



April 1, 2017 – December 31, 2019

Program Years 7, 8, and 9

# Energy Smart Demand Side Management Plan

September 28, 2017

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## Summary

Entergy New Orleans, Inc. (ENO) selected APTIM Environmental & Infrastructure, Inc. (APTIM) as the Third-Party Administrator (TPA) to deliver the Energy Smart portfolio of energy efficiency programs for the period of April 1, 2017 to December 31, 2019. APTIM will be retained by ENO to implement, deliver, administer and conduct Quality Control/Quality Assurance (QC/QA) and some measurement and evaluation of the energy conservation and demand side management programs as approved by the New Orleans City Council (Council).

The Demand Side Management (DSM) plan outlined in this document details the proposed design, budgets, and savings targets for the Energy Smart portfolio in Program Years 7, 8, and 9, which run from April 1, 2017 to December 31, 2019. The energy efficiency programs are available to ENO retail customers. An initial Implementation Plan was provided to the Council in February 2017, which was revised through a series of Technical Conferences with relevant stakeholders and the Council's Advisors. This Supplemental and Amended Plan includes the feedback and revisions from the Technical Conferences.

APTIM completed the analysis and recommendations detailed in this implementation plan utilizing available historical results and through incorporating best practices of energy efficiency programs to achieve aggressive program savings targets that provide significant benefits to ENO's customers. Additionally, APTIM solicited and incorporated the feedback of multiple stakeholders with significant experience with the Energy Smart programs and the New Orleans market, including, but not limited to, the following:

- Alliance for Affordable Energy
- Natural Resources Defense Council (NRDC)
- The Urban League of New Orleans
- ILSI Engineering (ILSI)
- TSG Services (TSG)
- Green Coast Enterprises
- Energy Wise Alliance

During the initial stage, APTIM is working to successfully transition responsibilities from the incumbent TPA and initial program designs will be aligned with ENO's Energy Smart programs detailed in the preferred portfolio of the 2015 IRP. These programs include the following with more detail on each offering included within this plan:

- Residential Programs
  - Home Performance with ENERGY STAR® ("HPwES")
  - Energy Smart for Multifamily
  - High Efficiency AC Tune Up Program
  - Residential Lighting and Appliances
  - Residential Direct Load Control
  - Behavioral Program
  - Low Income Program



- Commercial Programs
  - Large Commercial & Industrial Solutions
  - Small Business
  - Publicly Funded Institutions

During implementation of the programs listed above, APTIM will continue to work with ENO, the Council for the City of New Orleans (the “Council”) and its Advisors (“Advisors”), as well as other stakeholders in the final detailed design of the programs to identify innovative, impactful program enhancements, and those, which are approved, will be implemented during the TPA contract.

Enhancements will take the form of process improvements and introduction of innovative approaches, aimed at improving cost-effectiveness, enhancing participant satisfaction, driving increases in participation and energy savings and further expanding the value of Energy Smart programs beyond energy efficiency alone for the benefit of ENO’s customers and stakeholders.

Throughout the implementation of the approved portfolio enhancements, APTIM will continue to collaborate with ENO, the Advisors, and stakeholders, to identify, evaluate and, implement further program and portfolio enhancement opportunities, to move Energy Smart programs in the direction of being nationally recognized as best-in-class.

The following implementation plan provides additional detail on the program designs, savings targets, budgets, and innovative enhancements of the Energy Smart program.

## 1. Residential Programs

The proposed programs included within APTIM’s residential portfolio are included with information on innovations and enhancements for consideration during implementation of the 2017-2019 Energy Smart DSM portfolio. The program designs were derived from the preferred portfolio of the 2015 IRP and the program descriptions included within the Council-approved 2017-2019 Energy Smart Request for Proposal (RFP). However, all measure level planning assumptions have been aligned with the New Orleans Technical Reference Manual (NOTRM). For all programs, APTIM will facilitate brainstorming sessions throughout implementation of the programs involving ENO, members of our Stakeholder Advisory Panel, trade allies, and other stakeholders to identify and evaluate innovative options for program enhancement.

**Home Performance with Energy Star (“HPwES”)** – This program will achieve long term, significant cost-effective electricity savings using local auditors and contractors who will help residential customers analyze their energy use and identify opportunities to improve efficiency, install low-cost energy-saving measures, and identify and implement more comprehensive home efficiency projects. HPwES will offer three levels of home energy audits. The Level I Assessment will include a “walk-through” inspection and direct installation of low-cost measures, such as LEDs and water measures. To generate additional savings at the time of the audit, smart thermostats have been added as a direct install measure. The Level II and III Assessments are comprehensive home inspections with diagnostic testing, performed by a qualified contractor, targeted to achieve deeper savings within the home.

The APTIM Team will leverage our knowledge to identify and introduce innovative, value added



approaches. We will work in collaboration with ENO, the Advisors, and stakeholders to identify and evaluate program enhancements and implement those which the Council approves.

Proposed ideas for enhancements to the HPwES program include:

- Focusing on providing comprehensive energy assistance to residential customers on available program offerings to maximize use of programs and encourage comprehensive project retrofits.
- Enhancing and optimizing marketing and application screening to lower non-incentive costs and improve audit-to-install closure rates, thereby enhancing program cost-effectiveness.
- Better leveraging of trade allies through enhanced trade ally training. Trade allies are a low-cost program resource who can perhaps provide more program assistance.

**Energy Smart for Multifamily** - This program targets multifamily property owners (landlords) and managers, as well as apartment and condo renters. The program will address their unique needs, which are often overlooked, through a combination of incentives for both direct install and prescriptive measures, and through property owner and tenant education.

To meet the needs of New Orleans' high percentage of renters and the unique housing stock of double and triple shot-gun homes, APTIM would like to expand the multi-family program to include complexes with less than 4 units and to target property owners with portfolios of multiple dwellings.

Proposed ideas for enhancements for the Energy Smart for Multifamily program include:

- Working with Building Owners and Managers Association International (BOMA) and other local organizations like the Greater New Orleans Housing Alliance (GNOHA) and the Apartment Association to identify property owners with large portfolios of residential singles, doubles and triples in addition to the traditional large complexes targeted by previous efforts. Also focus communications to determine unique challenges and corresponding program solutions for New Orleans property owners.
- Coordinating services and incentives with Louisiana Housing Corporation (LHC) and Housing Authority of New Orleans (HANO) to reach affordable housing more effectively.
- Assessing multifamily complexes where direct installations were previously performed to determine if they are candidates for remarketing of the new program.
- Coordination with Natural Resources Defense Council (NRDC).
- Exploring program designs to allow for the Energy Smart for Multifamily program to better serve multi-family properties with low income tenants.
- Enhancing and optimizing marketing and application screening to lower non-incentive costs and improve audit-to-install closure rates, thereby enhancing program cost-effectiveness.

**High Efficiency AC Tune Up Program** - The Energy Smart High Efficiency AC Tune-Up Program will provide residential customers with a comprehensive set of options to lower the energy consumption and cost associated with keeping their homes and businesses cool and comfortable in the summer. Customers with functioning ACs can improve the efficiency of their units with the help of a comprehensive AC Tune-up. The program will build capacity within the territory's HVAC contractor network to provide value-added services



to its customers. These services are eligible to be incentivized because they go above and beyond the standard industry practices and offerings in the marketplace. The AC Tune-up offerings will be cross-promoted with the other programs, both residential and commercial, and, will help create a transformed AC market in the New Orleans. Additionally, this program provides an HVAC replacement incentive allowing the program to provide an option for customers to replace a failed HVAC unit with a high efficiency unit.

Proposed ideas for enhancements to the High Efficiency Tune Up program include:

- Cross-market the Direct Load Control program to participants in the Tune Up program through participating HVAC contractors. HVAC contractors who provide qualified leads resulting in a completed installation will be eligible for an incentive for each eligible enrollment.
- Consider expanding the Tune Up program to a comprehensive HVAC program including high efficiency air conditioners, heat pumps and electronically commutated motors (ECM).

**Residential Lighting and Appliances** - The objective of the Lighting and Appliances initiative is to increase awareness and sales of efficient lighting and appliances to ENO's residential population. The program will offer customers the opportunity to purchase, largely through retail locations, a variety of discounted products that are ENERGY STAR qualified or better. The two main program activities include (1) retailer recruitment and merchandizing, and 2) administration of the incentive process (including program tracking).

The APTIM team will work to expand the retail network, as well as increase the number of available products. Recruitment will also include the development of a marketing strategy that leverages the ENERGY STAR brand, development of point-of-purchase (POP) materials, and ongoing retailer training. The incentive process will include both midstream and upstream approaches. ENO will continue its in-store/instant coupon-based approach, but will also negotiate with retailers and manufacturers to buy-down the cost of program-qualified products.

Proposed ideas for enhancements for the Residential Light and Appliances program include:

- The APTIM team will explore creation of a custom Entergy New Orleans-branded online store that would be integrated seamlessly into Entergy New Orleans' existing website.
- Offering enhanced incentives for residential refrigerator replacements to encourage upgrades towards more efficient applications of units.

**Residential Direct Load Control** – This program is an opt-in load control initiative that will allow ENO to cycle off a participant's home central air conditioning (CAC) condenser during peak events. To minimize discomfort, the enabling technology will allow the air-handler fan to remain powered to circulate air throughout the house. The program will employ load control technology radio switches (installed directly on the CAC) to control participants' AC units. Enrollees will be provided with an incentive to encourage enrollment.

The Residential Direct Load Control program utilizes the existing infrastructure installed during the current pilot program and will continue to support the pilot customers while providing enhancements to the software.



Proposed ideas for enhancements for the Residential Direct Load Control program include:

- Potentially expanding the program to include hot water heaters.
- Leverage smart thermostats installed in the HPwES and Low-Income programs by enrolling those customers in the Direct Load Control program.
- To generate additional energy savings, consider providing a kit containing LEDs, water measures and educational information with each device installed.

**Behavioral Program** – The APTIM team will continue to work with the existing Behavioral Program implementation contractor to offer a behavioral program to ENO’s residential customers. The Behavioral Program will continue as a pilot in program year 7 and, following the results of the pilot period, will be incorporated into the Energy Smart program as a full program at the recommended levels associated with the budget provided for this Supplemental and Amended Plan.

**Green Light New Orleans** – The Energy Smart Program will continue to partner with Green Light New Orleans to install LEDs for New Orleans residents utilizing volunteers.

**NOLA Wise School Kit and Community Outreach Program** – The NOLA Wise School Kit and Community Outreach program will continue to target middle school students in the New Orleans area. The APTIM team will work with local schools to enhance energy efficiency lessons and provide students with energy efficiency kits that they will use in their homes.

Energy Wise Alliance (EWA) will continue to work with Energy Smart in the NOLA Wise School Kit and Community Outreach program. EWA will provide the students with kits containing energy efficient items and the students will be able to use these items in their homes and track their energy savings. Under community outreach, EWA will continue to conduct outreach to customers regarding the Energy Smart programs.

Proposed ideas for enhancements for the School Kit and Community Outreach program include:

- Enhancing and optimizing marketing to lower non-incentive costs, thereby enhancing program cost-effectiveness.
- Including private voucher schools to expand the potential number of students who can be reached by the program.
- Creating an additional outreach effort for older students (11th graders) to drive awareness and behavior while at home prior to moving out on their own. This would include coordination with the behavioral program to increase behavioral program participation and emphasize behavioral changes.
- Maximizing PR opportunities through attendance of ENO and City Council at trainings.
- Creative incentives – Include student-, teacher- and school-level incentives for achieving participation goals.
- Coordinating school building energy management activities with in-school education to encourage enhanced student education and to achieve significant energy savings for the Energy Smart portfolio.



**Low Income Program** – ENO’s Low-Income program is designed to offer qualifying customers free energy efficiency projects ranging from direct install measures, such as LED bulbs and water savings measures, to smart thermostats and comprehensive envelope measures. APTIM will work with ENO to identify and qualify customers for participation.

Proposed ideas for enhancements for the Low-Income program include:

- Assessing low income properties where direct installations were previously performed to determine if expanded energy efficiency opportunities exist and if they are candidates for remarketing of the new program.
- Enhancing and optimizing marketing and application screening to lower non-incentive costs and improve audit-to-install closure rates, thereby enhancing program cost-effectiveness.
- Coordination with Total Community Action and other community action agencies to cross promote and drive utilization of Low-Income Home Energy Assistance Program (LIHEAP) and Weatherization Assistance Program (WAP).

## 2. Commercial Programs

The proposed programs included within APTIM’s commercial portfolio are included with information on innovations and enhancements for consideration during implementation of the 2017-2019 Energy Smart DSM portfolio. The program designs align with the preferred portfolio of the 2015 IRP Demand Side Management Potential Study and the approved program descriptions included within the 2017-2019 Energy Smart Request for Proposal (RFP). For all programs, APTIM will facilitate brainstorming sessions including ENO, members of our Stakeholder Advisory Panel, customers in the sector, trade allies, and other stakeholders to identify and evaluate innovative options for program enhancement.

**Large Commercial & Industrial Solutions** - The primary objective of the Large Commercial and Industrial Solutions Program (Large C&I) is to provide a solution for larger (greater than 100 kW demand) nonresidential customers interested in energy efficiency through a prescriptive or custom approach. Incentives and savings for prescriptive measures are based primarily on measures in the NOTRM. The Large C&I program is designed to generate significant energy savings, as well as a longer-term market penetration by nurturing delivery channels, such as design professionals, distributors, installation contractors, and Energy Service Companies (ESCOs).

The incentives for the Large C&I program will be based on a set rate per energy savings achieved through completion of the project and verified by the Energy Smart program team. The incentive rates may vary throughout the implementation period and may be set based on project type.

Beginning in PY8, the Large C&I program will have a dedicated retro-commissioning offering to ENO customers, where an incentive will be available to reduce the cost of an initial study to identify retro commissioning opportunities an additional incentive will be available for completion of projects identified during the initial study.



Proposed ideas for enhancements for the Large Commercial & Industrial Solutions program include:

- Striving for more comprehensive large commercial and industrial projects to obtain the greatest energy savings possible and position the program for long term success. This will involve exploring bundling of non-lighting and lighting measures to encourage participation of non-lighting measures and innovative incentive offerings and program designs to achieve whole building commercial and industrial energy savings.
- Enhanced building and facility manager training programs to foster persistence of savings at commercial facilities and to encourage and utilize building benchmarking strategies.
- Exploring a Strategic Energy Management (SEM) program to achieve significant savings for targeted sectors, particularly healthcare and higher education facilities.
- Increasing reliance on market segmentation for marketing efforts and program design initiatives, including target measure bundles for specific customer types.
- Better leveraging of trade allies through enhanced trade ally training.

**Small Business** - ENO's Small Business program will provide small businesses (100 kW demand or less) and other qualified non-residential customers the opportunity to achieve electricity savings using the program. The program will help small business customers analyze facility energy use and identify energy efficiency improvement projects. Program participants will be advised regarding the available offerings through the program as well as financial incentives for eligible efficiency measures that are installed in their facilities by trade allies.

The incentives for the Small Business program will be based on a set rate per energy savings achieved through completion of the project and verified by the Energy Smart program team. The incentive rates may vary throughout the implementation period and may be set based on project type.

Beginning in PY8, the Small Business program will include a direct install lighting component. This component will be delivered through participation lighting trade allies and will incentivize certain lighting projects for small business customers at a higher incentive rate to cover and increased percentage of total project cost. The incentive will be offered to the customer through a discount to the project cost paid by the customer thus offsetting the initial investment and creating additional participation opportunities.

Proposed ideas for enhancements to the Small Business program include:

- Focusing on market segmentation for vertical-specific marketing efforts and program design initiatives, including target measure bundles for specific customer types. An example would include incorporating a hospitality offering or program features for hotels, motels and guest houses) and restaurants/bars, which, which comprise a very significant portion of New Orleans' small business segment in terms of numbers of customers and energy usage.
- Increasing reliance on contractors to deliver direct install programs for larger projects and customer portfolios and local non-profit partners to deliver direct install programs to smaller customers. Direct installation of measures, particularly by partners for smaller customers, can also yield marketing benefits and help spread awareness of portfolio offerings.



- Increasing the cost-effectiveness of program delivery. This may include a focus non-lighting measures including refrigeration measures. Commercial refrigeration awareness trainings and special offering incentives for Trade Allies that are first adopters.
- Better leveraging of trade allies through enhanced training. Trade allies are a low-cost program resource who can perhaps provide more program assistance.
- Working with community leadership and organizations to establish lines of communication and support. Leveraging and establishing relationships in the community prior to individual outreach will help establish and extend credibility in the marketplace.
- Establishing a closer collaboration and inter-program tie between the behavioral and small business programs. Further, there is a significant opportunity to derive economic development and small business enhancements through the Behavioral Program.

**Publicly Funded Institutions** - The Publicly Funded Institutions program is a public-sector program targeted at local publicly funded institutions. The program should assist end use customers in overcoming barriers that are specific to public funded groups. Through hands-on expertise and consulting, the program benchmarks the partner's energy use and identifies a roadmap to success. Customers will be given guidance throughout their experience in the program.

The implementation process for Publicly Funded Institutions includes the following available steps for participating institutions:

- Program expertise and consulting
- Benchmarking energy use
- Developing an Energy Master Plan
- Technical assistance with energy efficiency projects
- Communication support

In addition, APTIM will educate customers on the various financial vehicles available to fund the implementation of energy efficiency improvements. APTIM will further leverage the program's incentive dollars and encourage the participation of trade allies who can deliver energy efficient products and services in a cost-effective manner.

Beginning in PY8, the Publicly Funded Institutions program will have a dedicated retro-commissioning offering to ENO customers, where an incentive will be available to reduce the cost of an initial study to identify retro commissioning opportunities an additional incentive will be available for completion of projects identified during the initial study.

Proposed ideas for enhancements for the Publicly Funded Institutions program include:

- Provide specialized trainings and workshop sessions for publicly funded institutions, building and facility manager training programs, and development of a customer group for facility contacts to share best practices and strategies for achieving energy savings at publicly funded institutions.



## Background and Overview

The following sections provide additional detail on the approach and background of the proposed program designs, budgets, and savings targets included in this implementation plan.

### 1. Energy Savings

The energy savings and budget forecasts provided within this plan align with the Council’s recommendation in Resolution R-17-30 that ENO provided a scenario that would increase kWh savings by .2% annually until a goal of 2% annual kWh savings is achieved.

A three-year average of ENO’s net sales for calendar years 2013-2015<sup>1</sup> was utilized to determine the baseline for tracking achievement of the .2% annual energy savings increases. Program year 6 MWh savings totaled 19,336 MWh, which represented .34% of the baseline sales. Using the information as the starting point, the targets below were identified.

The Program Year 7 energy savings target was pro-rated to match the 9 month implementation timeline for Program Year 7.

| Plan to Save 2% of Annual Sales | Program Year 7 (Gross MWh) | Program Year 8 (Gross MWh) | Program Year 9 (Gross MWh) |
|---------------------------------|----------------------------|----------------------------|----------------------------|
| Energy Savings Target           | 23,120                     | 42,318                     | 53,809                     |
| Percent of Net Sales            | .54%                       | .74%                       | .94%                       |

### 2. New Orleans TRM and Measure Level Planning Assumptions

The measure level planning inputs used to derive the savings and budget estimates within this implementation plan are based on the NOTRM filed with the Council and distributed to stakeholders on September 19, 2017. For measures that are not included within the implementation plan, historical Energy Smart program results and results from other national programs were utilized to determine measure level planning assumptions. In instances, where the NOTRM provided energy savings calculations, but not planned savings estimates (e.g., Commercial and Industrial Lighting measures), the available measure level assumptions from the NOTRM were utilized with historical Energy Smart program results used to determine planned savings estimates.

The measure level participation estimates were determined through an analysis of historical implementation rates of measures for previous years of the Energy Smart programs in New Orleans and, for the new or re-designed program types included within the implementation plan, our understanding of national best practices of participation rates.

<sup>1</sup> Based on ENO’s FERC Form 1 filings for those years.



### 3. Evaluation Measurement and Verification (EM&V) Budget

The budgets outlined within this plan include an allocation for EM&V of roughly 6.5% of the annual portfolio budget.

### 4. Budget Flexibility

Program implementation often occurs at different rates for different programs, and implementation rates can vary significantly from the predictions in program applications that formed the basis for program approval. For that reason, it is important that there continue to be budget flexibility within each rate class.

Additionally, with the incorporation of new programs and design elements, APTIM requests a process to request approval for budget flexibility between program years for the identified programs based on success of programs and design changes within the market.

### 5. Behavioral Program

The Behavioral Program is included as a full-scale program beginning in PY8. Program administration costs for the Behavioral Program included within this implementation plan are projected to provide enough funding to exceed the stated goals, however, administrative fees will only be issued upon participant enrollment which will allow the program to ensure costs are spent only as participation targets are met.

### 6. Direct Load Control Program

The Direct Load Control program provides incentives to participants throughout the entire three-year implementation period. For instance, program year 7 participants would receive incentives in program year 8 and program year 9. This causes the annual incentive budget to increase over the three years at a higher rate than the increase in annual participation.

### 7. NOLA Wise School Kit and Community Outreach Program

The total funding for the NOLA Wise by program year is as follows:

| Program Year   | Funding Amount |
|----------------|----------------|
| Program Year 7 | \$275,625      |
| Program Year 8 | \$367,500      |
| Program Year 9 | \$367,500      |



## Demand Side Management Portfolio

### 1. Portfolio Budgets and Savings

The APTIM team developed the following budgets and savings estimates detailed in this implementation plan utilizing available historical results and through incorporating best practices of energy efficiency programs to provide aggressive, yet achievable program savings targets that provide significant benefits to ENO's customers.

#### i. Energy Smart New Orleans

| ENERGY SMART NEW ORLEANS  |                    |                     |                     |
|---------------------------|--------------------|---------------------|---------------------|
| DSM PORTFOLIO BUDGETS     | Year 7             | Year 8              | Year 9              |
| <b>Residential Total</b>  | <b>\$3,279,408</b> | <b>\$4,614,092</b>  | <b>\$5,169,219</b>  |
| Implementation            | \$1,783,254        | \$2,305,471         | \$2,479,736         |
| Incentives                | \$1,282,994        | \$2,008,703         | \$2,353,484         |
| EM&V                      | \$213,160          | \$299,918           | \$335,999           |
| <b>C&amp;I Total</b>      | <b>\$2,790,473</b> | <b>\$6,816,408</b>  | <b>\$8,170,963</b>  |
| Implementation            | \$1,397,679        | \$2,259,027         | \$2,610,935         |
| Incentives                | \$1,211,414        | \$4,114,315         | \$5,028,914         |
| EM&V                      | \$181,381          | \$443,066           | \$531,114           |
| <b>Energy Smart Total</b> | <b>\$6,069,881</b> | <b>\$11,430,500</b> | <b>\$13,340,182</b> |
| Implementation            | \$3,180,932        | \$4,564,498         | \$5,090,671         |
| Incentives                | \$2,494,408        | \$6,123,018         | \$7,382,398         |
| EM&V                      | \$394,541          | \$742,984           | \$867,113           |

| ENERGY SMART NEW ORLEANS   |         |         |         |
|----------------------------|---------|---------|---------|
| DSM PORTFOLIO SAVINGS      | Year 7  | Year 8  | Year 9  |
| <b>Residential Total</b>   |         |         |         |
| Participation              | 132,119 | 165,574 | 162,317 |
| Gross Energy Savings (MWh) | 6,975   | 14,025  | 17,373  |
| Gross Demand Savings (MW)  | 2.4     | 6.9     | 9.2     |
| <b>C&amp;I Total</b>       |         |         |         |
| Participation              | 163     | 424     | 468     |
| Gross Energy Savings (MWh) | 11,598  | 28,963  | 32,894  |
| Gross Demand Savings (MW)  | 1.8     | 4.8     | 5.4     |
| <b>Energy Smart Total</b>  |         |         |         |
| Participation              | 132,282 | 165,998 | 162,785 |
| Gross Energy Savings (MWh) | 18,573  | 42,989  | 50,266  |
| Gross Demand Savings (MW)  | 4.2     | 11.7    | 14.7    |



ii. Energy Smart Algiers

| ENERGY SMART ALGIERS      |                  |                  |                    |
|---------------------------|------------------|------------------|--------------------|
| DSM PORTFOLIO BUDGETS     | Year 7           | Year 8           | Year 9             |
| <b>Residential Total</b>  | <b>\$331,508</b> | <b>\$477,524</b> | <b>\$508,133</b>   |
| Implementation            | \$196,327        | \$262,473        | \$280,824          |
| Incentives                | \$113,633        | \$184,013        | \$194,280          |
| EM&V                      | \$21,548         | \$31,038         | \$33,029           |
| <b>C&amp;I Total</b>      | <b>\$222,677</b> | <b>\$491,255</b> | <b>\$565,405</b>   |
| Implementation            | \$126,305        | \$235,570        | \$271,205          |
| Incentives                | \$81,898         | \$223,753        | \$257,449          |
| EM&V                      | \$14,474         | \$31,932         | \$36,751           |
| <b>Energy Smart Total</b> | <b>\$554,185</b> | <b>\$968,779</b> | <b>\$1,073,538</b> |
| Implementation            | \$322,632        | \$498,043        | \$552,029          |
| Incentives                | \$195,531        | \$407,766        | \$451,729          |
| EM&V                      | \$36,022         | \$62,970         | \$69,780           |

| ENERGY SMART ALGIERS       |        |        |        |
|----------------------------|--------|--------|--------|
| DSM PORTFOLIO SAVINGS      | Year 7 | Year 8 | Year 9 |
| <b>Residential Total</b>   |        |        |        |
| Participation              | 13,627 | 19,727 | 15,815 |
| Gross Energy Savings (MWh) | 607    | 1,640  | 2,045  |
| Gross Demand Savings (MW)  | 0.19   | 0.89   | 1.25   |
| <b>C&amp;I Total</b>       |        |        |        |
| Participation              | 16     | 33     | 38     |
| Gross Energy Savings (MWh) | 769    | 1,471  | 1,584  |
| Gross Demand Savings (MW)  | 0.13   | 0.25   | 0.26   |
| <b>Energy Smart Total</b>  |        |        |        |
| Participation              | 13,643 | 19,760 | 15,853 |
| Gross Energy Savings (MWh) | 1,376  | 3,110  | 3,628  |
| Gross Demand Savings (MW)  | 0.32   | 1.13   | 1.52   |



## 2. DSM Net Benefits and Cost Effectiveness Analysis

The program design was screened for cost-effectiveness using an industry accepted, best practice energy efficiency cost efficiency modeling tool. The modeling tool takes into consideration savings and costs over the lifetime of each measure, the costs associated with delivering the programs, as well as economic factors, and avoided costs of energy and demand. The table below summarizes the cost effectiveness results for both the Total Resource Cost test (TRC) and the Utility Cost test (UCT), sometimes referred to as the Program Administrator Cost test (PACT). The screening tool relies on the most recent avoided costs determined through calculations that are consistent with the methodology that was implemented in the Entergy New Orleans IRP and utilizes ENO’s WACC as the discount rate. The programs that fail to pass are Low Income Audit & Wx, School Kits & Education, and Direct Load Control.

| DSM PORTFOLIO COST EFFECTIVENESS ANALYSIS |                     |             |             |
|-------------------------------------------|---------------------|-------------|-------------|
|                                           | TRC BENEFITS (\$)   | TRC RATIO   | UCT RATIO   |
| Small C&I                                 | \$6,609,625         | 1.30        | 1.43        |
| Large C&I                                 | \$26,601,884        | 1.38        | 2.15        |
| Publicly Funded Institutions              | \$3,101,491         | 1.30        | 1.50        |
| Home Performance with ENERGY STAR         | \$3,979,278         | 1.22        | 1.43        |
| Residential Lighting & Appliances         | \$4,494,924         | 2.97        | 2.65        |
| Green Light New Orleans                   | \$65,152            | 1.06        | 0.93        |
| Energy Smart for Multi-Family             | \$968,862           | 1.24        | 1.50        |
| Low Income Audit & Wx                     | \$2,690,164         | 0.88        | 0.90        |
| School Kits & Education                   | \$505,704           | 0.37        | 0.35        |
| High Efficiency Tune Up                   | \$2,832,091         | 1.33        | 1.92        |
| Behavioral                                | \$1,159,892         | 1.30        | 1.30        |
| Direct Load Control                       | \$1,935,806         | 0.96        | 0.90        |
| <b>Total</b>                              | <b>\$54,944,874</b> | <b>1.31</b> | <b>1.65</b> |



## Program Portfolio

### 1. Portfolio Budgets and Savings

The following tables represent the budget and savings totals for the program portfolio for Scenario 2.

#### i. Energy Smart New Orleans

| 2017 - ENERGY SMART NEW ORLEANS DSM PORTFOLIO BUDGET AND SAVINGS |                    |                    |                    |                |                            |                           |
|------------------------------------------------------------------|--------------------|--------------------|--------------------|----------------|----------------------------|---------------------------|
| Program                                                          | Incentives         | Non-Incentive      | Total              | Participation  | Gross Energy Savings (MWh) | Gross Demand Savings (MW) |
| Small C&I                                                        | \$243,659          | \$450,413          | \$694,071          | 114            | 2,069                      | 0.4                       |
| Large C&I                                                        | \$908,863          | \$931,323          | \$1,840,186        | 40             | 8,934                      | 1.3                       |
| Publicly Funded Institutions                                     | \$58,891           | \$197,325          | \$256,216          | 9              | 594                        | 0.1                       |
| Home Performance with ENERGY STAR                                | \$254,629          | \$280,408          | \$535,037          | 402            | 980                        | 0.2                       |
| Residential Lighting & Appliances                                | \$302,072          | \$155,427          | \$457,499          | 121,238        | 3,278                      | 0.7                       |
| Green Light New Orleans                                          | \$17,813           | \$1,238            | \$19,051           | 7,125          | 126                        | 0.0                       |
| Energy Smart for Multi-Family                                    | \$72,053           | \$52,136           | \$124,189          | 285            | 259                        | 0.0                       |
| Low Income Audit & Wx                                            | \$339,110          | \$428,556          | \$767,666          | 360            | 986                        | 0.2                       |
| NOLA Wise School Kits & Education                                | \$44,200           | \$255,822          | \$300,022          | 1,200          | 254                        | 0.0                       |
| High Efficiency Tune Up                                          | \$206,519          | \$140,565          | \$347,084          | 602            | 1,092                      | 0.3                       |
| Behavioral                                                       | \$0                | \$172,682          | \$172,682          | 0              | 0                          | 0.0                       |
| Direct Load Control                                              | \$46,600           | \$509,580          | \$556,180          | 907            | 0                          | 0.8                       |
| <b>TOTAL</b>                                                     | <b>\$2,494,408</b> | <b>\$3,575,473</b> | <b>\$6,069,881</b> | <b>132,282</b> | <b>18,573</b>              | <b>4.2</b>                |



2018 - ENERGY SMART NEW ORLEANS DSM PORTFOLIO BUDGET AND SAVINGS

| Program                           | Incentives         | Non-Incentive      | Total               | Participation  | Gross Energy Savings (MWh) | Gross Demand Savings (MW) |
|-----------------------------------|--------------------|--------------------|---------------------|----------------|----------------------------|---------------------------|
| Small C&I                         | \$999,008          | \$654,180          | \$1,653,188         | 292            | 5,309                      | 1.0                       |
| Large C&I                         | \$2,715,623        | \$1,716,630        | \$4,432,253         | 93             | 21,048                     | 3.5                       |
| Publicly Funded Institutions      | \$399,684          | \$331,283          | \$730,967           | 39             | 2,606                      | 0.4                       |
| Home Performance with ENERGY STAR | \$521,674          | \$356,132          | \$877,806           | 824            | 2,008                      | 0.4                       |
| Residential Lighting & Appliances | \$350,408          | \$185,281          | \$535,689           | 127,923        | 3,504                      | 0.7                       |
| Green Light New Orleans           | \$23,749           | \$1,651            | \$25,400            | 9,500          | 168                        | 0.0                       |
| Energy Smart for Multi-Family     | \$133,363          | \$62,213           | \$195,576           | 508            | 493                        | 0.1                       |
| Low Income Audit & Wx             | \$452,430          | \$518,246          | \$970,676           | 480            | 1,316                      | 0.3                       |
| NOLA Wise School Kits & Education | \$95,200           | \$334,852          | \$430,052           | 2,800          | 547                        | 0.1                       |
| High Efficiency Tune Up           | \$323,920          | \$172,371          | \$496,291           | 942            | 1,711                      | 0.5                       |
| Behavioral                        | \$0                | \$305,344          | \$305,344           | 21,388         | 4,278                      | 3.6                       |
| Direct Load Control               | \$107,960          | \$669,299          | \$777,259           | 1,209          | 0                          | 1.1                       |
| <b>TOTAL</b>                      | <b>\$6,123,018</b> | <b>\$5,307,482</b> | <b>\$11,430,500</b> | <b>165,998</b> | <b>42,989</b>              | <b>11.7</b>               |



2019 - ENERGY SMART NEW ORLEANS DSM PORTFOLIO BUDGET AND SAVINGS

| Program                           | Incentives         | Non-Incentive      | Total               | Participation  | Gross Energy Savings (MWh) | Gross Demand Savings (MW) |
|-----------------------------------|--------------------|--------------------|---------------------|----------------|----------------------------|---------------------------|
| Small C&I                         | \$1,136,305        | \$706,024          | \$1,842,329         | 317            | 5,760                      | 1.1                       |
| Large C&I                         | \$3,445,727        | \$1,973,579        | \$5,419,306         | 107            | 24,206                     | 3.9                       |
| Publicly Funded Institutions      | \$446,882          | \$462,446          | \$909,328           | 44             | 2,928                      | 0.4                       |
| Home Performance with ENERGY STAR | \$754,811          | \$416,647          | \$1,171,458         | 1,220          | 2,864                      | 0.6                       |
| Residential Lighting & Appliances | \$366,435          | \$211,862          | \$578,297           | 120,664        | 3,357                      | 0.7                       |
| Energy Smart for Multi-Family     | \$197,737          | \$76,634           | \$274,371           | 773            | 718                        | 0.1                       |
| Low Income Audit & Wx             | \$452,430          | \$586,864          | \$1,039,294         | 480            | 1,316                      | 0.3                       |
| NOLA Wise School Kits & Education | \$95,200           | \$334,852          | \$430,052           | 2,800          | 547                        | 0.1                       |
| High Efficiency Tune Up           | \$326,911          | \$190,459          | \$517,370           | 950            | 1,727                      | 0.5                       |
| Behavioral                        | \$0                | \$305,344          | \$305,344           | 34,221         | 6,844                      | 5.8                       |
| Direct Load Control               | \$159,960          | \$693,073          | \$853,033           | 1,209          | 0                          | 1.1                       |
| <b>TOTAL</b>                      | <b>\$7,382,398</b> | <b>\$5,957,784</b> | <b>\$13,340,182</b> | <b>162,785</b> | <b>50,266</b>              | <b>14.7</b>               |



ii. Energy Smart Algiers

| 2017 - ENERGY SMART ALGIERS DSM PORTFOLIO BUDGET AND SAVINGS |                  |                  |                  |               |                            |                           |
|--------------------------------------------------------------|------------------|------------------|------------------|---------------|----------------------------|---------------------------|
| Program                                                      | Incentives       | Non-Incentive    | Total            | Participation | Gross Energy Savings (MWh) | Gross Demand Savings (MW) |
| Small C&I                                                    | \$28,297         | \$40,118         | \$68,415         | 13            | 240                        | 0.05                      |
| Large C&I                                                    | \$47,428         | \$88,912         | \$136,340        | 2             | 466                        | 0.07                      |
| Publicly Funded Institutions                                 | \$6,173          | \$11,749         | \$17,922         | 1             | 62                         | 0.01                      |
| Home Performance with ENERGY STAR                            | \$18,903         | \$23,750         | \$42,653         | 30            | 73                         | 0.01                      |
| Residential Lighting & Appliances                            | \$22,238         | \$12,900         | \$35,138         | 9,008         | 242                        | 0.05                      |
| Green Light New Orleans                                      | \$10,313         | \$717            | \$11,030         | 4,125         | 73                         | 0.01                      |
| Energy Smart for Multi-Family                                | \$5,667          | \$5,065          | \$10,732         | 23            | 19                         | 0.00                      |
| Low Income Audit & Wx                                        | \$25,545         | \$36,042         | \$61,587         | 27            | 75                         | 0.02                      |
| NOLA Wise School Kits & Education                            | \$6,800          | \$64,407         | \$71,207         | 300           | 39                         | 0.01                      |
| High Efficiency Tune Up                                      | \$15,767         | \$11,749         | \$27,516         | 46            | 86                         | 0.03                      |
| Behavioral                                                   | \$0              | \$23,890         | \$23,890         | 0             | 0                          | 0.00                      |
| Direct Load Control                                          | \$8,400          | \$39,355         | \$47,755         | 68            | 0                          | 0.06                      |
| <b>TOTAL</b>                                                 | <b>\$195,531</b> | <b>\$358,654</b> | <b>\$554,185</b> | <b>13,643</b> | <b>1,376</b>               | <b>0.32</b>               |



2018 - ENERGY SMART ALGIERS DSM PORTFOLIO BUDGET AND SAVINGS

| Program                           | Incentives       | Non-Incentive    | Total            | Participation | Gross Energy Savings (MWh) | Gross Demand Savings (MW) |
|-----------------------------------|------------------|------------------|------------------|---------------|----------------------------|---------------------------|
| Small C&I                         | \$91,219         | \$77,643         | \$168,862        | 27            | 485                        | 0.10                      |
| Large C&I                         | \$98,845         | \$157,580        | \$256,425        | 3             | 766                        | 0.11                      |
| Publicly Funded Institutions      | \$33,689         | \$32,279         | \$65,968         | 3             | 220                        | 0.03                      |
| Home Performance with ENERGY STAR | \$38,662         | \$30,587         | \$69,249         | 61            | 149                        | 0.03                      |
| Residential Lighting & Appliances | \$26,635         | \$15,938         | \$42,573         | 9,613         | 265                        | 0.06                      |
| Green Light New Orleans           | \$13,751         | \$956            | \$14,707         | 5,500         | 98                         | 0.02                      |
| Energy Smart for Multi-Family     | \$10,603         | \$6,584          | \$17,187         | 41            | 38                         | 0.01                      |
| Low Income Audit & Wx             | \$33,794         | \$44,807         | \$78,601         | 36            | 98                         | 0.02                      |
| NOLA Wise School Kits & Education | \$23,800         | \$83,712         | \$107,512        | 700           | 137                        | 0.02                      |
| High Efficiency Tune Up           | \$24,728         | \$15,319         | \$40,047         | 73            | 134                        | 0.04                      |
| Behavioral                        | \$0              | \$44,118         | \$44,118         | 3,612         | 722                        | 0.61                      |
| Direct Load Control               | \$12,040         | \$51,490         | \$63,530         | 91            | 0                          | 0.08                      |
| <b>TOTAL</b>                      | <b>\$407,766</b> | <b>\$561,013</b> | <b>\$968,779</b> | <b>19,760</b> | <b>3,110</b>               | <b>1.13</b>               |



2019 - ENERGY SMART ALGIERS DSM PORTFOLIO BUDGET AND SAVINGS

| Program                           | Incentives       | Non-Incentive    | Total              | Participation | Gross Energy Savings (MWh) | Gross Demand Savings (MW) |
|-----------------------------------|------------------|------------------|--------------------|---------------|----------------------------|---------------------------|
| Small C&I                         | \$105,675        | \$83,806         | \$189,481          | 30            | 536                        | 0.11                      |
| Large C&I                         | \$113,462        | \$178,935        | \$292,397          | 4             | 797                        | 0.12                      |
| Publicly Funded Institutions      | \$38,312         | \$45,215         | \$83,527           | 4             | 251                        | 0.04                      |
| Home Performance with ENERGY STAR | \$56,489         | \$35,555         | \$92,044           | 91            | 215                        | 0.04                      |
| Residential Lighting & Appliances | \$27,596         | \$17,822         | \$45,418           | 8,981         | 251                        | 0.05                      |
| Energy Smart for Multi-Family     | \$15,664         | \$7,931          | \$23,595           | 63            | 54                         | 0.01                      |
| Low Income Audit & Wx             | \$33,794         | \$50,379         | \$84,173           | 36            | 98                         | 0.02                      |
| NOLA Wise School Kits & Education | \$23,800         | \$83,712         | \$107,512          | 700           | 137                        | 0.02                      |
| High Efficiency Tune Up           | \$24,897         | \$21,269         | \$46,166           | 74            | 134                        | 0.04                      |
| Behavioral                        | \$0              | \$44,118         | \$44,118           | 5,779         | 1,156                      | 0.98                      |
| Direct Load Control               | \$12,040         | \$53,067         | \$65,107           | 91            | 0                          | 0.08                      |
| <b>TOTAL</b>                      | <b>\$451,729</b> | <b>\$621,809</b> | <b>\$1,073,538</b> | <b>15,853</b> | <b>3,628</b>               | <b>1.52</b>               |

