Entergy New Orleans, Inc.'s
Report in Support of Application for
Approval of Programs to be Included in the
Energy Smart New Orleans Plan and
Related Approvals Pursuant to
Resolution R-09-136 and the 2009 Agreement in Principle

July 2, 2009

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PART 1 – BACKGROUND & EXECUTIVE SUMMARY (Sections I, II)

I. Executive Summary of Proposed Energy Smart Plan

A. Narrative Description of Programs

Entergy New Orleans, Inc. ("ENO" or the "Company") submits this Report pursuant to the 2009 Agreement in Principle ("2009 AIP") and Council of the City of New Orleans (the "Council") Resolution R-09-136, which sets forth the applicable requirements for ENO to submit by July 2, 2009 proposed energy efficiency programs to be included in the Energy Smart Plan; these programs would serve as another step in the evolution of the process of bringing to fruition the efforts of the Council, the Company, and numerous New Orleans community stakeholders to implement a viable, energy efficiency program for the City of New Orleans (the "City"). The programs as presented are intended to transform the market by creating a demand for energy efficiency products and services and stimulate the development of the workforce to meet this demand. This, in turn, will help create a sustainable, long term energy efficiency market. Based on the information in this Report, its supporting Appendices, and Affidavits, ENO is requesting Council approval of the programs it is proposing for inclusion in the Energy Smart Plan, including specific program expenditure levels and allocations recommended by the Company as reasonable.

To assist in the evaluation and development of energy efficiency programs to be implemented pursuant to the 2009 AIP, the Company engaged ICF International ("ICF") and GCR and Associates ("GCR"). ICF is an international consulting firm with an Energy Efficiency Practice group and has assisted and participated in the development and implementation of numerous demand side management programs throughout the country.[1] GCR is a local

[1] David K. Pickles, Southern Region Vice President for Energy Efficiency Practice for ICF is submitting his affidavit in support of this Report; the affidavit is found in Section XII of the Report.

consulting firm that specializes in, among other things, the analysis of demographic data relating to the New Orleans community.[2] The Company,[3] with the assistance of ICF and GCR applied a rigorous screening process to determine which energy efficiency measures would be applicable to the New Orleans community based on the expenditure level approved by the 2009 AIP and certain other funds available from other Council directives; the screening process incorporated data applicable to the New Orleans area, as well as other industry-industry accepted data and best practices.[4] Further, the screening process incorporated both quantitative (such as industry-accepted cost-effectiveness tests, avoided cost calculations, deemed savings calculations) and qualitative elements (such as an overarching set of guiding principles that address the unique characteristics of the New Orleans community).

Based on an understanding of the current state of energy efficiency programs in the community, external funding of other local energy efficiency programs, and the regulatory requirements of the Council, ENO examined a wide array of potential energy efficiency measures, selected and tested applicable measures; bundled passing measures into programs, and then scaled such programs to match the approved level of funding for the Energy Smart Plan. Except for those programs expressly exempted by the 2009 AIP, the proposed programs meet industry-standard cost-effectiveness criteria. The proposed Energy Smart Plan programs are shown in Table 1 below; the table assumes both Council approval of all proposed Energy Smart Plan programs and twelve months of program implementation.

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[2] Gregory C. Rigamer, Chief Executive Officer of GCR is submitting his affidavit in support of this Report; the affidavit is found in Section XII of the Report.

[3] Charles B. Steen, Director of Energy Efficiency, of Entergy Service, Inc. is submitting his affidavit in support of this Report; his affidavit also is found in Section XII of the Report.

[4] These best practices include information developed by the American Council for an Energy-Efficient Economy ("ACEEE"), the Consortium for Energy Efficiency (www.cee.org), the Energy Trust of Oregon, the California Public Utilities Commission's ("CPUC") Best Practices, and internal review of programs operated by utilities and other program administrators across the country.

TABLE 1

ENO PROPOSED ENERGY SMART PROGRAMS

Program	12-Month Goal kWh Savings	12-Month Goal kW Savings	Total Program Cost ($000)	TRC Test	PAC Test
Residential Solutions	586,490	198	$390	1.00	1.25
Residential Low Income	81,699	18	$300	0.21	0.22
ENERGY STAR A/C	706,901	208	$240	1.73	2.94
Residential AC Tune-up	706,191	389	$240	1.26	1.44
Energy Efficient New Homes	1,266,391	252	$280	1.03	5.23
Residential CFL	3,081,611	445	$230	2.73	2.73
Small Commercial Solutions	1,784,262	257	$680	1.38	1.66
Large C&I Solutions	3,304,371	509	$1,030	1.28	1.72
Solar Hot Water Pilot	259,785	39	$150	0.33	1.40
In-Home Display Pilot	428,100	134	$280	1.16	1.17
Solar PV Monitor Pilot	0	0	$100	N/A	N/A
One-Stop Energy Shop[5]	0	0	0	N/A	N/A
Totals	12,205,801	2,449	$3,920		

A brief description of each program in Table 1 is summarized below:

Residential Solutions: The Residential Solutions program will incent homeowners to use a whole-house approach, including a review of entire building envelope effecting everyday needs for reducing energy consumption and help establish and train a network of skilled and credible home energy analysts and contractors;

Energy Efficient New Homes: The Energy Efficient New Homes program offers cash incentives to, recognition for, and promotion of New Orleans' area residential building contractors who take steps to implement specific energy efficiency building practices that meet the program criteria for an energy efficient new home;

Residential AC Tune-up: The air conditioning ("AC") Tune-up program will recruit and train AC contractors to perform proper air conditioning tune-ups on existing, working residential air conditioners in New Orleans and provide incentives to customer toward the cost of tune-ups;

[5] The One-Stop Energy Shop costs have been allocated among all the programs listed above and is discussed in more detail later in the narrative of the report.

ENERGY STAR Air Conditioning: The ENERGY STAR Air Conditioning program is designed to increase the market penetration of ENERGY STAR central and window ACs in New Orleans through incentives. The program will also train participating contractors on how to perform "Quality Installation" of the units;

Low Income Program: The objective of the Low Income program is to improve the energy efficiency, comfort and affordability of homes for New Orleans' residents who qualify under Federal guidelines for the Weatherization Assistance Program ("WAP") by providing funding to make home weatherization ready, providing replacement window ACs where appropriate and education;

Residential Direct Install CFL: The objective of the Residential Direct Install CFL program is to increase the market penetration of ENERGY STAR-qualified compact fluorescent lamps ("CFL") in the New Orleans area through direct home installation of CFLs through partnership with local non-profits and customer education;

Small Commercial Solutions: The Small Commercial Solutions program will provide incentives to commercial customers with peak demand of less than 100 kW to implement cost-effective energy efficiency measures;

Large C&I Solutions: The Large Commercial and Industrial ("C&I") program will provide incentives to commercial, industrial, and government customers with peak demand of 100 kW or greater to implement site-specific and unique cost-effective energy efficiency opportunities (custom projects) through measures not addressed by prescriptive (deemed) offerings, in addition to prescriptive projects, where appropriate;

Solar Hot Water Pilot: The objective of the Solar Hot Water Pilot is to provide incentives for solar water heater installations in New Orleans.

In addition to these proposed programs, the Energy Smart Plan also seeks approval of a study of residential and commercial photovoltaic ("PV") installations, an in-home energy use monitoring study, and a One-Stop Energy Shop, which would serve as a centralized location for energy efficiency resources and information, the cost of which is absorbed within the programs listed above.

ENO recognizes that the success of any energy efficiency program implemented in the City of New Orleans will be affected by the customers' ability to finance installation of energy efficiency measures determined to be suitable to their dwelling or building structure. It is for this reason that, ENO is evaluating, among other alternatives, the feasibility of coupling the Energy

Smart Plan with an opportunity for customers to obtain subsidized financing for energy efficiency measures from a third-party lender. Under this type of subsidized, third-party financing program, the customer would have the option of choosing to receive subsidization of or buy down of the interest rate that would be required to obtain a loan to finance energy efficiency measures from a third-party lender. ENO is exploring the feasibility of an energy efficiency financing arrangement in which a program participant would have the option to apply program incentives in the form of providing one-time loan contributions to buy down financing costs. ENO is also surveying and analyzing funding mechanisms being used in other jurisdictions and emerging legislation to determine potential compatibility with the Energy Smart Plan and applicable legal and regulatory requirements.

To provide further explanation of its filing, ENO has scheduled a public meeting on Thursday, July 9, 2009, at the Lindy C. Boggs International Conference Center located in the UNO Research and Technology Park adjacent to the University of New Orleans Lakefront Campus, 2045 Lakeshore Drive, New Orleans, Louisiana. The meeting will be held from 2 o'clock in the afternoon to 4 o'clock. Members of the public interested in the proposed Energy Smart Plan discussions are invited to attend to receive further information and provide comments on aspects of the program.

In addition, as detailed in Resolution R-09-167, from the period of July 9 to July 24, 2009, questions germane to ENO's filing may be posted to a dedicated website. ENO will respond to these questions within five working days. The filing and link to the Q&A site can be found at ENO's website at "www.entergy-neworleans.com/IRP."

Because the Energy Smart Plan represents the culmination of the significant efforts and contributions on the part of community stakeholders, the Council, its Advisors, and the

Company, the Company believes it is helpful to recount the background and establish the context for the evolution of the Energy Smart Plan, which is summarized in the next section.

B. Request for Approval of Proposed Energy Smart Plan

As shown in Table 1 above, the Company provided information relating to energy and demand savings goals and targets that correspond with the recommended programs. However, these goals and targets reflect twelve months of program implementation, and the Company acknowledges that its programs, once approved, will be in place for less than a full calendar year in 2010. Therefore, the Company is seeking to retain flexibility in the establishment of goals and targets at this time, and the Company proposes to supplement this filing after program approval to establish goals and targets that better reflect the programs approved by the Council and a more certain implementation date.

Accordingly, Entergy New Orleans, Inc. requests that the Council issue an order approving ENO's design, selection, and implementation of the energy efficiency programs presented in Table 1 above, and approving the level of funding allocated to each program. In addition the Company also requests that the Council issue an order:

1. Providing for a subsequent determination in this proceeding in which the Council would approve a refined energy efficiency target (such refined targets to be provided by ENO) for the remaining months of calendar year 2010 reflecting the then-projected date of the launch of the Energy Smart Plan and the Council's actions regarding the energy efficiency programs to be included in the Energy Smart Plan.

2. Approving ENO's request to administer the proposed Residential and Commercial Solar PV Monitoring Pilot Program itself rather than through the TPA and the estimated cost of such study.

3. Approving ENO's request to administer the proposed In-Home Monitoring Pilot itself rather than through the TPA and the estimated cost of such study.

II. Background for Energy Smart Demand-Side Management and Energy Efficiency Efforts in New Orleans

A. Description of Efforts that Preceded the Energy Smart Plan

The proposed energy efficiency[6] programs contained in this Energy Smart Plan filing by the Company are the result of a comprehensive and ongoing process by the Council, various community stakeholders and the Company. In the spring of 2007 following Katrina and the need to rebuild a vast majority of the housing stock, the Council informally responded to a grass-roots effort to develop a comprehensive energy policy for New Orleans. The grass-roots effort assumed the form of an informal group commonly referred to as the Energy Policy Task Force. A number of individuals, representatives of community groups, business interests and other stakeholders from many segments of the City volunteered their time and energy to consider a varied and complex set of energy efficiency issues. In October 2007, several members of the Energy Policy Task Force presented to the Council their recommendations in what was referred to as the *"Energy Hawk Report."* The Council took the recommendations contained in the report "under advisement until such time as a broad cross-section of the New Orleans community had

[6] Energy efficiency consists of activities and actions that typically require an investment to achieve lower energy usage such as improving insulation levels, sealing heating and cooling ducts, weather striping, caulking, and the purchase of more efficient appliances.

an opportunity for input and each proposal was shown to be practical, cost-beneficial, and energy efficient."

In December 2007, the Council adopted Resolution R-07-600, which expressed the Council's commitment to energy efficiency and the development of a viable energy efficiency program as a part of the City's long-term energy policy. This resolution also expressed the Council's intent to develop a process to explore the energy efficiency potential in the City and policies to promote robust energy efficiency practices; the Council also expressed its commitment to integrate energy efficiency into energy resource plans at the utility and regulatory levels, and to provide, when costs allowed, program funding for energy efficiency initiatives. This resolution also established, among other things, that the Council would:

- Identify cost-effective energy efficiency potential in conjunction with the Council's ratemaking authority and responsibility;
- Develop processes that align incentives equally for efficiency and supply-side resources;
- Establish cost-effectiveness tests;
- Set energy savings goals consistent with the cost-effective potential;
- Establish appropriate evaluation, measurement, and verification mechanisms;
- Modify policies to align utility incentives with the delivery of cost-effective energy efficiency and modify, as appropriate, Council ratemaking practices to promote energy efficiency investments;
- Provide sufficient, timely, and stable program funding to deliver energy efficiency where cost-effective.

Following the adoption of Resolution R-07-600, the Council Utility Committee held a hearing in January 2008 and met with stakeholders to begin the process of airing for public comment specific proposals to implement the Council's energy efficiency goals; the Council also facilitated public stakeholder meetings to consider various energy efficiency proposals in March and May 2008. In the course of these meetings, nine criteria were developed for use in evaluating the proposals: (1) meaningful scale of impact; (2) timeliness; (3) economical feasibility; (4) financial feasibility; (5) technical feasibility; (6) compliance with best practices; (7) benefits to the community; (8) suitability for Council implementation; and (9) achievability in the near, mid, and long term.

In July 2008, the Council adopted Resolution R-08-366 (as amended), which included a report on the Energy Smart New Orleans facilitation process and based on the New Orleans Consensus Energy Efficiency Programs, proposed general concepts and program components for potential inclusion in the Energy Smart New Orleans energy efficiency program. Although the purpose of the original Energy Smart resolution was to promote and facilitate increased energy efficiency and conservation and foster the development of an energy efficiency industry in New Orleans, this resolution was conceptual in nature required additional analysis for cost effectiveness and did not contain direction to implement specific energy efficiency programs by a date certain. Consistent with these goals, the Council, by Resolution R-08-601, found it in the public interest to set aside for future use in the Energy Smart Plan approximately $1.855 million of a refund received by ENO as the result of a federal energy regulatory proceeding; these funds were to be held for the benefit of ENO's residential customers with a focus on senior citizens on fixed incomes as a part of the Energy Smart Plan.

In July 2008, ENO filed its first base rate case since Hurricane Katrina; the settlement of the rate case provided an opportunity to address the implementation of energy efficiency programs in New Orleans, and associated ratemaking treatment. The means by which the rate case settlement addressed energy efficiency was to collect in rates $3.1 million annually of costs to be expended as directed and approved by the Council for Energy Smart. ENO believes that the Energy Smart Plan included in this filing is consistent with the purpose and vision of that described in Resolution R-08-366 (as amended).

B. The 2009 Agreement in Principle

In April of 2009, a major step forward took place in the process of making energy efficiency for the City of New Orleans a reality. At that time, the Council adopted Resolution R-09-136 approving the 2009 AIP, which resolved the first ENO base rate case since Hurricane Katrina. The 2009 AIP was the culmination of ongoing energy efficiency efforts in the City of New Orleans, and demonstrated the evolution from conceptual first steps to actual program implementation.

The 2009 AIP establishes the Energy Smart New Orleans Plan ("Energy Smart Plan"), a viable energy efficiency program based upon significant input from and involvement of many community stakeholders. The 2009 AIP addresses the funding and process to establish cost-beneficial demand side management[7] ("DSM") programs for ENO's ratepayers in this docket, Integrated Resource Planning, UD-08-02.

Pursuant to the 2009 AIP, the Energy Smart Plan will be funded by $3.1 million per year collected from ENO's customers through base rates and initial "seed money" of approximately

[7] Demand side management is a set of actions, activities, or measures that impact energy use, energy use patterns, or customer behavior as it relates to energy consumption.

$1.855 million presently available for use in the delivery and implementation of residential energy conservation programs.[8]

In addition, the 2009 AIP provides that, subject to Council approval, ENO shall design, select, and implement demand side management programs benefiting all customer classes to be included in the Energy Smart Plan. Prior to implementation, the Council must determine that all programs, with the exception of low income weatherization and domestic solar water heating programs, must be determined cost-effective under the industry accepted testing criteria of the Total Resource Cost ("TRC") Test and the Program Administrator Cost ("PAC") Test. The 2009 AIP further provides that ENO must submit for the Council's consideration a proposal for a twelve-month study of residential and commercial solar photovoltaic applications to provide information on the benefits, costs and overall performance specific to the New Orleans area associated with these applications. Finally, the 2009 AIP includes provisions to insure that ENO is a dedicated partner in the Energy Smart Plan. The 2009 AIP provides that ENO will be held to goals/targets established by the Council in its order in this docket for the Council-approved programs which ENO shall oversee. Such goals/targets must be based on funding levels and energy efficiency programs approved by the Council in this docket; they must also be based on calculated deemed savings, which mechanism is discussed below, and estimated market participants for those specific programs. The Council will review such goals/targets annually to account for changes in funding, program design, and market conditions. The 2009 AIP further provides that, in accordance with the terms of the Electric Formula Rate Plan ("EFRP") approved in the 2009 AIP, ENO shall have the ability to recover in a timely fashion its lost

[8] As discussed in Section VI of this Report, the Company proposes to use both the $3.1 million and $0.8 million of the $1.855 million of "seed money" to implement the Energy Smart Plan in the first year.

contribution to fixed costs and to earn incentives based on its performance and implementation/execution of the Energy Smart programs.

PART 2 – SCREENING PROCESS & PROGRAM SELECTION (Sections III, IV, & V)

III. Analytical Framework for Energy Efficiency Programs

Prior to the selection of Energy Smart programs, the Company identified and retained ICF, a consulting firm that has designed and implemented numerous effective energy efficiency programs for utilities, and GCR, a local consulting and technology solutions firm, as key outside resources to be used to be in conjunction with ENO personnel in the development of the Energy Smart Plan. In addition, the Company, with the input of the Council's Advisors, identified a specific analytical framework for program selection. The framework contains four major components and is depicted in the diagram below:

TABLE 2

A. Understanding New Orleans DSM Potential	B. Understanding the Environment	C. Identifying the Alternatives	D. Selecting Among the Alternatives
GCR Baseline Study Customer Profiles Energy Breakdown Guiding Principles Regulatory Directives	State Energy Plan EE Block Grants Weatherization Program Other Programs	Energy Smart Programs ENO Current Programs Other Entergy Programs ICF Study Other Utilities EPA, ACEEE, etc. Vendors/Others	Cost Effectiveness Screening Consistency w/Principles Leverage of Funding Scaling & Balance

A. Understanding ENO's Customer Base and Guiding Principles for Energy Efficiency

Prior to undertaking the quantitative evaluation required for inclusion of appropriate efficiency measures in the Energy Smart Plan programs, the Company engaged in a qualitative evaluation of the environment in which the energy efficiency programs will be delivered to achieve full compatibility with local factors (*e.g.*, composition of market building structures, economic status, *etc.*). The Company's purpose in doing so was to enhance program design in a manner that would optimize potential market penetration.

Toward this end, the Company relied upon demographer, Mr. Greg Rigamer of GCR and Associates, Inc. to analyze various data (*e.g.*, pre- and post-Katrina population, billing, census, flood water depth and geographic data) to derive an energy baseline and consumption profiles for the City and its residents.[9] The GCR results aided the Company in defining the energy efficiency needs and potential throughout the City.

Next, the Company, in collaboration with the Council's Advisors, developed principles to help the guide the Company in its development of potential DSM programs ("Guiding Principles"). These Guiding Principles are intended to apply to proposed DSM programs in order to insure that any proposed programs reflect the particular characteristics of the New Orleans community and environment, the prior directives of the Council, the comments of interested stakeholders and the needs of customers. The eleven Guiding Principles are set forth in Table 3 that follows:

[9] The development of the energy baseline and profiles is discussed in greater detail in Appendix 1.

TABLE 3: GUIDING PRINCIPLES

1. Energy Smart Programs should be developed for, available to, and benefit residential, commercial, industrial and governmental customer classes.
2. All programs should be cost-effective as defined by the Total Resource Cost (TRC) and the Program Administrator Cost (PAC) tests as defined in the California Standard Practices Manual: Economic Analysis of Demand Side Programs and Projects, October 2001 except for those programs listed in the 2009 Agreement in Principle that are not subject to the cost effectiveness tests.
3. Inputs to program design and cost effectiveness measurement should reflect reliable New Orleans data to the maximum extent practicable, while giving express recognition to allowable budget, time and technology constraints.
4. Each program should be of sufficient scale to provide a meaningful contribution to kW or kWh reductions over the period of years in which the program is applied.
5. Programs should reflect "best practices" as appropriate for New Orleans with consideration of the City's unique economic, social and demographic environment and, to the extent relevant, should be consistent with successful models implemented in other jurisdictions.
6. With the exception of pilot programs, technologies should be commercially available and the necessary infrastructure should be present.
7. Programs should be economically significant within the budgetary realities of the Energy Smart Plan.
   - Assist in Demand Side Management market development and related job creation.
   - The programs should create measurable benefits to ratepayers and to the city.
8. Except as provided for in paragraph 9, the costs of program design, implementation, delivery, measurement of the benefits, and the costs of administration associated with the Energy Smart plan, including the costs of the Independent Monitor and the Third Party Administrator, shall not exceed those funds so established to be collected in rates as authorized by the Council.
9. Additional DSM and energy conservation funding may be obtained from other sources and will be evaluated on its merits for inclusion in the Energy Smart program.
10. Program implementation should give priority to the use of local vendors wherever possible and shall be consistent with the criteria of Entergy's Supplier Diversity Program which promotes the utilization of diverse suppliers (i.e., minority, women, veterans, disable veterans, historically underutilized business ("HUB") Zone).
11. All programs shall contain a measurement and verification component for prospective evaluation, modification and improvement within standard industry practice.

The 2009 AIP also states that the Advisors to the Council will collaborate with the Company in the further evaluation of the general concepts identified by the Council in Resolutions R-07-600 and R-08-366 for the Company's program evaluation, design and integration into the Energy Smart Plan. As part of the energy efficiency measure and program screening, the Company considered the previous energy efficiency resolutions established by the Council, particularly the program concepts identified in R-08-366 (as amended) as the Consensus Energy Efficiency Programs. Resolution R-08-366 describes, at a conceptual level, the components of the Consensus Energy Efficiency Program. Table 4 below compares the components of the Consensus Energy Efficiency program and the Company's recommended Energy Smart Plan programs:

TABLE 4

Comparison of Conceptual Consensus Energy Efficiency Programs With Elements of Energy Smart Plan Proposed by Entergy New Orleans, Inc.		
Consensus Energy Efficiency		**Recommended Energy Smart Programs**
1	Community Education	One Stop Energy Shop—Community Education, resource for energy efficiency information
2	Technical Diagnostics and energy efficiency measures (residential and small commercial)	Technical diagnostics and energy efficiency measured through several programs: Residential Solutions New Homes Program Small Commercial Large Commercial/Industrial Governmental Efficient A/C Programs Solar Water Heater Program
3	Low Income Weatherization	Low Income Weatherization ready efficiency A/C and education for low income customers
4	Energy Efficiency Training and Certification for contractors builders (residential and commercial)	Workforce development and training of contractor partners who participate in market programs
5	Real Time Energy User Monitoring Pilot	Real Time Energy Use Monitoring Pilot
6	Energy information and training program for large commercial and industrial customers	Large commercial, Governmental and Industrial program provides diagnostic services and incentives for upgrading lighting, HVAC, motors and process improvements
7	Quality assurance measures to verify effectiveness of program elements	Quality assurance, measurement and verification included in program cost estimates
8	Program startup and management plan	Included in program cost estimates
9	Risk-underwriting and targeted buy downs to foster third-party financing of energy efficiency improvements	Evaluating leveraging of stimulus funding and third party financing options

B. Consideration of Other Available Funds and Energy Efficiency Programs

In order to optimize the reach of Energy Smart Plan programs supported through customer funding, it is important to consider the availability of funding from all sources to support current and planned energy efficiency initiatives in the environment in which the programs will be delivered. Through the recently approved federal legislation the American Recovery and Reinvestment Act ("ARRA"), there has been a significant increase in federal and state DSM and energy efficiency funding. This funding will be administered through federal,

state and local government programs, non-profit organizations and private businesses to foster DSM/energy efficiency programs, renewable energy projects and job development.

It is crucial to the success of the Energy Smart Programs that the ARRA funding and other local competing and complementary programs be considered in development of the Energy Smart Programs. ENO has developed programs designed to leverage, or complement funding from current or expected programs where appropriate and to avoid duplication of program efforts in areas that may generate confusion or create competition for limited resources to deliver the programs. A more detailed discussion of ARRA funding, competing and complementary programs is found in Section IV. As additional information becomes available on these opportunities, the Company plans to update the Council on these matters.

C. Identifying Energy Efficiency Alternatives

In order to consider the universe of available options when identifying energy efficiency measures and programs for possible inclusion in the Energy Smart Plan, the Company and ICF reviewed a wide array of data sources to identify alternatives for energy efficiency that could be applicable to New Orleans.[10] Among other things, the Company considered stakeholder recommended programs, comments, (such as the Consensus Energy Program referenced in Resolution R-08-366) and other local DSM efforts. ENO also considered experience with its current $2 million energy efficiency quick start programs, and the results and experiences of the other Entergy operating companies' energy efficiency programs. ICF utilized their extensive database of measures developed through analysis of utility best practices and programs around the country.

[10] *See* Appendix 3.

D. Program Selection

The program selection process employed by ICF on behalf of ENO consisted of several measure and program screenings. First, measures and programs were screened for cost-effectiveness utilizing the TRC and PAC tests as required by the 2009 AIP. Programs were then screened for consistency with the Guiding Principles and reviewed against expected and current complementary or competing programs. Programs were also screened taking into consideration demographic data and customer energy profiles provided by GCR and Associates. Finally, programs were scaled and balanced to available funding levels and participation. ENO developed a detailed process for program selection which is discussed in more detail in the following section.

IV. Description of the Energy Smart Measure/Program Screening Process

In order to develop the mix of energy efficiency programs that the Company believes would likely be most effective and appropriate for implementation in the Energy Smart portfolio of programs, a rational and systematic six-step evaluation/screening process was reviewed with the Council's Advisors and undertaken by the Company. That evaluation/screening process involved the following steps:[11]

1) Develop/Identify a comprehensive list of potentially viable energy efficiency measures for all ENO customer classes.

2) Develop and apply appropriate measure evaluation parameters for basic applicability for New Orleans and initial measure screening.

3) Perform quantitative cost-benefit program-level screening based upon key parameters to eliminate ineffective measure options from programs.

[11] *See* Appendix 2 for a schematic diagram of this process.

4) Perform qualitative program level screening to refine program options in order to bundle potential measures into programs most relevant to specific New Orleans needs.

5) Consider existence of competing and complementary programs funded through other external sources which are currently offered or will be delivered in the City for potential opportunities to leverage Energy Smart Plan programs and avoid duplication of benefits where appropriate.

6) Finalize Energy Smart programs and verify consistency with Guiding Principles.

A more detailed description of the issues considered in each of the above listed steps is set out below.

Step 1: Develop and identify a comprehensive set of potentially viable energy efficiency measures for all ENO customer classes.

The core building block for the design of the Energy Smart energy efficiency program is the identification of appropriate energy efficiency measures. In general, an energy efficiency measure is defined as specific action taken to reduce a specific type of electric utility load. For example replacing 60 watt incandescent bulb lighting with 15 watt CFL bulb lighting is an example of a lighting efficiency measure. Similarly, replacing a 10 Seasonal Energy Efficiency Rating ("SEER") air conditioner with a 14 SEER air conditioner is an example of an HVAC efficiency measure. In this context, a variety of efficiency measures for specific lighting actions can, for example, be combined to create a lighting energy efficiency program for lighting replacement, specific customer groupings, and specific lighting end uses. Lighting efficiency programs can, in turn, be combined with similarly evaluated HVAC measures and programs to create an aggregate or portfolio of energy efficiency programs targeted for applicability to specific customer groups. As described in more detail below, the Energy Smart Plan programs were developed by screening a large population of potentially applicable energy efficiency measures and combining cost effective measures to create energy efficiency programs that optimize benefits to ENO customer groups within the context of the AIP-authorized level of

funding for the Energy Smart Plan. ICF International, on behalf of ENO, has gathered data on the universe of potentially viable energy efficiency measures for potential inclusion in the Energy Smart Program in the City of New Orleans.

In addition to ICF's database of potential measures, the Company's developmental process took into account information from the databases of leading energy efficiency consultant, Frontier Associates.[12] The Company's developmental process also took into account data from existing pilot programs, including quick start programs currently in place in New Orleans, as well as elsewhere in the Entergy System. For example, the Company considered the results of an advanced metering infrastructure ("AMI") pilot conducted in Baton Rouge, Louisiana, to assist in developing the AMI pilot being proposed in this filing.

As a result of this step in the overall process of program development, a list of over 700 measures for all customer groups was identified as potentially viable for inclusion in the Energy Smart programs. For each potential energy efficiency measure identified, information regarding demand and energy impact data was obtained. The two main sources of measure information for this analysis were Frontier Associates' Deemed Savings values and ICF's Potential Study for Entergy.[13] Measures that were not contained in either of these sources were also included in the analysis based on ICF's proprietary Measures Database.[14] Additional measures for consideration were identified through the New Orleans Consensus Energy Efficiency program and through the collaborative process established by the 2009 AIP.

Step 2: Develop and apply appropriate measure evaluation parameters for initial screening and for basic applicability for New Orleans and perform initial screening.

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[12] Frontier is a nationally important consultant to electricity retailers and distribution companies, power generators, natural gas distributors, electricity and gas consumers, and manufacturers of energy efficiency related products.

[13] Deemed savings values are found in Appendix 6.

[14] *See* Appendix 3.

This step in the process was necessary to establish the parameters under which the energy efficiency measures under consideration would be quantified and evaluated. Quantification of savings for each measure would be expressed in terms of expected kW/kWh savings and anticipated avoided costs. Quantification of the costs associated with the implementation of each measure would include the cost of equipment necessary for installation of the measure. Initial cost-effectiveness testing using the TRC test is quantified to ascertain the relationship between energy efficiency measure costs and benefits over the useful life of the installed measure. Using the demand and energy impact estimates from the above sources, each individual measure was evaluated for cost-effectiveness using the TRC test, as defined by the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects ("CA SPM").[15]

The purpose of conducting this initial screening was to identify any measures that would not be not cost-effective on a stand alone basis (*i.e.*, without as yet considering program implementation costs or free-riders[16]).[17] The 2009 AIP prohibits inclusion of non-cost-effective measures in the Energy Smart program, absent compelling policy reasons to the contrary, as the Council has found to be the case with low income weatherization programs and domestic solar water heating. The lists of measures that satisfied the initial cost-effectiveness screening (*i.e.*, measures with a TRC ratio greater than one) for residential, and non-residential customer segments can be found in Appendix 3. A listing of measures that did not satisfy the initial cost-effectiveness screening may also be found in Appendix 3.

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[15] Available at: ftp://ftp.cpuc.ca.gov/puc/energy/electric/energy+efficiency/em+and+v/Std+Practice+Manual.doc. Also see http://www.cpuc.ca.gov/NR/rdonlyres/A7C97EB0-48FA-4F05-9F3D-4934512FEDEA/0/2007SPMClarificationMemo.doc

[16] Customers implementing an energy efficiency measure or project even in the absence of a program/incentive.

[17] The CA SPM does not make a distinction between a measure screening and a program screening. Therefore, for the measure screening, ENO excluded program implementation costs and the effects of free-riders.

For the purpose of the TRC test, the benefits for each identified measure are calculated based on the present worth of the lifetime of energy and demand savings resulting from the measure's installation.[18] The demand (or capacity) and energy benefits are calculated separately; they are collectively referred to as the "avoided costs."[19] The incremental cost of each measure (*i.e.*, the cost of the efficient measure over and above the cost of the unit that would otherwise have been installed) used in the TRC test was primarily obtained from Frontier and Associates or the ICF Potential Study. Other sources of measure-level data include the California Database for Energy Efficiency Resources ("DEER"), evaluation results from programs run by other utilities, and program specific results from ICF.

The result of Step 2 is that only measures satisfying the initial screening under the TRC test would be eligible for bundling/grouping into Energy Smart program.

Additional tests are introduced in the next step. The PAC test is calculated only at the program level because they include program administrator and participant costs.[20]

Step 3: Perform quantitative cost-benefit program-level screening based upon key testing parameters to eliminate ineffective measure options from programs.

In this step, bundles or groups of measures are combined resulting in specific programs. The objective of "measure bundling" is to group measures into logical bundles representing "program types." A program type is represented by a specific market (*i.e.*, residential, commercial, industrial, and governmental) segment and high-level incentive, intervention, and delivery strategies. For example, residential AC measures passing the TRC test might be bundled into a Residential AC program. The bundling process is used because very few

[18] The discount rate used to calculate present value was 8.5%. *See* Appendix 5.

[19] The quantification of avoided costs used to calculate these are summarized in Appendix 7. A more detailed discussion of Avoided costs is contained in Section X to this report.

[20] The definition and detailed derivation of the cost effectiveness tests employed are contained in Section IX of this Report.

programs are designed and implemented to include only a single measure.[21] Rather, program designers attempt to build programs around combinations of measures: 1) that would attract a potential market participate from a given segment of the market; 2) that can be delivered using similar market channels (*i.e.*, retailers, contractors and distributors), and 3) which can share in the common costs associated with program implementation in order to minimize overall program costs.

The program types considered in the analysis were drawn from a review of best practice program information developed by the American Council for an Energy-Efficient Economy ("ACEEE"), the Consortium for Energy Efficiency (www.cee.org), the Energy Trust of Oregon, the California Public Utilities Commission's ("CPUC") Best Practices web site, and from ICF's internal review of programs operated by utilities and other program administrators across the country**.**

The developmental analysis also included testing of programs required by the 2009 AIP, but exempted from the measure-level cost-effectiveness requirement, including low income weatherization, domestic solar water heating, and solar PV initiatives.

Consistent with the development of programs cost elements (*i.e.*, incentive and non-incentive costs), utility costs associated with programs are identified for quantification and inclusion in program-level screening. All measures that were cost-effective were bundled into at least one program. In some cases, a measure was included in a program if it was cost-effective in most (but not all) building types if it would be impractical to prohibit participation by individual building types. For example, lighting upgrades are cost effective for most, but not all commercial, industrial and government building types, but on average (across all building types) the "lighting upgrade" measure is not cost-effective. Therefore, the lighting upgrade will only be

[21] For reference, the Company's proposed In-Home Display pilot is an example of a single-measure program.

available for rebate to those (majority) of building types where it is cost-effective to implement. Appendix 3 shows the residential measures as they have been bundled into individual programs. Appendix 3 provides the same information for non-residential measures.

An additional parameter considered in the cost-effectiveness testing is estimated potential level of customer participation. Different factors affect this estimate. For example, GCR provided to ICF data reflecting post-Katrina residential population, by housing unit type (*i.e.*, single family, duplex, multi-family) as well as post-Katrina saturation level of major household appliances (*i.e.*, refrigerators, air conditioners and heating units). ICF used this data to estimate the total number of participants[22] eligible for each program. For example, all homes are eligible for the proposed Residential Solutions Program; ICF used GCR's estimate of total housing units (111,656) as the basis for estimating eligibility rates for the Residential Solutions program.

In addition, program customer participation rates, including supporting inputs, are also quantified in this step in order to determine potential customer participation in the various program elements.[23] The potential effects on program savings and costs, including those associated with free-ridership, are also quantified. In this step, additional cost-effectiveness testing required by the 2009 AIP is introduced. The PAC test, in addition to the program TRC

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[22] The term participant generally refers to customers who participate in an energy efficiency program. Participants may install a variety of measures within a given program. The term installs can be used synonymously with measures to refer to the installation of various measures by participant (i.e. new insulation, AC, CFLs, are all measures available for installation).

[23] For the purposes of this filing, participation estimates for each program were developed based on consideration of the following:

- The number of customers with a currently operating baseline technology (in the case of a retrofit program), i.e. the number of homes that have air conditioners that are *not* ENERGY STAR rated, or better.
- The number of customers whose baseline technology is expected to fail and need replacement in a typical year (in the case of replace-on-burnout programs).
- The percent of customers who are expected to find the simple payback associated with the efficient measure to be attractive, both with and without the incentive that may be offered by the Energy Smart Program.

The experience of other utilities in promoting similar programs, and expert judgment where applicable.

test, is utilized as the basis for additional screening for Program selection.[24] Programs selected as a result of this step in the process reflect acceptable program options. Table 5 below shows the program and portfolio benefit-cost ratios; however, certain programs in the following table were screened out through further analysis in Steps 4 through 6.[25] Through the collaborative process with the Council's Advisors, the Company also agreed to perform the Participant test to provide additional information requested by intervenors.

TABLE 5: STEP 3 PROGRAM-LEVEL COST-EFFECTIVENESS TEST RESULTS

Program Name	TRC Test	PAC Test	PCT Test
Residential Solutions	1.00	1.25	2.24
Residential Low Income	0.21	0.22	1.45
Energy Efficient New Homes	1.03	5.23	1.41
Small Commercial Solutions	1.38	1.66	3.62
Large Commercial Solutions	1.28	1.72	2.64
Residential CFL	2.73	2.73	11.06
ENERGY STAR Air Conditioning	1.73	2.94	2.97
Residential AC Tune-up	1.26	1.44	2.99
Residential AC Cycling	3.00	3.00	1.00
Refrigerator Turn-In	1.84	2.48	5.78
Residential TOU Rate	8.19	8.44	12.48
Commercial DG	6.25	17.52	1.64
Solar Hot Water Pilot	0.33	1.40	0.59
Solar PV Pilot			
In-Home Display Pilot	1.16	1.17	5.15

Step 4: Perform qualitative program level screening to refine program options in order to bundle potential measures into programs most relevant to specific New Orleans needs.

The market potential for energy efficiency in New Orleans is somewhat unique due to the substantial rebuilding efforts following Hurricane Katrina. New building codes were adopted

[24] For purposes of cost-effectiveness screening at the program level, ICF developed estimates of total incentive and non-incentive program costs. Incentive costs were developed on a per participant basis. See Section VIII of this report for a more detailed discussion of ICF Program Costing and Cost Effectiveness Screening.

[25] The Solar PV Study does not provide cost savings to customers; thus, this study does not have data in the table.

contemporaneously with the commencement of significant construction activity. Over the last four years, as part of the rebuilding process, many residential customers were forced to replace many appliances. It is important that these market conditions be considered in the evaluation and selection of energy efficiency programs and the setting of savings targets, as a great deal of energy efficiency potential has already been realized from the rebuild.[26]

In Step 4, ENO customer data from New Orleans baseline building condition, construction data, appliance age and appliance saturation from GCR & Associates and New Orleans building codes were relied upon to further screen programs for consistency with New Orleans market demographics in the post-Katrina environment. As mentioned above, ENO also tested programs required as stated in the Agreement in Principle, including Low Income, Solar Hot Water, and Solar PV initiatives. Further, ENO weighed a variety of other sources when considering programs, including:

- New Orleans' re-development activity and demographic data (*i.e.*, GCR data);
- Local stakeholder suggestions;
- The Consensus Energy Smart Plan; and
- Energy Policy Task Force suggestions.

The result of this screening step, the refrigerator turn program was excluded from consideration.

Step 5: Consider existence of competing and complementary programs funded through other external sources which are currently offered or will be delivered in the City for potential opportunities to leverage Energy Smart Plan programs and avoid duplication of benefits where appropriate.

In this step, consideration was given to other external funding sources and programs beyond that of Energy Smart in an effort to optimize the market potential of ability to reflect a cost effective, coordinated energy efficiency effort. The objective of this screening step is to

[26] *See* Appendix 1.

leverage, or complement funding from current or expected programs where appropriate, while avoiding duplication of program efforts in areas that may generate confusion or create competition for limited resources to deliver the programs. Other funding sources considered were federal, state, and municipal funding associated with the ARRA (sometimes referred to as "stimulus funds"), along with other existing efforts in the areas of energy efficiency, weatherization, and renewables. In selecting an optimal mix of programs, ENO has contacted the Louisiana Department of Natural Resources ("LA DNR"), as well as the City of New Orleans to discuss the potential utilization of ARRA funds that are under their control to identify potential opportunities to leverage funding or coordinate activities where it makes sense. Below are the proposed programs and funding allocations for the State Energy Plan ("SEP") and the New Orleans Energy Efficiency Block Grant ("EEBG") program.

State Energy Program funding (Total = $71 million)

- "Lead by Example" State Govt. Building Retrofit. $25.7 million
- Residential/Commercial Program. $15.2 million
- ENERGY STAR Appliance Rebate. $2.6 million
- Transportation Efficiency & Alternative Fuels. $9.9 million
- Renewable Energy Development Grants. $9.9 million
- Education, Training & Outreach. $2.6 million

More detail information on the LA SEP can be found on LA DNR website.[27] Separately, the City of New Orleans received EEGB funding–of approximately $2.4 million.

The State of Louisiana also received $51 million of funding for their WAP of which approximately $5.1 million of which was allocated to the City of New Orleans. If the current state proposal is approved, funding to weatherize 596 homes in the City of New Orleans will be

[27] www.la.dnr.gov.

distributed equally among the following organizations: Total Community Action ("TCA"), Associated Catholic Charities, Volunteers of America and Rebuild New Orleans. ENO is currently working with TCA and Associated Catholic Charities and ENO is in discussions with Volunteers of America to leverage Energy Smart programs through these funding opportunities.

All of the ARRA funding proposals for the State Energy Plan, the EEBG program and the WAP have been submitted to the Department of Energy ("DOE") and have not yet received approval. Once the ARRA programs are approved, ENO will continue to work with the State and the City of New Orleans to pursue potential opportunities and coordinate efforts in the delivery of energy efficiency programs to the City's residents.

Also recognized were local established DSM/weatherization programs such as:

- Green Light New Orleans – 170,000 compact fluorescent light bulbs installed
- TCA - approximately 68 homes weatherized annually ($2500/ home)(funding increasing to $6500 with stimulus funds)
- Make It Right - 25 new construction energy efficient homes to date in Ninth ward
- DNR Hero Program – New construction and renovation (moving from $2,000 to $3,000 per home)
- Associated Catholic Charities - renovated 112 homes and has requested stimulus money to continue their initiatives.
- EPA Energy Star Program – Leveraging Entergy's Energy Star partnership

Step 6: Finalize Energy Smart programs and verify consistency with guiding principles.

ENO prioritized its final program and selection using the results of all prior steps and analysis, including but not limited to review for consistency with the Guiding Principles. The

result of these steps the Company's recommendation of final programs to comprise the Energy Smart Plan, a list of which programs is provided on Table 1.

Not all programs that were considered to be cost-effective were selected for implementation at this time due to a number of factors related to funding, market potential, and infrastructure. For example, the $3.1 million approved expenditure level for energy efficiency programs, there is a limit to the number of programs that can be implemented effectively while maintaining a reasonable balance between non-incentive program costs and incentive program cost. ENO's recommendation strikes an appropriate balance between providing a comprehensive set of programs that optimizes potential for savings and providing opportunities for all customer groups with the need to make optimal use of the available budget. There were four programs that passed the benefits costs tests that were not selected for implementation at this time due to limited budget as discussed above and due to the reasons stated below.

- **Refrigerator Turn In** - Based on GCR baseline data reflecting that over 70% of household refrigerators were replaced after Katrina. Recycling companies typically require a commitment of approximately 10,000 units per year for three years to set up a recycling facility. Due the limited long-term market potential, this program was not selected for implementation at this time.
- **Time of Use ("TOU")** - To achieve the maximum benefit from TOU rates, customers need up to date information on their energy usage by pricing tiers and their projected cost within tiers. This capability is enabled by AMI / Smart Meter technology which will not be available for 2010 programs. Without this enabling technology, TOU rates may prove to be less effective and may result in very low participation rates and minimal customer

savings TOU rates and other time differentiated pricing options will be considered in future program filings based on the availability of enabling technology.

- **Demand Response ("DR") -** Although demand response programs like residential a/c cycling programs can be implemented with existing technology that has been available for a number of years, new AMI enabled technology is becoming available that will also enable other demand response programs such as TOU, Critical Peak Pricing and Near Real Time Energy Use Information. These programs could potentially leverage the same infrastructure and in-home device to deliver multiple DR program options to the customer. Pursuing a large scale A/C cycling program with the older technology of installing disconnect devices on the customer's compressor and sending a paging signal to activate a load control event at this time would limit the ability to take advantage of future applications that may become available with enabling AMI technology. As in the case with TOU, residential demand response will be considered in later Energy Smart program filings based on the availability of enabling technology. This technology will be tested in the In Home Display Monitoring Pilot proposed by the Company and discussed in Section VI (B).
- **C&I Distributed Generation** – This program is more effective and (and more effectively measured) with advanced metering infrastructure ("AMI") enabled response technologies; The C&I budget is already somewhat limited, and the performance of DG programs is not as well documented as that of the Small and Large C&I initiatives that are currently being proposed. In addition, generator fuel burning raises unique air quality concerns, particularly if the fuel is diesel, which results in high levels of particulate emissions.

The final result from Step 6 was the identification of the following programs: Residential Solutions, Residential Low Income, Energy Efficient New Homes, CFL Replacement, ENERGY STAR Appliances, Residential AC Tune-up, Solar Water Heating, Small Commercial Solutions, and Large C&I Solutions.

V. Program Selection & Recommendations

A. Final Selection (Budget Allocation to Customer Classes & to Programs)

1. Allocation by Customer Class

ENO provided ICF with guidance on the allocation of expenditures between customer classes for use in its models. ENO utilized the following logic in its allocation of funding: First, ENO considered the allocation of $3.1 million which represents the funding made available annually through rates for the Energy Smart Plan through the 2009 AIP. Adjustments were made to this allocation based on ENO's experience with its quick start programs, GCR demographic data and the assumed allocation of ARRA funding. The suggested allocation of $3.1 million is shown below in Table 6, and is consistent with the allocation set forth in Exhibit 1 to the 2009 AIP. Although ENO recognizes that the expenditure allocation that may be approved in this proceeding may differ from the allocation proposed here, it must be noted that any change in the allocation of funding will affect the kWh savings presented in this filing and such a change in allocation must be considered in the goal-setting process. The Company also has attempted to allocate the applicable Energy Smart Plan funding among customer classes in a manner that reasonably optimizes the energy efficiency benefits to a broad segment of customers. In addition, the Company wishes to retain the flexibility to refine the funding allocation in the

future to reflect actual program participation over time; in this way, ongoing program funding can better address customer needs based on actual results.

Additionally, ENO recommends utilization of approximately $800,000 of the $1,855,000 previously set aside for the benefit of residential customers in the first 12 months of the program. This additional funding will be used to supplement residential programs, particularly community outreach and low income initiatives. The suggested total program funding for Year 1 of the Energy Smart Programs is as follows below:

TABLE 6

Energy Smart Proposed Expenditure Allocation

Spending Allocation:	Annual Funding %	Annual Funding $	$1.8MM Residential Contribution	Total First Year Funding $	Total First Year Funding %
Residential	50%	$ 1,559,876	$ 800,000	$ 2,359,876	60%
Small Commercial	20%	623,950		623,950	16%
Large C&I	30%	935,926		935,926	24%
	100%	$ 3,119,752	$ 800,000	$ 3,919,752	100%

2. Allocation of Program Costs Within Customer Class

Residential Programs: As discussed in the previous section, the Residential customer class was allocated approximately $2.3 million dollars to implement cost effective energy efficiency programs, a low income program and three pilot programs that include a solar water heater program, a solar PV monitoring program and an in-home display pilot as listed in Table 7.[28]

[28] In addition to the brief description of each program listed in the tables below, additional detail on each program is contained in individual program templates that are included in Appendix 4 of this Report

TABLE 7

Program Name	Program Objective	TRC Test	PAC Test	PCT Test	Year 1 Budget
Residential Solutions	The objective of the Residential Solutions program is to improve the energy efficiency of homes in New Orleans through whole-house approaches to reducing energy consumption.	1.00	1.25	2.24	$ 390,000
Residential Low Income	The objective of the Low Income program is to improve the energy efficiency, comfort and affordability of homes for New Orleans' residents who qualify under Federal guidelines for the Weatherization Assistance Program (WAP).	0.21	0.22	1.45	$ 300,000
ENERGY STAR Air Conditioning	The objective of the ENERGY STAR Air Conditioning program is to increase the market penetration of ENERGY STAR central and window ACs in New Orleans. The program will also train participating contractors on how to perform "Quality Installation" of the units.	1.73	2.94	2.97	$ 240,000
Residential AC Tune-up	The objective of the AC Tune-up program is to improve the operating efficiency of existing (Central and Window) residential air conditioners in New Orleans.	1.26	1.44	2.99	$ 240,000
Energy Efficient New Homes	The objective of the Energy Efficient New Homes program is to help develop the market in New Orleans for efficient new construction, gut-rehab and remodels by providing residential building contractors with incentives for incorporating high energy efficiency building practices into these projects.	1.03	5.23	1.41	$ 280,000
Residential CFL	Improve the energy efficiency of existing residential AC units through a comprehensive tune-up. Provide training and certification to contractors.	2.73	2.73	11.06	$ 230,000
				Residential Total	$ 1,680,000
Program Name	Pilot Description	TRC Test	PAC Test	PCT Test	Pilot Budget
Solar Hot Water Pilot	This program will provide incentives for pilot solar hot water installations in New Orleans.	0.33	1.40	0.59	$ 150,000
Solar PV Pilot	This program will provide monitoring/data gathering for pilot solar PV projects in New Orleans	NA	NA	NA	$ 100,000
In-Home Display Pilot	An In Home Display device and associated education will be provided for 400 homes	1.16	1.17	5.15	$ 275,000
				Residential Pilot Total	$ 525,000

The amounts shown on Table 7 are the estimated program dollars that are required to fund these programs for a twelve (12) month period.

Because these are new programs to the New Orleans area, there is the possibility that some programs may have more interest or participation while others may be under subscribed which may not be readily apparent in the initial design and funding of the program. This creates the need for flexibility to reallocate resources from under-performing programs to programs that may be oversubscribed due to better than expected participation and customer interest. The ability to reallocate funding to better performing programs will deliver increased benefits and optimize customer participation. Program expenditures for the Low Income program and the Pilot Programs would not be reduced or reallocated to other programs nor would residential program dollars be allocated to non-residential programs.

Non-Residential Programs: Below are the budget allocations and cost benefit test results for the small commercial program, and the large commercial, governmental and industrial program. Detailed descriptions of the programs are contained in Appendix 4.

TABLE 8

Program Name	Program Description	TRC Test	PAC Test	PCT Test	Year 1 Budget
Small Commercial Solutions	Incentives for small commercial for upgraded lighting, HVAC, Appliances, food service equipment.	1.38	1.66	3.62	$ 680,000
Large Commercial Solutions	Incentives for large commercial, industrial, and government customers for upgraded lighting, HVAC, motors, and process energy efficiency improvements.	1.28	1.72	2.64	$ 1,030,000
				Non-residential Total	$ 1,710,000

As in the residential class, there may be an opportunity to improve the overall program benefits by reallocating funding within the non-residential classes if one market is outperforming the other. Reallocation would only occur after it was apparent that not all funding was going to be utilized in one market and the other non-residential market was going to exhaust its funding prior to the end of the program year.

Shown in Table 9 below is the allocation of funds to individual programs to cover the cost of program administration, implementation, marketing, evaluation, measurement and verification ("EM&V"), equipment and incentives. The level of funding for each program was established at a level that would provide sufficient funds to cover all non-incentive costs while allowing for meaningful contributions to kWh savings.

Advertising and promotional costs are included within the marketing costs for each program. In addition, the costs for the TPA and the independent monitor for oversight of the RFP process and administration of the RFP are included in the administrative costs of each program. These costs are allocated on the basis of total program funding.

TABLE 9

	As a % of Total Program Costs							
Program Name	**Administrative Costs**	**Implementation Costs**	**Marketing Costs**	**EM&V Costs**	**IT/Equipment/Other Costs**	**Total Non-Incentive Costs**	**Incentive Costs**	**Net-to-Gross Ratios**
Residential Solutions	10%	23%	10%	4%	0%	48%	52%	0.90
Residential Low Income	10%	29%	10%	4%	0%	52%	48%	1.00
Energy Efficient New Homes	10%	29%	10%	4%	0%	52%	48%	1.00
Small Commercial Solutions	9%	30%	11%	4%	0%	54%	46%	0.80
Large Commercial Solutions	10%	28%	8%	4%	0%	49%	51%	0.80
Residential CFL	9%	18%	6%	5%	0%	39%	61%	0.90
ENERGY STAR Air Conditioning	9%	18%	6%	5%	0%	39%	61%	0.80
Residential AC Tune-up	9%	18%	6%	5%	0%	39%	61%	0.80
Solar Hot Water Pilot	9%	18%	6%	5%	0%	39%	61%	1.00
Solar PV Pilot	0%	100%	0%	0%	0%	100%	0%	1.00
In-Home Display Pilot	7%	23%	11%	9%	15%	65%	35%	1.00

PART 3 – OTHER PROGRAMS/PILOTS/ISSUES (Section VI)

VI. Pilot Programs, Studies, and Other Measures for Consideration

A. Residential and Commercial Solar PV Monitoring Pilot

As previously mentioned, the 2009 AIP further requires ENO to submit for the Council's consideration a proposal for a twelve-month study of residential and commercial solar PV applications to gather data on the costs and benefits, including the performance of such applications, specific to the New Orleans area. For Year 1 of the Energy Smart Plan, ENO proposes that a 12-month study be conducted to monitor non-utility sponsored third-party solar PV applications. The study will target ten to twenty existing residential applications and up to four existing commercial applications, including the New Orleans Solar Schools project. ENO intends to retain an independent third party (*e.g.*, a college or university) to perform the study and submit a detailed report providing the net energy output of the solar PV applications and a cost/benefit analysis of solar PV in the New Orleans community. ENO will be responsible only for installing all necessary sub-metering equipment and capturing total energy output of the solar PV systems. ENO expects the program to have a cost of approximately $100,000 in Year 1. ENO request that the Council approve ENO's proposed study in its order issued in this docket.

B. In Home Monitoring Pilot

Although not specifically addressed in the 2009 AIP, ENO proposes that the Council approve a twelve month In-Home Display pilot program which will allow the customer to view, near real time, their energy usage and energy costs. The pilot would entail the use of AMI meters. AMI Meters employ advanced communication capabilities with the conventional ability of recording usage in 15 minute intervals with the goal of providing a customer near real-time information about the customer's usage and the estimated cost of that usage at that point in time.

The primary objective of the study would be to see to what extent, real-time information about the customer's usage and the estimated cost of that usage affect the customer's behavior related to electricity consumption.

For this study, ENO proposes to install approximately three to four hundred AMI Meters at residential customer locations. Each participating customer also would receive an in-home display unit that would allow the customer to view usage information on a near real time basis. The customer would also have the option of viewing similar information via an internet web portal. Portal information would have a one day delay due to the fact that the energy use information would be collected for the day and down loaded into the web portal application on a nightly basis and available to the customer the following morning. In order to get the best possible utilization of the advanced features of AMI Meters, it is necessary to cluster the study participants in close proximity to necessary communications devices. In addition, site selection should provide for a wide variety of customer participation capturing various segments of the residential market (*i.e.*, homeowners/renters, single-family/multi-family, age and income diverse, etc.).

Participants should have at least twelve (12) months of usage history at their current location for the purpose of establishing a baseline for analysis. Also, all participants must be willing to dedicate time to instruction regarding the use of in-home display units and to responding to survey questions throughout the course of the study. Finally, ENO will provide support to the participants during the study, and, at the conclusion of the pilot, a detailed exit survey will be conducted and the meter and in-home device will continue to be functional.

This study is for monitoring purposes and participants will continue to be billed like any other similarly situated customer pursuant to the rate schedules on file and approved by the

Council. The Company expects the cost of this study to be approximately $275,000. A detailed breakdown of this expected cost may be found in the table below:

TABLE 10

Program Costs

Total Incrementat Program Costs	$ 275,000
Meters	$ 28,300
Meter Installation	$ 4,000
Aztec Device	$ 92,300
Aztec Licensing fees	$ 5,000
Collectors	$ 20,000
Technical Installation support	$ 10,400
Marketing / Customer Education	$ 30,000
Qualitative / Quantitative Data Analysis / Surveys	$ 25,000
Mailing device Preperation	$ 10,000
Portal Reports	$ 30,000
Program Management	$ 20,000

ENO requests that the Council approve the proposed study in its order issued in this docket.

C. "One Stop Shop" for Energy Efficiency Information

The "One Stop Shop" is envisioned as an education and awareness program to provide a clearinghouse for information on energy efficiency and DSM, including programs, products, incentives and best practices. The One Stop Shop will be provided by several delivery channels to make it easy and convenient to meet the needs of the customers. Information will be available through information centers, community outreach, website and links and contractor partners. This program will be funded with $200,000 per year and will not provide any energy savings independently but will promote investment by customers in energy efficiency measures. The cost associated with this program is contained within the costs allocated to all programs recommended in the filing.

D. Financing Measures under Evaluation

ENO recognizes that the success of any energy efficiency program implemented in the City of New Orleans will be affected by the customers' ability to finance installation of energy efficiency measures determined to be suitable to their dwelling or building structure. It is for this reason that, ENO is evaluating, among other alternatives, the feasibility of coupling the Energy Smart Plan with an opportunity for customers to obtain subsidized financing for energy efficiency measures from a third-party lender. Under this type of subsidized, third-party financing program, the customer would have the option of choosing to receive subsidization of or buy down of the interest rate that would be required to obtain a loan to finance energy efficiency measures from a third-party lender. In other words, instead of paying a rebate directly to the customer for implementing an energy efficiency measure to defray a portion of the cost of that measure, the Energy Smart Program Third Party Administrator ("TPA") essentially would pay the rebate directly to a third-party lender, thereby lowering the financing costs charged to the customer by the third-party lender. The TPA would provide information on such third-party financing to customers and be responsible for a one-time payment to the third-party lender. ENO would not participate in the loan transaction between the third-party lender and the customer and would incur no additional risk associated with such loan.

Due to the relatively short period (90 days) in which ENO was required to making this comprehensive filing identifying and supporting its recommendations of appropriate programs to include in the Energy Smart Plan and the recent introduction of alternative financing programs for which limited data has been available, ENO has not had an opportunity to fully explore some of the more creative opportunities for leveraged financing. The Company is actively engaged in reviewing various models across the country to determine the feasibility of including them in the

Energy Smart Plan. However, the Company does not believe that financing alternatives that are incompatible with Louisiana consumer lending laws and/or require on-bill financing present viable funding options as such programs require that substantial risk and administrative burdens be borne by the Company. Such risks and burdens are ultimately shifted to, and borne by, customers who are not participants in the Energy Smart Plan programs and are at odds with sound ratemaking policy. ENO is committed to continue to explore cost-effective, efficient financing mechanisms to compliment the programs described herein in order to maximize participation in the Energy Smart programs. It is ENO's hope that by the time these programs are launched, a fully developed financing mechanism will be developed and ready for implementation. ENO also encourages the City Council to investigate and pursue the provisions conceptually described in Senate Bill 224.[29]

[29] Louisiana State Senate Bill 224 (Regular Session 2009) is potential legislation that would authorize the creation of sustainable energy financing districts by local governmental subdivisions and provide for the issuance of bonds and property assessment programs for solar and energy efficiency projects.

PART 4 – ADMINISTRATION OF PROGRAMS (Section VII)

VII. Administration of Programs

A. Third Party Administrator of Programs

The 2009 AIP expresses a preference to have a third party administer the energy efficiency programs making up the Energy Smart Plan unless ENO can demonstrate that it would be more appropriate for ENO to administer any of the programs. At this time, utilizing a third party administrator ("TPA") is the appropriate decision for the specific programs proposed in this Report with the exception of the Solar PV and In-Home Display Monitoring Program.

The 2009 AIP requires ENO to issue its request for proposals ("RFP") to retain a TPA within sixty days of an order in this docket approving the programs to be included in the Energy Smart Plan. Given that short window of time, ENO intends to begin developing its RFP immediately and, in the near future, will begin discussions with the Council Advisors regarding the criteria to be used in selecting a TPA to be set forth in the RFP. Also, ENO recognizes that its solicitation of interest and administration of the RFP bidding process will be subject to monitoring by an independent monitor of national repute and experience.

B. Portfolio Evaluation, Measurement and Verification

The Company plans to conduct program evaluation activities during each year of program implementation to confirm program impacts and serve as a basis for recommended future program changes. DSM programs will also be formally evaluated to assess final (net) program impacts. These formal evaluations are characterized as impact evaluations, process, and market effects evaluations. In order to support robust evaluation activities and minimize the difference between gross and net program savings, the Company recommends that both monitoring and evaluation efforts be performed as part of the ongoing implementation of each

program so that any program problems can be identified and corrected expeditiously. The Company will use best practices in program tracking and savings estimation in order to optimize the efficiency of evaluation activities; at a minimum this includes:

- **Detailed performance tracking.** ENO will use a tracking system that supports data entry and reporting procedures for key aspects of every program. Data will be tracked at the customer, project and measure level, and will include, at a minimum measures installed, kWh savings, and project costs for multiple stages in a project cycle.
- **Developing and regularly updating a database of deemed savings for certain measures.** "Deemed savings" means simply that the energy and demand savings of certain technologies used to estimate total program savings have been agreed to by parties or set by a public utilities commission, or similar regulatory body. Put another way, to "deem" savings for a particular technology means that parties have agreed, or a regulatory body has found, that there is sufficient existing information regarding the value of a variable that the value can be accepted as the basis for both planning purposes and evaluation.

Deemed savings, although agreed upon, may not be static over time. Many states have a annual review process for deemed savings that takes into account updates to building codes and appliance standards, new market-ready energy efficient technologies, and more precise savings estimation techniques. Technologies may be removed from or added to the deemed savings database during this process. Typically new deemed savings values do not apply retroactively to program performance. That is, if during the annual deemed savings review process a deemed savings value for a particular technology changes, that new savings value will only apply to program savings estimates going forward. For most measures, Frontier Associates Deemed

Savings figures were used for the purposes of this filing.[30]

However, deemed savings may not be appropriate for all energy efficiency projects. Many commercial and industrial facilities, for example, require energy efficiency projects that are unique to those facilities, involving measures whose performance varies widely from application to application. For example, a large electric motor retrofit project will need to consider the facility's operating schedule, unique coincidence factors, and other variables in order to precisely estimate project energy and demand savings. A program will typically assign a project engineer to this type of project to conduct pre and post measure installation inspections, and perform engineering calculations to estimate project savings. The Company has included proposed budgets for this work within its overall DSM budget estimates.

The Company has included a "Measurement & Verification Strategy and Program Evaluation" discussion within each provided program descriptions, which are included in Appendix 4.

Data and technology requirements that will be necessary for a successful measurement, evaluation and verification program for Energy Smart Program may include, but are not limited to:

- Customer energy consumption data.
- Customer demographic data.
- End-use customer baseline data.
- Building characteristics.
- Site specific customer surveys.
- Pre and post installation site inspections.

[30] *See* Appendix 6.

- Engineering based savings calculations.
- Building performance energy simulation modeling.
- Regional weather data.

PART 5 – DESCRIPTION OF ANALYSIS METHODOLGY (Sections VIII, IX, X, & XI)

VIII. ICF Program Costing and Cost-Effectiveness Screening

A. Program Costing

For purposes of cost-effectiveness screening at the program level, ICF developed estimates of total incentive and non-incentive program costs.[31] Incentive costs were developed on a per participant basis as outlined above. Non-incentive program costs include:

- Program administrative costs – these are the utility's internal costs to administer the program.
- Program implementation costs – these are the costs associated directly with implementation of a program, i.e. training and inspections.
- Program marketing costs – the costs associated with production of program marketing collateral and the execution of marketing campaigns.
- Other program costs – the costs associated with the startup and implementation of a program unrelated to the size or annual incentive costs, which include among other costs, the estimated costs of the Request for Proposals (as required by the 2009 AIP) to solicit a third party administrator and the independent monitor (also required by the 2009 AIP) to monitor that RFP.
- Evaluation, Measurement and Verification Costs – costs incurred by an evaluator in the process of measuring program performance.

These costs were developed for each program based on a review of costs from similar programs at other utilities and judgment where appropriate. These costs were expressed as a

[31] *See* Appendix 4.

percentage of total program costs, and in relation to total incentives costs, and are illustrated in Table 11 below:

TABLE 11

	As a % of Total Program Costs							
Program Name	**Administrative Costs**	**Implementation Costs**	**Marketing Costs**	**EM&V Costs**	**IT/Equipment/Other Costs**	**Total Non-Incentive Costs**	**Incentive Costs**	**Net-to-Gross Ratios**
Residential Solutions	10%	23%	10%	4%	0%	48%	52%	0.90
Residential Low Income	10%	29%	10%	4%	0%	52%	48%	1.00
Energy Efficient New Homes	10%	29%	10%	4%	0%	52%	48%	1.00
Small Commercial Solutions	9%	30%	11%	4%	0%	54%	46%	0.80
Large Commercial Solutions	10%	28%	8%	4%	0%	49%	51%	0.80
Residential CFL	9%	18%	6%	5%	0%	39%	61%	0.90
ENERGY STAR Air Conditioning	9%	18%	6%	5%	0%	39%	61%	0.80
Residential AC Tune-up	9%	18%	6%	5%	0%	39%	61%	0.80
Solar Hot Water Pilot	9%	18%	6%	5%	0%	39%	61%	1.00
Solar PV Pilot	0%	100%	0%	0%	0%	100%	0%	1.00
In-Home Display Pilot	7%	23%	11%	9%	15%	65%	35%	1.00

B. Program Cost-Effectiveness Screening

After program costs were developed, the programs were re-screened using the program TRC test. Table 12 highlights the difference in the measure and program TRC test calculations:

TABLE 12

	Measure	**Program**
Benefits		
Savings	Gross	Net (includes NTG)
Costs		
Incremental Costs	Gross	Net (includes NTG)
Incentive Costs	-	Net (includes 1 - NTG)
Non-Incentive Costs	-	Gross

The two main differences between the measure and program screening are the inclusion of program costs and the cost of free ridership. First, program cost-effectiveness is based on program net savings – savings that are attributable directly to a program after netting out free riders. Net savings are accounted for in the calculation by multiplying gross program savings by

the net-to-gross ratio. The net-to-gross ("NTG") ratio[32] is the ratio of the program net savings which are estimated through the EM&V process and gross savings. Gross savings are those savings the program is designed to achieve based on activities contained in the program tracking database. The difference between net and gross savings is represented by the savings realized by free riders.

Therefore, the effect of applying the NTG ratio is to reduce program savings and cost-effectiveness (since program costs are not reduced by the NTG ratio). The primary source of NTG ratios was the Energy Efficiency Policy Manual ("Policy Manual"), prepared by the Energy Division of the California Public Utilities Commission. Other sources were used as appropriate.

The other key steps to complete the program cost-effectiveness screening included:

- Summing measure benefits over all measures and installations included in a program
- Calculating the total incentive costs by summing over the number of measures and installations projected
- Summing the total participant costs over all measures and installations included in a program
- Calculating the total program costs, calculated as a percentage of total incentive costs as described above
- Calculating the TRC, and other test benefit-cost ratios over the forecast period
    - Program Administrator Cost Test[33] = Avoided Demand and Energy Costs divided by Utility Incentive and Program Costs

[32] Net to gross ratios are fixed parameters associated with programs in the ICF planning model. They are energy efficiency policy variables that remain fixed until change as a result of program evaluation. When changed they operate prospectively to estimate program savings.

[33] Also known as the Utility Cost Test ("UCT").

- Participant Cost Test = Avoided energy and demand costs divided by Participant Incremental Costs

IX. Cost-Effectiveness Methodology

A. Overview

It is a well accepted and generally agreed upon principle that energy efficiency programs should be cost effective in that they achieve more in savings than the cost incurred to implement and manage them. The City Council recognized this requirement in adopting paragraph 43 of the March 25, 2009 Agreement in Principle ("AIP") as follows:

> All programs approved by the Council, with the exception of low income weatherization and domestic solar water heating programs, prior to implementation must be determined to be cost effective under the industry accepted testing criteria of the Total Resource Cost (TRC) Test and the Program Administrator Cost (PAC) Test as defined in the California Standard Practice Manual, "Economic Analysis of Demand-Side Programs and Projects," October 2001.

In connection with this requirement, the Company conducted the following cost-effectiveness tests to evaluate all of the potential measures and programs that were screened for the Energy Smart Plan demand side management programs: the Total Resource Cost Test[34] (for measures) and Program Administrator Cost Test (for programs) were quantified. As an additional screening measure of cost effectiveness the Participant Test was quantified.[35] All tests are based upon the cost-effectiveness analysis established by the California Standard Practice Manual. The Company relied on the results of the Total Resource Cost Test as the basis for its recommended energy efficiency and conservation programs. The Company required each

[34] The Total Resource Cost Test was formerly referred to as the All Ratepayers Test in State – the two tests are identical.

[35] The AIP adopted by the Council included the Program Administrator Test but did not adopt the Participant Test, the Ratepayer Impact Measure Test, or the Societal Test.

selected program DSM measure to pass the Total Resource Cost Test prior to inclusion in any recommended program. All recommended programs were screened using each of the cost-effectiveness tests listed above. Each program was screened using an avoided cost methodology which measured the costs of energy and capacity that were avoided using the selected Energy Smart Plan programs. The avoided cost methodology used modeling assumptions that were reviewed by both the Company and the Council's Advisors in the collaborative process required by the 2009 AIP.

The Total Resource Cost Test (also known as the All Rate Payers Test, or "ART") is the primary cost-effectiveness test most generally relied upon for demand side management program design. The Total Resource Cost Test compares the total cost of the program (including the costs to both the participants and the Company) to the total benefits derived from the program. The discount rate used is the Company's discount rate rather than the social discount rate and does not include the impacts of externalities such as, for example, health benefits or economic development. It should be noted that the avoided cost analysis includes the cost of carbon.[36]

The Program Administrator Cost Test compares program administrator costs, including program incentive and non-incentive costs, to the avoided costs resulting from electric energy and peak demand savings. To appropriately apply this cost-effectiveness test, avoided electric energy and peak demand savings for generation has been included in the analysis.

The results of the Participant Test have also been included in this filing at the request of certain intervenors in this proceeding. The Participant Test compares the benefits and costs for program participants and serves as a guide for program design. It should be noted that many customers choose to participate in a demand side program for reasons that cannot be quantified;

[36] *See* Appendix 7.

therefore an unfavorable benefit/cost ratio does not necessarily prevent customers from participating in a program.

Determination of avoided costs is vital to appropriate cost effectiveness analysis and screening of programs in all of the cost effectiveness measures identified above. Avoided costs modeling methodology and assumptions including forecasts of key inputs will be discussed in more detail in Section X.

B. Cost-Effectiveness Test Details

1. Total Resource Cost Test

The Total Resource Cost Test ("TRC"), measures the net cost of a program, including both the participants' and utility's. It was used to screen all measures for inclusion in program offerings. All programs were screened using the TRC. It is defined as follows:

$$\frac{Benefits_{ART} = \dfrac{\sum_{t=1}^{Life} UAC_t}{(1+d)^t}}{Costs_{ART} = \dfrac{\sum_{t=1}^{Life} UIC_t + IC_t + PRC_t}{(1+d)^t}}$$

Where:

- Life is the life of the measure in years
- UAC_t is the utility avoided cost from electricity (kWh) and electric demand (kW), savings in year t
- UIC_t is the utility increased cost from electricity (kWh) and electric demand (kW), increases in year t
- IC_t is the incremental cost for installed measures in year t

- PRC_t is the program administrator cost in year t
- d is the discount rate
- Σ is summation

TRC values were calculated for individual programs using the energy and demand impact estimates, regionally specific avoided energy, capacity, and T&D costs and discount rates.

2. Program Administrator Cost Test

The Program Administrator Cost Test ("PAC") is a measure of the net costs of a demand-side management program as a resource option based on the costs incurred by the program administrator (including incentive costs) and excluding any net costs incurred by the participant. The benefits are similar to the TRC benefits. The formula is as follows:

$$\frac{Benefits_{PA} = \dfrac{\sum_{t=1}^{Life} UAC_t}{(1+d)^t}}{Costs_{PA} = \dfrac{\sum_{t=1}^{Life} UIC_t + INC_t + PRC_t}{(1+d)^t}}$$

Where:

- Life is the life of the measure in years
- UAC_t is the utility avoided cost from electricity (kWh) and electric demand (kW) savings in year t
- UIC_t is the utility increased cost from electricity (kWh) and electric demand (kW) increases in year t
- INC_t is the utility incentive cost for installed measures in year t
- PRC_t is the program administrator cost in year t

- d is the discount rate
- Σ is summation

3. Participant Test

The Participant Cost Test ("PCT") is a measure of the costs and benefits for customers that participate in a utility program. Generally, if the incentives received plus the utility bill reductions exceed the incremental cost of the measure plus any utility bill increases, the participant will find the program valuable. It is defined as follows:

$$\frac{Benefits_{PCT} = \dfrac{\sum_{t=1}^{Life} BR_t + INC_t}{(1+d)^t}}{Costs_{PCT} = \dfrac{\sum_{t=1}^{Life} BI_t + PC_t}{(1+d)^t}}$$

Where:

- Life is the life of the measure in years
- BR_t is the reduction in utility bills for the participant from electricity (kWh) and electric demand (kW) savings in year t
- INC_t is the incentive amount received by the participant for installed measures in year t
- BI_t is the increased cost in utility bills for the participant from electricity (kWh) and electric demand (kW) increases in year t
- PC_t is the participant cost related to the installed measure in year t
- d is the discount rate
- Σ is summation

X. Avoided Cost Methodology

A. Overview

One of the principle benefits that electric utilities and their customers achieve through the implementation of DSM programs is the economic benefit obtained from energy and capacity savings. In other words, DSM measures or programs allow utilities to defer costs associated with capital additions or to not incur fuel or purchased power costs; these are costs that would have been spent (and recovered from customers) if DSM were not implemented. These costs are typically referred to as "avoided costs," and estimates of avoided costs (both for capacity and energy) are a key input used to evaluate the potential value of DSM programs.

From a long-term resource planning perspective, DSM projects result in energy efficiency gains that are long term in nature and are alternatives to the acquisition or use of supply side resources.[37] One of the key steps in the assessing the potential benefits of alternative DSM programs is estimating the costs that will be avoided as a result of energy and demand savings.

Two types of long-term avoided costs must be developed to evaluate potential DSM: avoided energy costs and avoided capacity costs. Avoided energy costs are the variable costs (largely fuel and purchased power costs) of the energy that is not consumed as a result of the implementation of DSM. Typically, it is assumed that DSM replaces the most expensive source of generation that is capable of being reduced.[38] This is often called the "cost at the margin" and

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[37] The expected effects of DSM programs should be included into the long-term loads and load profiles used to develop the long-term resource plans. The Strategic Resource Planning process includes a feedback loop that ensures that expectations regarding DSM are appropriately reflected in the hourly load forecasts used for the integrated resource planning that underlies the SRP. At this time, it is not possible to predict the displacement of any specific long term supply resources that may result from the implementation of ENO Energy Smart Programs.

[38] If a generating unit must be operated at some minimum level to maintain system reliability, it is not appropriate to consider the variable cost of that unit in the determination of avoided energy cost so long as that unit is operating at its minimum operating level. In addition, if a wholesale power purchase cannot be curtailed over some period of time, the cost of that purchase should not be used to determine the avoided energy cost.

is appropriately represented by the expected market cost of energy and/or commodity price inputs associated with energy production at the margin. Similarly, avoided capacity costs reflect the cost of incremental infrastructure investments (such as the cost of generation, transmission and/or distribution facilities) that can be avoided or deferred by DSM projects. Avoided energy costs are expressed in terms of $/kWh, and avoided capacity costs in terms of $/kW.

DSM projects are long run in nature and reduce usage along virtually all points of the load curve. Therefore, long term planning parameters are used to measure avoided costs. Entergy New Orleans is part of the Entergy Electric System, and is a vertically integrated utility operating according to the principles of security-constrained economic dispatch. The Entergy Electric System is tightly integrated into the wholesale power market, and routinely purchases energy from the wholesale market when the cost of wholesale energy is less than the cost of operating owned generation. Therefore, a market forecast of energy prices is a reasonable basis for the energy cost that would be avoided by DSM, because DSM would result in fewer energy purchases from the wholesale market, and the value of these decreased purchases can be readily estimated.[39] Market costs can also be used to establish an avoided capacity cost. A utility can always meet its incremental capacity needs by constructing a new combustion turbine ("CT"), so the revenue requirement (on a $/kW per year basis) that would be required for the purchase and installation of a new CT is a reasonable estimate of avoided capacity cost.[40] This is particularly

[39] Some might suggest that the cost that would be avoided would be marginal cost of the least-efficient unit committed and dispatched in any given hour. However, in a System such as the Entergy System that routinely purchases all of the available economy energy consistent with maintaining reliability requirements, such units should not be committed and dispatched at any level above the minimum operating level, and it is unreasonable to suggest that such generation could be avoided through additional DSM. Thus, in operations, the cost of energy that would otherwise be bought in the wholesale market is a proper estimate of the avoided energy value of DSM.

[40] The Entergy System is required to maintain a planning reserve margin that results in an expected loss of load probability ("LOLP") that is less than one day in ten years. The results of the LOLP analysis are converted into a reserve margin, which can then be compared to existing capability to determine incremental capacity needs. Although the cost of meeting that incremental capacity need is market based, the amount of the need is not (*i.e.*, the retail regulators of the Entergy System have not adopted tariffs that incorporate any variable value of lost load.

true for a utility system like the Entergy System, which currently has a need for peaking capacity that is at least as deep as the reasonable market potential for DSM resources at this point in time.

Avoided energy costs can also be estimated through the use of production cost simulation models (such as PROSYM or PROMOD).[41] Production cost simulation models are complex, containing thousands of algorithms and statistical procedures that are not transparent to most stakeholders. Production cost simulation models require the same assumptions regarding market energy and fuel prices, but also require numerous other assumptions, including (but not limited to) detailed hourly forecasts of System load, forecasts of variable operations and maintenance ("O&M") expense for each existing and proposed generating unit, forecasts of delivered fuel costs for each of the System's generating units, predictions regarding trends in the availability and efficiency of each of the System's generating units, specific assumptions about what generating units will be retired, and what and where specific new units will be added, and transmission system topography and reliability. Each of these thousands of assumptions is subject to errors in specification, measurement and prediction, and resolving differences among all of the stakeholders regarding what assumptions are appropriate can be time consuming and, in the end, will not produce perfect future estimates of any of the parameters. Furthermore, developing, running, and verifying production cost simulation models takes time. The use of a production cost simulation model would produce little, if any, increased accuracy in the avoided energy cost estimates. In fact, because of the sensitivity of a production cost model to the myriad of inputs, production cost modeling may well be less accurate than the market price approach that the Company has used. An evaluation of the relative costs and benefits of the

[41] Although it is conceptually possible to use production cost simulation models to estimate avoided capacity costs, the assumptions and modeling methodologies that would need to be developed to do so in a real-world application render that option unfeasible.

production cost simulation approach versus the market price approach has led the Company to adopt the market price approach.

B. Methodology

The Company relied upon forecasts of long-term wholesale power costs as the avoided energy cost used to evaluate potential DSM programs. Such long-term power price forecasts are driven largely by expectations regarding the future cost of natural gas and the future cost of complying with environmental regulations regarding CO_2 emissions. The Company also considered high and low price cases for each of these key assumptions. The midpoint and ranges for the natural gas and CO2 allowance costs and the resulting avoided energy costs are shown in the following table:

TABLE 13

Avoided Energy Costs 30 Year Levelized Values (2007$)			
	Low	Base	High
Natural Gas ($/MMBtu)	5.00	7.22	12.00
CO2 Emission Allowances ($/ton)	10.00	17.95[42]	50.00
On-Peak Energy July Weekdays 7am to 11pm ($/MWh)	62.65	75.22	119.00
Off-Peak Energy July Weekends 7am to 11pm ($/MWh)	44.46	54.47	92.01
Off-Peak Energy All Other July Hours ($/MWh)	36.13	44.65	77.42

- The mid-point natural gas forecast and the mid-point CO2 emission allowance forecast were developed by ICF Consulting as part of a multi-client study of various carbon scenarios. Integrated gas and CO2 forecasts were seen as an advantage over forecasts developed independently. However, both the gas forecast and the CO2 forecast were evaluated against long term forecasts developed by a number of leading energy consulting firms and public agencies and were determined to be reasonable.

[42] Equates to $25 per ton in nominal dollars in the year 2020.

- The avoided energy costs were developed by the Planning Analysis group of the System Planning and Operations department using third-party modeling software licensed by Ventyx. While the table above shows levelized prices for the month of July, this is to simplify the presentation of a large amount of data. For avoided energy costs, January prices were used to value the avoided cost of energy saved in January; February prices valued avoided energy costs in February; and so on.

The estimates of long-term avoided capacity costs were based upon the lowest cost alternative for new capacity – *i.e.*, the effective annual carrying cost of a newly constructed CT. The System compiles estimates of the cost of installing a variety of supply-side resources, based on a number of sources – including detailed, confidential discussions with vendors that actually sell and construct such resources. Because the cost estimates used to calculate avoided capacity cost for DSM evaluation purposes are the same cost estimates used in the System Resource Plan ("SRP"), there is consistency between those cost estimates. For purposes of comparison to DSM projects theses costs were inflation-adjusted, levelized and adjusted for fixed O&M cost. Avoided capacity costs were further adjusted for line losses and reserve margins that would be associated with any supply side resource. Additional costs were added to the estimated avoided cost of generation to reflect the avoided cost of transmission and distribution facilities associated with avoided generation cost.

TABLE 14

Avoided Capacity Cost	
New Capacity Cost (2007$)	$680/kW
Levelized Fixed Charge Rate	10.83%
Levelized Cost	$73.65/kW/Yr
Fixed O&M	$6.25/kW/Yr
Line Losses	7.42%
Reserve Margin	16.80%
Avoided Generation	$99.27/kW/Yr
Avoided T&D Costs	$2.93/kW/Yr
Total Avoided Capacity Costs	$102.19/kW/Yr

- As mentioned above, the cost of a newly constructed CT is based on third-party estimates and internal information. An estimate of fixed O&M costs was developed in a similar fashion.
- The levelized fixed charge rate was developed by the Planning Analysis group using a revenue requirements model that incorporated the financial structure of ENO as of December 31, 2007.
- The line loss estimate was developed by the Technical System Planning group which is a part of the Transmission Operations department. While line losses are developed by voltage level and then allocated to customer class, one loss factor for all retail service was used as a simplification.
- The reserve margin of 16.8% is the current planning assumptions for the Entergy Electric System.

The Company also developed estimates of avoided transmission and distribution ("T&D") cost to accompany the avoided capacity and energy costs. These estimates were based on an analysis of planned investment in the T&D systems, and an assessment of the amount of those planned expenditures that could be deferred as a result of the implementation of DSM programs. This analysis resulted in an estimated avoided T&D cost of $2.93/kW/Yr.

Similar to the development of a high-low range of avoided energy costs, the Company also developed high and low cases for the key assumption in avoided capacity costs. New capacity costs of $850/kw (2007$) and $350/kW (2007$) were used to develop a high avoided capacity estimate of $125.07/kW/Yr and a low avoided capacity estimate of $57.79/kW/Yr, respectively. A more detailed description of the Avoided Cost Methodology and assumptions is contained in Appendix 7.

C. Avoided Cost Sensitivity Analysis

The high-low range of avoided energy costs and avoided capacity costs represents an extreme case analysis in terms of the Company's view of future input costs, their effect on future avoided costs, and thus their impact on DSM recommendations. The use of a broad range of case values for key forecast assumptions affect the avoided cost values to a fairly significant degree. As such, the range of these values can serve as proxy sensitivity for other inputs such as the cost of capital. A change in the pre-tax cost of capital of 150 basis points, by way of example, would change the avoided capacity cost assumption by approximately +/- $10 per kW/year. The crucial question in regard to the DSM recommendations is the potential effect these avoided cost sensitivities would have on the cost effectiveness tests and therefore, on DSM program selection. The effect of avoided cost sensitivities on the TRC and PAC tests associated with each recommended DSM program can be summarized on the following table:

TABLE 15

Program Name	TRC Test			PAC Test		
	Low	Ref	High	Low	Ref	High
Residential Solutions	0.80	1.00	1.52	0.97	1.25	1.90
Residential Low Income	0.16	0.21	0.31	0.17	0.22	0.32
Energy Efficient New Homes	0.72	1.03	1.59	4.53	5.23	8.06
Small Commercial Solutions	1.33	1.38	2.06	1.62	1.66	2.48
Large Commercial Solutions	1.17	1.28	1.98	1.60	1.72	2.67
Residential CFL	2.25	2.73	4.33	2.25	2.73	4.33
ENERGY STAR Air Conditioning	1.24	1.73	2.68	2.11	2.94	4.56
Commercial DG	1.01	1.26	1.85	1.15	1.44	2.12
Solar Hot Water Pilot	0.25	0.33	0.53	1.05	1.40	2.25
Solar PV Pilot						
In-Home Display Pilot	0.92	1.16	1.68	0.92	1.17	1.68

Based upon the data above, it is clear that for those programs that rely upon cost effectiveness tests for selection (*i.e.*, all programs excluding Residential low income programs and pilot programs), only the Residential Solutions program would be vulnerable under the low case scenario combining low gas prices, low carbon assumptions, and low capacity costs. Under the high case scenarios, all programs improve in terms of cost effectiveness. In light of these sensitivity results, the Company considers its recommendations that result from using the base or reference scenario to be reasonable.

D. Conclusions

The estimates of avoided energy and capacity costs that the Company has prepared and used to evaluate DSM programs are reasonable and transparent. The avoided capacity cost estimates reasonably reflect the cost (expressed as an annual revenue requirement on a $/kW/year basis) that the Company would incur to meet an incremental capacity need, and the avoided energy costs reflect the market price of the energy that the Company would have bought but for the potential DSM program.

The approach that the Company has used is transparent and reasonably accurate. A recent publication prepared by the U.S. Department of Energy and the U.S. Environmental Protection Agency noted that:

> Avoided costs for energy efficiency do not necessarily require significant precision to the fractions of a cent to be useful. With long-term forecasts (up to 30 years), it is inherently impossible to be exact in predicting future market prices and the amount of energy and capacity savings ultimately achieved. Therefore, the methodology should be as complex as necessary to get the major decisions correct, but still should be workable and transparent to the stakeholders involved in their calculation.[43]

The avoided costs that the Company has developed and used for the DSM analysis presented in this report meet the criteria specified in the NAPEE. The estimates are sufficiently accurate to reach the proper conclusions with respect to the relative economic merits of one DSM program versus another. However, avoided cost estimates (and thus the results of the benefit-cost tests) are not the ultimate basis for decisions as to which programs to propose for implementation. Other factors, including budgets, non-pecuniary benefits to participants, and the state of the delivery infrastructure, weigh heavily on the ultimate recommendations. If the benefit-cost ratios based on avoided costs were the sole determinant, some programs, such as low-income weatherization, would never be implemented, and others would. The avoided cost estimates used in this analysis are sufficiently robust to provide a meaningful ranking of programs and to illustrate the potential economic benefits of alternative programs, so that the decision-makers can make informed choices.

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[43] National Action Plan for Energy Efficiency (2007). *Guide to Resource Planning with Energy Efficiency*. Prepared by Snuller Price et al., Energy and Environmental Economics, Inc. <www.epa.gov/eeactionplan>

XI. Deemed Savings

A. Overview

Given the importance of determining savings in terms of reduction of kW and kWh in any energy efficiency program, evaluation and measurement of savings is central to program selection and design. In general, there are three approaches to determining energy efficiency savings: (1) measurement and verification ("M&V") for each site or facility (2) large scale site analysis per facility and (3) deemed savings. The former two approaches are most useful where programs and measures are complex and in unique applications which focus on after the fact individual assessments including statistical sampling; these approaches also may be labor-intensive and costly. The latter approach, deemed savings, is an industry-accepted standard that is used in numerous well-documented energy efficiency programs throughout the country.[44] Based on the nature of the programs proposed by ENO for Energy Smart New Orleans, the large majority of energy efficiency savings will be estimated using the deemed savings approach, although certain customer-specific programs will use M&V approaches.

B. Deemed Savings for the Energy Smart Plan

Deemed savings represents a pre-determined, validated estimate of energy and peak demand savings attributable to a particular energy efficiency measure in a particular type of application. The determination of deemed savings relies upon statistical analysis and engineering practices adapted to New Orleans demographics and conditions to measure expected measure deemed savings. Deemed savings by energy efficiency measure represent the difference between baseline energy use as compared to expected post-installation energy use. Baseline

[44] Deemed savings are used by the following states, agencies, and utilities: California (Database of Energy Efficiency Resources); Pennsylvania (Technical Reference Manuals); Wisconsin Energy Conservation Corporation; Illinois (ComEd and Ameren IU); Arkansas (state adopted); Texas (state adopted); OG&E and PSO in Oklahoma; EPE and Xcel Energy in New Mexico; Northwest Energy Efficiency Alliance; Bonneville Power Administration; and Minnesota (state reviewed).

energy use is typically premised upon well-accepted and documented engineering analyses, including specific measure studies, building codes, manufacturer specifications, as well as government and industry data. The use of deemed savings is the preferred approach for well-known and well-documented energy efficiency programs across the nation; the deemed savings approach avoids the cost of time consuming individual site/facility analyses and related administrative burdens. Deemed savings provides a sound basis for timely and accurate verification of energy efficiency savings.

Extensive analysis has been conducted to support the deemed savings selected for the Energy Smart programs proposed for implementation in New Orleans; Frontier and Associates, LLC and ICF prepared deemed savings data that are applicable for the New Orleans area, and these data are sponsored by Mr. David K. Pickles of ICF International. In order to produce deemed savings values applicable to the New Orleans area, Frontier relied on a methodology that has been followed and accepted for various energy savings filings in Minnesota, Arkansas, New Mexico, Oklahoma, Colorado, and Texas. Results from this work are modified from a study developed for the Gulf States region, and modified to reflect appropriate weather conditions for Entergy New Orleans. ICF employed a similar methodology. The deemed savings and work papers describe the methods and tools used to produce New Orleans deemed savings for the residential, commercial, and industrial sectors, and are attached as Appendix 6.

C. Savings Goals/Targets

The 2009 AIP requires that the Council establish reasonably achievable energy efficiency targets for the Company. Both Paragraphs 46 and 47 of the 2009 AIP require the Council to set energy efficiency targets in this docket, and Paragraph 47 goes on to require that the savings targets be based on the specific programs approved in this docket with their calculated deemed

savings, approved expenditure levels, and estimated participants for those designated programs. The establishment of energy efficiency targets is a transparent, logical process that flows from the evidence accepted by the Council to support the approval of the specific programs and the approval of ENO's allocation of funds among the specific programs in this docket.

The targets for 2010 proposed by ENO in Table 1 (kWh and kW) above are achievable assuming twelve months of implementation; that is, the TPA must be in place and able to provide programs to the public for twelve months. Given the remaining tasks and approvals required from the Council prior to launch, including the TPA RFP and the Council's concurrence in the Company's selection of the TPA, the Company does not believe that the Energy Smart Plan will be ready to launch in January 2010. As a result, the Company requests the opportunity to supplement this filing to reflect the goals from the approved programs and the uncertainty of the implementation date. The targets for 2010 proposed by ENO will need to be refined in order to reflect the Energy Smart Plan launch date, when that date is known. Such adjustment is consistent with Paragraphs 46(a) and 47 of the 2009 AIP, which provides for adjustment of targets in subsequent years for then-existing conditions. Such refinement is necessary because Sections III.E.1 and III.E.2 of the Electric Formula Rate Plan ("EFRP") Rider Schedule provides for the calculation of the Lost Contribution to Fixed Costs and Energy Efficiency Incentive Mechanism for ratemaking purposes, respectively, to be based on a Council-approved target for the calendar year evaluation period, as opposed to a consecutive twelve-month period spanning two calendar year evaluation periods.

In addition, the establishment of a 2010 target is not a matter of pro-rating on a monthly basis the targets for 2010 proposed by ENO in Table 1. The 2010 targets do not assume that customer participation and savings will occur ratably over the year. This is due to the ramp-up

of TPA activity. Once the TPA is selected, there will be a ramp-up period which varies by program in which the TPA will need to develop networks of trade allies, train contractors, create public awareness, provide for monitoring and verification, develop tracking, and accounting systems, and influence the design and construction cycle for new buildings and related activities. Therefore, the date of the launch of the Energy Smart Plan is an essential factor in determining what is a reasonably achievable target.

Accordingly, ENO requests that the Council in its order provide for a subsequent determination to occur in this docket in which ENO may submit for the Council's final approval of a energy efficiency target for calendar year 2010 reflecting the then-projected date of the launch of the Energy Smart Plan and the Council's actions regarding the approved DSM programs to be included in the Energy Smart Plan.

D. Deemed Savings for Ratemaking Purposes

As required by the 2009 AIP, the Company will be held to goals/targets for programs selected and administered by the Company and as finally approved by the Council in Docket UD-08-02. An annual review to consider whether the Company has attained the targets/goals established by the Council within a 12-month review period, evaluation of the appropriateness of goals/ targets for the prospective 12-month review period and, if necessary, refinement of the stated goals/targets, shall be accomplished through a sub-docket of the Council in Docket UD-08-02.

The Company's EFRP ratemaking mechanism calls for recovery of two components of the Energy Smart Plan: (1) ENO's lost contribution to fixed costs (reduced kWh sales revenues) and (2) incentives if certain pre-established goals are met. It is anticipated that deemed savings per DSM measure will be relied upon for both pre- and post-implementation analyses of

achieved savings. For the lost contribution to fixed costs component, the Company's EFRP filing will include an estimate of its lost contribution to fixed costs. This lost contribution estimate is the product of the Company's adjusted gross margin per kWh (AGM per kWh) and the total annual projected savings approved by the Council. Projected savings are the product of deemed savings (by measure) in kWh and estimated participation in the measures/programs to be approved in this proceeding. Actual lost contribution to fixed costs will be calculated after the fact by multiplying the same AGM per kWh by the savings in kWh resulting from actual participation in approved energy efficiency programs.[45] Although the actual kWh savings and those estimated for purposes of calculating a target value will likely be different, the deemed savings at the individual measure level will not change; the difference between actual and estimated savings associated with the Energy Smart programs will vary primarily because of differences in estimated and actual participation rates in the approved programs.

As noted above, upon final approval of programs by the Council the Company proposes to update this quantification to reflect the estimated savings generated from final programs selected for implementation. An estimate of Adjusted Gross Margin (i.e. AGM or base rates) for rates currently in effect will be multiplied by the kWh target to quantify the estimate of lost contribution to fixed costs. The current AGM for ENO is $0.0534 per kWh on average for all customer classes. These estimates will be quantified in total and on a calendar year basis in order to estimate lost contribution to fixed costs for ratemaking purpose under the provisions of the FRP.

[45] An example of the lost contribution to fixed costs calculation is set forth in Attachment G to the Company's Rider Schedule EFRP-3.

In order to obtain actual data for the estimated versus actual lost contribution to fixed costs comparison calculation, ENO will rely on its tracking system[46] to provide the participant, program and total Plan savings at the end of the program year based on actual installs and participation.[47] The $/kWh savings on an estimated and actual calendar year basis (using the same AGM value) will be utilized for true up of the lost contribution to fixed costs for purposes of the FRP.

The second component of the EFRP, the energy efficiency incentive mechanism, uses the actual total calendar year annual savings in kWh (described above) from the developed tracking system and compares the kWh savings actually achieved by the program to the Council approved targets. The ratio of actual savings to projected savings is the basis for determination of the percentage of savings achieved for purposes of the EFRP's incentive measurement. The Company must achieve 75% or greater of its approved kWh savings goal in order to receive an incentive return on equity ("ROE") adder. The incentive is calculated on a sliding scale and would add from 0.04% to a maximum of 0.3% to the Company's ROE, with the incentive capped at 125% of the annual projected kWh savings goal.[48]

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[46] As part of the requirements of the TPA, a program tracking system will be developed to document the actual participation in the Energy Smart Plan by participant and measures installed. The deemed savings utilized in the development of the measures and programs approved by the Council will be utilized in the tracking system as the basis for actual savings obtained from the programs.

[47] *See* footnote 22 above.

[48] The incentive scale and an example of the incentive ROE adder calculation are set forth in Attachment H to the Company's Rider Schedule EFRP-3.

PART 6 – AFFIDAVITS & APPENDICES (Sections XII & XIII)

XII. Supporting Affidavits:

A. Charles B. Steen, Entergy Services, Inc.
B. David K. Pickles, ICF International
C. Gregory C. Rigamer, GCR and Associates

XIII. Appendices:

Reference	Data
Appendix 1	GCR NO Baseline Study
Appendix 2	Table of 6-Step Process for Measure/Program Screening
Appendix 3	Universe of Potential Measures contains a) List of Cost Effective Measures-residential and non-residential b) List of Non-Cost Effective Measures-residential and non-residential c) List of Bundled Residential Measures d) List of Bundled Non-Residential Measures
Appendix 4	Table of Final Portfolio and Program Selection
Appendix 5	Table Deriving the Discount Rate
Appendix 6	Deemed Savings Tables
Appendix 7	Assumptions and Derivation of Avoided Costs
Appendix 8	ICF Planning Model
Appendix 9	ICF Potential Study