not have building managers or operators to address energy use in their buildings, and owners are sometimes not available on a day-to-day basis to consider the effects of energy use. Barriers to participation may include: 1) lack of awareness and sophistication with regard to energy and non-energy benefits, 2) difficulty identifying qualified audit providers, 3) perception that energy efficient technologies/practices are expensive with long-term paybacks, 4) lack of confidence in the anticipated results, 5) misunderstanding the types of building performance problems that an audit can address, 6) split incentives between owners and tenants in lease spaces, and 7) difficulty getting owners who begin projects to quickly follow through to completion.

These barriers will be addressed through marketing efforts and incentives. This program will also provide education and technical tools to qualified contractors to help them demonstrate benefits to potential participants.

f) Proposed Customer Incentives:

Small Business Direct Install and Incentive Program Example Measures include:

| Direct Install Measures | Incentives |
|--------------------------------|-----------------------------------|
| Faucet Aerators | Installed at no cost during audit |
| Low Flow Shower Heads | Installed at no cost during audit |
| | |
| Lighting Measures: | |
| Parking Lot Lighting | \$201 / fixture |
| Parking Lot Controls | \$43 / unit |
| LED Outdoor Area Lighting | \$59 / fixture |

| | |
|--|---------------------------------|
| LED Wallpack | \$84 / fixture |
| LED Garage Fixture | \$85 / fixture |
| LED Downlight | \$22 / fixture |
| LED Cooler/Freezer Lighting | \$16 / fixture |
| LED Screw-In | \$22 / fixture |
| T8 Delamp, Office, Premium Efficiency Ballast | \$12 / fixture |
| T8 -> HPT8, Office, Lamp-Lamp 2 Lamp Fixture | \$5 / fixture |
| Occupancy Sensors, office | \$23 / control |
| T8 Delamp, Office, Premium Efficiency Ballast | \$12 / fixture |
| T8 Delamp, Retail, Premium Efficiency Ballast | \$16 / fixture |
| T8 -> HPT8, Retail, Lamp-Lamp 2 Lamp Fixture | \$6 / control |
| Occupancy Sensors, Retail | \$29 / control |
| T8 Delamp, Office, Premium Efficiency Ballast | \$12 / fixture |
| Exit Signs | \$17 / fixture |
| | |
| Kitchen Measures: | |
| Anti-Sweat Heater Controls for Commercial Refrigerator Doors | \$58 / bank of 6 doors (20 ft.) |
| Pre-Rinse Sprayer – Sit-Down Restaurant | \$80 / unit |
| Dishwasher, Door E/E | \$1 / unit |
| Energy Star Convection Oven Elec. | \$25 / unit |
| EnergyStar Refrigerator – Solid Door | \$40 / unit |
| EnergyStar Freezer – Solid Door | \$45 / unit |

Note: Final incentive levels are subject to change pending completion of final program design.

g) Timeframe for Program:

This program is expected to be effective September 1, 2014 (assuming the receipt of MPSC approval by March 1, 2014) and is intended to continue through December 31, 2016 or until such time MPC and/or the MPSC determines the program is no longer a practical offering.

h) Plan for Addressing Oversubscriptions:

Oversubscription of the program will be managed by adjusting marketing outreach. Once the budget for the current year is expended, a waiting list will be established for program participation in the following budget year.

i) Program Budget, Demand, and Energy Savings Estimates: (kW demand and kWh energy savings are based on deemed savings)

| Program Year | Program Budget | kW Demand Savings | kWh Savings |
|-------------------------|----------------|-------------------|-------------|
| Sept. through Dec. 2014 | \$91,742 | 104 | 487,320 |
| 2015 | \$520,533 | 709 | 3,321,110 |
| 2016 | \$520,533 | 709 | 3,321,110 |

j) Estimated program costs and its proportion of the Quick Start budget:

The Small Business Direct Install and Incentive Program budget of \$1,132,808 for the Quick Start period is approximately 16% of total program budget dollars.

**Large Commercial and Industrial Prescriptive and Custom
Quick Start Program**

a) General Description of the Program and Services to Be Provided:

The Large Commercial and Industrial Prescriptive and Custom Program will be implemented by CLEAResult and will provide facility walkthroughs and incentives for a suite of energy efficiency measures. The walkthrough audit will assess items such as heating, ventilation, and air conditioning (HVAC) equipment and other energy-using equipment, processes, lighting, motors, and the building shell. During walkthrough, contractors will be able to install low-cost energy efficiency measures at the facility at no cost to the customer.

Following walkthrough, the program includes a prescriptive and custom track. Prescriptive measures may be installed at the facility and incented at a per unit basis, while the custom track assists customers in identifying opportunities, analyzing associated costs and savings, and provides incentives for the deeper audit and installation of custom measures. A full, ASHRAE Level II audit will be available at a reduced fee to the customer following the initial walkthrough or pre-screening. Prior to the full audit, customers will be asked to sign a Participation Agreement to install any low-cost and no-cost measures recommended. Qualified vendors will be scheduled to complete the ASHRAE Level II audit.

As part of the program, technical assistance will be provided to help customers evaluate comprehensive energy efficiency opportunities, including retro-commissioning and custom measurement and verification projects for large commercial and industrial facilities.

All participating contractors will be required to attend an introductory training and will be offered additional optional trainings through the year. Customers will be recruited for participation in the program primarily through direct outreach activities to trade allies, program marketing and outreach activities, and referrals by MPC's account representatives.

b) Target Customer Population Addressed by the Program:

This program will target MPC's commercial and industrial customers with a peak demand of 100kW or greater.

c) Program Objectives:

The objectives of the Large Commercial and Industrial Prescriptive and Custom Program are to:

- Help businesses with peak demand greater than 100 kW make more efficient use of energy by upgrading energy-consuming equipment and improving energy management practices.

- Train and certify a network of locally-based contractors to provide business energy services in the MPC service territory

d) Evaluation, Measurement, and Verification (EM&V) Procedures

The evaluation, measurement, and verification plan will use deemed savings as the basis for determining the energy savings accrued for the program. Verification will be based upon incentives paid and a statistically significant sample of installations will be subject to on-site inspection in accordance with the protocol set out for this program. The inspection will occur within 30 days of notification of measure installation to ensure that measures are installed and capable of performing their intended function. For measures not included within the deemed savings, a spot EM&V will be performed to verify and quantify the predicted savings. In addition, MPC intends to select an independent evaluation firm to assist with the measurement and verification of energy savings after program launch.

e) Anticipated Implementation Barriers:

For many building owners and facility managers, market barriers to greater adoption of energy efficiency measures include: 1) lack of awareness of the energy and non-energy benefits, 2) difficulty identifying qualified audit providers, 3) perception that energy efficient technologies/practices are expensive with long-term paybacks, 4) lack of confidence in the anticipated results, 5) misunderstanding the types of building performance problems that an audit can address, 6) split incentives between owners and tenants in lease spaces, and 7) difficulty getting owners who begin projects to quickly follow through to completion.

MPC account representatives have strong relationships with larger Commercial and Industrial customers and have supported their energy efficiency efforts over many years. To overcome the anticipated barriers, CLEAResult will closely coordinate with MPC to target customers who have a high potential for participation. The program will also provide trade allies with training and tools that help them encourage customers in these groups to participate in the program.

f) Proposed Customer Incentives:

Large Commercial and Industrial Prescriptive and Custom Program Example Measures:

| Direct Install Measures | Incentive |
|--|-----------------------------------|
| Faucet Aerators – Commercial | Installed at no cost during audit |
| Low Flow Shower Heads – Commercial | Installed at no cost during audit |
| Pre-Rinse Sprayer – Sit Down Restaurant | Installed at no cost during audit |
| Exit Signs | Installed at no cost during audit |
| Vending Machine Occupancy Sensor – Refrigerated Beverage | Installed at no cost during audit |
| | |
| Lighting Measures: | |

| | |
|--|----------------------------------|
| Parking Lot Lighting | \$118 / fixture |
| Parking Lot Controls | \$25 / unit |
| LED Outdoor Area Lighting | \$58 / fixture |
| LED Wallpack | \$49 / fixture |
| LED Garage Fixture | \$50 / fixture |
| LED Downlight | \$13 / fixture |
| LED Cooler/Freezer Lighting | \$9 / fixture |
| LED Screw-In | \$13 / fixture |
| T8 Delamp, Office, Premium Efficiency Ballast | \$7 / fixture |
| T8 -> HPT8, Office, Lamp-Lamp 2 Lamp Fixture | \$3 / fixture |
| Occupancy Sensors, office | \$13 / control |
| (table continued on following page) | |
| T8 Delamp, Office, Premium Efficiency Ballast | \$7 / fixture |
| T8 Delamp, Retail, Premium Efficiency Ballast | \$9 / fixture |
| T8 -> HPT8, Retail, Lamp-Lamp 2 Lamp Fixture | \$4 / fixture |
| Occupancy Sensors, Retail | \$17 / control |
| T8 Delamp, Office, Premium Efficiency Ballast | \$7 / fixture |
| Exit Signs | \$10 / fixture |
| Hi Bay T5HO, School | \$32 / fixture |
| | |
| HVAC Measures: | |
| Packaged AC, <5.4 tons – office | \$80 / unit |
| Split AC, <5.4 tons –office | \$80 / unit |
| Packaged Heat Pump, <5.4 tons - office | \$97 / unit |
| Split Heat Pump, <5.4 tons -office | \$97 / unit |
| AC, 5.4-11.25 tons – office | \$266 / unit |
| AC, 11.25-20 tons – office | \$216 / unit |
| AC, 20-63 tons – office | \$1,204 / unit |
| Heat Pump, 5.4-11.25 tons - office | \$296 / unit |
| Heat Pump, 11.25-20 tons - office | \$245 / unit |
| Heat Pump, 20-30 tons – office | \$514 / unit |
| | |
| Kitchen Measures: | |
| Anti-Sweat Heater Controls for Commercial Refrigerator Doors | \$41 / linear feet of glass case |
| Pre-Rinse Sprayer – Sit-Down Restaurant | \$80 / unit |
| Dishwasher, Door E/E | \$3 / unit |
| EnergyStar Convection Oven Elec. | \$25 / unit |
| EnergyStar Refrigerator – Solid Door | \$40 / unit |
| EnergyStar Freezer – Solid Door | \$45 / unit |

Note: Final incentive levels are subject to change pending completion of final program design.

g) Timeframe for Program:

This program is expected to be effective September 1, 2014 assuming the receipt of MPSC approval by March 1, 2014 and intended to continue through December 31, 2016 or until such time MPC and/or the MPSC determines the program is no longer a practical offering.

h) Plan for Addressing Oversubscriptions:

When the incentive fund subscription rate reaches ninety percent all customers and trade allies will be notified that all future projects will require pre-approval to reserve incentive funds. When all program incentive funding is reserved customer projects will be placed on a waiting list that will be prioritized based on the date of the project approval date.

i) Program Budget, Demand, and Energy Savings Estimates: (kW demand and kWh energy savings are based on deemed savings)

| Program Year | Program Budget | kW Demand Savings | kWh Savings |
|-------------------------|----------------|-------------------|-------------|
| Sept. through Dec. 2014 | \$158,538 | 288 | 1,120,364 |
| 2015 | \$847,488 | 1,771 | 6,779,061 |
| 2016 | \$847,488 | 1,771 | 6,779,061 |

j) Estimated program costs and its proportion of the Quick Start budget:

The Large Commercial and Industrial Prescriptive and Custom Program budget of \$1,853,513 for the Quick Start period is approximately 27% of total program budget dollars.

**MPC Neighborhood Efficiency
Quick Start Program**

a) General Description of the Program and Services to Be Provided:

The Neighborhood Efficiency Program is intended to promote energy efficiency and conservation by offering home energy assessments and direct install measures to MPC's lower income customers. The program provides for a residential energy audit, energy education, installation of energy efficient light bulbs, and in a large number of homes, an increased level of insulation, and/or HVAC tune-up, and/or duct sealing. There is no out-of-pocket expense to customers for any of the program measures.

The program is an extension and enhancement of the MPC Neighborhood Efficiency Pilot Program, filed with the Commission in September 2013. The Pilot is providing meaningful data with regards to program outreach and design. Based on the lessons learned from the Pilot, further program customization will be added during the Quick Start period.

MPC will hire and train local contractors to serve as "walker/talkers" to canvass neighborhoods or pre-determined boundaries to describe to customers the program and associated benefits. If the customer is not home, a door tag will be hung with a toll-free number to call. The customer will call into the toll-free call center staffed by dedicated MPC Energy Efficiency Representatives within five business days to indicate their interest and schedule an appointment to have an energy audit performed at their residence.

During the visit, MPC Residential Energy Auditors inspect the outside and inside of the home, primarily looking for air infiltration issues. In addition, they will review customer billing history and, based on the size and usage characteristics of the customer, determine if there are any inconsistencies or trends that should be addressed further. They will also provide energy saving tips, recommendations of proper thermostat settings, and describe any money-saving programs that the customer may be eligible to participate in. Insulation levels and a basic look at HVAC system and airflow will also be checked. Those results and recommendations will be communicated with the customer. In addition, each home will have up to 10 compact fluorescent light (CFL) bulbs installed by the auditors in high-use fixtures.

If the audit finds that the HVAC system, ductwork, and insulation levels are satisfactory, there is no further work that will be done to the home.

In the event that the HVAC system should need a tune up and/or ducts need to be cleaned or repaired, the MPC Residential Energy Auditor will make note for follow-up from an HVAC dealer and communicate with the customer.

Similarly, if the audit finds that there is a minimal level or no attic insulation present, the MPC Residential Energy Auditor will make note for follow-up from an insulation contractor and communicate with the customer.

If the audit finds that there are structural modifications or repairs that need to be addressed in order to provide significant energy savings, but that are outside of the scope of the program, those recommended improvements will be provided to a local community action agency for follow-up.

If there are suggested improvements to be made by a contractor and the customer is renting the home, the auditor will require that the customer communicate with the home owner and have that person call the toll-free number to indicate their interest in having contractors to the home. The MPC Energy Efficiency Representatives will then make a note within the customer account that the owner has authorized work on behalf of the customer.

The MPC Residential Energy Auditors provide those recommendations for further follow-up to the MPC Energy Efficiency Representatives and they pass those customer details and needs along to MPC-determined contractors. The contractors follow up with the customer directly and schedule a date to perform the recommended home upgrades.

b) Target Customer Population Addressed by the Program and How Customers Will Be Selected:

The Neighborhood Efficiency Program is designed to reach income-qualified customers within the MPC service territory.

For the Neighborhood Efficiency Pilot Program, Mississippi Power worked closely with MPC Community Development staff, local community leaders and action agencies, faith-based organizations, police departments, and MPC area managers and residential marketing representatives to identify areas of need within the community.

MPC proposes to continue in this manner, as the cost of selecting neighborhoods through these channels is significantly lower than data mining and analysis to determine which homes fall within a required income ceiling or age of home. While there will not be a maximum income threshold for homes to be selected for the program, the overwhelming majority of the homes will fall below the 200% of the federal poverty guideline income level (\$47,100 annual income for a family of four). The low cost to determine customer neighborhoods results in more homes impacted and a higher level of program energy savings.

c) Program Objectives:

Income-qualified customers in Mississippi spend a disproportionate amount of their income on energy, and the direct install measures from the program are intended to provide immediate relief to customer bills while also making the living space more comfortable. In addition, the detailed

education of customer habits such as thermostat settings during hot and cold months, review of customer bill history, discussion of additional programs that customers may be eligible to participate in, and benefit of energy efficiency measures will make a lasting impact to those customers that need help the most.

d) Evaluation, Measurement, and Verification (EM&V) Procedures:

The auditors take an inventory of housing characteristics on a Home Energy Efficiency Evaluation form with details such as: approximate age and square footage of the home, water heating type and age, heating & cooling system type and age, insulation level, windows (single pane, storm windows, double pane), lighting, etc.

After measures have been installed by the Auditors (10 CFLs in high-use fixtures) and any insulation addition, HVAC tune-up, or duct sealing, they will be tracked within an MPC energy efficiency reporting database. The associated program savings are a delta of energy and demand savings from home characteristics prior to the audit and upgrades to after the audit and upgrades, based on savings deemed from the Arkansas Technical Reference Manual, Second Edition.

Lighting measures, duct sealing, and HVAC tune-up savings will be based on deemed savings estimates from geographically-similar jurisdictions, where possible.

In addition, MPC intends to select an independent evaluation firm to assist with the measurement and verification of energy savings after program launch.

e) Anticipated Implementation Barriers:

The MPC Neighborhood Efficiency Pilot Program has illustrated that even with no out-of-pocket cost to customers, there is often hesitation to allow someone to enter the home, regardless of the benefit. The primary hurdle that must be addressed with each customer is the benefit of energy efficiency and conservation. Educating participants is extremely important, as some income-qualified customers are less likely to be aware of the energy and non-energy benefits of energy efficiency and are also less likely to have the income to direct toward improvements.

Another barrier that turns potential customers away is the rise in customer scams in recent years. Customers are fearful of a scam, and often times do not understand that the company is there to help them. There are very few instances in business in which a company spends money and sends people door-to-door to help them use less of the product that the business creates and delivers. The neighborhood canvassing approach, by design, will alleviate much of this concern.

f) Proposed Customer Incentives:

| Measures | Incentives |
|-------------------------|-----------------------------------|
| 10 CFL bulbs | Installed at no cost during audit |
| Insulation installation | MPC direct-billed by contractor |
| HVAC tune-up | MPC direct-billed by contractor |
| Duct sealing | MPC direct-billed by contractor |

g) Timeframe for Program

This program is expected to be effective May 1, 2014 assuming the receipt of MPSC approval by March 1, 2014 and is intended to continue through December 31, 2016 or until such time MPC and/or the MPSC determines the program is no longer a practical offering.

h) Plan for Addressing Oversubscriptions:

Due to the program not requiring any out-of-pocket cost to customers, initial budget projects to limit the program to 100 homes per month. By limiting on a monthly basis rather than an annual basis, it limits an “off” lag time for contractors and provides for program consistency.

There will be customers that want to participate in the program but either missed the window to call in or do not live in the areas selected for the program. If the program timing and budget allows for those customers to be reached, an effort will be made to include those customers. In the situation that program timing and budget do not allow for those customers at the time, customer information will be tracked and MPC will make an effort to reach those homes at a later date.

i) Proposed Budget, Demand, and Energy Savings Estimates: (kW demand and kWh energy savings are based on deemed savings)

Using the MPC Neighborhood Efficiency Pilot Program as a guide, the insulation upgrade percentage is approximately 60% of homes audited. Assuming a similar level for HVAC Tune Up and Duct Sealing, and a maximum of 100 homes audited per month, the annual budget for insulation costs, HVAC tune ups, duct sealing, and CFL light bulbs installed will be:

| Program Year | Program Budget | Estimated Customers | kW Demand Savings | kWh Savings |
|-----------------------|----------------|---------------------|-------------------|-------------|
| May through Dec. 2014 | \$297,000 | 800 | 664 | 1,512,424 |
| 2015 | \$445,500 | 1,200 | 995 | 2,268,636 |
| 2016 | \$445,500 | 1,200 | 995 | 2,268,636 |

j) Estimated program costs and its proportion of the Quick Start budget:

The Neighborhood Efficiency Program budget of \$1,188,000 for the Quick Start period is approximately 17% of total program budget dollars.

**MPC School Kits and Energy Education
Quick Start Program**

a) General Description of the Program and Services to Be Provided:

MPC proposes to provide 4th and 5th grade students with a kit of energy efficiency and conservation items to take home. The students will work with their parents to install simple measures (like CFLs, LED nightlights, shower timers, etc.) and the kits would also include energy conservation literature geared towards children. Parents will sign a card signifying that energy-saving measures were installed in the home. If the schools get a predetermined level of participation, then MPC would provide a mini-grant for the school to use at their discretion.

Mississippi Power plans to work with schools, school districts, and PTA groups to schedule a time to come to the school to distribute the kits, describe the program, and give a basic presentation to classes either through a general assembly, home room class, or science classrooms. The program is not intended to drive school curriculum in any way, but rather suggested to be discussed in the context of saving money and environmental resources.

Students and school administrators will be informed that a return signature card with a tiered level of participation will result in a grant paid to the school by Mississippi Power of up to \$250 per grade level if responses are returned by a specified date.

Students will be instructed to take the kits home and to work with parents/guardians to install the simple energy conservation measures and to fill out a card indicating those measures were installed.

Completed and signed cards will be turned in to classes and then provided to Mississippi Power to determine completeness of responses as well as to determine if the minimum level of response was achieved to earn the school grant.

Mississippi Power will retain the response cards to evaluate program participation and feedback as well as to provide a measurement and verification tool to illustrate that the measures were installed.

b) Target Customer Population Addressed by the Program:

The School Kit and Energy Education Program is expected to serve 4th and 5th grade students living in homes served by MPC or who are enrolled in public or private schools within the MPC service territory are eligible for the program. While the program is designed to educate students on energy efficiency and conservation, it indirectly targets single family and multi-family homes where the kit measures will be installed by the students or their parents.

MPC intends to achieve a 25% participation level to reach ‘at risk’ schools, with the remaining schools selected to approximately resemble the MPC service territory geographically. Additionally, the program is designed to visit schools no sooner than every other year, so that student exposure is not repeated.

c) Program Objectives:

The School Kit and Energy Education Program will be driven by outreach from MPC to identify public and private school 4th and 5th grade classes to provide education and energy conservation materials in an effort to teach children how to make informed decisions about energy usage in anticipation that they will adopt long-lasting energy conservation behaviors.

d) Evaluation, Measurement, and Verification (EM&V) Procedures:

Program savings will be calculated from the cards signed by parent or guardian and returned to the schools, based on deemed savings estimates from geographically-similar areas, where possible. In addition, MPC intends to select an independent evaluation firm to assist with the measurement and verification of energy savings after program launch.

Although there will be some benefits provided to students/parents that are not MPC customers, MPC requests that all program deemed energy and demand savings be eligible for consideration.

e) Anticipated Implementation Barriers:

The primary implementation barrier to the School Kit and Energy Education Program will be consistently gaining access to the schools due to their time constraints and curriculum needs. For those reasons, the program does not seek to drive an energy efficiency curriculum through the classes, but rather to enhance instruction at a time and in a context deemed relevant by the teacher. The mini-grant is intended as a goodwill thank-you to the school for its time commitment in helping to administer the program and collect participation cards.

f) Proposed Customer Incentives:

| Measures | Incentive |
|---|-----------|
| 13W CFL (3) | Kit |
| LED Night Light | Kit |
| Shower Timer | Kit |
| Energy Cost Calculator | Kit |
| Educational Conservation Guide | Kit |
| | |
| Anticipated Grant Funds (Paid per Grade Level) | |
| 75% participation or greater | \$250 |
| 51% to 74% participation | \$150 |
| 25% to 50% participation | \$100 |
| Less than 25% participation | \$50 |

Note: Final incentive levels are subject to change pending completion of final program design.

g) Timeframe for Program

This program is expected to be effective September 2014 assuming the receipt of MPSC approval by March 1, 2014 and is intended to continue through December 31, 2016 or until such time MPC and/or the MPSC determines the program is no longer a practical offering. Because the majority of schools will be closed during summer months and taking holidays, breaks, and state tests into account, the program will collaborate with schools to determine best dates.

h) Plan for Addressing Oversubscriptions:

MPC anticipates working with approximately 42 schools during the school year to visit with 4th and 5th grade classes. MPC has budgeted \$200,000 per school year for kits and potential grant payments and will monitor throughout the year to ensure the program stays within budget.

i) Program Budget, Demand, and Energy Savings Estimates: (kW demand and kWh energy savings are based on deemed savings)

MPC has assumed an average number of students per grade level to be 150, based on a rudimentary sampling of school data. Therefore based on budgetary limitations, MPC can reasonably expect to implement the program for 4th and 5th grade students at 42 schools annually, assuming all school grade-levels receive full \$250 mini-grants.

| Program Year | Program Budget | Estimated Students | kW Demand Savings | kWh Savings |
|-------------------------|------------------------|--------------------|-------------------|-------------|
| Sept. through Dec. 2014 | \$92,400 (21 schools) | 6,300 | 87 | 371,350 |
| 2015 | \$184,800 (42 schools) | 12,600 | 174 | 742,699 |
| 2016 | \$184,800 (42 schools) | 12,600 | 174 | 742,699 |

Note: Energy and demand estimates include deemed lighting measures only and assume 75% student participation. Program budgets assume all grades achieve greater than 75% participation.

j) Estimated program costs and its proportion of the Quick Start budget:

The School Kit and Energy Education Program budget of \$462,000 for the Quick Start period is approximately 7% of total program budget dollars.

Behavioral Analysis
Quick Start Program

a) General Description of the Program and Services to Be Provided:

In an effort to encourage and promote the efficient use and conservation of energy, MPC proposes to work with OPower to deliver a Behavioral Analysis Home Energy Reporting (HER) program to 25,000 residential households. By providing customers with better information on their energy use and personalized energy saving advice, the program will seek to motivate customers to measurably and verifiably use less energy and save money on their monthly bills. The Home Energy Report program will also likely provide program awareness to increase participation in other MPC Quick Start programs.

OPower's Home Energy Report program provides residential customers with better energy information through personalized mailed reports and an integrated web portal to empower them to make better energy usage decisions. There are multiple benefits associated with this energy efficiency program, including but not limited to:

- Quantifiable electricity savings as has been demonstrated through independent evaluations of programs across millions of households. This leads to reduced energy costs and lower bills for families who participate in the program.
- MPC plans to use OPower's program to reach 25,000 residential households. Furthermore, since OPower's program delivers savings to over 85% of households it engages, an estimated 21,250 households will save energy as a direct result of the program.
- OPower delivers energy savings by providing better energy information. Through OPower's program, households become more aware of their energy usage and opportunities for conservation – through both changes in behavior and the purchase of energy efficient products. For example, OPower has demonstrated an ability to lift participation in other utility efficiency programs. A customer receiving Home Energy Reports is more likely to buy efficient appliances, which is a secondary benefit of the OPower program.

MPC will work with OPower to design a program that maximizes savings for its customers. Specifically, Mississippi Power will automatically deliver the program on an opt-out basis to 25,000 randomly selected households. The program is designed with the following characteristics:

- **Delivery of reports:** Targeted households automatically receive one welcome insert to introduce them to the program followed by four home energy reports annually. These

reports provide periodic updates on the energy usage behavior of a given household, and offer tips for saving energy.

- **Delivery of web portal:** All program participants will have access to a web portal designed by OPower that will be integrated into MPC's website. This site will enable participants to create a profile, perform an online audit, access energy savings tips, monitor usage over time, and compare usage to neighbors for benchmarking purposes.
- **Ability to opt-out:** All participants will have a clear method for opting out of the program if they no longer want to receive the information. The opt-out rate for the Home Energy Report program has generally been less than 1%.

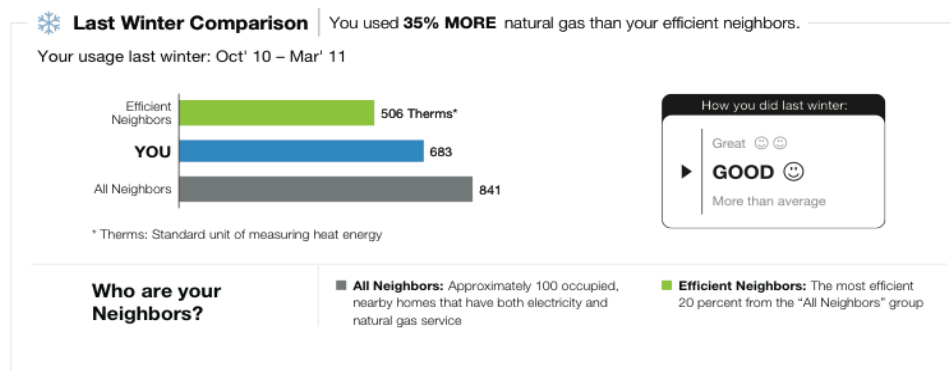
b) Target Customer Population Addressed by the Program:

Home Energy Reports will be delivered to a random sample of 25,000 Mississippi Power customers. This allows Mississippi Power to deliver valuable bill savings to all customer classes, including income-qualified customers, who will be included as participants as a result of the random sampling. A random sample also provides valuable data points for understanding the Home Energy Report program's impact across the customer base and the impact of the program at scale.

c) Program Objectives:

The Home Energy Report program is organized around two concepts. First, motivate consumers to change their behavior by putting their usage in context. Second, provide them with personalized advice to capitalize on this motivation to use less energy and save money. Figure 1 provides a sample home comparison that puts a household's usage in context to motivate them to take action.

Figure 1: Sample Neighbor Comparison Module



Consumers change how they use energy when they receive relevant insights about their energy use in a format that provokes their interest and action. Behavioral science research has demonstrated that peer-based comparisons are highly motivating ways to present information. OPower's Home Energy Report programs leverage a dynamically created comparison group for each residence that compares it to other similarly sized and located households. This behavioral science complements other residential energy efficiency approaches, and is a driving force behind consistent and reliable behavior-based energy efficiency.

Once motivated by this comparison, customers receive individually targeted savings tips based on their energy usage patterns, housing characteristics, and demographics. OPower's Home Energy Report programs present customers with the most relevant suggestions that are likely to deliver the greatest savings.

d) Evaluation, Measurement, and Verification (EM&V) Procedures:

The OPower Home Energy Report program uses randomized controlled trials (RCTs) and *ex-post* measurement—rather than *ex ante* deemed savings—to measure savings with over 90% statistical confidence. Under this approach, OPower uses parameters to create an eligible group of recipients, randomly assigns households to control and treatment groups, tests these groups to ensure statistical equivalence, sends reports only to the treatment group, and measures the difference in energy usage between the two groups using statistical billing analysis. This approach measures savings without bias and with precision. Key components of this approach include:

- (i) Statistically equivalent and randomly allocated control and treatment groups
- (ii) Opt-out design
- (iii) *Ex-post* measurement
- (iv) Panel data methodology billing analysis for comparison of control and treatment groups

In addition, MPC intends to select an independent evaluation firm to assist with the measurement and verification of energy savings after program launch.

e) Anticipated Implementation Barriers and How They Will Be Addressed:

Based on OPower's experience in other jurisdictions, MPC does not anticipate any significant implementation barriers for this program.

f) Proposed Customer Incentives:

No customer incentives are needed to encourage participation, as the Home Energy Report program is delivered on an opt-out basis.

g) Timeframe for Program:

This program is expected to be effective September 2014 assuming the receipt of MPSC approval by March 1, 2014 and is intended to continue through December 31, 2016 or until such time MPC and/or the MPSC determines the program is no longer a practical offering.

h) Plan for Addressing Oversubscriptions:

The Home Energy Report program is designed as an opt-out rather than an opt-in program. Therefore, over-subscription is not a risk, as an anticipated 25,000 households will be randomly selected and automatically enrolled with the ability to opt-out.

i) Program Budget, Demand, and Energy Savings Estimates:

The estimates below use data from over 70 other Home Energy Report programs to forecast savings rates, and energy usage to create an estimate of total savings in each program year.

| Program Year | Program Budget | Number of Households | kW Demand Savings | kWh Savings |
|-------------------------|----------------|----------------------|-------------------|-------------|
| Sept. through Dec. 2014 | \$263,650 | 25,000 | 103 | 469,329 |
| 2015 | \$254,833 | 25,000 | 771 | 3,500,413 |
| 2016 | \$253,252 | 25,000 | 201 | 912,258 |

j) Estimated program costs and its proportion of the Quick Start budget:

The Behavioral Analysis Home Energy Reporting program budget of \$771,735 for the Quick Start period is approximately 11% of total program budget dollars.

Mississippi Power Energy Efficiency Quick Start Programs
2014-2016 Projected Energy and Demand Savings

| Program Name | Customer Class Percentage | Anticipated Start Date | 2014 | | 2015 | | 2016 | |
|---|---------------------------------|------------------------|------------------|--------------|-------------------|--------------|-------------------|--------------|
| | | | Energy (kWh) | Demand (kW) | Energy (kWh) | Demand (kW) | Energy (kWh) | Demand (kW) |
| Residential Energy Audit and Direct Install | 100% Residential | September 2014 | 174,107 | 61 | 677,075 | 240 | 677,075 | 240 |
| Residential and Commercial HVAC Tune-Up and Replacement | 75% Residential, 25% Commercial | September 2014 | 227,377 | 129 | 680,390 | 388 | 680,390 | 388 |
| Small Business Direct Install and Incentive | 100% Commercial | September 2014 | 487,320 | 104 | 3,321,110 | 709 | 3,321,110 | 709 |
| Large Commercial and Industrial Prescriptive and Custom | 10% Commercial, 90% Industrial | September 2014 | 1,120,364 | 288 | 6,779,061 | 1,771 | 6,779,061 | 1,771 |
| Behavioral Analysis | 100% Residential | September 2014 | 469,329 | 103 | 3,500,413 | 771 | 912,258 | 201 |
| MPC Neighborhood Efficiency | 100% Residential | May 2014 | 1,512,424 | 664 | 2,268,636 | 995 | 2,268,636 | 995 |
| MPC School Kits and Energy Education | 100% Residential | September 2014 | <u>371,350</u> | <u>87</u> | <u>742,699</u> | <u>174</u> | <u>742,699</u> | <u>174</u> |
| Projected total | | | 4,362,271 | 1,436 | 17,969,384 | 5,048 | 15,381,229 | 4,478 |

Mississippi Power Energy Efficiency Quick Start Programs
2014-2016 Program Budgets

| <u>Program Name</u> | <u>Target Market</u> | <u>Implementation Firm</u> | <u>Anticipated Start Date</u> | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>Total</u> | <u>Program Percentage of Total</u> <i>(excluding admin, em&v, marketing/advert.)</i> |
|---|----------------------------|----------------------------|-------------------------------|--------------------|--------------------|--------------------|--------------------|---|
| Residential Energy Audit and Direct Install | Residential | CLEAResult | September 2014 | \$87,000 | \$332,000 | \$332,000 | \$751,000 | 11% |
| Residential and Commercial HVAC Tune-Up and Replacement | Residential and Commercial | CLEAResult | September 2014 | \$123,000 | \$335,000 | \$335,000 | \$793,000 | 11% |
| Small Business Direct Install and Incentive | Commercial | CLEAResult | September 2014 | \$92,000 | \$521,000 | \$521,000 | \$1,134,000 | 16% |
| Large Commercial and Industrial Prescriptive and Custom | Commercial and Industrial | CLEAResult | September 2014 | \$159,000 | \$847,000 | \$847,000 | \$1,853,000 | 27% |
| Behavioral Analysis | Residential | OPower | September 2014 | \$264,000 | \$255,000 | \$253,000 | \$772,000 | 11% |
| MPC Neighborhood Efficiency | Residential | Mississippi Power | May 2014 | \$297,000 | \$446,000 | \$446,000 | \$1,189,000 | 17% |
| MPC School Kits and Energy Education | Residential | Mississippi Power | September 2014 | \$92,000 | \$185,000 | \$185,000 | \$462,000 | 7% |
| Administrative Cost | | | | \$167,100 | \$438,150 | \$437,850 | \$1,043,100 | |
| Evaluation, Measurement, & Verification | | | | \$55,700 | \$146,050 | \$145,950 | \$347,700 | |
| Marketing and Advertising | | | | <u>\$200,000</u> | <u>\$400,000</u> | <u>\$400,000</u> | <u>\$1,000,000</u> | |
| Total Budget | | | | \$1,536,800 | \$3,905,200 | \$3,902,800 | \$9,344,800 | |

1 **DIRECT TESTIMONY**

2 **OF**

3 **LAWRENCE J. VOGT**

4 **On Behalf of**

5 **MISSISSIPPI POWER COMPANY**

6 **BEFORE THE MISSISSIPPI PUBLIC SERVICE COMMISSION**

7 **DOCKET NO. _____**

8
9 **Q. Would you please state your name, business address, and position.**

10 **A.** My name is Lawrence J. (Larry) Vogt. My business address is 2992 West Beach
11 Boulevard, Gulfport, Mississippi 39501. I am the Manager, Rates, for Mississippi Power
12 Company (MPC or the Company).

13 **Q. Please describe your education and professional experience.**

14 **A.** I am a graduate of the University of Louisville with a Bachelor of Science and a Master
15 of Engineering in Electrical Engineering. Over the last 37 years, I have held various
16 positions including Distribution Engineer, Senior Industrial Marketing Engineer, and
17 Rate Engineer at Public Service Indiana (now known as Duke Energy – Indiana) in
18 Plainfield, IN; Senior Rate Design Engineer and Principal Engineer – Rates & Regulation
19 at Southern Company Services in Atlanta, GA; Manager, Distribution Technologies
20 Center at ABB Power T&D Company in Raleigh, NC; and Lead Product Manager at
21 Louisville Gas & Electric Company in Louisville, KY. I joined MPC in 1997 as a
22 Principal Rate Research Analyst. In 1998, I was promoted to the position of Manager,
23 Pricing Planning and Implementation. In 2005, I was promoted to my current position of

1 Manager, Rates.

2 I have also been active in a variety of industry functions throughout my career. I
3 have conducted a number of industry workshops under the sponsorships of the Electric
4 League of Indiana, Inc. and the University of South Alabama. I have served as an
5 Adjunct Professor in Pennsylvania State University's (Penn State) International Power
6 Engineering Program. I am the Company's representative on and Chairman of the Rate
7 and Regulatory Affairs Committee of the Edison Electric Institute (EEI), where I have
8 also served as a Principal Instructor in the Committee-sponsored E-Forum Rate College
9 and Electric Rate Advanced Course. I am also the Company's representative on the
10 Southeastern Electric Exchange's (S.E.E.) Rates and Regulation Section. I am a member
11 of the Association of Energy Engineers (AEE) and the National Society of Professional
12 Engineers (NSPE), and I am a Senior Member of the Institute of Electrical and
13 Electronics Engineers (IEEE). I am a registered Professional Engineer in several states,
14 including Mississippi. In addition, I am the coauthor of several technical papers and
15 reports as well as the textbook *Electrical Energy Management* (Lexington Books, 1977).
16 I am also the author of the textbook *Electricity Pricing: Engineering Principles and*
17 *Methodologies* (CRC Press, 2009).

18 **Q. What are your responsibilities at MPC?**

19 **A.** As Manager, Rates, I am responsible for managing the research, development, and
20 implementation of retail and wholesale rate designs. I am also responsible for
21 administration of the Company's rates and for supporting other regulatory matters of the
22 Company.

1 **Q. Have you previously testified before the Mississippi Public Service Commission (the**
2 **Commission)?**

3 **A.** Yes, I have.

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

5 **A.** I will present the Company's proposed Energy Efficiency Cost Recovery (EECR)
6 methodology and the associated rider schedule. I will also present the impact of the
7 proposed EECR rider factors on a typical residential customer having a usage of 1,000
8 kWh per month.

9 **Q. Are you sponsoring any exhibits?**

10 **A.** Yes, I am sponsoring one (1) exhibit:

11 Exhibit____(LJV-1) Proposed Energy Efficiency Cost Recovery Rider "EECR."

12 **Q. Was this exhibit prepared under your supervision and control?**

13 **A.** Yes, it was.

14 **Q. Please explain what is shown in Exhibit____(LJV-1).**

15 **A.** Exhibit____(LJV-1) is a copy of the Company's proposed EECR rider schedule. This
16 schedule designates three (3) energy efficiency cost recovery components: program
17 costs, company incentive, and lost contribution to fixed costs. The rider schedule
18 describes the methodology that will be used to calculate these cost components along
19 with the design for determination of monthly billing factors based on three (3) rate
20 schedule billing groups: residential, small commercial & industrial, and large
21 commercial & industrial. The proposed rider schedule is similar in design and concept to
22 the energy efficiency cost recovery mechanisms used in other states.

23 **Q. Please describe the energy efficiency program cost component.**

1 **A.** The energy efficiency program costs include all projected expenditures required to
2 establish and administer the Company's proposed energy efficiency programs. The
3 Company's proposed EECR rider schedule includes a formula for determining the annual
4 revenue requirement based on each program's projected operation and maintenance
5 (O&M) expenditures and capital investments for each rate schedule group. These costs
6 will be recovered by the energy efficiency program cost factor (PCF).

7 **Q.** **Please describe the energy efficiency Company incentive cost component.**

8 **A.** The energy efficiency Company incentive costs represent a financial incentive, which
9 encourages utility investment in energy efficiency programs. The Company proposed
10 EECR rider schedule includes a sharing mechanism that applies to the net resource
11 savings of the energy efficiency programs. These costs will be recovered by the energy
12 efficiency Company incentive factor (CIF).

13 **Q.** **Please describe the energy efficiency lost contribution to fixed cost component.**

14 **A.** The energy efficiency lost contribution to fixed costs represents the reduction in base rate
15 revenue that occurs when energy efficiency programs are implemented. The demand
16 and/or energy rate structure of the rate schedules is the pricing mechanism that recovers
17 the Company's fixed investment and O&M costs of providing electric service. The
18 Company's proposed EECR rider schedule includes an engineering calculation based
19 methodology for determining program participants' energy and demand reductions along
20 with the associated lost contribution to fixed costs under current rates. These costs will
21 be recovered by the energy efficiency lost contribution to fixed costs factor (LCFCF).

22 **Q.** **How are the monthly billing factors determined and applied?**

23 **A.** On a rate schedule group basis, the PCF, CIF, and LCFCF cost components of the rate

1 schedule group are divided by the projected annual kWh energy sales of the rate
2 schedules within each group. The resulting rates per kWh for the three (3) cost
3 components are then summed to determine the total Energy Efficiency Cost Recovery
4 Factor (EECRF) to be applied to the customer's monthly kWh for billing purposes.

5 **Q. What are the monthly EECRF billing factors that were determined from the**
6 **application of the proposed methodology for the Company's proposed energy**
7 **efficiency programs?**

8 **A.** Based on the Company's proposed Quick Start Energy Efficiency program plan, as
9 discussed by Mr. Ihrig, the billing factors for the first twelve (12) months of
10 implementation are calculated to be:

11 Residential Rate Schedule Group: \$0.001521 per kWh

12 Small Commercial& Industrial Rate Schedule Group: \$0.000414 per kWh

13 Large Commercial& Industrial Rate Schedule Group: \$0.000369 per kWh

14 These factors would be applicable for the billing months of September 2014 through
15 August 2015, and remain in effect unless and until changed by subsequent order of the
16 Commission.

17 **Q. Please explain how the proposed Residential Rate Schedule Group's EECRF factor**
18 **would affect the billing of a typical residential customer.**

19 **A.** A residential customer having a monthly usage of 1,000 kWh would have an average
20 monthly bill increase of \$1.52 as a result of the proposed Quick Start programs.

21 **Q. Do the proposed EECR charges result in just and reasonable charges for electric**
22 **service?**

23 **A.** Yes they do.

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

2 **A.** Yes, it does.

BEFORE THE MISSISSIPPI PUBLIC SERVICE COMMISSION

MISSISSIPPI POWER COMPANY
EC-120-00097-00


DOCKET NO. _____

IN RE: NOTICE OF INTENT OF MISSISSIPPI POWER COMPANY
TO ESTABLISH THE ENERGY EFFICIENCY QUICK START
PLAN AND COST RECOVERY RATE CLAUSE

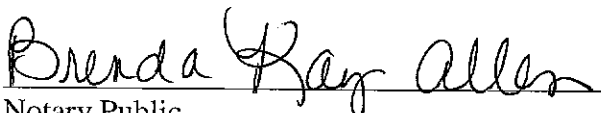
AFFIDAVIT OF LAWRENCE J. VOGT

PERSONALLY appeared before the undersigned officer authorized to administer oaths, LAWRENCE J. VOGT, who being duly sworn, deposes and says; that the foregoing direct testimony was prepared by him or under his supervision; that said testimony was prepared for use as direct testimony on behalf of Mississippi Power Company in the captioned proceeding; that the facts stated therein are true to the best of his knowledge, information and belief; and that if asked the questions appearing therein, his answers, under oath, would be the same.

Dated at Gulfport, Mississippi, the 10th day of January, 2014.


LAWRENCE J. VOGT

Sworn to and subscribed before me this the 10th day of January, 2014.


Notary Public

My Commission Expires:



ENERGY EFFICIENCY COST RECOVERY RIDER "EECR"



Mississippi Public Service Commission Schedule No. 57

| | | |
|----------------|----------------|--|
| PAGE 1 of 4 | EFFECTIVE DATE | DATE OF VERSION SUPERSEDED Original |
|----------------|----------------|--|

APPLICABILITY

This rider schedule is applicable to the electric service rate schedules of Mississippi Power Company (the Company), excluding lighting service rate schedules. For application of this rider, the electric service rate schedules will be grouped in the following manner:

| <u>Rate Group</u> | <u>Rate Schedules</u> |
|--------------------------------|--|
| Residential: | R, SPH |
| Small Commercial & Industrial: | GS-LVS, GSEH-LVS, GS-LVT, GSEH-LVT, GS-HV, GSEH-HV, GP, T |
| Large Commercial & Industrial: | LGS-LV, LGSEH-LV, LGS-HV, LGSEH-HV, LGS-TOU, LPO-TOU, SPSS, LPSS, T-LP |

MONTHLY RATE

The monthly amount computed under each of the rate schedules to which this Energy Efficiency Cost Recovery (EECR) Rider is applicable shall be increased or decreased by the Energy Efficiency Cost Recovery Factor (EECRF) at a rate per kilowatt hour of monthly consumption in accordance with the following formula:

$$EECRF = PCF + CIF + LCFCF$$

Where:

$$PCF = \text{ENERGY EFFICIENCY PROGRAM COST FACTOR}$$

The PCF shall include all expected costs that have been approved by the Commission for each twelve-month period for Energy Efficiency programs. Program costs shall include the cost of planning, developing, implementing, monitoring, measuring, and evaluating Energy Efficiency programs, as well as customer incentives. In addition, all costs, including but not limited to costs for consultants, employees, and administrative expenses, will be recovered through the PCF. For recovery purposes, program costs will be assigned to the rate Groups whose customers are directly participating in the programs. Administrative costs that are allocable to more than one rate Group will be recovered from those Groups and allocated by rate Group on the basis of the estimated budget from each program. The over/under recovery of the PCF from the prior twelve-month period will be included in the calculation of the PCF for the subsequent twelve-month period. The Energy Efficiency program cost amount related to programs for each of the rate Groups shall be divided by the projected Group sales (in kWh) for the upcoming twelve-month period in order to determine the applicable PCF factor for each such rate Group.

ENERGY EFFICIENCY COST RECOVERY RIDER "EECR"



Mississippi Public Service Commission Schedule No. 57

| | | |
|----------------|----------------|--|
| PAGE 2 of 4 | EFFECTIVE DATE | DATE OF VERSION SUPERSEDED Original |
|----------------|----------------|--|

Calculation of Retail Energy Efficiency Program Revenue Requirements

| 12 Months Ending 00/00/00 | | | |
|----------------------------|----------------------|-----------------------|-----------------------|
| Total Retail Service | Residential Group | Small C&I Group | Large C&I Group |

1. Gross EE Plant in Service
2. EE Accumulated Depreciation
3. Net EE Plant in Service
4. Materials Inventory
5. Prepaid Materials
6. Specifically Allowed EE Investment
7. EE Accumulated Deferred Income Taxes
8. Total EE Investment
9. EE Return on Rate Base
10. Target Net Income Before Interest Expense on EE Investment
11. Interest Expense on EE Investment
12. Adjusted Target Net Income on EE Investment
13. Income Tax Adjustment Factor
14. EE Investment Revenue Requirement
15. EE Depreciation Expense
16. Specifically Allowed EE Expenses
17. Interest Expense on EE Investment
18. EE Revenue Requirement Before Adjustment for Prior Year's Expenditures and Revenues
19. Adjustment for Prior Year's Expenditures and Revenues
20. EE Revenue Requirement Before Municipal Franchise Taxes
21. Municipal Franchise Tax Adjustment Factor
22. Total EE Revenue Requirement

CIF = ENERGY EFFICIENCY COMPANY INCENTIVE FACTOR

For all Energy Impact Programs, the Energy Efficiency Company incentive amount shall be computed by multiplying the net resource savings expected from the approved programs that are to be implemented during the upcoming twelve-month period times fifteen (15) percent. Net resource savings for each program are defined as program benefits less utility program costs and participant costs (but not less than zero), where program benefits will be calculated on the basis of the present value of the Company's avoided costs over the expected life of the program, and will include both capacity and/or energy savings. For programs where energy savings benefits would be hard to quantify, such as some energy education programs, the Energy Efficiency incentive amount shall be computed by multiplying the annual cost of the approved program times five (5) percent. For recovery purposes, Energy Efficiency Company Incentive amounts will be assigned to the rate Groups whose programs created the incentive. The over/under recovery of the CIF from the prior twelve-month period will be included in the calculation of the subsequent twelve-month period. The Energy Efficiency Company incentive amount related to programs

ENERGY EFFICIENCY COST RECOVERY RIDER "EECR"



Mississippi Public Service Commission Schedule No. 57

| PAGE | EFFECTIVE DATE | DATE OF VERSION SUPERSEDED |
|--------|----------------|----------------------------|
| 3 of 4 | | Original |

for each of the rate Groups shall be divided by the projected Group sales (in kWh) for the upcoming twelve-month period in order to determine the applicable CIF factor for each such rate Group.

LCFCF = ENERGY EFFICIENCY LOST CONTRIBUTION TO FIXED COSTS FACTOR

The Lost Contribution to Fixed Costs (lost revenues) due to lost sales from Energy Efficiency programs implemented on and after the effective date of this tariff will be assigned for recovery purposes to the rate Groups whose programs resulted in the lost sales and will be recovered as follows:

- For each upcoming twelve-month period, the loss of sales due to the reduction in customer usage (in demand units and/or kWh) will be determined for the approved Energy Efficiency programs. Lost sales for each rate Group shall be based on projected engineering estimates of demand and/or energy savings per month, expected program participation, and the projected sales for the upcoming twelve-month period.
- The projected annual lost revenues due to lost sales shall be determined by applying the average monthly base rate per kWh to the projections of kWh reductions for each rate Group. These calculations will be based on both the PEP base rates and the KRF base rates (or other approved recovery mechanisms for Kemper Project costs) as shown on the electric service rate schedules then in effect.
- At the end of each annual period, the difference between the lost revenues actually collected hereunder and the estimated lost revenues shall be determined with due consideration to any revisions of the engineering estimates and the actual program participation. The over/under recovery of the LCFCF from the prior twelve-month period will be included in the calculation of the subsequent twelve-month period.
- The Lost Contribution to Fixed Costs for each rate Group shall then be divided by the projected class sales (in kWh) for the upcoming twelve-month period in order to determine the applicable LCFCF for each such rate Group. Recovery of lost sales revenue shall be included in the LCFCF until new base rates for electric service as approved by the Commission are implemented.

Energy Efficiency Cost Recovery Rate Group Factors

| | |
|--|--------------------------|
| Energy Efficiency Program Cost Factor (PCF) | \$ X.XXXX per kWh |
| Energy Efficiency Incentive Factor (CIF) | \$ X.XXXX per kWh |
| Energy Efficiency Lost Contribution to Fixed Costs Factor (LCFCF): | |
| ▪ PEP Component | \$ X.XXXX per kWh |
| ▪ KRF Component | <u>\$ X.XXXX per kWh</u> |
| Total LCFCF | \$ X.XXXX per kWh |
| ENERGY EFFICIENCY COST RECOVERY FACTOR (EECRF) | \$ X.XXXX per kWh |

The Energy Efficiency Rate Group Factors shall be effective on and after the first billing cycle of September and shall remain in effect for twelve (12) months of the program period and remain in effect unless and until changed by subsequent order of the Commission.

ANNUAL FILING PROCEDURES

ENERGY EFFICIENCY COST RECOVERY RIDER "EECR"



Mississippi Public Service Commission Schedule No. 57

| PAGE | EFFECTIVE DATE | DATE OF VERSION SUPERSEDED |
|--------|----------------|----------------------------|
| 4 of 4 | | Original |

On or before the first working day of July, the Company shall submit a sworn filing including the calculation of the "EECR" Program Revenue Requirements and other cost components for the upcoming program year and the applicable revised EECRF factors for each of the rate Groups.

ADJUSTMENT CLAUSES

The Company's effective adjustment clauses will not be affected by this Rate Schedule in any manner.

TERM

The Energy Efficiency Cost Recovery Rider shall be effective upon approval by the Commission beginning with the first billing cycle of September 2014, and shall continue unless modified or terminated by the Commission.

1 **DIRECT TESTIMONY**

2 **OF**

3 **MICHELE P. NEGLEY**

4 **On Behalf of**

5 **MISSISSIPPI POWER COMPANY**

6 **BEFORE THE MISSISSIPPI PUBLIC SERVICE COMMISSION**

7 **DOCKET NO. _____**

8 **INTRODUCTION AND BACKGROUND**

9 **Q. Please state your name, business address, and job title.**

10 A. My name is Michele P. Negley. My business address is 4301 Westbank Dr., Bldg. A, Ste.
11 300, Austin TX, 78746. I am employed by CLEAResult Consulting, Inc. as the Vice
12 President of the Sunbelt Business Unit.

13 **Q. On whose behalf do you testify in this proceeding?**

14 A. I am submitting direct testimony to the Mississippi Public Service Commission on behalf
15 of Mississippi Power Company.

16 **Q. Please summarize your educational and professional background and experience.**

17 A. I hold a Bachelor of Science in Electrical Engineering from Arizona State University. I
18 am a registered Electrical Professional Engineer in the State of Arizona. I have over 25
19 years of experience that spans from utility engineering management to demand-side
20 management (DSM) program implementation. I have been responsible for
21 implementation services for both commercial and industrial (C&I) and residential DSM
22 programs for approximately 20 utilities across the southern United States.

1 In 2010, I joined CLEAResult and am the Vice President of the Sunbelt Business
2 Unit. My current duties include directly leading an organization of consultants that
3 provide energy efficiency program implementation services for more than 40 programs
4 on behalf of 16 utility clients across five states. As part of my duties, I often provide
5 assistance with regulatory support for energy efficiency and demand side management
6 (DSM) filings and testimony to ensure program savings and incentive protocol
7 compliance.

8 Prior to joining CLEAResult, I provided program implementation leadership for
9 another firm, and prior to that, I held several positions at an electric utility including
10 management of Distribution Planning, Transmission Planning, Marketing, Distribution
11 Design, System Protection and rotational assignments.

12 **Q. Have you previously testified before the Mississippi Public Service Commission?**

13 A. No.

14 **REVIEW OF THE DEVELOPMENT OF THE QUICK START PLAN**

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

16 A. The purpose of my testimony is to discuss the development of energy efficiency
17 programs meeting the Mississippi Public Service Commission (MPSC) requirements for
18 Quick Start programs, in compliance with Rule 29.

19 To provide additional background, CLEAResult is a leading provider of energy
20 optimization solutions for utilities, end-users and governments. Established in 2003, we
21 are the largest North American private company exclusively focused on energy efficiency
22 and other DSM solutions. We have specific expertise in designing and implementing
23 energy efficiency, load management and renewable energy programs for electric and gas

1 utilities. CLEAResult currently delivers more than 300 residential, commercial, industrial
2 and institutional programs for more than 120 utilities, state and local governments and
3 Fortune 100 companies. We run programs in 34 states and provinces in the U.S. and
4 Canada.

5 CLEAResult has collaborated with Mississippi Power Company in the design of the
6 following four core energy efficiency programs for Mississippi Power Company. The
7 four core programs that we are proposing to design and implement with Mississippi
8 Power are:

9 1) Residential Energy Audit and Direct Install Program

10 2) Residential and Commercial Air Conditioning Tune-Up and Replacement
11 Program

12 3) Small Business Direct Install and Incentive Program

13 4) Large Commercial and Industrial Prescriptive and Custom Program

14 We developed this portfolio of Quick Start programs based on our experience
15 delivering similar energy efficiency programs for electric utilities including Entergy
16 Arkansas; Entergy-New Orleans; Entergy-Texas; Southwestern Electric Power Company
17 (SWEPCO); Oncor; El Paso Electric; FirstEnergy; Alliant Energy; Oklahoma Gas &
18 Electric; and many others. Our experience launching and implementing Arkansas' Quick
19 Start programs, provides Mississippi Power with an opportunity to leverage our expertise
20 implementing programs that are based in a large part on the rules in place in Arkansas.
21 Our programs are designed to drive job creation in Mississippi and keep Mississippi
22 Power ratepayer dollars that fund these programs within the state, by developing and

1 utilizing the local contractor-base (HVAC contractors, insulation contractors, engineering
2 firms, etc.) to implement measures at customer sites.

3 CLEAResult is recommending programs that include various approaches,
4 measures and rebates for Mississippi Power's residential, commercial, industrial and
5 institutional customers. We have worked with the Mississippi Power staff to design
6 programs that meet the program implementation Quick Start guidelines, and maintain the
7 flexibility within the program design and measure selection to optimize the programs so
8 they meet the Commission's objectives and are in compliance with Rule 29.

9 CLEAResult utilized experience from other programs as a baseline to customize
10 programs and materials specifically for Mississippi Power customers. These customized
11 programs were designed using market data specific to Mississippi Power's service
12 territory as well as CLEAResult's regional experience implementing programs for
13 utilities including: Southern Mississippi Electric Power Association (SMEPA), Entergy
14 New Orleans, Energy Arkansas, El Paso Electric and Oklahoma Gas & Electric. These
15 client utility programs are similar to these Quick Start Programs in scope, geographic
16 market or customer demographic. These highlighted programs are successful and are
17 achieving goals set out for such programs.

18 Implementing multi-program portfolios that span residential and C&I sectors is
19 complex and requires specialization and coordination across program teams, target
20 markets, sectors and customers. CLEAResult has experience implementing large program
21 portfolios for utility clients throughout the United States and specifically on the Gulf
22 coast and Midwest. Our experience with similar program portfolios translates to a better

1 understanding of utility customers and the correct processes and protocols to quickly
2 engage customers and trade allies so that the programs achieve the desired results.

3 CLEAResult's proposed programs offer the following advantages to customers of
4 Mississippi Power:

- 5 • Customer-focused efficiency programs that will drive increased customer
6 satisfaction. CLEAResult designs programs that are easy for customers to
7 understand and participate in, achieve savings for customers, educate customers
8 on the value of efficient appliances and equipment, and ultimately increase
9 comfort in the home and productivity in the workplace.
- 10 • A commitment to achieving electric savings in both energy and demand.
- 11 • Mentoring, training and job creation for local contracting firms in Mississippi that
12 choose to participate in the Mississippi Power programs. Because we intend to
13 run our programs using local trade allies (contractors), many of the local firms in
14 Mississippi will be able to increase the number of contractors that they employ in
15 their companies as their workload expands due to their participation in these
16 Mississippi Power programs.
- 17 • Proven success in marketing to residential and business customers of all sizes.
- 18 • Experienced team members that have delivered these programs for other utilities.
- 19 • Processes and procedures in place to begin the implementation of its energy
20 efficiency programs within six months of Plan approval, in accordance to Rule 29.

- 1 • Tried and true Quality Control (QC) and Quality Assurance (QA) processes to
2 ensure that program savings are accurate and the customer experience with the
3 programs is satisfactory.
- 4 • Expertise and processes to ensure compliance with Evaluation, Measurement and
5 Verification (EM&V) requirements to verify savings.
- 6 **Q. Does this conclude your testimony?**
- 7 A. Yes.

BEFORE THE MISSISSIPPI PUBLIC SERVICE COMMISSION

MISSISSIPPI POWER COMPANY
EC-120-0097-00

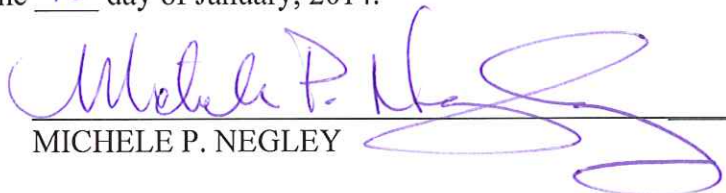
DOCKET NO. _____

IN RE: NOTICE OF INTENT OF MISSISSIPPI POWER COMPANY TO
ESTABLISH THE ENERGY EFFICIENCY QUICK START PLAN AND
COST RECOVERY RATE CLAUSE

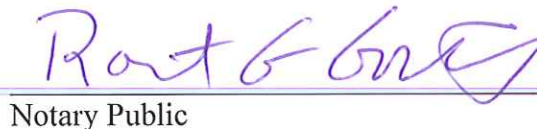
AFFIDAVIT OF MICHELE P. NEGLEY

PERSONALLY appeared before the undersigned officer authorized to administer oaths, Michele P. Negley, who being duly sworn, deposes and says; that the foregoing direct testimony was prepared by him or under his supervision; that said testimony was prepared for use as direct testimony on behalf of Mississippi Power Company in the captioned proceeding; that the facts stated therein are true to the best of his knowledge, information and belief; and that if asked the questions appearing therein, his answers, under oath, would be the same.

Dated at Kenner, La, the 10 day of January, 2014.

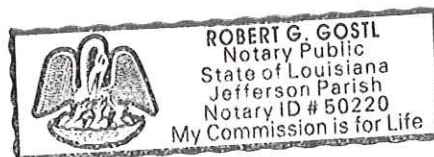

MICHELE P. NEGLEY

Sworn to and subscribed before me this the 10 day of January, 2014.


Notary Public

My Commission Expires:

AT Death



DIRECT TESTIMONY

OF

JAMES E. KAPSIS

On Behalf of

OPOWER, INC.

BEFORE THE MISSISSIPPI PUBLIC SERVICE COMMISSION

DOCKET NO. _____

Q. Please state your name and business address

A. My name is James E. Kapsis. My business address is 1515 N. Courthouse Rd., 8th Floor, Arlington, Virginia 22201.

Q. By whom are you employed and in what capacity?

A. I am employed by Opower, Inc. ("Opower"), where I serve as the Vice President of Policy and Regulatory Affairs.

Q. For whom are you testifying?

A. I am testifying on behalf of Opower.

Q. Please summarize your educational and professional qualifications.

A. I lead Opower's regulatory team in North America. In this capacity, I frequently testify before regulators, legislatures, and speak at industry conferences on energy efficiency, technology and policy. Prior to Opower, I was an Energy Advisor at the U.S. Department of the Treasury. In that role, I was a member of the U.S. negotiating team that helped broker the Copenhagen Accord in December 2009. I have also served as a Presidential Management Fellow (PMF) in the Office of the Secretary of Defense (OSD), including rotations in the Office of Management and Budget (OMB), the U.S. Mission to NATO,

1 and the Joint Chiefs of Staff. From August 2006 to March 2007, I served at the State
2 Department as Special Assistant to Ambassador David Satterfield, the Secretary's top Iraq
3 advisor. I have also worked in Congress as Communications Director and Legislative
4 Assistant to U.S. Congressman Rush Holt from New Jersey. I earned a B.A. in Political
5 Science from Haverford College and a M.P.A. from the Woodrow Wilson School at
6 Princeton University. Exhibit____(JEK-1) provides a list of independent evaluations of
7 various energy efficiency programs conducted.

8 **Q. Please describe Opower.**

9 **A.** Opower is an Arlington, Virginia-based company that provides information-based
10 behavioral energy efficiency programs for over 80 electric and gas utilities in 30 states and
11 eight countries. This year, Opower will deliver personalized energy usage insight to more
12 than 22 million residential customers through paper mail, email, websites, smart phones,
13 and text messages.

14 Opower's Home Energy Reports program consistently motivates customers to
15 save an average of 1.5-3% on their energy bills. Opower has helped its utility partners
16 drive this level of energy efficiency at scale, achieving 3 terawatt-hours in energy
17 savings¹, and driving significant increases in participation in energy efficiency programs
18 and overall customer satisfaction.

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

20 **A.** The purpose of my testimony is to recommend approval of Mississippi Power's request to
21 the Mississippi Public Service Commission ("Commission") to include Opower's Home

¹ Cumulative results as of October 2013. Three terawatt-hours in energy savings is enough to power all the homes in a city of 600,000 people in a year such as Las Vegas, Nevada.

1 Energy Reporting program in its Quick Start efficiency portfolio and to provide
2 supporting background on the program. My testimony also provides background
3 information on Opower's planned program with Mississippi Power, the results similar
4 programs have delivered in other jurisdictions, and a description of the methodology used
5 to measure and verify the program's energy savings.

6 **Q. Explain why Opower supports the inclusion of its Home Energy Reporting program**
7 **in Mississippi Power's Quick Start efficiency portfolio**

8 **A.** Opower's Home Energy Reporting program provides residential customers with better
9 energy information through personalized mailed reports, emails, as well as an integrated
10 web portal. This information empowers residential customers to make more informed
11 energy usage decisions and save money on their bills. There are multiple public benefits
12 associated with this energy efficiency program, including but not limited to:

13 (i) *Cost effective energy savings:* This program consistently results in 1.5 – 3% for
14 average electric savings, as has been demonstrated through 29 independent
15 evaluations² of programs across millions of households. This leads to reduced
16 energy costs and lower bills for families who participate in the program.

17 (ii) *Widely distributed benefits:* Mississippi Power plans to use Opower's program
18 to automatically reach 25,000 residential households on an opt-out basis. The
19 benefits of behavioral programs can reach all types of residential rate-payers,
20 including low-income households, senior citizens, and renters.

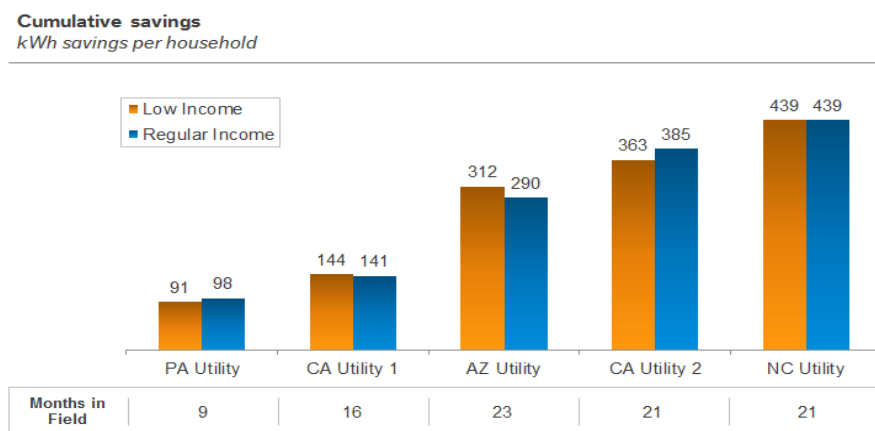
² See Appendix DSG-1, attached hereto

(iii) *Heightened awareness of efficiency*: Opower delivers energy savings by providing better energy information. Through Opower's program, households become more aware of their energy usage and opportunities for conservation – through both changes in behavior and the purchase of energy efficient products. For example, Opower has demonstrated an ability to lift participation in other utility efficiency programs. A customer receiving Home Energy Reports is more likely to buy efficient appliances, which is a secondary benefit of the Opower program.

Q. How do low-income households benefit from Opower programs?

A. Opower's results have shown that low-income households save consistently in response to the program and sometimes save even more than non-low income households. Figure 1 below shows Opower's internal analysis of savings between low income and regular income households across five different utilities.

Figure 1



1 Independent evaluations of programs at AEP Ohio and Progress Energy in North
2 Carolina have corroborated Opower's findings. Navigant found that low-income
3 households receiving Opower's program in North Carolina reduced annual energy usage
4 by 238 kWh (1.35%) on average in response to the program, compared to 225 kWh
5 (1.22%) for non-low income participants³. Similarly, Navigant found that Opower's
6 program delivered an average of 1.25% savings or 179/kWh's per household per year for
7 the 16,000 low-income households receiving its program through AEP Ohio.⁴

8 **Q. What will be the program design for Mississippi Power's Home Energy Report**
9 **program?**

10 **A.** Mississippi Power will automatically deliver the program on an opt-out basis to 25,000
11 randomly selected households. The program is designed with the following
12 characteristics:

- 13 (i) *Delivery of reports:* Targeted households automatically receive one welcome
14 insert to introduce them to the program followed by four home energy reports
15 annually. These reports provide periodic updates on the energy usage behavior
16 of a given household, and offer tips for saving energy.
- 17 (ii) *Delivery of web portal:* All program participants will have access to a web portal
18 designed by Opower that will be integrated into Mississippi Power's website.
19 This site will enable participants to create a profile, perform an online audit,
20 access energy savings tips, monitor usage over time, and compare usage to
21 neighbors for benchmarking purposes.

³ December 2012. "Program Year 1 (2011-2012) EM&V Report for the Residential Energy Efficiency Benchmarking Program."
Navigant

⁴ May 2013. "Home Energy Reports Program: Program Year 2012 Evaluation Report." Navigant Consulting

(iii) *Ability to opt-out:* All participants will have a clear method for opting out of the program if they no longer want to receive the information. The opt-out rate for the HER program has generally been less than 1%.

Q. How will Mississippi Power target the program's customer population?

A. Home Energy Reports will be delivered to a random sample of 25,000 Mississippi Power customers. This allows Mississippi Power to deliver valuable bill savings to all customer classes, including low-income customers, who will be included as participants as a result of the random sampling. A random sample also provides valuable data points for understanding the HER program's impact across the customer base and the impact of the program at scale.

Q. Does Opower intend to use any customer incentives?

A. No customer incentives are needed to encourage participation, as the HER program is delivered on an opt-out basis.

METHODOLOGY FOR MEASUREMNT AND VERIFICATION

Q. Please explain the methodology used to measure and verify program savings.

A. The Opower home energy reports program uses randomized control trials and *ex-post* statistical billing analysis-rather than *ex-ante* deemed savings-to measure savings with over 90% statistical confidence. Under this approach, Opower uses parameters to create an eligible group of recipients, randomly assigns households to control and treatment groups, tests these groups to ensure statistical equivalence, sends reports only to the treatment group, and measures the difference in energy usage between the two groups

1 using billing analysis. This approach measures savings without bias and with precision.

2 Key components of this approach include:

3 (i) Statistically equivalent and randomly allocated control and treatment groups

4 (ii) Opt-out design

5 (iii) *Ex-post* measurement

6 (iv) Panel data methodology billing analysis for comparison of control and treatment
7 groups.

8 **Q. Why are randomized control trials (RCTs) with panel data analysis best practice?**

9 **A.** This methodology is consistent with the recommendations of the Department of Energy-
10 led State & Local Energy Efficiency (“SEE”) Action Network’s *EM&V of Residential*
11 *Behavior-Based Energy Efficiency programs: Issues and Recommendations*.⁵ SEE Action
12 Network is a consensus group comprised of utilities, consumer advocates, commission
13 staff, and government officials. According to the SEE Action Network, “using a
14 randomized controlled trial for behavior-based efficiency programs will result in robust,
15 unbiased program savings impact estimates, and a panel data analysis method, which will
16 result in precise estimates.”⁶

17 The use of randomized control trials is the most rigorous way to precisely
18 measure impacts at a large scale. This is a low-risk approach because the results are
19 proven and predictable. Since the results are measured *ex post*, credit is given only for the

⁵ *Evaluation, Measurement, and Verification (EM&V) of Residential Behavior Based Energy Efficiency Programs: Issues and Recommendations*, State & Local Energy Efficiency Action Network, (May 2012) available here:
http://www1.eere.energy.gov/seeaction/pdfs/emv_behaviorbased_eepgrams.pdf

⁶ *Id.* at 11.

1 results actually achieved. For these reasons, it is an approach that has been recognized as
2 the gold standard by the U.S. Department of Energy.

3 This approach is also consistent with best practices supported by the National
4 Action Plan for Energy Efficiency guidelines⁷, the California Evaluators Manual⁸, and
5 The Brattle Group's Principles of Behavior-Based Energy Efficiency⁹. Randomized
6 controlled trials are also cited in the Arkansas Technical Resource Manual¹⁰ as the
7 recommended evaluation method, as it "will result in the most robust, unbiased program
8 savings impact estimates."

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

10 **A.** Yes.

⁷ "Model Energy Efficiency Program Impact Evaluation Guide." November 2007. Available online at:
http://www1.eere.energy.gov/office_eere/pdfs/napee_evaluation_guide.pdf.

⁸ California Public Utilities Commission. "California Energy Efficiency Evaluation Protocols: Technical, Methodological, and Reporting Requirements for Evaluation Professionals." April 2006. Available Online at:
http://www.calmac.org/events/EvaluatorsProtocols_Final_AdoptedviaRuling_06-19-2006.pdf.

⁹ Sergici, Sanem and Ahmad Faruqi. "Measurement and Verification Principles for Behavior-Based Efficiency Programs." May 2011. Available online at: http://opower.com/uploads/library/file/10/brattle_mv_principles.pdf.

¹⁰ Arkansas Public Service Commission. "Arkansas Technical Resource Manual, Version 2.0." September 2012. Available Online at:
<http://www.apscservices.info/EEInfo/TRM.pdf>.

BEFORE THE MISSISSIPPI PUBLIC SERVICE COMMISSION

MISSISSIPPI POWER COMPANY
EC-120-0097-00

DOCKET NO. _____

IN RE: NOTICE OF INTENT OF MISSISSIPPI POWER COMPANY TO
ESTABLISH THE ENERGY EFFICIENCY QUICK START PLAN AND
COST RECOVERY RATE CLAUSE

AFFIDAVIT OF JAMES E. KAPSIS

PERSONALLY appeared before the undersigned officer authorized to administer oaths, JAMES E. KAPSIS, who being duly sworn, deposes and says; that the foregoing direct testimony was prepared by him or under his supervision; that said testimony was prepared for use as direct testimony on behalf of Mississippi Power Company in the captioned proceeding; that the facts stated therein are true to the best of his knowledge, information and belief; and that if asked the questions appearing therein, his answers, under oath, would be the same.

Dated at 2:20 the 10 day of January, 2014.

J. E. Kapsis
JAMES E. KAPSIS

Sworn to and subscribed before me this the 10 day of January, 2014.

Rebecca A. Ickey
Notary Public

My Commission Expires:

4/30/17

Arlington, VA

Rebecca A. Ickey



Independent Evaluations

1. Klos, Mary, September 2009. “Impact Evaluation of OPOWER SMUD Pilot Study.” *Summit Blue Consulting, LLC.*
 - *Utility, State, Fuel:* Sacramento Municipal Utility Department, CA, Electric
 - *Results:* Summit Blue (d/b/a Navigant) verified an average of 2.2% savings in the first year, as well as a bump to 2.8% average savings in the first four months of year two
2. Ayres, Ian, et al., September 2009. “Evidence From Two Large Field Experiments That Peer Comparison Feedback Can Reduce Residential Energy Usage.” *NBER Working Paper.*
 - *Utility, State, Fuel:* Sacramento Municipal Utility Department & Puget Sound Energy, CA & WA, Electric & Gas
 - *Results:* There is evidence of a reduction in the early years of the program of 1.2% (natural gas) and 2.1% (electric) participants
3. Allcott, Hunt, February 2010. “Social Norms and Energy Conservation.” *Working Paper, Massachusetts Institute of Technology’s Center for Energy and Environmental Policy Research.*
 - *Utility, State, Fuel:* Connexus, MN, Electric
 - *Results:* Using data from a randomized natural field experiment at 80,000 treatment and control households in Minnesota, it is estimated that the monthly program reduces energy consumption by 2.3 – 2.4% relative to baseline

4. Allcott, Hunt and Sendhil Mullainathan, March 2010. "Behavior and Energy Policy."

Science, Vol. 327

- *Utility, State, Fuel*: This article is a literature review
- *Results*: Using randomized, controlled trials with hundreds of thousands of utility customers across the United States, these [OPOWER] reports have been shown to reduce electricity consumption in the average household by over 2%.

5. Macke, Rich, June 2010. "Measurement and Verification Report of Lake Country's OPOWER Energy Efficiency Pilot Program." *Power System Engineering*.

- *Utility, State, Fuel*: Lake Country Power, MN, Electric
- *Results*: Average of 2.77% first-year savings with 99% statistical confidence

6. Ivanov, Chris, July 2010. "Measurement and Verification Report of OPOWER Energy Efficiency Pilot Program." *Power System Engineering*.

- *Utility, State, Fuel*: Connexus, MN, Electric
- *Results*: With 99% confidence, the program demonstrated an average of 2.07% savings across three distinct approaches to measuring and verifying the results

7. October 2010. "Puget Sound Energy's Home Energy Reports Program." *KEMA*.

- *Utility, State, Fuel*: Puget Sound Energy, WA, Electric & Gas

- *Results:* The savings rate of the most recent 12 months was significantly greater than for the first 12 months – improving from 1.87% to 2.28% average electric savings.
8. Gunn, Randy, December 2010. “Energy Efficiency / Demand Response Plan: Plan Year 2 (6/1/2009-5/31/2010), Evaluation Report: OPOWER Pilot.” *Navigant Consulting*.
- *Utility, State, Fuel:* Commonwealth Edison Company (ComEd), IL, Electric
 - *Results:* “Average annual savings was 1.54% for high energy users, and was 1.27% for low energy users.”
9. Cooney, Kevin, February 2011. “Evaluation Report: OPOWER SMUD Pilot Year 2.” *Navigant Consulting*.
- *Utility, State, Fuel:* Sacramento Municipal Utility Department, CA, Electric
 - *Results:* (i) 2.89% savings in the second year, 22% increase over first year; (ii) Highest savings—3.56% savings in July/August of 2009—occurred during peak season; and (iii) only signs of impact stability over the first 30 months of the program
10. Davis, Matt, May 2011. “Behavior and Energy Savings: Evidence from a Series of Experimental Interventions.” *Environmental Defense Fund*.
- *Utility, State, Fuel:* Report verifies results from 11 different gas and electric utilities covering urban and suburban communities in 6 states in the Northeast, Midwest, and West. Specific utility names are not released for confidentiality purposes. Electric only.

- *Results:* Reports have driven electricity savings ranging from 1.1-2.9% across the 11 deployments, and, if fully deployed in the US, OPOWER programs would lead to \$3 billion in annual savings

11. Dougherty, Anne, June 2011. “Massachusetts Cross-Cutting Behavioral Program Evaluation.” *Navigant Consulting and Opinion Dynamics*.

- *Utility, State, Fuel:* National Grid, MA, Electric
- *Results:* 1.61% average savings, of which the majority came from actions that were taken outside other National Grid programs.

12. Todd, Annika, Steven Schiller, and Charles Goldman, October 2011. “Analysis of PSE’s Pilot Energy Conservation Project: “Home Energy Reports.” *Lawrence Berkeley National Laboratory*.

- *Utility, State, Fuel:* Puget Sound Energy, WA, Electric & Gas
- *Results:* “The evaluation study design for the HER pilot program utilized a randomized controlled experiment with an opt-out design, which is the best feasible method of inferring that a program caused energy savings.” Averaged 2.03% savings in the last 12 months for electricity, 1.40% for gas.

13. April 2012. “Puget Sound Energy’s Home Energy Reports Program: Three Year Impact, Behavioral, and Process Evaluation.” *KEMA Energy & Sustainability*.

- *Utility, State, Fuel:* Puget Sound Energy, WA, Electric & Gas

- *Results:* In its third year, this program generated savings of 2.6% for electric customers and 1.3% for gas. Electric impact leapt from 169.7 kWh per household per year in Year 1 to 274.2 kWh in Year 3, an increase of 62%. Gas impact increased from 10.7 to 11.9 therms, a change of 11%. In the third year, reports were suspended for a sub-set of the treatment group. In this group, the electric savings rate dropped to 1.6% compared to a savings rate of 2.6% for the group that continued to receive the reports.

14. Gunn, Randy, May 2012. "Evaluation Report: Home Energy Reports." *Navigant Consulting*.

- *Utility, State, Fuel:* Commonwealth Edison, IL, Electric
- *Results:* In the second program year, savings range from 1.55 – 2.02% and 185.54 – 444.56 kWh per customer per year, depending on the treatment group. These results led the independent evaluator to conclude that, "average weather-normalized annual savings increased from 230 to 317 kWh per customer [from the first to second program year], and increase of 38%. This increase is statistically significant."

15. Dougherty, Anne, July 2012. "Massachusetts Three Year Cross-Cutting Behavioral Program Evaluation Integrated Report." *Opinion Dynamics Corporation with Navigant Consulting*.

- *Utility, State, Fuel:* NSTAR & National Grid, MA, Electric & Gas
- *Results:* Electric savings range from 1.25 – 2.06% and gas savings range from 0.81 – 1.50%, depending on the number of years the program has been running. From the first to the second program year, electric savings increased from 1.61 – 2.06% in one program and 1.25 – 1.63% in another – increases of 28 and 30%, respectively. Gas savings increased from 0.81 to 1.25%, an increase of over 54%.

16. Sutter, Mary, October 2012. “Impact and Process Evaluation of 2011 (PY4) Ameren Illinois Company Behavioral Modification Program.” *Opinion Dynamics Corporation with The Cadmus Group, Navigant, and Michaels Engineering.*

- *Utility, State, Fuel:* Ameren Illinois Company (AIC), IL, Electric & Gas
- *Results:* Overall, the program achieved electric net savings of 1.14% per household and gas net savings at 0.70% per household.

17. Wu, May, November 2012. “Impact & Persistence Evaluation Report: Sacramento Municipal Utility District Home Energy Report Program.” *Integral Analytics, Inc with BuildingMetrics Incorporated and Sageview.*

- *Utility, State, Fuel:* Sacramento Municipal Utility District (SMUD), CA, Electric
- *Results:* HERs had a net impact of 2.2% electricity savings per month per household (250 kWh) in the Wave 1 group (monthly report recipients, quarterly report recipients as well as a third group that stopped receiving reports). The Wave 2 group, which included UCLA Selection, SMUD Segmentation, High Use, E-reports and Seasonal Burst sub-groups, experienced a net impact of 1.6% electricity savings per month per household (216 kWh). The Seasonal Burst notifications yielded 1.2% mean annual savings (178 kWh), along with 0.06 kW reductions on summer peak days. Additionally, “the team found that homes that make a structural change with SMUD efficiency rebate dollars that also receive the HER go on to save more than homes that merely participate in a rebate program.”

18. Gunn, Randy, November 2012. “Energy Efficiency / Demand Response Plan: Plan Year 4 (6/1/2011-5/31/2012), Evaluation Report: Home Energy Reports.” *Navigant Consulting*.

- *Utility, State, Fuel:* Commonwealth Edison Company (ComEd), IL, Electric
- *Results:* Over the past two years, energy savings by Wave 1 customers do not show sign of diminishing and this evaluation calculated 2.20% savings for these participants.

Participants who began receiving HERs later achieved lower savings rates (1.66% and 1.16%), although Navigant noted that “their savings are likely in a ramp-up phase” and that “Navigant expects that savings from Wave 4 participants will increase by at least 50% over the next year.”

19. December 2012. “Verification of Hawaii Energy 2011 Programs.” *Evergreen Economics*.

- *Utility, State, Fuel:* Hawaii Energy, HI, Electric
- *Results:* “The savings claimed by Hawaii Energy for this measure is a total of 1,704,648 kWh based on savings estimated by Opower.”

20. December 2012. “Program Year 1 (2011-2012) EM&V Report for the Residential Energy Efficiency Benchmarking Program.” *Navigant*.

- *Utility, State, Fuel:* Progress Energy Carolinas, NC, Electric
- *Results:* “Average savings were 224 kWh or 1.23% of energy consumption during the first twelve months of the program. Total program savings were 10.6 GWh during the twelve month period of August 2011 to July 2012.”

21. March 2013. "Puget Sound Energy's Home Energy Reports: 2012 Impact Evaluation." *KEMA*

- *Utility, State, Fuel:* Puget Sound Energy, WA, Electric & Gas
- *Results:* "The overall credited savings for electric and gas were 300 kWh and 11 therms per household, respectively. These savings constitute 2.8% and 1.3% of the household's average electric and gas consumption, respectively."

22. March 2013. "Evaluation of the Year 1 CL&P Pilot Customer Behavior Program." *NMR*

- *Utility, State, Fuel:* Connecticut Light and Power, CT, Electric
- *Results:* "Overall, the treatment group used an average of 1.7% less energy than did the control group, translating to 388 kWh less energy used by a treatment household, compared to a control group household, during the first year of the program... Monthly report recipients (2.2% savings) saved more electricity than did the quarterly report recipients (1.2% savings)."

23. April 2013. "Evaluation of Pacific Gas and Electric Company's Home Energy Report Initiative for the 2010-2012 Program." *Freeman, Sullivan & Company*

- *Utility, State, Fuel:* Pacific Gas and Electric Company, CA, Electric & Gas
- *Results:* Program waves have been running between 11 to 17 months. Total electric and gas savings for the program were 49.9 GWh and 1,469 thousand Therms respectively

through December 2012. Percent impact ranges from 0.9% to 1.5% for electric and 0.4% to 0.9% for gas depending on number of program months.

24. May 2013. "Home Energy Reports Program: Program Year 2012 Evaluation Report." *Navigant Consulting*

- *Utility, State, Fuel:* American Electric Power Ohio, OH, Electric
- *Results:* The Home Energy Report Program reported 53,174 MWh of energy savings with an average savings rate of 2.0%.

25. June 2013. "Massachusetts Cross-Cutting Behavioral Program Evaluation Integrated Report." *Opinion Dynamics Corporation*

- *Utility, State, Fuel:* National Grid Massachusetts, NSTAR, Electric & Gas
- *Results:* Programs achieved 63 GWh and 344,681 MMBTu in 2012 for Massachusetts. Electric savings rate ranges from 0.89 - 2.47% and gas savings range from 0.50 - 1.80% depending on the number of years the program has been running. All electric programs running for at least two years show increased savings from PY1 to PY2 and PY2 to PY3 where applicable. Gas savings rates are steady or increasing.

26. July 2013. "Evaluation of Residential Incentive Program Portfolio: May 2012 through December 2012." *ADM Associates, Inc.*

- *Utility, State, Fuel:* Indiana Michigan Power, IN, Electric

- *Results:* The program achieved an annualized saving rate of 200 kWh per participant for a total savings from the program over the evaluation period of 4,051 MWh.

27. August 2013. “Review of PG&E Home Energy Reports Initiative Evaluation.” *DNV KEMA*

- *Utility, State, Fuel:* Pacific Gas and Electric, CA, Electric & Gas
- *Results:* Independent evaluation of FSC estimates of savings from PG&E Home Energy Report initiative. DNV KEMA confirms FSC evaluation and “recommends accepting the findings regarding energy savings for HERs presented in the FSC report.”