

#### **BLACK & VEATCH CORPORATION**

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01 March 2013

Mr. Steve Garl Florida Public Service Commission 2540 Shumard Oak Blvd Tallahassee, Florida 32399-0688

Subject: 2013 Orlando Utilities Commission Annual Conservation Report

Dear Mr. Garl:

Attached please find an electronic version (in PDF format) of the 2013 Orlando Utilities Commission (OUC) Annual Conservation Report. The 2013 OUC Annual Conservation Report was prepared by Black & Veatch and is being submitted by Black & Veatch on behalf of OUC. In addition to this electronic version, five hardcopies of this report are being sent to your attention via FedEx.

If you have any questions about this report, please do not hesitate to contact me.

Very truly yours, BLACK & VEATCH CORPORATION

Bradag Kuli

**Bradley Kushner** 

Principal Consultant, Management Consulting Division



## Orlando Utilities Commission 2013 Annual Conservation Report

March 2013

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#### 1.0 Introduction

In accordance with Rule 25-17.0021, Florida Administrative Code, the Florida Public Service Commission (FPSC) must establish numeric conservation goals for the Orlando Utilities Commission (OUC) at least once every five years. In addition, OUC must file an annual report showing the status of its numeric conservation goals.

#### 1.1 Background of OUC's Current Numeric Conservation Goals

OUC's residential and commercial/industrial numeric conservation goals for the 2010 through 2019 period were established by the FPSC in the *Final Order Approving Numeric Conservation Goals* (Order No. PSC-09-0855-FOF-EG, issued December 30, 2009). On March 30, 2010, OUC filed a petition requesting FPSC approval of OUC's DSM Plan, which was subsequently approved pursuant to the FPSC Order issued September 3, 2010 (Order No. PSC-10-0554-PAA-EG), with Consummating Order issued September 28, 2010 (Order No. PSC-10-0595-CO-EG). OUC's DSM Plan sets forth the programs that OUC anticipated offering to achieve the numeric conservation goals established by the FPSC. The approved numeric conservation goals are summarized in Section 2.0 of this report.

#### 1.2 OUC's Conservation and DSM Programs

OUC has been increasingly emphasizing its DSM and conservation programs to increase customer awareness of such programs. Not only do these programs help customers save money by saving energy, the programs help OUC reduce emissions of greenhouse gases and better position OUC to meet possible future greenhouse gas regulations. It should be noted that government mandates have forced manufacturers to increase their efficiency standards, thereby decreasing the incremental amount of energy savings achievable. In addition, the efficiency of new generation has increased. These appliance and generating unit efficiency improvements have mitigated to some degree the effectiveness of DSM and conservation programs, as the incremental benefit of such programs is partially offset by overall efficiency increases in the marketplace as a whole.

The following two sections of this report provide more specific details concerning the DSM and conservation programs offered by OUC in calendar year 2012, (Section 2.0), and present the participation levels and associated numeric savings for each of OUC's quantifiable conservation programs which were offered in 2012 (Section 3.0) and were consistent with OUC's submitted DSM Plan. The quantifiable DSM Plan's conservation programs offered to OUC's customers in 2012 included the following:

- Residential Energy Survey Program (Walk-Through, DVD, and Online)
- Residential Duct Repair Rebate Program

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- Residential Ceiling Insulation Rebate Program
- Residential Window Film/Solar Screen Rebate Program
- Residential High Performance Window Rebate Program
- Residential Caulking and Weather Stripping Rebate Program
- Residential Wall Insulation Rebate Program
- Residential Cool/Reflective Roof Rebate Program
- Residential Heat Pump Rebate Program
- Residential Efficiency Delivered Program
- Residential Billed Solution Insulation Program
- Residential New Home Rebate Program
- Residential Compact Fluorescent Lighting Program
- Residential AC Proper Sizing with R-30 Attic Insulation Rebate Program
- Commercial Energy Audit Program
- Commercial Indoor Lighting Retrofit Billed Solution Program
- Commercial Indoor Lighting Retrofit Rebate Program
- Commercial Heat Pump Rebate Program
- Commercial Duct Repair Rebate Program
- Commercial Window Film/Solar Screen Program
- Commercial Ceiling Insulation Program
- Commercial Cool/Reflective Roof Program<sup>1</sup>

During calendar year 2012, OUC continued to offer the following measures that have not been quantified, but aid OUC's customers in reliability, energy conservation, and education:

- Residential Energy Conservation Rate Structure
- Commercial OUConsumption Online
- Commercial OUConvenient Lighting
- OUCooling
- Small Business Efficiency Pilot

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<sup>&</sup>lt;sup>1</sup> As stated in OUC's DSM Plan, the annual energy and demand reductions associated with the Commercial Cool/Reflective Roof Program were not included in OUC's projected energy and demand reductions. In order to be consistent with the DSM Plan, this Conservation Report includes information on the Commercial Cool/Reflective Roof Program, but does not include the energy and peak demand reductions realized when summarizing total energy and demand reductions.

#### 1.3 OUC's Renewable Energy and Sustainability Initiatives and Community Involvement

The remainder of this section discusses OUC's recent renewable energy and sustainability initiatives, as well as OUC's recent activities in the community.

#### 1.3.1 OUC Renewable Energy – Solar

In addition to continuing to promote DSM and conservation, OUC is actively working to promote customer awareness of opportunities to increase the role of renewable energy. One such initiative is OUC's Green Pricing Program. Participation in this program helps add renewable energy to OUC's generation portfolio, improves regional air and water quality, and assists OUC in developing additional renewable energy resources. Program participants may pay an additional \$5.00 on their monthly utility bills for each 200 kWh block blend of local bio-energy (75 percent), local solar energy (20 percent) and purchased wind power (5 percent); or \$10.00 for each 200 kWh block of 100 percent solar energy. There is no limit to the number of 200 kWh blocks that a participant may acquire to support funding of additional renewable energy to OUC's portfolio. Participation helps OUC develop cleaner alternative energy resources, such as solar, wind, and biomass. The annual per customer participation of 2,400 kWh is equivalent to the environmental benefit of planting 3 acres of forest, taking three cars off the road, preventing the use of 27 barrels of oil, or bicycling more than 30,575 miles instead of driving.

Further examples of OUC's commitment to renewable energy are OUC's environmentally friendly solar programs, which are available to both residential and commercial customers. These programs include the Solar Photovoltaic (PV) Net Metering Program and the Solar PV Credit Program, and the Solar Thermal program, which generates heat for domestic water heating systems. Participating customers in the PV Credit program can install a solar PV system on their homes or business and sign an agreement allowing OUC to retain the rights to the environmental benefits or attributes. For the Net Metering Program, participating customers receive a monthly production credit on their utility bills for energy produced in excess of what the home or business can use. Any excess electricity generated and delivered by the solar PV systems back to OUC's electric grid is credited at the customer's retail electric rate. Customers participating in the Solar PV Credit program receive a monthly credit of \$0.05 for each kWh produced from their system. Commercial Solar Thermal Program participants receive a monthly credit of \$0.03 for each kWh equivalent produced by their solar hot water system. Customers participating in the Residential Solar Thermal Program receive a rebate of up to \$1,000 for installing a solar hot water system. Residential customers may also benefit from OUC's partnership with the Orlando Federal Credit Union to provide low interest loan options for solar thermal and PV installations, helping to keep the net monthly cost low, all of which can be included on the OUC bill. Additional federal tax credits may also be available to help minimize

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costs. To date, a total of 512 customers participate in OUC's solar incentive programs adding 4.1 MW of distributed capacity to OUC's energy portfolio.

To further facilitate development of solar energy, OUC supported Orange County in its efforts to obtain a \$2.5 million grant from the Florida Department of Environmental Protection to install a 1 MW solar array on the Orange County Convention Center. The project "went live" in May 2009 and is currently producing clean, green power. In 2008, Orlando was designated a "Solar American City" by the U.S. Department of Energy (DOE). The ongoing partnership between OUC, City of Orlando and Orange County received \$450,000 in funding and technical expertise to help develop solar projects in OUC's service area that can be replicated across the country.

In September 2009, OUC and clean energy company Petra Solar teamed up to launch the first utility pole-mounted solar photovoltaic system in Florida. Ten of Petra Solar's SunWave<sup>TM</sup> intelligent photovoltaic solar systems have been installed on OUC utility poles along Curry Ford Road. Together the panels can generate up to 2 KW, about enough to power a small home. The innovative solar panel demonstration project is expected to help enhance the Smart Grid capabilities and reliability of the electric distribution grid. Petra Solar worked in collaboration with the University of Central Florida in developing the pole-mounted approach to clean energy generation. The SunWave systems not only turn street light and utility poles into solar generators, they also communicate with the electric grid and can offer smart grid capabilities. The systems can improve grid reliability through real-time communications between solar generators in the field and the utility control center. In addition, the systems enhance electric distribution grid reliability through a host of capabilities such as voltage and frequency monitoring and reactive power compensation.

During 2010, OUC invested \$100,000 in an educational partnership with the Orlando Science Center to build a 31.5 kW PV array atop the Science Center's observatory. The system provides about 42,660 kWh of electricity per year, or enough power to serve about four homes. The PV installation not only provides green power to the Science Center but also an educational experience on the science of solar energy for the thousands of children who visit the center each year.

OUC has added solar to its fleet of natural gas, coal, and landfill gas generation already on site at Stanton Energy Center. Duke Energy owns and maintains the Stanton Solar Farm, which produces about 6 MW, or enough power for about 600 homes. Brought on-line in late 2011, the Stanton Solar Farm consists of more than 25,000 modules featuring solar panels with a patented single-axis tracking system design that can withstand Category 4 hurricane winds while increasing electricity output by 30 percent. OUC plans to purchase the output of this installation, which is the first solar farm in Orange County, for the next 20 years.

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#### 1.3.2 OUC Renewable Energy – Landfill Gas(LFG)

The gas produced by the biological breakdown of organic matter in landfill is known as methane or landfill gas. It is created by the decomposition of wet organic waste under anaerobic, or oxygen-less, conditions in a landfill. This gas is considered a renewable energy source because the anaerobic digestion process continues as waste materials are constantly added to the landfill. In partnership with Orange County, OUC captures methane gas emissions from county landfill cells, and pipes it to the Stanton Energy center where it is co-fired with coal. In addition to helping to reduce greenhouse gas emissions, this project has the potential to displace more than 3 percent of the coal burned at the Stanton Energy Center. It is also capable of producing in excess of 100,000 MWh of reduced-emissions power.

OUC and Orange County recently brought a new LFG facility on line that will recover up to 22 MW of landfill gas capacity from the Orange County Landfill's southern expansion site.

OUC has signed a 20-year renewable energy purchase power agreement for nearly 4 MW of energy generated from landfill gas in Port Charlotte. Its current capacity is now at 2.8 MW but is expected to increase over time.

#### 1.3.3 OUC Carbon Reduction

With more than 775 vehicles – ranging from plug-in hybrids to bucket trucks – OUC's fleet logs more than 4.7 million miles annually. OUC reduces their carbon footprint by using alternative fuels, purchasing more hybrids and recycling automotive products to help our environment. As part of an overall plan to reduce emissions in fleet, OUC uses"B20" – a blend of 80 percent petroleum diesel and 20 percent biodiesel – a clean-burning alternative fuel made from new or used vegetables oils and animal fats, including recycled cooking grease. Compared to petroleum diesel, biodiesel produces lower emissions, so it is better for the environment. B20 has been integrated seamlessly into the fueling system without any changes to vehicles or fuel storage and distribution equipment. Since 2006, nearly 696,000 gallons of B20 have been purchased, and the reduction in diesel fuel has reduced OUC's carbon footprint by 1,772 tonnes of CO<sub>2</sub>e (carbon dioxide equivalent). OUC uses biodiesel at the Pershing Fleet Center and plans to expand its use to the Gardenia site in the near future. Biodiesel is now available in downtown Orlando. Thanks to a \$2.5 million grant from the Florida Department of Environment Protection, Central Florida's LYNX transit system opened a biodiesel blending facility and fueling station at its Orlando Operations Center.

Embracing fuel-efficient technology as a commitment to green initiatives, OUC was the first municipal utility in Florida to acquire a plug-in hybrid that gets up to 99 miles per gallon. In addition to the plug-in, OUC has 19 other traditional hybrids in the fleet. OUC also moved forward with an agreement to develop the charging infrastructure, test, and lease 6 all-electric

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vehicles with a 100 mile range (the Nissan "Leaf"), and has also leased two Chevy Volts, which can run on gasoline or electricity.

OUC now has five hybrid bucket trucks and one auxiliary battery system to operate the aerial tower hydraulics. Bucket trucks are a promising application for hybrid technology since much of the vehicle's work is done when stationary. The hybrid diesel-electric system allows the main engine to be turned off while crews operate entirely off the battery.

OUC's Fleet Division has incorporated a number of eco-conscious policies, including the use of earth-friendly products and special care taken to dispose contaminated fuels according to environmental standards. Tires, batteries and oil filters are recycled through vendors, while freon, antifreeze and motor oil are handled on site. OUC also has a vehicle idling policy that requires the engine to be turned off after five minutes. Diesel engines use about one gallon of fuel per hour when idling, so this policy saves about \$4 per hour per vehicle.

As part of OUC's commitment to alternative fuels and efficient transportation, three of the nine electric-vehicle charging stations at Reliable Plaza are powered by the sun. Located in the parking garage, the 16-panel solar array provides a total of 2.8 kW of power to charge the vehicles. At night or on a cloudy day when the sun is not shining, the power is drawn from Reliable Plaza. When the sun is shining but no car is charging, the power is fed back into the building. OUC can access a special website to track real time info and total system usage for its charging stations. A full charge takes about four hours for a Nissan Leaf. Users have a key fob for the charging station and supply their own power cord. Plug-in drivers can go to mychargepoint.net to locate available charging stations nationwide. Users register with Chargepoint to set up an account that links to their credit card. The power is billed by Nova Charge.

To help prepare Central Florida to support plug-ins, OUC partnered with the City of Orlando, Orange County, and others as part of a national non-profit initiative called Project Get Ready. OUC and the City of Orlando also hosted the national kickoff of the U.S. Department of Energy ChargePoint America Grant, which has provided nearly 300 public charging stations to Central Florida; 135 of these stations are located in OUC's service territory. OUC is developing an electric vehicle infrastructure solution for Greater Orlando, and as part of this effort is offering businesses the opportunity to participate by allocating space for charging stations. Participating businesses were given the option of owning the equipment or hosting the equipment. Customers that choose to own the equipment were reimbursed for installation costs. Customers that opted to host the equipment had no out of pocket expense. OUC installs, owns, and operates the equipment at hosted sites. In the coming year, OUC plans to offer a rebate of \$1,000 to commercial customers who install additional charging stations within its service territory.

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#### 1.3.4 OUC Energy Efficiency and Sustainability

OUC's commitment to efficiency and sustainability is further demonstrated by Reliable Plaza, OUC's energy and water efficient center in south downtown that opened in 2008 and replaced OUC's 40-year-old Administration Building on South Orange Avenue. Reliable Plaza earned Gold Leadership in Energy and Environmental Design (LEED) certification in 2009, officially cementing the 10-story administration and customer service center as the "Greenest Building in downtown Orlando." The non-profit U.S. Green Building Council awarded the Gold level certification after completing a review of the building's design and construction. Reliable Plaza also holds a Florida Water Star certification, a voluntary program for new and existing construction that encourages water efficiency in appliances plumbing fixtures, irrigation systems and landscapes. Reliable Plaza showcases a number of environmentally friendly features designed to use 28 percent less energy and 40 percent less water than a similarly sized facility. One of the more innovative offerings at Reliable Plaza is the interactive conservation education center. With a live link to the building's conservation systems, the center's touch screen gives customers real time data on how Reliable Plaza uses – and saves – energy and water. The center provides information on green building ideas and conservation tips customers can use at home.

#### 1.3.5 OUC's Green Team

With the philosophy that changing an organization's culture requires both corporate and individual accountability, OUC has established the Green Team – a dedicated group of employee volunteers who are working to implement practical, sustainable operations in their respective work areas.

In addition to setting benchmarks and establishing metrics, the Green Team identifies ways to improve energy and water efficiency in OUC buildings, reduce waste, use product inventories more efficiently, lower emissions from operations, and create a healthier, happier environment for employees and customers.

With the Gold LEED-certified Reliable Plaza setting the standard, other OUC facilities have followed suit, implementing a number of environmental efforts, including:

- Retrofitting and upgrading light bulbs and ballasts
- Installing light sensors
- Turning up thermostats
- Cutting back on landscape and exterior building lighting
- Purchasing Energy Star-rated appliances when replacements are needed
- Using environmentally friendly cleaning products
- Upgrading HVAC systems
- Installing rain sensors on irrigation systems

• Cutting grass less frequently at water plants, substations and areas not highly visible to the public

Going forward, OUC is planning a number of new green initiatives. OUC currently has single stream recycling at all of its facilities and also recycles industrial materials such as wood pallets, utility meters, wire reels and copper. It has also developed internal policies such as electronic document storage, online document review, double-sided printing and specifies the use of recycled paper and office products whenever practicable. In the coming months, OUC will be focused on reducing its energy and water usage with efficiency upgrades at its Pershing and Gardenia facilities.

#### 1.3.6 OUC Community Activities

OUC also continues to play an active role in the local community. OUC employees have donated more than 55,000 hours and \$200,000 to 180 community organizations since 1993. OUC conservation support personnel have made hundreds of public appearances related to conservation at schools, business expos, professional associations, and homeowner association meetings. Conservation specialists conducted presentations, provided face-to face consultations, scheduled audits, and disseminated information on conservation programs. Below is a list of events OUC participated in during 2012:

- Nissan LEAF Drive Electric Tour
- Project Get Ready Stakeholder Meeting
- Eco-nomic Living Expo
- Orlando Business Journal Power Breakfast
- Neighborhood & Community Summit
- Colony Cove HOA Presentation
- Orlando Magic Fan Fest (NBA Green Week)
- Valencia Earth Day Event
- Watercolor Project Awards
- CNL Earth Day Fair
- GE Earth Day
- Earth Day at Lake Eola
- Hispanic Business Expo
- State of Orange County Address
- Valencia EV Event
- Mascot Games
- Florida Energy Summit
- Solar Power International Conference

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- Lake Eola's Electric Auto Showcase
- State of Downtown Address
- Home & Garden Show
- Richmond Estates HOA Presentation
- Florida Water Festival

Specific examples of community activities in which OUC was involved during 2012 are outlined below.

**1.3.6.1 Lowe's Utility Partnership Event.** OUC partnered with Lowe's to celebrate Energy Awareness Month. OUC utilized its partnership with Lowe's to educate customers on the benefits of saving energy and water as well as rebates available through OUC. Conservation Auditors were on site at the Lowe's Home Improvement store in Southeast Orlando in October. Conservation Auditors and OUC representatives engaged customers by conducting a scavenger hunt throughout the store for customers to identify ENERGY STAR® and OUC rebated products for a chance to win a \$50 Lowe's gift card.

**1.3.6.2 Water Color Project.** For the sixth year in a row, OUC hosted the Water Color Project, a conservation-themed art program that encourages students to showcase the importance of saving water through their artwork. Elementary students compete to have their artwork featured in an annual calendar, while middle and high school students decorate rain barrels that become a traveling exhibit that is displayed throughout the community.

**1.3.6.3 City of Orlando Weatherization Programs.** OUC also partnered with the City of Orlando on several weatherization programs that target homes in some of the City's least energy-efficient neighborhoods. Based on historical consumption data from OUC, the City developed an energy intensity map to identify the neighborhoods with the highest energy consumption per square foot.

A relatively new program—**P.O.W.E.R**. (Provide Opportunity, Weatherization, Efficiency and Rehabilitation)—weatherizes and renovates the homes of Orlando residents who apply and meet specific income requirements.

**1.3.6.4 Project AWESOME.** OUC and the Orlando Science Center delivered energy and water conservation workshops to fifth grade classrooms throughout OUC's service territory via Project AWESOME (Alternative Water & Energy Supply; Observation, Methods & Education). It was the third year of the educational program that promotes both water and energy conservation through a hands-on curriculum using content approved by OUC and meeting Sunshine State Standards. Projects included allowing students to make an aquifer, build a solar-powered car, and test low flow showerheads and compact fluorescent light bulbs (CFLs) against traditional fixtures as part of an electric and water conservation and alternative sources educational program. Project A.W.E.S.O.M.E., which launched in 2009, delivers two 90-minute classroom

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workshops—energy in the fall and water in the spring—to students in support of their Science FCAT preparation. In the 2011–2012 school year, 7,500 fifth grade students in 50 schools in Orange and Osceola County participated, and the program received high marks from both teachers and students. According to post-test assessments, more than 60 percent of the students improved their science skills.

**1.3.6.5** "Light Up Nemours" (Believe in Conservation Contest). OUC teamed up with Nemours Children's Hospital to celebrate the hospital's grand opening by giving elementary school children the chance to participate in a special lighting ceremony. The winners of a conservation-themed art contest received the opportunity to turn on the hospital's colorful lights for the very first time. The colorful lights are unique to Nemours Children's Hospital, where patients are able to pick the lighting color in their own rooms.

The winning schools received \$1,000 to be used to teach children the importance of conservation and efficiency; knowledge which will help families reduce their utility bills by making good decisions. Nemours also is going green. In fact, 90 percent of the hospital's construction waste has been recycled, and reclaimed water is being used for more than 60,000 square feet of garden space. Nemours is working toward a Leadership in Energy and Environmental Design (LEED) certification.

**1.3.6.6 Habitat for Humanity.** OUC has been a long time partner of Habitat for Humanity Orlando, and in 2012 donated \$60,000 worth of energy efficient features towards Staghorn Villas – Habitat Orlando's energy efficient townhome project. The \$8 million community houses 58 local families. OUC provided 870 compact fluorescent light bulbs, and upgraded all of the community's lighting systems. Siemens partnered with OUC on the project, matching OUC's \$60,000 donation.

**1.3.6.7 OUC Orlando Half Marathon and 5K.** Each December the annual OUC Orlando Half Marathon and 5k races through the streets of downtown Orlando. Considered one of the Southeast's premier and most popular road races, the event starts and finishes in picturesque Lake Eola Park. It offers participants a scenic tour of The City Beautiful throughout their entire running experience. Known for its relatively flat/fast course and favorable Florida weather, the race attracts world class runners, local athletes and amateurs alike.

#### 1.3.7 Customer Education Initiatives

From providing better online access to their consumption history to designing convenient and effective conservation programs, OUC is arming customers with the information and tools they need to optimize the efficiency of their homes and businesses. While the tools and technologies we use might have changed, OUC's commitment to conservation has not.

**1.3.7.1 Preferred Contractor Network.** OUC's revamped its Preferred Contractor Network (PCN) in order to take the hassle out of home improvement by eliminating the guesswork and the paperwork. With the PCN, customers seeking to improve the efficiency of their home don't have

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to worry about finding a qualified contractor or submitting rebate forms and receipts. Instead they simply select an OUC-approved contractor who completes the work and provides the qualifying rebate at the point of sale. Customers can start saving energy, water and money right away. For the contractors who earn OUC's stamp of approval, they benefit by growing their business and promoting OUC's rebates.

- **1.3.7.2 Mobile Site.** OUC continued to offer a mobile version of its website —m.ouc.com— for handheld devices. The mobile site lets customers interact with OUC on the go. They can pay their bill, check their account, find a rebate or get conservation tips right from their cell phone. Customers have the same online access to OUC.com but in an easy-to-use mobile format.
- **1.3.7.3 Conservation Website**. OUC's conservation website (<a href="http://www.ReliablyGreen.com">http://www.ReliablyGreen.com</a>), which launched in January 2010, was developed to inform OUC's customers about energy conservation and ways to "Make Your Mark" while showcasing OUC's own green efforts in "How We Make Our Mark." In 2012, OUC developed an additional six water conservation videos to show customers how they can start saving water and money starting at the tap. It's a one-stop, 24-hour shop for energy and water conservation and rebate information for OUC customers.
- **1.3.7.4 Home Energy Reports Program.** The Home Energy Reports Program, OUC's largest conservation effort to date serving 78,000 customers, encourages customers to conserve by comparing their consumption to their efficient neighbors. Participants receive regular emails or printed reports showing how they rank along with tips and suggestions on how they can improve. To administer the Home Energy Reports, OUC is working with Opower, a software company that helps utilities meet their efficiency goals through effective customer engagement.
- 1.3.7.5 Energy & Water Conservation DVD. OUC continued to offer a conservation video in an interactive DVD format in English or Spanish that walks customers through a "do-it-yourself" energy and water audit for their home that can help lower their utility bill. In 2012, OUC developed an additional six water conservation videos to show customers how they can save starting It also available online water and monev at the tap. is at http://www.ouc.com/waystosave.
- **1.3.7.6 Media Overview.** To reach the desired audience, OUC implemented a comprehensive media campaign that utilized print, online, television, radio, outdoor media and community partnerships. By diversifying their media, OUC is able to reach a broader range of customers and reinforce their commitment to showing customers how to reduce their energy and water use and ultimately their utility bills.
- **1.3.7.7 Orlando Magic Partnership.** After assisting with the energy and water efficiency features in the design phase of the Orlando Magic's new LEED certified home, OUC has continued its green partnership with the Orlando Magic since the Amway Center opened in October 2010:

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- The promotion of the facility's LEED certification and its energy and water efficiency features
- Sponsorship of the NBA Green Week (April 2012)
- An interactive educational booth at home game Fan Fest events
- A public information campaign on www.orlandomagic.com.

With this partnership, OUC reaches many of its customers who attend Magic games or follow them on TV. In addition to the approximately 7,000 season ticket holders who reside in the OUC service territory, 87 corporations hold suites, loge boxes or legends suites at the arena. These include many large and mid-size commercial businesses that can benefit from OUC's commercial products and services.

- **1.3.7.8 Connections.** Connections is a monthly newsletter sent to all OUC customers whether they receive a paper statement or e-bill. The Connections newsletters also are posted on <a href="http://www.OUC.com">http://www.OUC.com</a> and feature information on OUC's programs, events and energy and water saving tips. A sample Connections newsletter is included in Appendix A of this report.
- **1.3.7.9 Social Media.** Facebook and Twitter allow OUC to spotlight special events and programs in the community and provide a conservation tip of the day, consisting of 365 daily tips on how to save energy, water and money. OUC also utilizes OUC TV via YouTube to promote conservation and renewable initiatives.

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# 2.0 Conservation Goals and Demand-Side Management Plan

## 2.1 Approved Numeric Conservation Goals

The FPSC-established annual goals for both annual peak demand and energy reductions are presented in Table 2-1.

	Table 2-1 OUC Approved Numeric Conservation Goals												
	Resid	ential Reduct	tion	Commercia	l/Industrial R	Reduction							
Year	Summer MW	Winter MW	GWh	Summer MW	Winter MW	GWh							
2010	0.50	0.2	1.8	0.7	0.7	1.8							
2011	0.50	0.2	1.8	0.7	0.7	1.8							
2012	0.50	0.2	1.8	0.7	0.7	1.8							
2013	0.50	0.2	1.8	0.7	0.7	1.8							
2014	0.50	0.2	1.8	0.7	0.7	1.8							
2015	0.50	0.2	1.8	0.7	0.7	1.8							
2016	0.50	0.2	1.8	0.7	0.7	1.8							
2017	0.50	0.2	1.8	0.7	0.7	1.8							
2018	0.50	0.2	1.8	0.7	0.7	1.8							
2019	0.50	0.2	1.8	0.7	0.7	1.8							
Total	5.00	2.0	18.0	7.0	7.0	18.0							

## 2.2 OUC Demand-Side Management Programs

As shown in Table 2-1, the FPSC has established residential and commercial/industrial conservation goals for OUC for the 2010 through 2019 period. In response to this requirement, OUC offered various programs during calendar year 2012 including programs that result in demand and/or energy reductions that were quantifiable, as well as programs that were not quantifiable but aided OUC's customers in reliability, energy conservation, and education. Each of these programs is described further in the remainder of this section.

## 2.2.1 Quantifiable Conservation Programs

**2.2.1.1** Residential Energy Survey Program. OUC has been offering home energy surveys dating back to the late 1970's. The home energy walk-through surveys were designed to provide residential customers with recommended energy efficiency measures and practices customers can implement. The Residential Energy Survey Program consists of three measures:

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the Residential Energy Walk-Through Survey, the Residential Energy Survey DVD, and an interactive Online Energy Survey. These measures are available to both single family and multifamily residential customers.

The Residential Energy Walk-Through Survey includes a complete examination of the attic; heating, ventilation, and air conditioning (HVAC) system; air duct and air returns; window caulking; weather stripping around doors; faucets and toilets; and lawn sprinkler systems. OUC provides participating customers specific tips on conserving electricity and water as well as details on customer rebate programs. OUC Conservation Specialists are using this walk-through type audit as a means of motivating OUC customers to participate in other conservation programs and qualify for appropriate rebates.

A Residential Energy Survey Video was first offered in 2000 by OUC and is now available to OUC customers in an interactive DVD format. The DVD is free and is distributed in English and Spanish to OUC customers by request. The DVD was developed to further assist OUC customers in surveying their homes for potential energy saving opportunities. The DVD walks the customer through a complete visual assessment of energy and water efficiency in his or her home. A checklist brochure to guide the customer through the audit accompanies the DVD. The DVD has several benefits over the walk-through survey, including the convenience of viewing the DVD at any time without a scheduled appointment and the ability to watch the DVD numerous times. In addition to the Energy Walk-Through and the DVD Surveys, OUC offers customers an interactive Online Home Energy Audit. The interactive Online Home Energy Audit is available on OUC's web sites, <a href="http://www.OUC.com">http://www.ReliablyGreen.com</a>.

One of the primary benefits of the Residential Energy Survey Program is the education it provides to customers on energy conservation measures and ways their lifestyle can directly affect their energy use. Customers participating in the Energy Survey Program are informed about conservation measures that they can implement. Customers will benefit from the increased efficiency in their homes, and decreased electric and water bills.

Participation in the Walk-Through Energy Survey has been consistently strong over the past several years and interest in the Energy Survey DVD, as well as the interactive Online Home Energy Audit, has been high since the measures were first introduced. Feedback from customers who have taken advantage of the surveys has been very positive.

OUC customers can participate in this program by requesting an appointment for a Walk-Through Energy Survey by calling the OUC Customer Service Call Center or requesting an Energy Survey DVD. OUC customers can also use the Online Home Energy Audit at their convenience by visiting OUC's websites. Participation is tracked through service orders that are produced when appointments are scheduled and completed or the DVD is mailed. Online Surveys are tracked through the service provider (Apogee), who produces monthly activity reports.

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**2.2.1.2** Residential Duct Repair Rebate Program. The Duct Repair Rebate Program originated in 2000 and is designed to encourage customers to repair leaking ducts on existing systems. Qualifying customers must have an existing central air conditioning system of 5.5 tons or less and ducts must be sealed with mastic and fabric tape or Underwriters Laboratory (UL) approved duct tape. Participating customers receive a rebate for 100 percent of the cost of duct repairs on their homes, up to \$160.

Customers can participate by submitting a rebate application form available through OUC's Customer Service Centers or on line at <a href="http://www.OUC.com">http://www.OUC.com</a> or <a href="http://www.ReliablyGreen.com">http://www.ReliablyGreen.com</a>. Proofs of purchase or receipts are required to be attached to the application and repairs can be performed by a contractor or the customer. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

**2.2.1.3** Residential Ceiling Insulation Rebate Program. The attic is the easiest place to add insulation and lower total energy costs throughout the seasons. The ceiling insulation rebate program has been offered for several years and is designed to encourage customers to upgrade their attic insulation. Participating customers receive \$0.05 per square foot for upgrading their attic insulation up to R-30. If the customer arranges an OUC pre-inspection and it is verified the existing insulation is R-11 or less, OUC will pay a rebate of \$0.14 per square foot.

Customers can participate by submitting a rebate application form available through OUC's Customer Service Centers or on line at <a href="http://www.OUC.com">http://www.OUC.com</a> and <a href="http://www.ReliablyGreen.com">http://www.ReliablyGreen.com</a>. Proofs of purchase or receipts are required to be attached to the application and repairs can be performed by a contractor or the customer. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

**2.2.1.4** Residential Window Film/Solar Screen Rebate Program. Installing solar window film on pre-existing homes can help reflect the heat during hot summer days and help the efficiency of home cooling units. The window film/solar screen rebate program has been offered for several years and is designed to encourage customers to install solar shading on their windows. Participating customers will receive a rebate in the amount of \$1 per square foot for installation of solar shading film with a shading coefficient of 0.5 or less on east-, west, and south-facing windows.

Customers can participate by submitting a rebate application form available through OUC's Customer Service Centers or on line at <a href="http://www.OUC.com">http://www.OUC.com</a> or <a href="http://www.ReliablyGreen.com">http://www.ReliablyGreen.com</a>. Proofs of purchase or receipts are required to be attached to the application and repairs can be performed by a contractor or the customer. Participation is

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tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

**2.2.1.5** Residential High Performance Window Rebate Program. Energy-efficient windows can help minimize heating, cooling, and lighting costs. The high performance windows rebate program has been offered for several years and is designed to encourage customers to install windows that improve energy efficiency in their homes. Customers will receive a \$2 rebate per square foot for the purchase of ENERGY STAR® rated energy efficient windows.

Customers can participate by submitting a rebate application form available through OUC's Customer Service Centers or on line at <a href="http://www.OUC.com">http://www.OUC.com</a> or <a href="http://www.ReliablyGreen.com">http://www.ReliablyGreen.com</a>. Proofs of purchase or receipts are required to be attached to the application and repairs can be performed by a contractor or the customer. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

**2.2.1.6** Residential Caulking and Weather Stripping Rebate Program. Properly sealing cracks and openings in houses can significantly reduce heating and cooling costs, improve building durability, and create a healthier indoor environment. In an effort to continue providing this program in a more cost productive and efficient manner this program was incorporated into the Efficiency Delivered program described in Section 2.2.1.10.

As a standalone program, customers received a rebate for 50 percent of the cost (up to \$100) for the caulking and weather stripping of their homes. Customers can now participate in the program via the Efficiency Delivered program.

**2.2.1.7 Residential Wall Insulation Rebate Program.** Air leakage and improperly installed insulation can waste 20 percent or more of the energy used to heat and cool a house. The wall insulation rebate program is designed to encourage customers to insulate the walls of their homes. Customers will receive a rebate of \$0.66 per square foot of insulation added, with the requirement that the initial insulation R-value must be increased by a minimum of R-10.

Customers can participate by submitting a rebate application form available through OUC's Customer Service Centers or on line at <a href="http://www.OUC.com">http://www.OUC.com</a> or <a href="http://www.ReliablyGreen.com">http://www.ReliablyGreen.com</a>. Proofs of purchase or receipts are required to be attached to the application and repairs can be performed by a contractor or the customer. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

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**2.2.1.8** Residential Cool/Reflective Roof Rebate Program. A cool/reflective roof reflects the sun's rays to help lower roof surface temperature and increase roof life. It helps lower energy bills during the summer by preventing heat absorption. The cool/reflective roof rebate program, which has been offered in the past couple of years, is designed to encourage customers to install new roofing to help insulate their homes. Customers will receive a rebate of \$0.14 per square foot for ENERGY STAR® cool/reflective roofing that has an initial solar reflectance greater than or equal to 0.70.

Customers can participate by submitting a rebate application form available through OUC's Customer Service Centers or on line at <a href="http://www.OUC.com">http://www.OUC.com</a> or <a href="http://www.ReliablyGreen.com">http://www.ReliablyGreen.com</a>. Proofs of purchase or receipts are required to be attached to the application and repairs can be performed by a contractor or the customer. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to property owner who may have paid for the improvement.

**2.2.1.9** Residential Heat Pump Rebate Program. The residential heat pump rebate program provides rebates to qualifying customers in existing homes who install heat pumps having a seasonal energy efficiency ratio (SEER) of 14.0 or higher. Customers will obtain a rebate in the form of a credit on their bill ranging from \$20 to \$1,275, depending upon the SEER rating and capacity (tons) of the new heat pump. The following table illustrates the incentives available depending on the size and efficiency of the Heat Pump installed.

		Heat Pump SEER							
		14	15	16	17	18			
	1	\$	\$	\$	\$	\$			
ŝ	'	20	80	130	175	215			
(Tons)	1 1/2	55	145	220	290	350			
	2	90	205	310	400	480			
Size	2 1/2	120	270	400	515	615			
	3	155	335	490	625	745			
Pump	3 1/2	190	395	580	735	880			
at F	4	225	460	670	850	1,010			
Heat	4 1/2	260	525	755	960	1,145			
	5	295	590	845	1,075	1,275			

Customers can participate by submitting a rebate application form available through OUC's Customer Service Centers or on line at <a href="http://www.OUC.com">http://www.OUC.com</a> or <a href="http://www.ReliablyGreen.com">http://www.ReliablyGreen.com</a>. Proofs of purchase or receipts are required to be attached to the application, and work must be performed by a contractor. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill or a check can be processed and sent to the property owner who may have paid for the improvement.

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**2.2.1.10 Residential Efficiency Delivered Program.** What was once referred to as the home energy fix-up program has now been revamped and expanded to allow for any OUC customer both Energy and Water to participate and renamed as the Efficiency Delivered program. The program is available to residential customers (single family homes) and provides up to \$2,000 of energy and water efficiency upgrades based on the needs of the customer's home. A Conservation Specialist from OUC performs a survey at the home and determines which home improvements have the potential of saving the customer the most money. The program is an income based program which is the basis for how much OUC will help contribute toward the cost of improvements and consists of three household income tiers: 1) \$40,000 or less OUC will contribute 85% of the total cost, 2) \$40,001 to \$60,000 OUC will contribute 50% of the total cost, and 3) greater than \$60,000 OUC will contribute the rebate incentives that apply toward the total cost. Each customer must request and complete a free Residential Energy Survey. Ordinarily, Energy Survey recommendations require a customer to spend money replacing or adding energy conservation measures: however, customers may not have the discretionary income to implement these measures especially those in the lower income tier. Under this program, OUC will arrange for a licensed, approved contractor to perform the necessary repairs based on a negotiated and contracted rate. The remaining portion of the cost the customer is responsible for, can be paid directly to OUC or over an interest-free 12-month period on the participant's monthly electric bill. To be eligible for this program, the customer's account must be in good credit standing with the exception of our low-income customers who are only required to have a current balance. Some of the improvements covered under this program include ceiling insulation, duct system repair, pipe insulation, window film, window caulk, door caulk, door weather stripping, door sweep, threshold plate, air filter replacement, toilet replacement, irrigation repairs, water flow restrictors and minor plumbing repairs.

The purpose of the program is to reduce the energy and water costs especially for low-income households, particularly those households with elderly persons, disabled persons and children. Through this program, OUC helps to lower the bills of customers who may have difficulty paying their bills, thereby decreasing the potential for costly service disconnect fees and late charges. OUC believes that this program will help customers afford other essential living expenses. For others, this program offers a one-stop-shop to facilitate the implementation of a whole suite of conservation measures at reasonable costs and pre-screened qualified contractors.

Efficiency Delivered contractor(s) are selected through a Request For Proposal (RFP) process on a routine basis. Eligible customers are referred to the participating contractor after the OUC Conservation Specialist inspection is complete. The Efficiency Delivered contractor then inspects the home and creates a proposal to install eligible measures. Once the customer accepts the proposal and signs the agreement the contractor calls the customer and schedules the work.

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Typically the work is completed within 45 days. Upon receipt of notice of completion and customer acceptance, payment to the contractor is processed and the customer's share of the conservation improvements is billed. Participation is tracked based on completed installations.

- **2.2.1.11** Residential Billed Solution Insulation Program. The billed solution insulation program was merged into the newly expanded Efficiency Delivered program in 2011 as described above. OUC is still providing interest free financing over 12 months through the OUC bill for any remaining costs that exist not covered by OUC's incentives, up to \$2,000.
- **2.2.1.12 Residential New Home Rebate Program.** Previously named The Residential Gold Ring Home Program has been transformed into a more flexible "a la carte" program offering a variety of choices for the Builder or Home buyer. This transformation was based on feedback OUC received from the residential building community in order to increase the level of participation in OUC's program. The chart below reflects an example of the incentives available.

Rebate	Rate of Rebate	Square Footage	Total
Cool/Reflective Roof	\$0.04 per sq. ft	2,000	\$80
Block Wall Insulation	\$0.16 per sq. <b>ft</b>	1,100	\$176
Ceiling Insulation Upgrade to R-38	\$0.04 per sq. ft	2,000	\$80
Heat Pump	up to \$1,275	2,000	*\$460
Energy Star® WashingMachine	\$100	N/A	\$100
Energy Star® Heat Pump Water	\$650	N/A	\$650
Solar Water Heater	\$1000	N/A	\$1,000

<sup>\*</sup>Based on a typical HVAC Heat Pump size for a 2000 square foot home of 4 tons with a 15 SEER efficiency. Refer to Heat Pump rebate chart for other details.

Due to the downturn in homebuilding in the past few years the demand for this program has significantly diminished.

**2.2.1.13 Residential Compact Fluorescent Lighting Program.** OUC will give away at least one compact fluorescent lamp to customers who participate in OUC's in-home energy audit program, contribute to OUC's customer assistance program Project Care, attend a CFL giveaway event, or sign up for Budget Billing or OUConvenient Billing. OUC will encourage their installation in fixtures that they use the most or at least operate four hours per day. This practice may be eliminated as incandescent lamps are curtailed from the market place due to legislation over the next few years. The loss of the energy savings will be made up through increases from other OUC programs.

**2.2.1.14** Residential AC Proper Sizing with R-30 Attic Insulation Program. OUC offers this program to assist its customers in properly sizing their air conditioning (AC) units.

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The program combines proper sizing of AC systems along with installation of R-30 insulation. OUC will provide the customer with a \$40 rebate when provided with certified sizing documentation; the rebate increases to \$85 when combined with participation in another OUC program such as the Heat Pump, Block Wall Insulation, Ceiling Insulation Upgrade, Floor Insulation Upgrade, or Duct Repair/Replacement programs.

**2.2.1.15 Commercial Energy Audit Program.** The commercial/industrial energy audit program has been offered for several years and is focused on increasing the energy efficiency and energy conservation of commercial buildings and includes a free survey comprised of a physical walk-through inspection of the commercial facility performed by highly trained and experienced energy experts. The survey will examine heating and air conditioning systems including duct work, refrigeration equipment, lighting, water heating, motors, process equipment, and the thermal characteristics of the building including insulation. Following the inspection the customer receives a written report detailing cost-effective recommendations to make the facility more energy and water efficient. Participating customers are encouraged to participate in other OUC commercial programs and directly benefit from energy conservation, which decreases their electric and water bills.

OUC customers can participate by calling the OUC Customer Service Call Center and requesting an appointment for a Walk-Through Energy. Participation is tracked through service orders that are produced when appointments are scheduled and completed.

**2.2.1.16 Commercial Indoor Lighting Retrofit Program.** The indoor lighting retrofit program has been offered for several years and reduces energy consumption for the commercial customer through the replacement of older fluorescent and incandescent lighting with newer, more efficient lighting technologies. A special alliance between OUC and the lighting contractor enables OUC to offer the customer a discounted project cost. An additional feature of the program is a "cash-flow neutral billing solution" that allows the customer to pay for the retrofit through the monthly savings that the project generates. This removes the major participation barrier of lacking the upfront capital funding normally required to implement an impactful conservation measure. The project payment appears on the participating customer's utility bill as a line-item and is typically offset by the energy savings. The Term is set to be equal to the payback period of the project. After the project has been completely paid for, the participating customer's utility bill will decrease by the energy cost savings.

Lighting contractor(s) are selected through an RFP process. Eligible customers are referred to the lighting contractor typically after an energy survey or through other contacts generated by OUC's Account Representatives. The Lighting contractor inspects the facility and creates a proposal to install eligible measures. Once the customer accepts the proposal and signs the payment agreement, the work is scheduled and completed. Upon receipt of notice of completion, customer acceptance and an OUC inspection, payment to the contractor is

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processed, and the customer is billed through their OUC bill based on the terms of the payment agreement. Participation is tracked based on completed installations.

As contemplated in OUC's FPSC-approved DSM Plan, OUC has expanded its Indoor Lighting retrofit program by offering the option of receiving a \$150/kW rebate instead of the billed solution mentioned above. This expansion provides more options to encourage participation.

**2.2.1.17 Commercial Heat Pump Rebate Program.** The commercial heat pump rebate program provides rebates to qualifying customers in existing buildings who install heat pumps having a seasonal energy efficiency ratio (SEER) of 14.0 or higher. Customers will obtain a rebate in the form of a credit on their bill ranging from \$20 to \$1,275, depending upon the SEER rating and capacity (tons) of the new heat pump. The following table illustrates the incentives available depending on the size and efficiency of the Heat Pump installed.

				Heat Pump S	SEER	
		14	15	16	17	18
	1	\$	\$	\$	\$	\$
s)	'	20	80	130	175	215
(Tons)	1 1/2	55	145	220	290	350
	2	90	205	310	400	480
Size	2 1/2	120	270	400	515	615
	3	155	335	490	625	745
Pump	3 1/2	190	395	580	735	880
at	4	225	460	670	850	1,010
Heat	4 1/2	260	525	755	960	1,145
	5	295	590	845	1,075	1,275

Customers can participate by submitting a rebate application form available through OUC's Customer Service Centers or on line at <a href="http://www.OUC.com">http://www.OUC.com</a> or <a href="http://www.ReliablyGreen.com">http://www.ReliablyGreen.com</a>. Proofs of purchase or receipts are required to be attached to the application and repairs can be performed by a contractor. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

**2.2.1.18** Commercial Duct Repair Rebate Program. The duct repair rebate program started in 2009. OUC will rebate 100 percent of cost, up to \$160. Qualifying customers must have an existing central air conditioning system of 5.5 tons or less and ducts must be sealed with mastic and fabric tape or Underwriters Laboratory (UL) approved duct tape.

Customers can participate by submitting a rebate application form available through OUC's Customer Service Centers or on line at <a href="http://www.OUC.com">http://www.OUC.com</a> or <a href="http://www.ReliablyGreen.com">http://www.ReliablyGreen.com</a>. Proofs of purchase or receipts are required to be attached to the application and repairs can be performed by a contractor. Participation is tracked based on the

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number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

**2.2.1.19 Commercial Window Film/Solar Screen Rebate Program.** The window film/solar screen rebate program started in 2009 and is designed to help reflect the heat during hot summer days and retain heat on cool winter days. OUC will rebate customers \$1 per square footfor window tinting and solar screening with a shading coefficient of 0.5 or less.

Customers can participate by submitting a rebate application form available through OUC's Customer Service Centers or on line at <a href="http://www.OUC.com">http://www.OUC.com</a> or <a href="http://www.ReliablyGreen.com">http://www.ReliablyGreen.com</a>. Proofs of purchase or receipts are required to be attached to the application and repairs can be performed by a contractor. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

**2.2.1.20** Commercial Ceiling Insulation Rebate Program. The ceiling insulation rebate program started in 2009 and was designed to increase a building's resistance to heat loss and gain. Participating customers receive \$0.05 per square foot, for upgrading their attic insulation up to R-30. If the customer arranges an OUC pre-inspection and it is verified the existing insulation is R-11 or less, OUC will pay a rebate of \$0.14 per square foot.

Customers can participate by submitting a rebate application form available through OUC's Customer Service Centers or on line at <a href="http://www.OUC.com">http://www.OUC.com</a> or <a href="http://www.ReliablyGreen.com">http://www.ReliablyGreen.com</a>. Proofs of purchase or receipts are required to be attached to the application and repairs can be performed by a contractor. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

**2.2.1.21 Commercial Cool/Reflective Roof Rebate Program.** The cool/reflective roofs rebate program started in 2009 and was designed to reflect the sun's rays and lower roof surface temperature while increasing the lifespan of the roof. OUC will rebate customers at \$0.14 per square foot for ENERGY STAR® cool/reflective roofing that has an initial solar reflectance greater than or equal to 0.70.

Customers can participate by submitting a rebate application form available through OUC's Customer Service Centers or on line at <a href="http://www.OUC.com">http://www.OUC.com</a> or <a href="http://www.ReliablyGreen.com">http://www.ReliablyGreen.com</a>. Proofs of purchase or receipts are required to be attached to the application and repairs can be performed by a contractor. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

### 2.2.2 Additional Conservation Measures

The following measures are offered by OUC to its customers, resulting in energy savings and increased reliability. Although the measures were not included in OUC's DSM Plan, they are initiatives OUC's local board of Commissioners have elected to offer that provide additional benefits to OUC's customers.

- **2.2.2.1** Residential Energy Conservation Rate Structure. Beginning in October 2002, OUC modified its residential rate structure to a two-tiered block structure to encourage energy conservation. Residential customers using more than 1,000 kWh per month pay a higher rate for the additional energy usage. The purpose of this rate structure is to make OUC customers more energy-conscientious and to encourage conservation of energy resources.
- **2.2.2.2 Commercial OUConsumption Online.** OUConsumption enables businesses to check their energy usage and demand from a desktop computer and manage their energy load. Customers are able to analyze the metered interval load data for multiple locations, compare energy usage among facilities, and measure the effectiveness of various energy efficiency efforts. The data can also be downloaded for further analysis. Participants must cover a one-time set-up fee of \$45, a \$45 monthly fee per meter, up to \$500 for a load profiling meter and the cost of additional infrastructure to provide connectivity to the meter.
- **2.2.2.3 Commercial OUConvenient Lighting.** OUConvenient Lighting provides complete outdoor lighting services for commercial applications, including industrial parks, sports complexes, and residential developments. Each lighting package is customized for each participant, allowing the participant to choose among light fixtures and poles. OUC handles all of the upfront financial costs and maintenance. The participant then pays a low monthly fee for each fixture. OUC also retrofits existing fixtures to new light sources or higher output units, increasing efficiency as well as providing preventive and corrective maintenance. New interlocal agreements have allowed this OUConvenient Lighting to expand into neighboring communities like Clermont, Oviedo, and Brevard County.
- **2.2.2.4 OUCooling.** Originally formed in 1997 as a partnership between OUC and Trigen-Cinergy Solutions, OUCooling helps to lower air conditioning-related electric charges and reduce capital and operating costs. During 2004, OUC bought Trigen-Cinergy's rights and is now the sole owner of OUCooling. OUCooling will fund, install, and maintain a central chiller plant for each business district participating in the program. The main benefits to the businesses are lower electric energy consumption, increased reliability, and the elimination of the environmental risks associated with the handling of chemicals. Other benefits for the businesses include avoided initial capital cost, lower maintenance costs, a smaller mechanical room (therefore more rental space), no insurance requirements, improved property resale value, and availability of maintenance personnel for other duties.

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OUC currently has five chilled water districts: downtown Orlando, the Mall at Millenia, the Starwood Resort, Lake Nona, and the Orange County Convention Center including Lockheed Martin and neighboring hotels. OUC envisions building other chiller plants to serve commercial campuses, hotels, retail shopping centers, and tourist attractions. OUC recently added its fifth district at Lake Nona, with the potential to provide up to 50,000 tons of chilled water to the medical complexes and research facilities located in the area. At full build out, this central chilled water system may be one of the largest in the US. In addition, a 17.6 million gallon chilled water thermal storage tank serving the Orange County Convention Center among other facilities and hotels, is one of the largest in the world. The tank works in tandem with 18 water cooled chillers and feeds a chilled water loop that can handle more than 33,000 gallons of 37° F water per minute.

**2.2.2.5 Small Business Efficiency Pilot.** OUC's Small Business Efficiency Pilot shows small business owners how to reduce energy and water consumption and improve overall business operations. The pilot focuses on providing essential services to entrepreneurial and small businesses, which include how to write a business plan, how to write contracts, proper accounting methods and other information necessary for a new business to succeed. After completion, small businesses receive a \$250 credit on their utility bill.

For participation, customers are required to complete a Commercial Energy Survey or have had one completed in the past 12 months, fill an application form (downloadable from <a href="http://www.OUC.com">http://www.OUC.com</a>), and attend a one-hour counseling session at the University of Central Florida's Small Business Development Center (SBDC). Validation of the application form by the SBDC is necessary before turning it in to OUC for credit processing.

- **2.2.2.6 Residential Floor Insulation.** OUC added a Floor Insulation rebate to incent customers to insulate wood floors over unconditioned spaces. This incentive is mostly geared towards older homes that were not built to today's more energy efficient standards. The \$0.07 per square foot incentive is for a minimum of R-11 floor insulation.
- **2.2.2.7** Energy Star Washing Machine. OUC added a \$50 incentive for the purchase of Energy Star washing machines to bring customers' attention to the benefits of these new machines. Not only do they use less electricity and water, but they also reduce the energy required to dry the clothes which accounts for the majority of the electric savings.
- **2.2.2.8 Solar Water Heating.** OUC changed its previous incentive of \$0.03 per kWh equivalent production incentive to a one time upfront rebate of \$1,000 to incent customers to purchase a Solar Water Heater. OUC continues to partner with Orlando Federal Credit Union (OFCU) to provide OUC's residential customers with low interest loan options for installing Solar Thermal Systems. Below are the low interest loan rates and terms for the solar thermal program.

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Solar Thermal Systems							
(\$7,500 maximum loan amount)							
Terms (months) Rate (APR)							
36	0.00%						
60	2.75%						
84	4.00%						

**2.2.2.9** Heat Pump Water Heaters. OUC added a new incentive of \$650 for the purchase of a Heat Pump Water Heater. It appears this technology has passed the development stage, become more affordable and has become more of a standard option for customers to consider. As with other incentives, this has the potential to change as equipment minimum efficiency standards change in the future.

2.2.2.10 Commercial Custom Incentive Program. OUC developed a program to accommodate the various other efficiency improvements possible in a commercial application that were not covered by an existing standard conservation program. It is impractical to have specific individual programs for all potential conservation measures especially when there are technological changes and improvements occurring all the time. With the Custom Incentive program, OUC can accommodate practically any measure that can reduce electric demand above code requirements that a commercial customer wants to implement. The incentive is \$250/KW provided it is a measure other than just an indoor lighting retrofit. Qualifying measures can include chillers, thermal storage systems, packaged cooling unit replacements, fan and pump motor efficiency upgrades, refrigeration equipment, etc. The program brochure is available at: <a href="http://www.ouc.com/Libraries/RG">http://www.ouc.com/Libraries/RG</a> Documents/CommIndustrial Incentives Info Sheets lo.sflb.ashx

**2.2.2.11** *Multi-Family ARRA Grant Project.* The multi-family market segment is a notoriously difficult market segment to penetrate when it comes to conservation program participation. The owners of the complex do not have a great interest in reducing the tenants' electric bills they do not pay. And the tenants do not have an interest in improving property they do not own. These disincentives lead to a lack of participation from the multi-family market segment, unless the market can be transformed. One way to begin to transform this market is to illustrate the benefits of efficiency that could lead to lower overall costs for tenants that translate to higher satisfaction rates that lead to higher occupancy rates, lower maintenance costs and higher property values for the owners. Last year the opportunity arose when American Recovery and Reinvestment Act (ARRA) grant money became available. OUC partnered with the University of Florida (UF) and were awarded a Clean Energy ARRA grant to install conservation measures

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in several multi-family apartment complexes to start illustrating these benefits in a real application, not just theoretical. The project consisted of installing conservation measures such as: R-30 Attic Insulation, SEER 15 High Efficiency Heat Pumps, Duct Repair, Solar window film, Energy Star Refrigerators, Heat Pump Water Heaters, Compact Flourescents, Water Saving Showerheads and Aerators. In keeping with the objectives of the ARRA funds, OUC targeted low-income complexes where the savings would have the greatest economic benefit. The highlights of the project that was completed on 4/30/2012 include:

- Five (5) low-income apartment complexes
- Total of 272 Apartments retrofitted (other half reserved for control group)
- Total Project Cost: \$1,295,960
- Clean Energy Grant used towards Project Cost: \$390,000
- OUC contribution towards Project Cost: \$215,786
- Complex owners' contribution \$651,426
- Total expected savings from retrofits: \$142,247/yr
- Average savings per apartment: \$523/yr
- Total estimated kWh savings per year: 1,016,052

Once a full year has passed, the plan is to perform some measurement and verification analytics to demonstrate all of the associated benefits derived from these retrofit projects and share the results with the multi-family ownership and tenant community alike. The full details of the report "Transforming the Multi-Family Market Place Through Efficiency Improvements" are included in Appendix B.

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## 3.0 Status of OUC Approved Numeric Goals

This section presents the status of OUC's actual demand and energy reduction versus the numeric peak demand and energy reduction approved by the FPSC.

## 3.1 Summary of OUC Residential Numeric Goals

Table 3-1 indicates that OUC exceeded its residential peak demand and energy reduction goals during calendar year 2012.

	Table 3-1 Comparison of Actual Conservation Savings to Numeric Conservation Goals – Residential Programs											
Calendar		Peak kW uction		Peak kW uction	MWh Ener	gy Reduction						
Year	Total	Commission	Total	Commission	Total	Commission						
Tear	Achieved	Approved	Achieved Approved		Achieved	Approved						
	Reduction	Goals	Reduction	Goals	Reduction	Goals						
2010	789	200	1,000	500	3,011	1,800						
2011	749	200	953	500	2,692	1,800						
2012	472	200	617	500	1,921	1,800						
2013	N/A	200	N/A	500	N/A	1,800						
2014	N/A	200	N/A	500	N/A	1,800						
2015	N/A	200	N/A	500	N/A	1,800						
2016	N/A	200	N/A	500	N/A	1,800						
2017	N/A	200	N/A	500	N/A	1,800						
2018	N/A	200	N/A	500	N/A	1,800						
2019	N/A	200	N/A	500	N/A	1,800						

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## 3.2 Summary of OUC Commercial/Industrial Numeric Goals

As shown in Table 3-2, OUC substantially exceeded its commercial and industrial peak demand and energy reduction goals during calendar year 2012. Strong performance in OUC's Commercial Indoor Lighting Retrofit program was a significant contributor to the overall Commercial/Industrial demand and energy reductions shown in Table 3-2.

Table 3-2
Comparison of Actual Conservation Savings to
Numeric Conservation Goals – Commercial / Industrial Programs<sup>1</sup>

	Winter	Peak kW	Summer	Peak kW	MWh Ener	gy Reduction	
Calendar	Red	uction	Red	uction	WIVII Energy Reduction		
Year	Total	Commission	Total	Commission	Total	Commission	
1 cai	Achieved	Approved	Achieved	Approved	Achieved	Approved	
	Reduction	Goals	Reduction	Goals	Reduction	Goals	
2010	935	700	1,667	700	5,800	1,800	
2011	619	700	611	700	3,003	1,800	
2012	1,750	700	1,748	700	7,256	1,800	
2013	N/A	700	N/A	700	N/A	1,800	
2014	N/A	700	N/A	700	N/A	1,800	
2015	N/A	700	N/A	700	N/A	1,800	
2016	N/A	700	N/A	700	N/A	1,800	
2017	N/A	700	N/A	700	N/A	1,800	
2018	N/A	700	N/A	700	N/A	1,800	
2019	N/A	700	N/A	700	N/A	1,800	

<sup>(1).</sup> As stated in OUC's DSM Plan, the annual energy and demand reductions associated with the Commercial Cool/Reflective Roof Program were not included in OUC's projected energy and demand reductions. In order to be consistent with the DSM Plan, this Conservation Report includes information on the Commercial Cool/Reflective Roof Program, but does not include the energy and peak demand reductions realized when summarizing total energy and demand reductions.

## 3.3 Summary of OUC Combined Numeric Goals

OUC surpassed both its total (combined residential, commercial, and industrial) energy goals, by approximately 155 percent, and its peak demand goals, by approximately 97 percent for the summer and approximately 147 percent for the winter.

Table 3-3 displays the total annual peak demand and energy savings achieved through OUC's DSM and conservation programs since calendar year 2010. In calendar year 2012, OUC realized a total reduction in energy use of 9,177 MWh and a reduction in peak demand of 2,365 kW for summer and 2,222 kW for winter. OUC's energy and peak demand reduction successes

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were driven by relatively consistent participation in the majority of OUC's conservation programs, as well as strong performance in its Commercial Indoor Lighting Retrofit program.

Table 3-3

Comparison of Actual Conservation Savings to

Numeric Conservation Goals – Residential and Commercial / Industrial Programs<sup>1</sup>

Calendar	,,,	Peak kW uction		r Peak kW uction	MWh Energy Reduction		
Year	Total Achieved Reduction	Commission Approved Goals	Total Achieved Reduction	Commission Approved Goals	Total Achieved Reduction	Commission Approved Goals	
2010	1,724	900	2,667	1,200	8,811	3,600	
2011	1,368	900	1,564	1,200	5,695	3,600	
2012	2,222	900	2,365	1,200	9,177	3,600	
2013	N/A	900	N/A	1,200	N/A	3,600	
2014	N/A	900	N/A	1,200	N/A	3,600	
2015	N/A	900	N/A	1,200	N/A	3,600	
2016	N/A	900	N/A	1,200	N/A	3,600	
2017	N/A	900	N/A	1,200	N/A	3,600	
2018	N/A	900	N/A	1,200	N/A	3,600	
2019	N/A	900	N/A	1,200	N/A	3,600	

<sup>(1).</sup> As stated in OUC's DSM Plan, the annual energy and demand reductions associated with the Commercial Cool/Reflective Roof Program were not included in OUC's projected energy and demand reductions. In order to be consistent with the DSM Plan, this Conservation Report includes information on the Commercial Cool/Reflective Roof Program, but does not include the energy and peak demand reductions realized when summarizing total energy and demand reductions.

Tables 3-4 through 3-30 present the annual demand and energy savings for each of the directly quantifiable programs offered by OUC during calendar year 2012. Each table also includes the actual program costs and participation for 2012 and participation projections for years 2013 through 2019, unless otherwise noted. The utility costs associated with the programs have been updated based on actual costs incurred during calendar year 2012. Unless otherwise noted, actual cumulative penetration rates for each program reflect 2010 as the base year and do not consider customer participation prior to 2010.

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Table 3-4
Residential Home Energy Walk-Through Survey – Single Family

Program Name: Residential Home Energy Survey

Program Start Date: 2010

Measure: Residential Energy Walk Through Survey - Single Family

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	80,189	80,189	2,013	2,013	2.51%	2,053	2,053	2.56%	40
2011	81,032	81,032	2,013	4,026	4.97%	1,674	3,727	4.60%	(299)
2012	82,159	82,159	2,013	6,039	7.35%	1,280	5,006	6.09%	(1,033)
2013	83,835	83,835	2,013	8,052	9.60%				
2014	85,799	85,799	2,013	10,065	11.73%				
2015	88,075	88,075	2,013	12,078	13.71%				
2016	90,543	90,543	2,013	14,091	15.56%				
2017	93,107	93,107	2,013	16,104	17.30%				
2018	95,695	95,695	2,013	18,117	18.93%				
2019	98,313	98,313	2,013	20,130	20.48%				

Eligibility Level 100.0%

Annual Demand and Energy Savings	Per Installation		Program Total	
Annual Dernand and Energy Savings	@meter	@generator	@meter	@generator
Summer kW Reduction	0.00	0.00	0	0
Winter kW Reduction	0.00	0.00	0	0
kWh Reduction	263.00	273.26	336,535	349,660

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$280	\$357,870
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$0	\$0
Utility Recurring Rebate	\$0	\$0

Annual Benefits = B<sub>npv</sub> x d/[1-(1+d)<sup>-n</sup>] = (\$395,880) where:

B<sub>npv</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2010 DSM Plan [approved by Consummating Order issued September 28, 2010 (Order No. PSC-10-0595-CO-EG() and utilizes the 8.00% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2010 DSM Plan.

Table 3-5
Residential Home Energy Walk-Through Survey – Multi Family

Program Name: Residential Home Energy Survey

Program Start Date: 2010

Measure: Residential Energy Walk Through Survey - Multi Family

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	98,008	98,008	863	863	0.88%	880	880	0.90%	17
2011	99,039	99,039	863	1,726	1.74%	717	1,597	1.61%	(129)
2012	100,417	100,417	863	2,589	2.58%	548	2,146	2.14%	(443)
2013	102,465	102,465	863	3,452	3.37%				
2014	104,865	104,865	863	4,315	4.11%				
2015	107,647	107,647	863	5,178	4.81%				
2016	110,664	110,664	863	6,041	5.46%				
2017	113,798	113,798	863	6,904	6.07%				
2018	116,961	116,961	863	7,767	6.64%				
2019	120,161	120,161	863	8,630	7.18%				

Eligibility Level 100.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total	
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator
Summer kW Reduction	0.00	0.00	0	0
Winter kW Reduction	0.00	0.00	0	0
kWh Reduction	200.00	207.80	109,680	113,958

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$410	\$224,950
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$0	\$0
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($162,855)$  where:

Bnow = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2010 DSM Plan [approved by Consummating Order issued September 28, 2010 (Order No. PSC-10-0595-CO-EG)] and utilizes the 8.00% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2010 DSM Plan.

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Table 3-6
Residential Home Energy DVD Survey – Single Family

Program Name: Residential Home Energy Survey

Program Start Date: 2010

Measure: Residential Energy DVD Survey - Single Family

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	80,189	80,189	1,816	1,816	2.26%	851	851	1.06%	(965)
2011	81,032	81,032	1,816	3,632	4.48%	920	1,771	2.19%	(1,861)
2012	82,159	82,159	1,816	5,448	6.63%	749	2,520	3.07%	(2,928)
2013	83,835	83,835	1,816	7,264	8.66%				
2014	85,799	85,799	1,816	9,080	10.58%				
2015	88,075	88,075	1,816	10,896	12.37%				
2016	90,543	90,543	1,816	12,712	14.04%				
2017	93,107	93,107	1,816	14,528	15.60%				
2018	95,695	95,695	1,816	16,344	17.08%				
2019	98,313	98,313	1,816	18,160	18.47%				

Eligibility Level 100.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total	
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator
Summer kW Reduction	0.00	0.00	0	0
Winter kW Reduction	0.00	0.00	0	0
kWh Reduction	131.00	136.11	98,119	101,946

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$47	\$35,260
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$0	\$0
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($34,517)$  where:

B<sub>nov</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

The Annual Benefits calculation is based on the Total Resource Cost (TRC) test results presented in OUC's 2010 DSM Plan [approved by Consummating Order issued September 28, 2010 (Order No. PSC-10-0595-CO-EG)] and utilizes the 8.00% discount rate and 10-year program life, consistent with the TRC calculations presented in OUC's 2010 DSM Plan.

Table 3-7
Residential Home Energy DVD Survey – Multi Family

Program Name: Residential Home Energy Survey

Program Start Date: 2010

Measure: Residential Energy DVD Survey - Multi Family

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	98,008	98,008	778	778	0.79%	365	365	0.37%	(413)
2011	99,039	99,039	778	1,556	1.57%	394	759	0.77%	(797)
2012	100,417	100,417	778	2,334	2.32%	321	1,080	1.08%	(1,254)
2013	102,465	102,465	778	3,112	3.04%				
2014	104,865	104,865	778	3,890	3.71%				
2015	107,647	107,647	778	4,668	4.34%				
2016	110,664	110,664	778	5,446	4.92%				
2017	113,798	113,798	778	6,224	5.47%				
2018	116,961	116,961	778	7,002	5.99%				
2019	120,161	120,161	778	7,780	6.47%				

Eligibility Level 100.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	0.00	0.00	0	0	
Winter kW Reduction	0.00	0.00	0	0	
kWh Reduction	100.00	103.90	32,100	33,352	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$40	\$12,829
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$0	\$0
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($11,749)$  where:

Bnow = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-8
Residential Home Energy Online Survey – Single Family

Program Name: Residential Home Energy Survey

Program Start Date: 2010

Measure: Residential Energy Online Survey - Single Family

Reporting Period: 2012

Α	В	С	D	E	F	G	н	1	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	80,189	80,189	1,320	1,320	1.65%	1,358	1,358	1.69%	38
2011	81,032	81,032	1,320	2,640	3.26%	598	1,956	2.41%	(684)
2012	82,159	82,159	1,320	3,960	4.82%	818	2,774	3.38%	(1,186)
2013	83,835	83,835	1,320	5,280	6.30%				
2014	85,799	85,799	1,320	6,600	7.69%				
2015	88,075	88,075	1,320	7,920	8.99%				
2016	90,543	90,543	1,320	9,240	10.21%				
2017	93,107	93,107	1,320	10,560	11.34%				
2018	95,695	95,695	1,320	11,880	12.41%				
2019	98,313	98,313	1,320	13,200	13.43%				

Eligibility Level 100.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	0.00	0.00	0	0	
Winter kW Reduction	0.00	0.00	0	0	
kWh Reduction	131.00	136.11	107,197	111,378	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$83	\$67,845
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$0	\$0
Utility Recurring Rebate	\$0	\$0

Annual Benefits = B<sub>npv</sub> x d/[1-(1+d)<sup>-n</sup>] = (\$47,445)

where:

B<sub>npv</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-9
Residential Home Energy Online Survey – Multi Family

Program Name: Residential Home Energy Survey

Program Start Date: 2010

Measure: Residential Energy Online Survey - Multi Family

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	98,008	98,008	566	566	0.58%	582	582	0.59%	16
2011	99,039	99,039	566	1,132	1.14%	256	838	0.85%	(294)
2012	100,417	100,417	566	1,698	1.69%	351	1,189	1.18%	(509)
2013	102,465	102,465	566	2,264	2.21%				
2014	104,865	104,865	566	2,830	2.70%				
2015	107,647	107,647	566	3,396	3.15%				
2016	110,664	110,664	566	3,962	3.58%				
2017	113,798	113,798	566	4,528	3.98%				
2018	116,961	116,961	566	5,094	4.36%				
2019	120,161	120,161	566	5,660	4.71%				

Eligibility Level 100.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	0.00	0.00	0	0	
Winter kW Reduction	0.00	0.00	0	0	
kWh Reduction	100.00	103.90	35,070	36,438	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$73	\$25,568
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$0	\$0
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($18,133)$  where:

B<sub>npv</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-10
Residential Duct Repair Rebates

Program Name: Residential Duct Repair Rebate

Program Start Date: 2010

Measure: Residential Duct Repair Rebate

Reporting Period: 2012

Α	В	С	D	E	F	G	н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	178,175	89,088	135	135	0.15%	206	206	0.23%	71
2011	180,072	90,036	135	270	0.30%	584	790	0.88%	520
2012	182,576	91,288	135	405	0.44%	213	1,003	1.10%	598
2013	186,300	93,150	135	540	0.58%				1
2014	190,664	95,332	135	675	0.71%				1
2015	195,721	97,861	135	810	0.83%				1
2016	201,208	100,604	135	945	0.94%				1
2017	206,905	103,452	135	1,080	1.04%				1
2018	212,656	106,328	135	1,215	1.14%				
2019	218,474	109,237	135	1,350	1.24%				

Eligibility Level 50.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	0.22	0.23	47	49	
Winter kW Reduction	0.29	0.30	62	65	
kWh Reduction	306.06	318.00	65,191	67,733	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$99	\$21,038
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$187	\$39,810
Utility Recurring Rebate	\$0	\$0

Annual Benefits = B<sub>npv</sub> x d/[1-(1+d)<sup>-n</sup>] = (\$73,678)

where:

B<sub>nov</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-11
Residential Ceiling Insulation Rebates

Program Name: Residential Ceiling Insulation Rebate

Program Start Date: 201

Measure: Residential Ceiling Insulation Rebate

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	178,175	43,903	225	225	0.51%	312	312	0.71%	87
2011	180,072	43,591	225	450	1.03%	383	695	1.59%	245
2012	182,576	43,366	225	675	1.56%	254	949	2.19%	274
2013	186,300	43,141	225	900	2.09%				
2014	190,664	42,916	225	1,125	2.62%				
2015	195,721	42,691	225	1,350	3.16%				
2016	201,208	42,466	225	1,575	3.71%				
2017	206,905	42,241	225	1,800	4.26%				
2018	212,656	42,016	225	2,025	4.82%				
2019	218,474	41,791	225	2,250	5.38%				

Eligibility Level 25.0% Initial eligibility in 2005.

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	0.17	0.18	44	46	
Winter kW Reduction	0.32	0.33	81	84	
kWh Reduction	459.10	477.00	116,611	121,159	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$148	\$37,633
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$174	\$44,245
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($162,788)$  where:

B<sub>nov</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-12
Residential Window Film/Solar Screen Rebates

Program Name: Residential Window Film / Solar Screen Rebate

Program Start Date: 2010

Measure: Residential Window Film / Solar Screen Rebate

Reporting Period: 2012

Α	В	С	D	E	F	G	н	1	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	178,175	89,088	90	90	0.10%	92	92	0.10%	2
2011	180,072	90,036	90	180	0.20%	179	271	0.30%	91
2012	182,576	91,288	90	270	0.30%	97	368	0.40%	98
2013	186,300	93,150	90	360	0.39%				i .
2014	190,664	95,332	90	450	0.47%				i .
2015	195,721	97,861	90	540	0.55%				i .
2016	201,208	100,604	90	630	0.63%				i .
2017	206,905	103,452	90	720	0.70%				
2018	212,656	106,328	90	810	0.76%				i .
2019	218,474	109,237	90	900	0.82%	1			i .

Eligibility Level 50.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total	
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator
Summer kW Reduction	0.03	0.04	3	3
Winter kW Reduction	-0.01	-0.01	-1	-1
kWh Reduction	106.64	110.79	10,344	10,747

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$34	\$3,338
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$144	\$13,962
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($22,051)$  where:

B<sub>nov</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-13
Residential High Performance Window Rebates

Program Name: Residential High Performance Window Rebate
Program Start Date: 2010

Measure: Residential High Performance Window Rebate

Reporting Period: 2012

Α	В	С	D	E	F	G	н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	178,175	89,088	105	105	0.12%	204	204	0.23%	99
2011	180,072	90,036	105	210	0.23%	226	430	0.48%	220
2012	182,576	91,288	105	315	0.35%	178	608	0.67%	293
2013	186,300	93,150	105	420	0.45%				
2014	190,664	95,332	105	525	0.55%				
2015	195,721	97,861	105	630	0.64%				
2016	201,208	100,604	105	735	0.73%				
2017	206,905	103,452	105	840	0.81%				
2018	212,656	106,328	105	945	0.89%				
2019	218,474	109,237	105	1,050	0.96%				

Eligibility Level 50.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total	
Armual Demand and Energy Savings	@meter	@generator	@meter	@generator
Summer kW Reduction	0.37	0.38	66	68
Winter kW Reduction	0.22	0.23	40	41
kWh Reduction	780.06	810.48	138,850	144,265

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$252	\$44,810
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$318	\$56,615
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($198,423)$ 

where:

B<sub>npv</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-14
Residential Caulking and Weather Stripping Rebates

Program Name: Residential Caulking and Weather Stripping Rebate

Program Start Date: 2010

Measure: Residential Caulking and Weather Stripping Rebate

Reporting Period: 2012

Α	В	С	D	E	F	G	н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	178,175	89,088	34	34	0.04%	19	19	0.02%	(15)
2011	180,072	90,036	34	68	0.08%	73	92	0.10%	24
2012	182,576	91,288	34	102	0.11%	10	102	0.11%	0
2013	186,300	93,150	34	136	0.15%				
2014	190,664	95,332	34	170	0.18%				
2015	195,721	97,861	34	204	0.21%				
2016	201,208	100,604	34	238	0.24%				
2017	206,905	103,452	34	272	0.26%				
2018	212,656	106,328	34	306	0.29%				
2019	218,474	109,237	34	340	0.31%				

Eligibility Level 50.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total	
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator
Summer kW Reduction	0.00	0.00	0	0
Winter kW Reduction	0.00	0.00	0	0
kWh Reduction	25.00	25.98	250	260

Per Participant	Program Total
\$8	\$81
\$0	\$0
\$70	\$701
\$0	\$0
	Per Participant \$8 \$0 \$70 \$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($3,779)$  where:

B<sub>npv</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-15
Residential Wall Insulation Rebates

Program Name: Residential Wall Insulation Rebate

Program Start Date: 201

Measure: Residential Wall Insulation Rebate

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	178,175	88,574	7	7	0.01%	19	19	0.02%	12
2011	180,072	88,555	7	14	0.02%	46	65	0.07%	51
2012	182,576	88,548	7	21	0.02%	39	104	0.12%	83
2013	186,300	88,541	7	28	0.03%				i I
2014	190,664	88,534	7	35	0.04%				
2015	195,721	88,527	7	42	0.05%				i I
2016	201,208	88,520	7	49	0.06%				1
2017	206,905	88,513	7	56	0.06%				1
2018	212,656	88,506	7	63	0.07%				1
2019	218,474	88,499	7	70	0.08%				

Eligibility Level 50.0% Initial eligibility in 2009.

Annual Demand and Energy Savings	Per Inst	allation	Program Total	
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator
Summer kW Reduction	0.02	0.02	1	1
Winter kW Reduction	0.10	0.10	4	4
kWh Reduction	51.43	53.44	2,006	2,084

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$17	\$647
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$850	\$33,162
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($18,492)$  where:

B<sub>nov</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-16
Residential Cool/Reflective Roof Rebates

Program Name: Residential Cool / Reflective Roof Rebate

Program Start Date: 2010

Measure: Residential Cool / Reflective Roof Rebate

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	178,175	5,345	13	13	0.24%	19	19	0.36%	6
2011	180,072	5,402	13	26	0.48%	22	41	0.76%	15
2012	182,576	5,477	13	39	0.71%	8	49	0.89%	10
2013	186,300	5,589	13	52	0.93%				
2014	190,664	5,720	13	65	1.14%				
2015	195,721	5,872	13	78	1.33%				
2016	201,208	6,036	13	91	1.51%				
2017	206,905	6,207	13	104	1.68%				
2018	212,656	6,380	13	117	1.83%				
2019	218,474	6,554	13	130	1.98%				

Eligibility Level 3.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total	
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator
Summer kW Reduction	0.31	0.32	2	3
Winter kW Reduction	0.00	0.00	0	0
kWh Reduction	687.15	713.95	5,497	5,712

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$222	\$1,774
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$272	\$2,175
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($10,428)$  where:

B<sub>nov</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

### Table 3-17 Residential Heat Pump Rebates

Program Name: Residential Heat Pump Rebate

Program Start Date: 2010

Measure: Residential Heat Pump Rebate Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	178,175	5,345	685	685	12.82%	1,202	1,202	22.49%	517
2011	180,072	5,402	685	1,370	25.36%	1,245	2,447	45.30%	1,077
2012	182,576	5,477	685	2,055	37.52%	767	3,214	58.68%	1,159
2013	186,300	5,589	685	2,740	49.02%				
2014	190,664	5,720	685	3,425	59.88%				
2015	195,721	5,872	685	4,110	70.00%				
2016	201,208	6,036	685	4,795	79.44%				
2017	206,905	6,207	685	5,480	88.29%				
2018	212,656	6,380	685	6,165	96.63%				
2019	218,474	6,554	685	6,850	104.51%				

Eligibility Level 3.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	0.39	0.40	298	310	
Winter kW Reduction	0.22	0.23	167	174	
kWh Reduction	802.69	833.99	615,663	639,674	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$286	\$219,664
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$448	\$343,935
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = (\$184,858)$  (\$1,217,539) (\$484,425) (\$407,811) (\$210,248) where: (SEER 14) (SEER 15) (SEER 16) (SEER 17) (SEER 18)

B<sub>npv</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-18
Residential Efficiency Delivered (formerly known as Home Energy Fix-Up)

Program Name: Residential Home Energy Fix-up

Program Start Date: 2010

Measure: Residential Home Energy Fix-up

Reporting Period: 2012

Α	В	С	D	E	F	G	н	1	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	178,175	49,889	52	52	0.10%	180	180	0.36%	128
2011	180,072	50,420	52	104	0.21%	182	362	0.72%	258
2012	182,576	51,121	52	156	0.31%	137	499	0.98%	343
2013	186,300	52,164	52	208	0.40%				
2014	190,664	53,386	52	260	0.49%				
2015	195,721	54,802	52	312	0.57%				
2016	201,208	56,338	52	364	0.65%				
2017	206,905	57,933	52	416	0.72%				
2018	212,656	59,544	52	468	0.79%				
2019	218,474	61,173	52	520	0.85%				

Eligibility Level 28.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	0.27	0.28	37	38	
Winter kW Reduction	0.06	0.06	8	9	
kWh Reduction	250.00	259.75	34,250	35,586	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$81	\$11,053
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$804	\$110,085
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($4,983)$ where:

B<sub>nov</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

**Table 3-19 Residential Billed Solution Insulation** 

Program Name: Residential Billed Solution Insulation (In 2012, this program was absorbed into the Home Fix-Up Program)

Program Start Date:

Measure: Residential Billed Solution Insulation (In 2012, this program was absorbed into the Home Fix-Up Program)

Reporting Period:

Α	В	С	D	Е	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	178,175	41,234	43	43	0.10%	50	50	0.12%	7
2011	180,072	41,184	43	86	0.21%	39	89	0.22%	3
2012	182,576	41,141	43	129	0.31%	0	89	0.22%	(40)
2013	186,300	41,098	43	172	0.42%				
2014	190,664	41,055	43	215	0.52%				
2015	195,721	41,012	43	258	0.63%				
2016	201,208	40,969	43	301	0.73%				
2017	206,905	40,926	43	344	0.84%				
2018	212,656	40,883	43	387	0.95%				
2019	218,474	40,840	43	430	1.05%				

Eligibility Level 25.0% Initial elegibility in 2005

Annual Demand and Energy Savings	Per Inst	allation	Program Total	
Allitual Definanti and Energy Savings	@meter	@generator	@meter	@generator
Summer kW Reduction	0.17	0.18	0	0
Winter kW Reduction	0.32	0.33	О	0
kWh Reduction	492.56	511.77	0	0

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$0	\$0
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$0	\$0
Utility Recurring Rebate	\$0	\$0

Annual Benefits = B<sub>npv</sub> x d/[1-(1+d)<sup>-n</sup>] = (\$162,788)

where:

B<sub>npv</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-20
Residential New Home Rebate Program (formerly known as Gold Ring Home)

Program Name: Residential Gold Ring Home

Program Start Date: 2010

Measure: Residential Gold Ring Home

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	178,175	853	6	6	0.70%	91	91	10.66%	85
2011	180,072	1,127	6	12	1.06%	15	106	9.41%	94
2012	182,576	1,676	6	18	1.07%	7	113	6.74%	95
2013	186,300	1,964	6	24	1.22%				
2014	190,664	2,276	6	30	1.32%				
2015	195,721	2,469	6	36	1.46%				
2016	201,208	2,564	6	42	1.64%				
2017	206,905	2,588	6	48	1.85%				
2018	212,656	2,618	6	54	2.06%				
2019	218,474	2,618	6	60	2.29%				

Eligibility Level 45.0% of new construction

Annual Demand and Energy Savings	Per Inst	allation	Program Total	
Affidal Demand and Energy Savings	@meter	@generator	@meter	@generator
Summer kW Reduction	0.89	0.92	6	6
Winter kW Reduction	1.01	1.05	7	7
kWh Reduction	1,313.50	1,364.73	9,195	9,553

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$424	\$2,967
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$700	\$4,900
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = $38$ where:

Bnpv = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

### **Table 3-21 Residential Compact Fluorescent Lighting**

Program Name: Residential Compact Fluorescent Lighting Program Start Date:

Residential Compact Fluorescent Lighting Reporting Period:

Α	В	С	D	E	F	G	н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	178,175	178,175	2,876	2,876	1.61%	2,232	2,232	1.25%	(644)
2011	180,072	180,072	2,876	5,752	3.19%	1,884	4,116	2.29%	(1,636)
2012	182,576	182,576	2,876	8,628	4.73%	2,232	6,348	3.48%	(2,280)
2013	186,300	186,300	2,876	11,504	6.17%				
2014	190,664	190,664	2,876	14,380	7.54%				
2015	195,721	195,721	2,876	17,256	8.82%				
2016	201,208	201,208	2,876	20,132	10.01%				
2017	206,905	206,905	2,876	23,008	11.12%				
2018	212,656	212,656	2,876	25,884	12.17%				
2019	218,474	218,474	2,876	28,760	13.16%				

Eligibility Level 100.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	0.04	0.04	86	89	
Winter kW Reduction	0.04	0.04	86	89	
kWh Reduction	58.71	61.00	131,041	136,152	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$21	\$47,155
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$0	\$0
Utility Recurring Rebate	\$0	\$0

Annual Benefits = B<sub>npv</sub> x d/[1-(1+d)<sup>-n</sup>] = \$4,024 where:

Bnov = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 2 = life of the program

Table 3-22
Residential HVAC Proper Sizing with R-30 Attic Insulation Rebate

 Program Name:
 Residential HVAC Proper Sizing with R-30 Attic Insulation Rebate

 Program Start Date:
 2011

 Measure:
 Residential HVAC Proper Sizing with R-30 Attic Insulation Rebate

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	178,175	5,345							
2011	180,072	5,402	34	34	0.63%	14	14	0.26%	(20)
2012	182,576	5,477	34	69	1.25%	16	30	0.55%	(39)
2013	186,300	5,589	34	103	1.84%				
2014	190,664	5,720	34	137	2.40%				
2015	195,721	5,872	34	171	2.92%				
2016	201,208	6,036	34	206	3.40%				
2017	206,905	6,207	34	240	3.86%				
2018	212,656	6,380	34	274	4.29%				
2019	218,474	6,554	34	308	4.70%				

Eligibility Level 3.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total	
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator
Summer kW Reduction	0.16	0.17	3	3
Winter kW Reduction	0.00	0.00	0	0
kWh Reduction	104.68	108.77	1,675	1,740

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$34	\$541
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$76	\$1,210
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($51,370)$ where:

B<sub>nov</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-23 Commercial Energy Audit

Program Name: Commercial Energy Audit

Program Start Date: 2010

Measure: Commercial Energy Audit

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	28,869	28,869	248	248	0.86%	247	247	0.86%	(1)
2011	29,558	29,558	248	496	1.68%	137	384	1.30%	(112)
2012	30,877	30,877	248	744	2.41%	120	504	1.63%	(240)
2013	31,432	31,432	248	992	3.16%				
2014	31,563	31,563	248	1,240	3.93%				
2015	33,042	33,042	248	1,488	4.50%				
2016	34,439	34,439	248	1,736	5.04%				
2017	35,488	35,488	248	1,984	5.59%				
2018	36,550	36,550	248	2,232	6.11%				
2019	37,636	37,636	248	2,480	6.59%				

Eligibility Level 100.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total	
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator
Summer kW Reduction	0.15	0.15	18	19
Winter kW Reduction	0.15	0.15	18	19
kWh Reduction	848.60	881.70	101,832	105,803

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$954	\$114,442
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$0	\$0
Utility Recurring Rebate	\$0	\$0

Annual Benefits = B<sub>npv</sub> x d/[1-(1+d)<sup>-n</sup>] = (\$111,188)

where:

B<sub>nov</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-24 Commercial Indoor Lighting Retrofit – Billed Solution

Program Name: Commercial Indoor Lighting Retrofit

Program Start Date: 2010

Measure: Commercial Indoor Lighting Retrofit- Billed Solution

Reporting Period: 2012

Α	В	С	D	E	F	G	н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	28,869	14,435	8	8	0.06%	11	11	0.08%	3
2011	29,558	14,779	8	16	0.11%	7	18	0.12%	2
2012	30,877	15,438	8	24	0.16%	23	41	0.27%	17
2013	31,432	15,716	8	32	0.20%				
2014	31,563	15,781	8	40	0.25%				
2015	33,042	16,521	8	48	0.29%				
2016	34,439	17,220	8	56	0.33%				
2017	35,488	17,744	8	64	0.36%				
2018	36,550	18,275	8	72	0.39%				
2019	37,636	18,818	8	80	0.43%				

Eligibility Level 50.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	56.83	59.04	1,307.00	1,357.97	
Winter kW Reduction	56.83	59.04	1,307.00	1,357.97	
kWh Reduction	217,327.35	225,803.11	4,998,529	5,193,472	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$5,682	\$130,681
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$0	\$0
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = $385,459$  where:

B<sub>npv</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-25 Commercial Indoor Lighting Retrofit – Rebates

Program Name: Commercial Indoor Lighting Retrofit

Program Start Date: 2011

Measure: Commercial Indoor Lighting Retrofit- Rebates

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	28,869	14,435		0	0.00%				
2011	29,558	14,779	8	8	0.05%	21	21	0.14%	13
2012	30,877	15,438	8	16	0.10%	21	42	0.27%	26
2013	31,432	15,716	8	24	0.15%				
2014	31,563	15,781	8	32	0.20%				
2015	33,042	16,521	8	40	0.24%				
2016	34,439	17,220	8	48	0.28%				
2017	35,488	17,744	8	56	0.32%				
2018	36,550	18,275	8	64	0.35%				
2019	37,636	18,818	8	72	0.38%				

Eligibility Level 50.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	15.47	16.07	324.88	337.55	
Winter kW Reduction	15.47	16.07	324.88	337.55	
kWh Reduction	86,782.48	90,166.99	1,822,432	1,893,507	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$2,269	\$47,645
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$2,411	\$50,633
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = $385,459$ where:

B<sub>npv</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-26 Commercial Heat Pump Rebate

Program Name: Commercial Heat Pump Rebate
Program Start Date: 2010

Measure: Commercial Heat Pump Rebate

Reporting Period: 2012

Α	В	С	D	E	F	G	н	1	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	28,869	1,347	19	19	1.41%	142	142	10.54%	123
2011	29,558	1,379	19	38	2.75%	11	153	11.09%	115
2012	30,877	1,441	19	57	3.96%	34	187	12.98%	130
2013	31,432	1,467	19	76	5.18%				
2014	31,563	1,473	19	95	6.45%				
2015	33,042	1,542	19	114	7.39%				
2016	34,439	1,607	19	133	8.28%				
2017	35,488	1,656	19	152	9.18%				
2018	36,550	1,706	19	171	10.03%				
2019	37,636	1,756	19	190	10.82%				

Eligibility Level 4.7%

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Annual Demand and Energy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	0.39	0.40	13	14	
Winter kW Reduction	0.22	0.22	7	8	
kWh Reduction	799.89	831.09	27,196	28,257	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$21	\$711
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$435	\$14,800
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = (\$1,912)$  (\$12,146) (\$29,830) (\$22,087) (\$20,598) where: (SEER 14) (SEER 15) (SEER 16) (SEER 17) (SEER 18)

 $B_{npv}$  = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-27 Commercial Duct Repair Rebate

Program Name: Commercial Duct Repair Rebate

Program Start Date: 2010

Measure: Commercial Duct Repair Rebate

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	28,869	14,435	10	10	0.07%	2	2	0.01%	(8)
2011	29,558	14,779	10	20	0.14%	163	165	1.12%	145
2012	30,877	15,438	10	30	0.19%	42	207	1.34%	177
2013	31,432	15,716	10	40	0.25%				
2014	31,563	15,781	10	50	0.32%				
2015	33,042	16,521	10	60	0.36%				
2016	34,439	17,220	10	70	0.41%				
2017	35,488	17,744	10	80	0.45%				
2018	36,550	18,275	10	90	0.49%				1
2019	37,636	18,818	10	100	0.53%				

Eligibility Level 50.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Affilial Defilant and Energy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	0.22	0.23	9	10	
Winter kW Reduction	0.29	0.30	12	13	
kWh Reduction	375.36	390.00	15,765	16,380	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$10	\$412
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$160	\$6,720
Utility Recurring Rebate	\$0	\$0

Annual Benefits = B<sub>npv</sub> x d/[1-(1+d)<sup>-n</sup>] = (\$4,541)

where:

B<sub>nov</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-28 Commercial Window Film/Solar Screen Rebate

Program Name: Commercial Window Film / Solar Screen Rebate

Program Start Date: 201

Measure: Commercial Window Film / Solar Screen Rebate

Reporting Period: 2012

Α	В	С	D	E	F	G	н	1	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	28,869	27,426	7	7	0.03%	11	11	0.04%	4
2011	29,558	28,080	7	14	0.05%	11	22	0.08%	8
2012	30,877	29,333	7	21	0.07%	7	29	0.10%	8
2013	31,432	29,861	7	28	0.09%				
2014	31,563	29,985	7	35	0.12%				
2015	33,042	31,390	7	42	0.13%				
2016	34,439	32,717	7	49	0.15%				
2017	35,488	33,714	7	56	0.17%				
2018	36,550	34,722	7	63	0.18%				
2019	37,636	35,754	7	70	0.20%				

Eligibility Level 95.0%

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Affilial Defilation and Effergy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	0.20	0.21	1.42	1.48	
Winter kW Reduction	-0.06	-0.06	-0.42	-0.43	
kWh Reduction	961.84	999.35	6,733	6,995	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$25	\$176
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$2,296	\$16,075
Utility Recurring Rebate	\$0	\$0

Annual Benefits = B<sub>npv</sub> x d/[1-(1+d)<sup>-n</sup>] = (\$2,895)

where:

B<sub>nov</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

a = 10 = life of the program

Table 3-29
Commercial Ceiling Insulation Rebate

Program Name: Commercial Ceiling Insulation Rebate

Program Start Date: 2010

Measure: Commercial Ceiling Insulation Rebate

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	28,869	13,737	7	7	0.05%	5	5	0.04%	(2)
2011	29,558	13,732	7	14	0.10%	12	17	0.12%	3
2012	30,877	13,725	7	21	0.15%	4	21	0.15%	0
2013	31,432	13,718	7	28	0.20%				
2014	31,563	13,711	7	35	0.26%				
2015	33,042	13,704	7	42	0.31%				
2016	34,439	13,697	7	49	0.36%				
2017	35,488	13,690	7	56	0.41%				
2018	36,550	13,683	7	63	0.46%				
2019	37,636	13,676	7	70	0.51%				

Eligibility Level 50.0% Initial eligibility in 2009

Annual Demand and Energy Savings	Per Inst	allation	Program Total	
Affilial Defilation and Effergy Savings	@meter	@generator	@meter	@generator
Summer kW Reduction	2.09	2.18	8	9
Winter kW Reduction	3.85	4.00	15	16
kWh Reduction	2,671.27	2,775.45	10,685	11,102

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$70	\$279
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$2,402	\$9,608
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($4,140)$  where:

B<sub>nov</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

Table 3-30 Commercial Cool/Reflective Roof Rebate

Program Name: Commercial Cool / Reflective Roof Rebate

Program Start Date: 201

Measure: Commercial Cool / Reflective Roof Rebate

Reporting Period: 2012

Α	В	С	D	E	F	G	Н	I	J
Calendar Year	Total Number of Customers	Total Number of Eligible Customers	Projected Annual Average Number of Program Participants	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (E/C*100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (H/C*100)	Actual Participation Over (Under) Projected Participants (H-E)
2010	28,869	1,925	7	7	0.36%	15	15	0.78%	8
2011	29,558	1,971	7	14	0.71%	5	20	1.01%	6
2012	30,877	2,058	7	21	1.02%	11	31	1.51%	10
2013	31,432	2,095	7	28	1.34%				
2014	31,563	2,104	7	35	1.66%				
2015	33,042	2,203	7	42	1.91%				
2016	34,439	2,296	7	49	2.13%				
2017	35,488	2,366	7	56	2.37%				
2018	36,550	2,437	7	63	2.59%				
2019	37,636	2,509	7	70	2.79%				

Eligibility Level 6.7%

Annual Demand and Energy Savings	Per Inst	allation	Program Total		
Affilial Defilant and Energy Savings	@meter	@generator	@meter	@generator	
Summer kW Reduction	15.92	16.54	175.07	181.89	
Winter kW Reduction	0.00	0.00	0.00	0.00	
kWh Reduction	37,393.52	38,851.87	411,329	427,371	

Costs	Per Participant	Program Total
Utility Nonrecurring Cost	\$978	\$10,754
Utility Recurring Cost	\$0	\$0
Utility Nonrecurring Rebate	\$1,470	\$16,170
Utility Recurring Rebate	\$0	\$0

Annual Benefits =  $B_{npv} \times d/[1-(1+d)^{-n}] = ($333,488)$  where:

B<sub>npv</sub> = cumulative present value of the net benefits over the life of the program for measures installed during the reporting period

d = 8% = discount rate (utility's after tax cost of capital)

n = 10 = life of the program

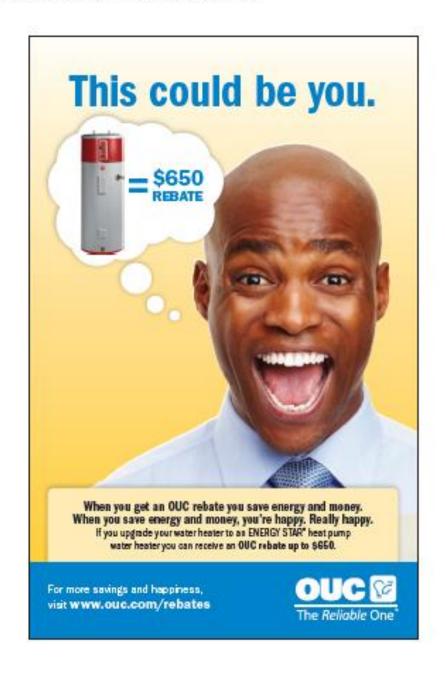
# Appendix A- Examples of Some of OUC's Electric DSM Educational and Marketing Campaigns

March 2013 A-1 Black & Veatch



## Print (Appliance Rebates)

Message: New Appliance Rebates: Clothes washing machine and heat pump water heater. Run dates: Feb. 16 - April 20, 2012 (Quarter page size)



March 2013 A-2 Black & Veatch



## Print (New Appliance Rebates)

Message: New Appliance Rebates: Clothes washing machine and heat pump water heater. Run dates: Feb. 16 - April 20, 2012 (Quarter page size)



March 2013 A-3 Black & Veatch



## Online (Appliance Rebates)

Run dates: Feb. 16 - April 30, 2012 (The online ad size below is a sliding billboard and pencil.)

This could be you.

When you get an GUC rebate you save energy and money.
When you save energy and money, you're happy. Really happy.

For more savings and happiness, click here.

(The online ad size below 468 x 60.)



Click through to OUC Residential Rebates: http://www.ouc.com/en/residential/ways\_to\_save/home\_rebates. aspx

March 2013 A-4 Black & Veatch



## Online (Appliance Rebates)

Run dates: Feb. 16 - April 30, 2012 (The online ad size below is a sliding billboard and pencil.)

This could be you.

When you get an GUC rebate you save energy and money, When you save energy and money, Really happy.

For more savings and happiness, click here.

(The online ad size below 468 x 60.)



Click through to OUC Residential Rebates: http://www.ouc.com/en/residential/ways\_to\_save/home\_rebates. aspx

March 2013 A-5 Black & Veatch



### Print (PCN)

Run Dates: July 8, 15, 22 & 29, 2012(Quarter page size; Orlando Sentinel Real Estate section)

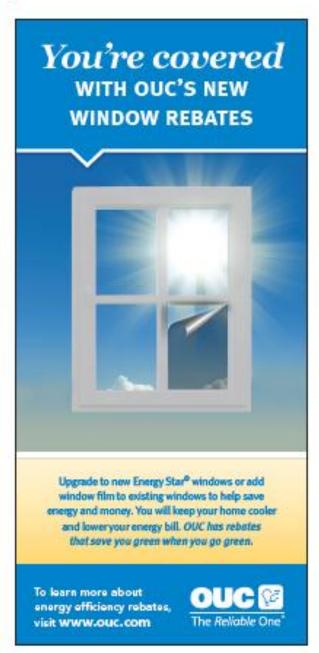


March 2013 A-6 Black & Veatch



## Print (Rebates & ED)

Run Dates: July 8, 15, 22 & 29, 2012 (Quarter page size & Advertorial; Orlando Sentinel Real Estate section)







## Print (PCN Spanish)

Run Dates: April 26 - July 30, 2012 (Quarter page size - Spanish)

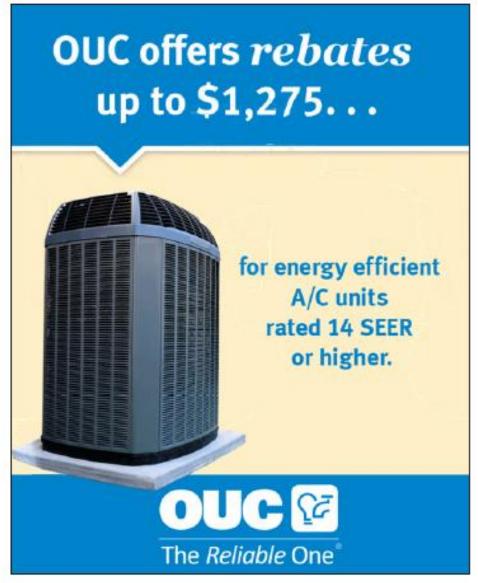


March 2013 A-8 Black & Veatch



## Online (Rebates)

Run Dates: May - July 2012 (The online ad below is intended for an iPad (i.e. iPad Interstitial 663x830; 919x575.)

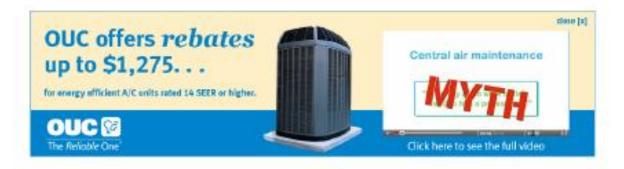


Click through to OUC's rebates' page: http://www.ouc.com/en/residential/ways\_to\_save/home\_rebates.aspx

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Run Dates: May - July 2012 (The online ad below is a billboard ad unit with video intergrated.)





Click through to OUC's rebates' and OUCTV - YouTube pages:

- http://www.ouc.com/en/residential/ways\_to\_save/home\_rebates.aspx
- https://www.youtube.com/watch?v=Xel\_AuQomGg&list=PLBB85C8E17871FE1B&index=13&feature=pl pp\_video

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## Radio (PCN)

Run Dates: Jun 4 - July 29, 2012

Message: Preferred Contractor Network and Conservation

Scripts:

### :30 Right tool for the Job

You wouldn't use hammer to screw in a light bulb (smashing sound) or a power saw to fix a sprinkler head (sawing sound). It's important to have the right tool for the job. That's why O U C The Reliable One developed the Preferred Contractor Network, a group of qualified, licensed professionals, for all your energy-saving project needs. OUC's Preferred Contractors can help you take advantage of our money-saving rebates and will provide on the spot, point-of-sale rebates to OUC customers who qualify. For a list of OUC Preferred Contractors, visit O U C dot com slash P C N.

#### :30 Heat Pump

Want to save energy and save money, but don't know where to begin? It's easier than you think and O U C The Reliable One is here to help every step of the way! When you invest in energy efficiency upgrades, like replacing an older A/C unit with a more efficient one, chances are O U C has a rebate that could add up to hundreds of dollars in savings. Even better, we can help you find a preferred contractor to install the system. For more information visit o u c dot com.

#### :30 Conservation Video

Want to save energy, save water and save money, but don't know where to begin? With O U C The Reliable One, you can start online. Check out OUC's conservation videos at O U C dot for a variety of energy and water saving ideas for your home. From learning how to change your air filter to planting Florida-friendly landscaping, the videos are a click away from helping you lower your electric and water use. Watch the videos now at O U C dot com slash ways to save.

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### Radio continued

### Message: Preferred Contractor Network and Conservation

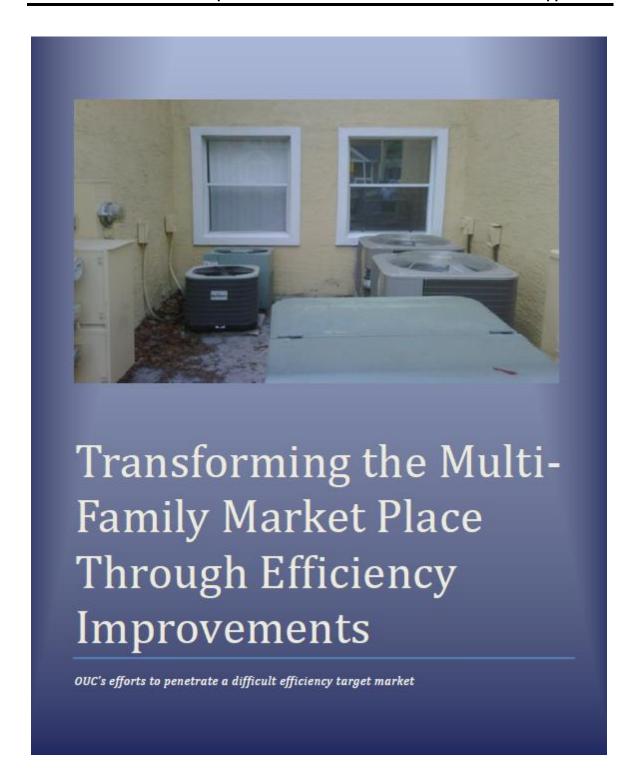
### :30 Thermostat

Want to save energy, save water and save money, but don't know where to begin? Well, it's easier than you think and O U C The Reliable One is here to help every step of the way! Did you know air conditioning and heating account for more than fifty percent of your electric bill? Adjusting your thermostat just one or two degrees can save up to five percent on your electric bill. For more tips and rebate information visit o u c dot com.

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Appendix B- Multi-family ARRA Grant project "Transforming the Multi-Family Market
Place Through Efficiency Improvements"

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The genesis of this project began from a question posed by an Orlando Utilities Commission (OUC) board member after listening to a presentation about planned improvements to OUC's conservation programs. The question was: What are we doing for the multi-family market segment?

It was an important question because approximately 50% of OUC's residential customers live in multifamily complexes, the other half in single family homes. Unfortunately, OUC has hardly gained any participation in its conservation rebate programs from the multi-family market segment. The reason why its so difficult to get any meaningful penetration into the multi-family market segment is two fold:

- The owners of the complex typically don't make improvements until absolutely necessary because they don't benefit from the lower operating costs from efficiency improvements since they don't pay the electric bill.
- 2. The tennants don't want to make any improvements to property they don't own.

Neither party has an incentive to make meaningful efficiency improvements to the property. The challenge is how to affect this dilemma. OUC is tackling this challenge on several fronts by:

- Developing multiple demonstration projects to showcase all of the benefits that can be derived from making efficiency improvements.
- · Developing a program specifically geared towards the multi-family market
- Working with our contractor network to encourage greater participation
- Develop enhanced consumer education to include operating costs in their decision making process before they lease
- Develop a more competitivly driven market to encourage owners to be the "greenest" complex in town.

As an example of one of OUC's efforts, OUC recently (4/30/2012) completed the "construction" phase of its largest project to date. This project was the result of a collaborative effort with the the Program for Resource Efficient Communities (PREC) at the University of Florida (UF). OUC and UF were competitively selected and awarded a \$500,000 grant to help transform the multi-family efficiency market. The Clean Energy Grant was administered by the Florida Department of Agriculture and Consumer Services (FDACS) and was originally funded by the American Recovery and Reinvestment Act (ARRA).

In keeping with the objectives of the ARRA funds, OUC targeted low-income complexes where the savings would have the greatest economic benefit. The highlights of the project include:

- · Five (5) low-income apartment complexes
- · Total of 272 Apartments retrofitted (other half reserved for control group)
- Total Project Cost: \$1,295,960
- Clean Energy Grant used towards Project Cost: \$390,000
- OUC contribution towards Project Cost: \$215,786
- Complex owners' contribution \$651,426
- Total expected savings from retrofits: \$142,247/yr
- Average savings per apartment: \$523/yr
- Total kWh savings per year: 1,016,052

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OUC was successful in gaining the owners cooperation and participantion of five low income multi-family complexes and help pay for vaious effiency improvements. The improvements included such measures as:

- R-30 Attic Insulation
- · SEER 15 High Efficiency Heat Pumps
- Duct Repair
- Solar window film
- Energy Star Refrigerators
- Heat Pump Water Heaters
- · Compact Flourescents
- · Water Saving Showerheads and Aerators

The specific savings and financial details along with pictured examples of the five complexes listed below follow.

#### **Hidden Creek Villas**

2001 Rivertree Circle, Orlando, FL 32839

#### Callahan Oaks

659 W. Jefferson St.

#### **Boca Club Apartments**

3114 C R Smith St. Orlando, FL 32805

#### Hope Village

3014 Orange Center Blvd, Orlando, Florida 32805

#### Dunwoodie

4213 Dunwoodie Blvd. Orlando, FL 32839



e Hidden Creek Villas											
s 2001 Rivertree Circle, Orlando Fl 32839											
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	Menons	nager.com	_		Ļ			H		⊢	
No. of Life Measure		4.00		Total Savings/y		Total ARRA Incentive	Total OUC		OU		
60	13	\$ 1,482	\$	88,893	\$	15,992	\$59,881	\$	184	\$	12
60	13	\$ 1,482	\$	88,893	\$	4,546	\$17,022	\$	24,000	\$	2,273
60	12	\$ 237	\$	14,249	\$	1,722	\$6,448	\$	-	\$	12
60	12	\$ 237	\$	14,249	\$	412	\$1,541	\$	3,000	\$	206
20	20	\$ 332	\$	6,644	\$	1,718	\$6,432	\$	4,050	\$	859
	10	\$ -	\$		\$	0	\$0	\$	3.0	\$	0
60	10	\$ 300	\$	18,000	\$	2,045	\$7,658	\$	9,226	\$	1,023
60	5	OUC	\$	450	\$	2,150	\$0	\$			
60	3	\$ 15	\$	896	\$	2,208	\$896	\$	-		
		1.	\$	231,823	\$	30,792	\$ 99,877	\$	40,276	OU Inc \$/N \$ \$ \$ \$ \$ \$ \$ \$ \$	4,360
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	2001 Rive Scott Zimr 407-377-0 szimmemar 304 No. of Units 60 60 60 60 60 60 60 60 60 60 60 60 60	2001 Rivertree Cir Scott Zimmerman 407-377-0695 szimmerman(Jagona) 304  No. of Life Units (yrs) 60 13 60 12 60 12 20 20 10 60 10 60 5 60 3	2001 Rivertree Circle, Orlando Scott Zimmerman 407-377-0695 szimmerman@agomanager.com 304  No. of Life Measure Units (yrs) Costlunit 60 13 \$ 1,482 60 12 \$ 237 60 12 \$ 237 20 20 \$ 332 10 \$ - 60 10 \$ 300 60 5 OUC 60 3 \$ 15	2001 Rivertree Circle, Orlando FI3  Scott Zimmerman 407-377-0695 szimmerman@agomanager.com 304  No. of Life Measure Proceed Control Control 13 \$ 1,482 \$ 60 13 \$ 1,482 \$ 60 12 \$ 237 \$ 60 12 \$ 237 \$ 20 20 \$ 332 \$ 10 \$ - \$ 60 10 \$ 300 \$ 60 5 OUC \$ 60 3 \$ 15 \$ \$  43% \$ 38% \$ \$	Scott Zimmerman   A07-377-0695   Szimmerman   A07-377-06	Scott Zimmerman   407-377-0695	Scott Zimmerman   407-377-0695	Scott Zimmerman	Scott Zimmerman   407-377-0695	Scott Zimmerman   407-377-0695	Scott Zimmerman   407-377-0695

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# Hidden Creek Villas (Continued)

2001 Rivertree Circle, Orlando, FL 32839



Picture of example of old A/C condenser uints and clear windows



Picture of new SEER 15 Heat Pumps installed and new Window Film.

Other improvements installed include: Duct repair, R-30 attic insulation, Energy Star refrigerators, CFL's, water saving showerheads, aerators and toilet flapper valves.

## Hidden Creek Villas (continued)



Picture of new SEER 15 Heat Pumps and Window Film

# Callahan Oaks



Apartment Rebate/Grant Worksheet													
Complex Name	Callahan Oal	is .	Ser.	annua o			1						
Complex Address			ando	, FL 328	05								
Complex Account#		1					1						
Contact Name							1			-			
Contact Prone#							-			H			
# of Apartments	Tincke@orlango	neighborhoo	Lorg	- 3			ļ.			-		-	
List of Eligible Conservation Measures	No. of Units	Life (yrs)		asure st/unit	Pro	ject Totals		otal avings/yr	Total ARRA Incentive	OL	tal IC sentive	OUC	ntive
ONIC Admin and Project Mgt cost	7.6	10000	1		\$	5,143	1	A 160					
Code Heat Pump SEER13	20	13	\$	3,576	\$	38,380	\$	5,331	\$27,889	\$	-	\$	12
Incremental Heat Pump SEER 15	20	13	\$	500	\$	38,380	\$	1,515	\$7,927	\$	8,000	\$	758
New Standard vs. Old Refrigerator	20	12	\$	400	\$	4,360	\$	574	\$3,003	\$		\$	-
Incremental Energy Star Refrigerator	20	12	\$	50	\$	4,360	\$	137	\$718	\$	1,000	\$	65
Attic Insulation (only 1/2 of units)	10	20	\$	394	\$	3,617	\$	877	\$4,589	\$	2,176	\$	433
Duct Repair	10	10		100	\$	1,000	\$	315	\$1,648	\$	500	\$	158
Window Shading/Tinting	20	10		205	*	4,088	\$	693	\$3,628	\$	4,100	\$	347
Showerheads and aerators	20	- 5	\$	30	\$	387	\$	912	\$387	\$			
Compact Flourescent	20	3	\$	20	\$	120	\$	736	\$120	\$			
		Ÿ.	8		\$	99,835	\$	11,091	\$ 49,909	\$	15,776	\$	1,763
								20					
			1				*	554.54					
Project Cost Total			Ŀ		\$	99,835						_	
OUC Rebate			1		\$	(15,776)	_						
Additional OUC Incentive (max \$30k)			_		\$	(1,769)							
UF Grant (max \$100k)					\$	(49,909)	_						
Customer's Total Contribution	32%				\$	32,381							
Annual Savings per year					\$	11,091							
Project Pay Back Period						2.92							
Avg. Savings/yr/ Retro Unit					\$	554.54							

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# Callahan Oaks (Continued)

659 W. Jefferson St.



Improvements installed include: Window Film on E & W windows (pictured), New SEER 15 Heat Pumps, Duct repair, R-30 attic insulation, Energy Star refrigerators, CFL's, water saving showerheads, and aerators.



Picture of old A/C units and clear window next to new SEER 15 Heat Pumps and Window Film.

# **Boca Club Apartments**

3114 C R Smith St. Orlando, FL 32805



Complex Name	e Boca Club s 3114 C. R. Smith Street, Orlando, FL												1	
Complex Address														
Complex Account#														
Contact Name	Bob Frinc	ke												
Contact Prione#													L	
Contact Email		indoneigh	both	gro.boc	33		<u></u>		<u> </u>		<u> </u>		L	
# of Apartments	216	-	+		ш									
List of Eligible Conservation Measures	No. of Units	Life (yrs)		easure est/unit		oject Itals	To Sa	tal vings/yr		al ARRA entive	O	ital JC centive	inc	ditional IC entive fWh
Code Heat Pump SEER13	108	13	*	1,905	\$	205,700	\$	28,786		\$56,748	\$		\$	_ ×-
Incremental Heat Pump SEER 15	108	13	\$	1,905	\$	205,700	\$	8,183		\$16,131	\$	43,200	\$	4,091
New Standard vs. Old Refrigerator	108	12	\$	245	\$	26,460	\$	3,100		\$6,110	\$	-	\$	_
Incremental Energy Star Refrigerator	108	12	\$	245	\$			741		\$1,461	\$	5,400	\$	370
Attic Insulation (only 1/2 of units)	54	20	\$	240	\$	12,940	\$	4,737		\$9,338	\$	11,750	\$	2,368
Duct Repair	54	10	\$	100	\$	5,400	\$	1,701		\$3,353	*	2,700	\$	851
Window Shading/Tinting	80	10	\$	269	\$	21,548	\$	2,774		\$5,468	\$	20,800	\$	1,387
Showerheads, aerators and flapper valves	108	5	\$	8.00	\$	864	\$	4,925		\$864	\$	-		
Compact Flourescent	108	3	\$	4.44	\$	480	\$	1,987		\$480	\$	-	3	
					\$	505,551	\$	56,933	\$	99,953	\$	83,850	\$	9,068
	Avq. Num				d		Sie	108						
	Avg. Savi	ngs/yr/ F	tetro	Unit			\$	527.16					_	
Project Cost Total					\$	505,551							1	
OUC Rebate					\$	(83,850)								
Additional OUC Incentive (max \$30k)					\$	(9,068)								
UF Grant (max \$100k)	20%				\$	(99,953)								
Customer's Total Contribution	62%				\$	312,680								
Annual Savings per year					\$	56,933								
Project Pay Back Period						5.49								
Avg. Savings/yr/ Retro Unit					\$	527.16								

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# Boca Club Apartments (Continued)

3114 C R Smith St. Orlando, FL 32805



Installed: R-30 Attic Insulation, Energy Star Refrigerators, Ductwork repairs, Window Film on E & W windows, CFL's, SEER 15 Heat Pumps, water saving showerheads and aerators.



Picture of the new SEER 15 heat pump condenser units.

March 2013 B-11 Black & Veatch



Improvements installed include: SEER 15 Heat Pumps, R-30 attic insulation, Energy Star refrigerators, and Water Heater Heat Pumps, water saving aerators.

Complex Name											
Complex Address	2912 Ora	ange C	enter Blvd								
Complex Account#	6705110	0001									
Contact Name					Ļ						
Contact Phone#					Ļ			╙		4	
Contact Email		thevillag	emanagemen	.com	-			⊢		-	
# of Apartments	80		-		-			Н		Add	itional
List of Eligible Conservation Measures	No. of Units	Life (yrs)	Measure Cost/unit	the second second	To Sa	37.75	Total ARRA Incentive	Total OUC		OUG	C entive
Code Heat Pump SEER13	10	13	8	\$0	\$	3,010	\$12,157	\$	**	\$	1.0
Incremental Heat Pump SEER 15	10	13	\$ 3,570	\$35,703	\$	758	\$3,060	\$	4,000	\$	379
New Standard vs. Old Refrigerator	40	12		\$0	\$	1,148	\$4,636	\$	-	\$	- 2
Incremental Energy Star Refrigerator	40	12	\$ 434	\$17,362	\$	274	\$1,108	\$	2,000	\$	137
Attic Insulation (only 1/2 of units)	40	20	\$ 195	\$7,795	\$	3,121	\$12,607	\$	6,792	\$	1,561
Hot Water Heat Pump	40	12	\$ 2,090	\$83,619	\$	7,166	\$28,943	\$	8,000	\$	3,583
Showerheads and aerators	40	5	\$ 44	\$1,772	\$	1,433	\$1,771	\$			
			13	\$ 146,250	\$	16,911	\$ 64,282	\$	20,792	\$	5,660
						40					
				3	\$	422.78					
Project Cost Total				\$ 146,250							
OUC Rebate				\$ (20,792)							
Additional OUC Incentive (max \$30k)				\$ (5,660)							
UF Grant (max \$100k)	-44%			\$ (64,282)							
Customer's Total Contribution	38%			\$ 55,516							
Annual Savings per year				\$ 16,911				T.			
Project Pay Back Period				3.28							
Avg. Savings/yr/ Retro Unit				\$ 422.78				Г			

March 2013 B-12 Black & Veatch

Hope Village (Continued) 3014 Orange Center Blvd, Orlando, Florida 32805



Picture of new Water Heater Heat Pump.

March 2013 B-13 Black & Veatch

# Dunwoodie

4213 Dunwoodie Blvd. Orlando, FL 32839



Improvements installed include: Window Film on E & W windows, New SEER 15 Heat Pumps, Duct repair, R-30 attic insulation, Energy Star refrigerators, CFL's, water saving showerheads and aerators.

Complex Name	Dunwoodie F	lace	1										
Complex Address	4213 Dunwo	odie Blvd. (	ĺ			т							
Complex Account#	7790010001	di l	ĺ										
Contact Name	Scott Zimme	rman	1										
Contact Pnone#	407-377-069	5											
Contact Email		acomanager.	om	34	- 1	_							
# of Apartments	172					3			-	-	-		
List of Eligible Conservation Measures	No. of Units	Measure Life (yrs) Costiunit		No. of Units   Life (yrs)		Proj	ect Totals	100			Total OUC Incentive		onal OUC tive \$/MWh
				1							\$	70.00	
Code Heat Pump SEER13	44	13	\$ 1,532.83	5	67,444	\$	11,728	\$42,552	\$		\$		
Incremental Heat Pump SEER 15	44	13	\$ 1,532.83	\$	67,444	\$	3,334	\$12,096	\$	17,600	\$	1,667	
New Standard vs. Old Refrigerator	44	12	\$ 225.23	5	9,910	\$	1,263	\$4,582	\$		\$		
Incremental Energy Star Refrigerator	44	12	\$ 225.23	\$	9,910	\$	302	\$1,095	\$	2,200	\$	151	
Attic Insulation (only 1/2 of units)	22	20	\$ 321.75	\$	7,079	\$	1,889	\$6,856	\$	4,512	\$	945	
Duct Repair	22	10	\$ 137.95	5	3,035	\$	693	\$2,514	\$	1,518	\$	347	
Window Shading/Tinting	44	10	\$ 310.00	5	13,640	\$	1,500	\$5,441	\$	4,547	\$	750	
Showerheads and aerators	44	- 6	OUC			\$	1,577	\$0	\$				
Compact Flourescent	44	3	\$ 4.79	\$	843	\$	1,619	\$843	\$				
		algebraich	47.30350.035	\$	179,306	\$	23,904	\$ 75,979	\$	30,376	\$	3,859	
		THE RESERVE AND ADDRESS OF THE PARTY.	er of units Re	COLUMN TO SERVICE	ed		44	A 1 4 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5	- 77	1- 41-113	100		
		Avg. Savin	gslyn/Retro L	nit		\$	543.26						
Project Cost Total			200	\$	179,306				_				
OUC Rebate				\$	(30,376)	1_			_				
Additional OUC Incentive (max \$30k)	$\overline{}$			\$	(3,859)				_				
UF/ARRA Grant (max \$100k)				\$	(75,979)								
Customer's Total Contribution	39%			\$	69,092								
Annual Savings per year				\$	23,904								
Project Pay Back Period					2.89								
Avg. Savings/yr/ Retro Unit				5	543.26								

March 2013 B-14 Black & Veatch

Now that the "construction phase" has been successfully completed, the remainder of the project needs to be finalized, including:

- . Gather, document, and disseminate all of the benefits of these improvements such as:
  - o Actual energy and water savings through Measurement and Verification (M&V)
  - o Improvement in renter retention rates
  - o Improvement in occupancy rates
  - o Reduced complaints
  - o Reduced maintenance and administration costs
  - Increased property value
- Create and offer a standard retrofit program in the OUC service territory that incentivizes a variety of
  energy, water, efficient and renewable energy improvements in multi-family housing.
- Enroll apartment owners to participate.
- Create a model web-based energy use data visualization platform for apartments in order to provide current and prospective renters with comparative data on actual energy use of complexes and units.
   A prototype that is in its preliminary stages of development can be viewed at: http://ouc.toolsfortenants.com/
- Develop a climate to encourage competition to own or live in the "greenest" complex in town.

### Milestones of Clean Energy Grant from beginning to construction

January 15, 2010- Florida Energy and Climate Commission (FECC) approved draft solicitation document for Clean Energy grant. Awaiting approval from DOE

May 24, 2010- Solicitation of grant becomes public (Application Due date June 18, 2010)

May 24, 2010- T. Gross contacted UF's Dr. P. Jones to propose a joint project for Low-income multi-family energy efficient retrofits.

June 10, 2010- OUC provides a letter of support and commitment of \$150,000 towards the project

June 18, 2010- UF Submits Grant Application to FECC

August 13, 2010- informed UF/OUC proposal was not awarded funding

May 19, 2011- Informed UF/OUC were awarded the Grant after several proposed projects failed to materialize

May 24, 2011- OUC reaffirms OUC's support and commitment to project

June 29, 2011- Agreement between FECC and UF executed

August 31, 2011- UF prepares SOW between OUC and UF. Solicitations for participation are sent to the Multi-

September 22, 2011- Application and funding allocation methodology approved by UF

September 29, 2011- Started to receive applications

December - OUC executes SOW with UF

December 21, 2011- UF reviews and approves submitted applications. Customers are notified to proceed as proposed.

January 1, 2012- Retrofits begin

April 30, 2012- All construction completed and inspected.

March 2013 B-15 Black & Veatch