

Distributed Energy Services Annual Report Fiscal Year 2012

Forward from the Vice President of DES

In 2007, Austin Energy (AE) committed to achieving an 800 megawatt savings goal to be reached Fiscal Year End 2020. Five years into our efforts, we have accomplished nearly 40% of the goal. FY 2012 proved to be a successful year for AE across all programs. FY 2013 is expected to be as successful with the transition from grants to in-house programs and the research and development of new programs. The goals remain the same – to bring energy efficiency to all Austin Energy customers in the most cost-effective, high-value manner possible.



Much of the success for FY 2012 was supported by grant-related work within select programs. Austin Energy was successfully awarded millions in grant dollars which has allowed us to reach more customers without increasing the burden to Austin Energy customers. Credit goes to many AE employees, contractors, and support personnel for the significant effort directed to grant activity, while supporting existing and new AE programs.

We continue to look for innovative ways to improve service while focusing on cost-effective measures. We strive to make energy efficiency part of every customer's life and work.

As the newest member and leader of AE's energy efficiency team, I look forward to the challenges and opportunities that lie ahead. We are building on our partnership with AE's Customer Assistance Program to better serve those in need. We are engaging community stakeholders in an effort to increase dialogue and transparency as we move toward achieving our megawatt goal. We will focus on new technologies as well as improving existing programs. I hope you share my excitement and my staffs' enthusiasm as we move into FY 2013 and closer to achieving our 800 MW goal. Austin Energy is committed to continuing our industry leadership in developing and promoting customer energy efficiency and demand response programs that benefit our customers, the community, and the environment.

Debbie Kimberly Vice President, Distributed Energy Services Austin Energy

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EXECUTIVE SUMMARY

Austin Energy (AE) is responsible for and committed to the design, implementation and evaluation of Residential Energy Efficiency offerings, Commercial Energy Efficiency offerings, Energy Management Offerings, and Green Building offerings. From our national Energy Star Sustained Excellence Award-winning Home Performance with Energy Star and Green Building programs to our ongoing efforts to help limited income customers achieve better energy efficiency, AE delivers cost-effective energy efficiency opportunities to our customers while striving to meet an 800 megawatt savings goal by 2020.

By offering technical assistance and energy audits, AE identifies efficiency opportunities, makes recommendations for cost-effective measures, and offers financial incentives for installation of efficient qualifying equipment. Green Building offers consulting services and technical assistance to building industry professionals in market segments seeking to build energy efficient structures that preserve and improve the quality of life in Austin. These offerings drive market transformation to maximize energy resources by lowering electric bills, increasing customer comfort, and improving customer satisfaction. Greater efficiency also reduces power plant emissions and promotes economic development in the Austin area.

FY 2012 offered many exciting challenges for Distributed Energy Services (DES), including the receipt of over \$29 million in federal grant funding. These grants allowed DES to reach more customers with energy efficiency measures and to assist the utility in achieving its energy savings goal.



Total Participant Increase, 2011 to 2012 = 7,445

The diverse mixture of residential efficiency, commercial energy management and green building programs offered by AE have achieved substantial reductions in peak electric demand, energy usage, as well as associated power plant emissions, thereby avoiding the need for Austin Energy to purchase power or build new power plants. For FY 2012, the foregoing programs reduced peak electric demand by 48.5 megawatts and energy usage by 106,070 megawatt-hours. Not only does this energy reduction assist the utility in avoiding building new power plants, the programs avoid power plant emissions of greenhouse gases by over 63,805 metric tonnes annually and water savings of over 47 million gallons. Finally, for every kilowatt hour saved, customers are also saving money.



Megawatt Savings by Program Area, FY 2011 to FY 2012

Total Megawatt Savings Increase, FY 2011 to FY 2012 = 2.1 MW

Austin Energy is on target to achieve our 800 megawatt savings goal by 2020. Efforts within DES focus on achieving this goal in the most cost-effective, high value manner possible. Additionally, DES works with a variety of internal and external resources to explore new ways to save energy and money for our customers. As AE evaluates it rates to meet growing operating expenses, DES programs and services become more impactful to our customers. By creating programs and providing services that help customers reduce their energy use, energy efficiency can help offset potential increased costs with rate increases. Customers benefit, the utility benefits, and our community benefits.

ENERGY EFFICIENCY RESIDENTIAL REBATES

Austin Energy encourages residential customers to take advantage of a wide variety of AE conservation programs designed to help them reduce energy consumption and save money on their electric bills as well as help all the residents of Austin by defraying the cost of construction and operation of additional power plants. Marketing and community outreach are necessary components to residential programs so that customers can stay informed about new programs and changes in energy efficiency technology.

FY 2012 saw a decrease in residential rebate program participation. Much of this drop in measured participation is due to participation in the Better Buildings and ARRA grants. Participation in these two grants allowed more customers to benefit from energy efficiency because of the focus in the multifermily properties. More details on the grant estimities EX



multifamily properties. More details on the grant activities FY 2012 are provided in subsequent sections.



FY 2012 – Actual Number of New Participants by Residential Program

Decrease over FY 2011 = [-3,991]

As with the reduction in participation in rebate programs, the overall savings was correspondingly less than in FY 2011. However, this specific savings was offset by participation in and savings gained from both the ARRA Weatherization grant and the Better Buildings grant. The reduction in savings in relation to the FY 2012 goal is more than offset by the participation seen in both the ARRA Weatherization grant and the Better Buildings grant. These grants allowed us to improve the energy efficiency in over 950 dwellings and achieve an energy savings of close to 800,000 kWh. This is equivalent to serving 67 average Austin residential customer homes for 1 year.



The Home Performance with Energy Star and the Appliance Efficiency rebate programs continue to be the highest producing programs in terms of megawatt savings.





Home Performance with Energy Star

Home Performance with Energy Star is a "whole house" approach to energy efficiency, incentivizing customers to complete multiple recommended measures including attic insulation, duct repair, home air sealing, weatherization improvements, solar screens, Energy Star-rated windows, and a properly sized high-efficiency heating and cooling system. A trained home performance contractor performs a home energy analysis of homes, 10 years of age or older. Through the use of a rebate, a loan, or a combination of both, over 2,200 customers participated in FY 2012 and achieved an average annual savings of 1.8 kW, missing its program goal by nearly 2 MW.

Appliance Efficiency Program

The Appliance Efficiency program (AEP) exceeded its FY 2012 goal by 1 MW by providing rebates for the installation of high-efficiency air conditioning units and ground source heat pumps that are more efficient than local energy code requirements and the national appliance manufacturing standards. Over 3,000 homes received a new air conditioner or ground source heat pump and saved an average of 0.9 kW annually.

Free Weatherization

Austin Energy offers free home-energy improvements to qualifying low-income customers. These improvements reduce energy costs, thus lowering utility bills and enhancing comfort for customers who might otherwise be unable to afford such upgrades. AE provides materials for and installation of attic insulation, minor duct repair and sealing, caulking around plumbing penetrations, weather stripping around doors, and solar screens.

Austin Energy received a federal grant through the American Recovery and Reinvestment Act (ARRA) of 2009 that superseded the free weatherization program in FY 2012. ARRA helped AE

fund numerous low-income, energy-efficiency upgrades through the Texas Department of Housing & Community Affairs (TDHCA) grant program. In FY 2012 AE completed free weatherization of 842 homes, bringing the total to 1,767 homes over the period 2009 to 2012. The grant allowed AE to bring energy efficiency to more Austin families than we could have reached with the weatherization program alone.

Each home received an average of \$4,931 in free improvements, including as-needed replacement of air conditioning and heating systems, attic insulation, duct repair/replacement, air sealing work and minor energy-related repairs to the home. It is estimated that each of the homes will experience an average 13% reduction in annual energy usage due to energy efficiency improvements. The graph below compares typical spending on low and limited income customer homes, with and without grant funding. As the graph shows, the grant allowed AE to invest more money per home for greater overall energy savings for our customers.



FY 2012 Comparative Program Spending Per House - Low and Limited Income Customers

In addition to assisting customers with energy efficiency, the grant program also supported the local economy. Six weatherization contractors, employing a total of sixty (60) employees, benefited from the work generated through the grant. Included in this group of contractors were minority business enterprises (MBE) and woman business enterprises (WBE).

Free Thermostat/ Power Partner Program

The Free Thermostat program, also known as the Power Partner program, is offered to both residential and commercial customers. For 12 years, the thermostat load management system has provided AE with an affordable and reliable method of reducing air conditioning load when the demand for electric power is at its peak on hot summer afternoons. This is a voluntary program and

participants benefit through free installation of a programmable thermostat as well as a sense of commitment to their community and environment.

For FY 2013, this program is being enhanced with a new business model for outreach and deployment as well as more advanced two-way technology. This new technology will still provide the demand savings plus give customers more control over their energy use.

Other Residential Rebate Programs

The Appliance Recycling program targets the permanent removal of inefficient refrigerators and freezers from AE's electric system. Ninety-eight percent of the refrigerator/freezer components are recycled, thus minimizing landfill disposal. The program has recycled 23,870 appliances since it began in 2004. The materials captured and recycled include 1,700 tons of scrap metal and 14,500 lbs. of chlorofluorocarbon/hydrofluorocarbon refrigerants - the equivalent of taking 1,645 cars off our roads annually.

Austin Water Utility and AE customers can purchase high efficiency clothes washers that are up to 50% more energy and water efficient than conventional top loading clothes washers. In FY 2012, 414 customers participated in the program. This program was a successful partnership between the two utilities and, because of its market penetration, will be moving into the sunset phase.

The original Pool Pump and Motor Rebate program, launched in FY 2008, offered a rebate that was split between the vendor and the customers, a benefit that some customers found confusing. New marketing strategies were employed to make participation straightforward and appealing. As a result, Austin Energy's Pool Pump and Motor program participation increased more than 100%, with more than 130 customers receiving a rebate in FY 2012.

ENERGY EFFICIENCY MULTIFAMILY REBATES AND INCENTIVES

Austin is a unique community with more than 54% of citizens living in rental properties (US Census QuickFacts). Many of these properties are over 95% occupancy. The Multifamily Rebate program, a costeffective opportunity to directly provide energy efficiency to a large number of AE customers, provides rebates to existing apartment and condominium communities for making energy-efficient improvements. The program has seen an increase in participants with the recent Energy Conservation Audit and Disclosure (ECAD) ordinance that provides



multifamily properties with detailed information about their property's energy usage as compared to similar complexes. The most popular improvements in FY 2012 were solar screens, attic insulation, and duct sealing. These improvements resulted in increased efficiency for over 18,200 apartment units. The popularity of this program led to a 138% increase of the actual savings over the predicted goal. The multifamily program reaches more residential customers than any other energy efficiency program, bringing energy savings and reduced utility bills to many Austin citizens.





Air Duct System Diagnostic and Improvement Program

The Multifamily program assists owners and managers of multifamily properties with duct sealing improvements to conserve energy resources and lower utility bills. The program encourages multifamily property owners to have their duct systems checked to identify air leaks and to have any ductwork leaks sealed. This improvement helps reduce cooling and heating costs, resulting in lower energy bills for residents.

Cycle Saver Water-Heater Timers

Like the Power Partner program, the Cycle Saver Water Heater Timer program is a load management strategy that was created to expand AE's efforts to manage the demand for energy during periods of peak demand for power. The program installs energy-controlling water heater timers on individual electric water heaters at multifamily properties. The program directly targets multifamily properties with electric water heaters, providing the owners and managers with incentives for participation along with providing nearly 1 kW per participant in annual savings.

ENERGY EFFICIENCY COMMERCIAL REBATES



despite 242 fewer participants.

AE offers rebates to commercial customers for investing in new, energy efficient technologies that reduce the high demand for electrical power during hot summer afternoons when the demand for electric power is at its highest. The program focuses on lighting, heating/air-conditioning, thermal energy storage (TES), motors, variable frequency drives, building envelope, and other custom technologies. The program demonstrated a great energy saving success,



FY 2012 - Number of Participants by Commercial Program

For FY 2012, the Commercial Rebate program exceeded its overall goal by over 2 megawatts and surpassed FY 2011 by 1.6 MW.



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While there were fewer participants in FY 2012, as compared to FY 2011, the overall savings was greater. This additional savings was seen in both the Load Coop and Commercial Rebate programs.



Commercial Rebate Programs

Businesses averaging less than 100 kW per summer month receive a price discount at the time of purchase when installing energy efficient lighting equipment. In FY 2012, the Small Business Lighting program had 156 participants.

The Small Business Bonus program helps businesses and organizations operating out of converted residential structures implement a variety of energy efficiency measures to reduce their electric demand. Participants receive an additional 30% bonus on one or more of AE's Commercial Rebates (excluding solar rebates) up to \$200,000 per customer per site.

The Load Coop program provides an opportunity for commercial and industrial customers to participate in our Demand Response program. A total of 16 customers enrolled for a total of 78 individual locations. Curtailments, the request to reduce demand power, were called 11 times for a total savings of 6 MW an average savings of 5 MW for September curtailments alone.

The Municipal Energy Conservation program (MECP) began in FY 2011, providing technical support, employee awareness training, funding for energy conservation projects, procurement services, and project management. During FY 2012, municipal conservation efforts included recommissioning 14 City facilities and 18 City offices, fire stations, and EMS stations using Texas A&M Energy Systems Laboratory's "Continuous Commissioning" program. Below are examples illustrating the success of this municipal program.



HVAC Upgrades at the Techni-Center Building

An 118,000-gallon thermal energy storage unit was completed with the renovation of the building's HVAC equipment. Detailed work included the reworking of air ducts, replacement of air-handling units, pumps, motors and the domestic hot water systems, the conversion to a variable air volume system, and an upgrade to a new energy management system.

Exterior Lighting Improvements

One Texas Center Parking Garage was converted entirely to 100% LED lighting in FY 2012, resulting in a total lighting load that is now 73% below the Energy Code lighting requirement, meaning that is much more efficient than required by code.

The main parking lot lighting at the Rutherford Lane Campus was converted to LED technology. The lighting load was reduced by 64% and energy usage was reduced by 59,126 kWh annually.

American Recovery and Reinvestment Act (ARRA) and Energy Efficiency and Conservation Block Grant (EECBG) funds were also used to purchase 41 LED Decorative Post-Top and 149 LED cobra head streetlight luminaries. The LED streetlights reduced the existing load by 49% and energy usage by 56,874 kWh annually.





Interior Lighting Improvements

The Decker Power Plant Generator Floor was retrofitted with 250W Induction High Bay luminaries to replace hard-to-service 400W HPS luminaries, reducing the 24-hour-a-day, 7-day-a week lighting load by 45%. Other campus buildings were retrofitted with T8 fluorescent technology and occupancy sensors. Decker's load was reduced by 46 kW and energy usage by 389,325 kWh annually.

The concourse and the baggage claim areas in Austin Bergstrom International Airport's Main Terminal had LED and induction retrofit kits installed in architectural fixtures to replace 1,000W metal halide lamps and ballasts to yield a load reduction of 56 kW and reduced energy usage by 529,105 kWh.





Lighting retrofits were also completed at the Austin

History Center, Austin Resource Recovery Todd Lane facility, South Austin Senior Center, Rutherford Lane Campus Atrium Lobby, Palmer Events Center Atrium Lobby, Building Services 411 Chicon Administrative Building, and APD's Blue Santa Warehouse. These retrofits save City buildings energy and money.



AUSTIN ENERGY GREEN BUILDING

Austin Energy Green Building (AEGB) offers consultation, technical assistance, and green building rating services to building industry professionals working on new construction and major renovation projects within the Austin Energy service area. AEGB considers the "big picture" in the building or remodeling and how the building affects not only its occupants, but also the community and the planet.

AEGB consists of single family, multifamily, and commercial green building ratings and is responsible for facilitating the adoption and implementation of the City of Austin Energy Code and code enhancements. AEGB nearly doubled its participation rate in FY 2012 over FY 2011.



FY 2012 - Total Number of Green Building Participants by Program



Overall, AEGB is responsible for nearly 12 MW of savings for FY 2012 with the greatest savings coming from code efforts.



Total FY 2012 Savings = 11.9 MW Increase over FY 2011 = 2.3 MW

For FY 2012, the Green Building program exceeded its overall goal due to increased savings in the multifamily sector.



FY 2012 - Green Building MW Savings - Goal to Actual

Green Building Ratings

The underlying concept of AEGB is to evaluate homes and buildings based on their sustainability. Sustainability is defined as meeting today's needs without compromising future generations' ability to meet their needs. The rating system has been designed by AEGB to meet Austin's specific climate and construction needs and to further the City's sustainability policy. Not only does this program provide immediate energy savings, it also enhances the long-term plan of energy reductions and environmental benefits. The system is used to rate projects on a 1-star to 5-star scale with 5 stars being the highest rating.

The Single Family program began rating homes in 1992, using a 3-star system, with a focus to ensure that the homes built are energy and resource efficient. The rating system was expanded to 4 stars in 1998. In 2001, the first 5-star home was recognized. In FY 2012, the Single Family program rated 352 homes. The table to the right shows the number of homes by star rating from 1995 through 2012.

Rating	Number of Homes
1 Star	5139
2 Star	2573
3 Star	1666
4 Star	359
5 Star	524

The Multifamily program provides services to developers, designers, and builders of low and midrise multifamily buildings. In FY 2012, Multifamily Green Building rated projects containing 709 units.

The Commercial program assists owners, developers and building industry professionals in achieving a Commercial Green Building rating for their new construction or major renovation projects. Green Building ratings are now required for all major projects in the Central Business District, all buildings at the Mueller redevelopment, in several Planned Unit Developments (PUDs), and in other instances where mandated by the Austin City Council. In FY 2012, the Commercial program rated 12 projects, comprising approximately 2.01 million square feet.

Energy Code

AEGB is responsible for overseeing the City of Austin Energy Code. When new systems and technologies are proven to be cost effective and sustainable through the rating system, they are incorporated into the City of Austin Energy Code to raise the bar for all new buildings. The City of Austin Energy Code will be used to increase standards on energy efficiency until all new homes constructed are zero energy-capable by 2015. Zero energy-capable homes are so energy efficient that it becomes more cost effective to install on-site renewable generation systems to achieve net zero annual energy use.

GRANTS AWARDED

AE was awarded nearly \$29 million in grant funds over the last five years to support city-wide energy efficiency initiatives, renewable generation, and transportation. By receiving these grants and successfully deploying the monies, AE was able to achieve wider and deeper energy savings without increasing costs to our customers.



ARRA - Clean Energy Accelerator/Be	etter Buildings	\$10.0 million
ARRA – Low Income Weatherization	\$9.6 million	
ARRA – Energy Efficiency and Cons	ervation Block Grant	\$7.6 million
Electric Vehicle Infrastructure Grant ((Charge Point America)	\$633,000
Texas River Cities Plug-in Electric Ve	ehicles Initiative	\$500,000
ARRA - Solar Curriculum Developme	ent & School Demo	\$216,000
APPA Power Factor Analysis Tool	\$50,000	
Best Practices for Data Center Energy	Efficiency	\$34,000
Central Texas Clean Cities	\$32,000	
ARRA - Propane Vehicles/Infrastruct	ure	\$17,500
Solar City Partnership	\$8,000	
Propane Lawn Equipment Project	\$1,500	

Through these grants, AE was able to reach more of the community - including schools, nonprofit organizations and neighborhood groups. AE was also able to bring greater levels of energy efficiency to low income, elderly, and disabled customers. The grants allowed AE to bring more technology to Austin including solar and plug-in electric vehicles. Finally, the awarding of these grants to AE created greater opportunities for the local economy.



ENERGY CONSERVATION AND DISCLOSURE (ECAD) ORDINANCE

The Energy Conservation and Disclosure Ordinance No. 20081106-047 (ECAD) was approved in November 2008 and amended as City of Austin Ordinance No. 20110421-002 in April 2011. The Ordinance was put into place to promote a market shift toward increased participation in energy efficiency upgrades to existing residential,

multifamily and commercial buildings to support the Austin Climate Protection Plan Homes and Buildings Initiative.

Within the single family housing market, educational workshops are an important component of the customer education and awareness campaign and essential for local real estate professionals. These real estate workshops provided information on Austin's disclosure law, the Green MLS system (a real estate-based listing service), home performance retrofits, and utility initiatives and rebates.

Austin Energy met regularly with local property owners, building owners, management companies and professional associations, providing updates on Austin's disclosure laws, innovative technologies and utility initiatives. An educational webinar series sponsored by Austin Energy and Environmental Protection Agency on "How to Rate Your Building" prepared building owners in advance of the ECAD phased-in benchmark reporting. Additionally, AE developed а video (https://www3.ci.austin.tx.us/ecad/) that will be available in FY 2013 to assist in increasing the points of the ECAD audit as well as energy efficiency information to focus on increasing the conversation rate from audit to rebate program participation.

Family Home Audit Counts

ECAD Single

Over the life of the single family audit process, 97% of homes received energy efficiency recommendations. However, only 6% went on to participate in a residential rebate program in the first 12 months of the home sale. The goal for FY 2012, per the

		Not		% Non
	Exempt	Exempt	All	Exempt
Home	from	from	Homes	Homes
Sales	Ordinance	Ordinance	Audited	Audited
11,230	4,118	7,112	3,538	50

resolution, was 65% of residential homes sold would have cost-effective improvements made. In an effort to continually increase the number of homes audited each year as well as encourage more energy efficiency improvements, AE will be increasing outreach to real estate professionals and the general public. These education and marketing efforts are designed to bring more homes into audit compliance and efficiency adoption.

ort multifamily	To suppor					Apartment
, Austin	customers,			Apartment	Apartment	Communities
provided	Energy	Non Exempt	Apartment	Communities	Communities	within the
workshops for	education	Communities	Communities	Not Exempt	Exempt from	Austin City
professional	local	Audited	Audited	from Audit	Audit	Limits
nd multifamily	auditors an	66%	728	1,096	276	1,372
performance	building				•	

ECAD Multifamily Audit Counts

contractors. These workshops provided updates on Austin's disclosure law, innovative technologies, building science training opportunities and retrofits, and current utility initiatives and rebates.

			mici ciai muu	t Counts		
Commercial audits		Buildings or	Buildings or			
were staggered across	Buildings or	Campuses	Campuses			
building size, with the	Campuses	between	between	Average	Average	Average
largest buildings	over 75K	30K and	10K and 30K	Rating	Site EUI	Emissions
required to report by	sqft	75K sqft	sqft	(1-100)	(kBTU/sqft)	(MtCO2e)
June 2012.	632	877	1534			
Interestingly, several	buildings	buildings	buildings	64	135	2,108

buildings in the other categories have already reported their Energy Usage Index (EUI) numbers even though their reporting periods begin in June 2013 for mid-size buildings and June 2014 for the smallest buildings. These commercial building owners are getting a head start on learning more about the energy usage of their buildings.

ECAD Commercial Audit Counts

ADDITIONAL DISTRIBUTED ENERGY SERVICES PROGRAMS



Residential Online Energy Analysis

AE offers a free online home energy analysis to residential customers through Austin Energy's website (<u>http://www.austinenergy.com/</u>). Appliance Calculators have also been added to allow customers to determine energy savings for specific products such as refrigerators, dishwashers, HVAC systems, water heaters, and lighting. Customers interested in taking action to implement the recommended measures are directed to AE's Residential

Energy Efficiency program webpage (http://www.austinenergy.com/Energy%20Efficiency/Programs/Rebates/Residential/index.htm).

Watt Meter

Austin Energy and the Austin Public Libraries teamed up to make available 100 watt meters. These devices measure how much energy common household appliances use. The project created public awareness and education about appliance energy consumption and the power consumed in the "off" mode, known as a phantom load or vampire load. The devices have proven to be very popular, with as many as 73 of the watt meters checked out at any one time.



Power Saver Volunteer Program

Power Saver Volunteers are residential customers who volunteer to help reduce their electrical consumption during hot summer afternoons when the demand for electric power is at its highest. When contacted via telephone, text message or email, they are asked to adjust their air conditioning thermostat two to four degrees higher and turn off all unnecessary appliances and lights. This voluntary load shedding minimizes the demand on the system as well as create innovative ways to reduce energy use such as using a microwave and going to the local pool.



GreenChoice

GreenChoice®

GreenChoice is Austin Energy's award winning, Green-e certified renewable energy program that provides customers the option of choosing

renewable energy for their electricity sources. Subscribers to the program are buying energy produced from 100% renewable sources like wind power and support the development of new renewable energy projects in Texas.

Onsite Energy Surveys

AE performs no-cost energy audits of commercial buildings to identify energy efficiency opportunities. An experienced staff of energy engineers, energy representatives, and energy consultants perform a walk-through energy survey of facilities to make energy saving recommendations to building owners and operators. These assessments are specific to the business so that energy efficiency improvements fit the environment.

A unique component of onsite energy surveys is the Small Business Outreach program. The program provides small businesses a custom report of an energy assessment of their building and recommendations to improve the energy efficiency of the building such as duct sealing, window treatments, and efficient lighting and motors. Customers find this personal approach beneficial to increasing their understanding of their business relationship to electricity.

Power Factor Analysis Tool

Customers with low power factor draw more electric current than would be necessary with more efficient facilities or equipment. Austin Energy developed a power factor correction analysis tool that specifically recommends efficiency measures to mitigate the impact of power factor penalties. A larger draw from available electricity results in higher system line losses and requires the utility to install additional capacity. This results in customers with a higher cost to serve. This analysis helps companies correct their electrical systems so that the electrical power is used more efficiently, thus saving energy and money.

Load Profiler

With Austin Energy's web-based Load Profiler, commercial customers can monitor their company's energy use daily, hourly, or every 15 minutes. Load Profiler pinpoints unusual or unnecessary loads and helps customers take control of their company's energy use.

Key Accounts Management

In addition to state government and one of the largest university populations in the nation, Austin Energy serves sophisticated industries and high-tech companies. The Key Accounts staff is very proficient in meeting the needs of this diverse and complex customer group. The utility has developed tremendous expertise in serving power-sensitive customers and delivers technical knowhow through a nationally recognized Key Accounts program.

Plug-In Partners

Austin Energy is making it easy to save on fuel and go electric whether you are driving a car or riding a bike. Electricity is a cleaner, convenient, and more cost-effective fuel compared to gasoline. By partnering with the Texas River Cities Plug-In Electric Vehicle Initiative, Austin Energy is promoting clean and efficient electric cars for Central Texas. Read more about the initiative at <u>http://texasrivercities.com/</u>.



Future Programs

Austin Energy strives to keep up with current technology and customer needs. FY 2013 holds exciting additions to our program offerings. We will be introducing a mobile web site where residential customers can monitor their electricity usage as well as set tier alerts to help them better control their energy use. We are also creating a new demand savings program that will allow customers to take advantage of the latest technology in programmable thermostats. Austin Energy is engaging our community stakeholders in the year-long process to discuss and evaluate programs, program changes and new program ideas that will help us reach our 800 MW goal in the most cost-effective manner.

AUSTIN ENERGY SOLAR PROGRAM



Unlike energy efficiency programs, solar is a supply-side resource. Adding this energy resource to AE's portfolio allows for a better mix of energy sources that can react to the growing energy demand needs of Austin. Solar is also critical to the pursuit of clean energy development as we seek to meet Austin's sustainability goals. Like energy efficiency, the Solar program strives toward its own megawatt goal – 200 MW by 2020. The success of the program, indicated by current participation and planned participation, shows that the program is on track to meet and possibly exceed its goal.

Solar Rebate Programs

AE's Solar Rebate programs assist customers implementing photovoltaic (PV) technology and solar hot water in their home or business by offering financial incentives to offset the customers' initial investments. Significant change lifted the program cap from 20kW to 200kW to enable commercial customers to leverage economies of scale and strengthen participation. Another important change impacting the solar program was the implementation of the Value of Solar rate. Residential solar customers gained from their solar production with a 12.8 cents/kWh return on the solar energy they produce. Customers have also benefited from declining installation costs, opening up the accessibility of solar systems to more customers.



Increase over FY 2011 = 199

The total installations for FY 2012 were 2.2 MW of PV (residential and commercial) and 90 solar hot water systems, resulting in an increase of nearly 0.7 MW over FY 2011.





City Solar Projects

In FY 2012, several projects were in the design stage or beginning construction. One long-term project was designed to provide approximately 500 kW of PV generation at Austin Energy's new System Control Center. Two other PV projects were being developed: 1) rehabilitation of PV at the Decker Creek Power Plant; and 2) installation of PV on seven City of Austin buildings, operated by the Fleet, Fire, Parks, Health, and AE departments.

AE applied for and received a grant for PV systems on the Carver Library and Carver Museum. These grant-funded systems were designed and solicited in FY 2012, and construction will begin in FY2013.

GLOSSARY OF TERMS

Benefit-Cost Tests - tests used in energy efficiency program design, planning, and management to determine if a program or portfolio of programs is beneficial to the utility and its customers. These tests determine net impacts on cost effectiveness.

Total Resource Cost (TRC) - used to measure the cost effectiveness of energy efficiency programs compared to the cheapest source of power production. The premise is that the energy savings from energy efficiency programs must cost less than the cost to produce a similar amount of energy form a traditional power plant. A TRC greater than 1.0 is considered cost-effective.

Participant Test (PT) - used to measure the program benefit to the participant and what kind and how much of an incentive is needed to motivate customers to participate. This test helps determine specific dollar amounts in rebate and incentive programs.

Utility Cost Test (UCT) - used to determine if programs are beneficial to the utility as a resource in meeting customer demand for energy. Energy efficiency can be seen as a virtual energy resource using this test.

Ratepayer Impact Test (RIM) - used to analyze the impact of energy efficiency programs on rates in the evaluation of the impact on nonparticipants. Energy efficiency programs should not overly burden nonparticipants through higher electricity rates.

Societal Cost Test (SCT) - an attempt to measure the net cost/benefit to society of energy efficiency programs. Benefits may include environmental, improved health care, and improved participant comfort.

Building Envelope - the physical separator between the interior and the exterior environments of a building. The more energy efficient the building envelope is, the less energy is needed to control the internal environment.

Conservation - the reduction of energy consumption whereas energy efficiency is producing the same results using less energy.

Conservation and Incentives Rebates Fund (CRIF) - portion of the Austin Energy budget designated to provide funds for all rebate programs. This portion of the budget is now funded with money from the Community Benefit Charge that is part of the utility bill.

Demand - rate of using electricity measured by kilowatt (kW). This is the power used by consumers and can fluctuate hourly, daily, monthly, and annually.

Peak Demand is the highest point of customer consumption in a given time period and typically used for assessing rates and costs.

Demand Response (DR) - programs that are designed to be both fiscally and environmentally responsible ways to respond to occasional peak demand periods. The programs offer incentives to businesses that volunteer and participate by temporarily reducing their electricity use when customer energy demand could outpace power plant supply.

Demand Side Management (**DSM**) - the modification of consumer demand for energy through various methods such as financial incentives and education.

ECAD - Energy Conservation Audit and Disclosure ordinance (No. 20110421-002, Austin City Code, Chapter 6-7) designed to improve the energy efficiency of Austin homes and buildings that receive electricity from Austin Energy.

Emissions - a gas in an atmosphere that absorbs and emits radiation, often referred to as greenhouse gases. Emission reductions tracked include carbon dioxide, nitrogen oxide, sulfur dioxide, carbon monoxide, suspended particulates, non-methane organic compounds, and volatile organic compounds.

Energy Efficiency - developed and designed to reduce the amount of energy required to create the same results. It is not a conservation of energy but a more resourceful use of energy. For example, an energy efficiency home would be one where the residents would feel as comfortable in their cooled or heated home while using less energy.

Load Cooperative - commercial program designed to reduce unnecessary power load during peak demand periods, typically during hot summer days.

Load Factor - how much energy was used in a time period versus how much energy would have been used if the power had been left on during a period of peak demand. It is a useful indicator for describing the consumption characteristics of electricity over a period of time.

Multiple Listing Service (MLS) - a marketing database set up by a group of cooperating real estate brokers.

Photovoltaic (**PV**) - a method of generating electrical power by converting solar radiation into direct current electricity using semiconductors that exhibit the photovoltaic effect. Photovoltaic power generation employs solar panels composed of a number of solar cells containing a photovoltaic material.

Power Factor - the ratio of the real power flowing to the load to the apparent power in the circuit. An electrical load with a low power factor draws more current than a load with a high power factor for the same amount of useful power transferred. The result of a low power factor is often wasted energy.

Sustainability - meeting today's needs without compromising future generations' ability to meet their needs.

Thermal Energy Storage - allows excess thermal energy to be collected for later use. Thermal energy can be converted to electrical energy. Thermal energy is used to run engines and turbines and is a popular form of industrial energy.

Variable Frequency Drive (VFD) - a type of adjustable-speed drive used in electro-mechanical drive systems to control AC motor speed and torque. Adding a VFD to a motor-driven system can offer potential energy savings in a system in which the loads vary with time. In other words, the VFD matches the power delivered with the work being done to balance the overall system.

Watt (**W**) - a measure of power. For example, a 100W light bulb uses 100 watts of power when turned on. If the light bulb is left one for 4 hours, it then uses 400 watt hours. Watts measure power and watt hours measure power over time. Other measures of power and power over time include:

Kilowatt Hour (**kWh**) - energy equal to 1000 watt hour. The kilowatt hour is most commonly known as a billing unit for energy delivered to consumers by electric utilities.

Kilowatt (kW) - power equal to 1000 watts.

Megawatt (**MW**) - power equal to 1 million watts. One megawatt is equivalent to the energy produced by 10 automobile engines.

Megawatt Hour (MWh) –energy equal to 1 million watt hours.

Watt Meter - best used to measure standby power, also called vampire power, vampire draw, or phantom load, and refers to the electric power consumed by electronic and electrical appliances while they are switched off (but are designed to draw some power) or in a standby mode.

APPENDIX A

REPORT TABLES

The following tables provide detailed program information. Details include program participation, demand savings (MW), energy savings (MWh), kW generation, and related expenditures. Comparisons to other reports should be done on a totalized and annual basis due to program and revenue tracking differences. The following tables were updated as of August 15, 2013 and reflect the most recent counts and calculations.

Table 1 – Executive Summary

This table provides the year-end summary of program participants and savings, along with expenditures and cost-benefits analyses.

Table 2 – Participation, MW, and MWh – Actual vs. Goal

The goals are itemized for participation, demand, and energy for energy efficiency and Green Building programs. Data is provided for FY 2012.

Table 3 - Annual Program Participation

This table depicts the number of participants by year for each of the energy efficiency and Green Building programs offered by AE. Data is provided since inception through FY 2012.

Table 4 - Annual Peak Demand Reduction (MW)

This table shows the reduction in peak demand achieved by conservation programs. These numbers include the avoided Utility Capacity Reserve Margin and avoided Transmission & Distribution losses. Data is provided since inception through FY 2012.

Table 5 - Austin Climate Protection Plan (ACPP) in MW

This table shows the current megawatt savings and the remaining megawatt savings per the Austin Climate Protection Plan.

Table 6 - Annual Energy Saving (Megawatt-Hours)

This table shows the savings in energy savings by the energy programs. These numbers include the avoided Transmission & Distribution losses. Data is provided since inception through FY 2012.

Table 7 - Emissions Reductions

This table shows the reduced quantity of pollutant emissions as a result of DSM activities for FY 2012.

Table 8 – Program Expenditures

This table provides the detailed expenses, both operating and rebate-related, for energy efficiency and Green Building programs. Data is provided for FY 2012.

Table 9 - Solar Photovoltaic Program

This table provides the detailed information for the Solar program. Solar is classified as generation and is not part of the energy savings reported previously.

Table 1 - Executive Summary

	Participants	MWh	MW	Incentives	Total	Savings	TRC ²	TRC ⁴	Utility	Utility4	Life	Utility	\$/kW
Program				CRIF	O&M ¹ +CRIF	\$0.086/kwh	B/C	Net Benefit	B/C	Net Benefit	Years	Life Cycle	
Residential Efficiency							Ratio		Ratio			¢/kWh	
Appliance Efficiency Program	3,819	4,631	3.5	\$ 1,709,110	\$ 2,090,384	\$ 399,527	1.53	\$ 8,486,326	4.06	\$ 8,486,326	15	4.06	\$ 592
Home Performance ES - Rebate	2,202	4,349	4.0	\$ 2,196,771	\$ 2,945,225	\$ 375,160	1.20	\$ 9,129,576	3.03	\$ 9,129,576	15	6.09	\$ 743
Home Performance ES - Loan	34	67	0.1	\$ 24,137	\$ 182,028	\$ 5,793	0.61	\$ 140,965	0.77	\$ 140,965	15	24.38	\$2,974
Free Weatherization	958	1,047	0.9	\$ 598,003	\$ 738,190	\$ 90,327	0.80	\$ 1,569,311	2.13	\$ 1,569,311	10	8.69	\$ 811
Multi-Family	18,213	7,886	5.5	\$ 2,734,740	\$ 3,025,156	\$ 680,247	1.30	\$ 6,601,135	2.18	\$ 6,601,135	6	7.32	\$ 552
Clothes Washer Rebate	414	119	0.0	\$ 20,750	\$ 74,410	\$ 10,285	0.40	\$ 38,349	0.52	\$ 38,349	10	7.69	\$ 3,595
Refrigerator Recycling	2,553	1,667	0.4	\$ 346,040	\$ 472,504	\$ 143,803	0.96	\$ 1,122,652	2.38	\$ 1,122,652	10	3.49	\$1,138
Power Partner ³	891	9	0.4	\$ 550,305	\$ 1,038,643	\$ 753	0.39	\$ 423,079	0.39	\$ 423,079	7	1,982	\$ 2,332
Cycle Saver ³	587	4	0.6	\$ 186,409	\$ 341,686	\$ 304	2.07	\$ 707,102	2.07	\$ 707,102	10	1,196	\$ 618
Subtotal Residential	29,671	19,779	15.4	\$ 8,366,264	\$10,908,226	1,706,199	0.97	\$ 27,375,892		\$ 27,375,892			\$ 709
Commercial Energy Management													
Commercial Rebate	385	55,930	12.3	\$ 3,005,474	\$ 3,348,085	\$4,824,816	3.86	\$36,944,839	10.90	\$ 36,944,839	10	1	\$ 272
Small Business	233	1,997	0.7	\$ 379,963	\$ 538,027	\$ 172,299	1.14	\$ 1,500,762	2.78	\$ 1,500,762	10	3	\$ 722
Municipal	68	1,380	0.7	\$ 58,957	\$ 278,944	\$ 119,065	2.57	\$ 1,466,038	6.54	\$ 1,466,038	10	2	\$ 397
Power Partner (Comm & Muni) ³	142	3	0.0	\$ 97,381	\$ 237,768	\$ 272	0.11	\$ 27,337	0.11	\$ 27,337	7	1,256	\$8,229
Load Coop ³	78	0	6.1	\$ 135,250	\$ 255,894	\$-	3.62	\$ 925,238	3.62	\$ 925,238	2	4,522	\$ 42
Engineering Support & TES ³	3	0	1.2	\$-	\$ 123,231	\$-	2.92	\$ 2,173,054	17.63	\$ 2,173,054	15	-	\$ 99
Subtotal Commercial	909	59,311	21.1	\$ 3,677,024	\$ 4,781,950	5,116,452	3.96	\$48,408,235		\$ 48,408,235			\$ 226
Green Building													
Residential Ratings	352	121	0.2		\$ 240,175	\$ 10,397							
Residential Energy Code	2,394	9,357	3.9		\$ 170,791	\$ 807,216							
Multi-Fam Tonnage Reduction	709	1,813	0.2		\$ 214,945	\$ 156,436							
Multi-Family Energy Code	5,631	8,020	3.8		\$ 170,791	\$ 691,798							
Commercial Ratings	0	1,747	1.4		\$ 416,789	\$ 150,675							
Commercial Energy Code	0	5,814	2.4		\$ 170,791	\$ 501,574							
Subtotal Green Building	9,086	26,872	11.9		\$ 1,384,282	2,318,096	4.67		16.4		10.0	0.64	\$ 116
Subtotal Demand Response ³	1,701	15	8.4	\$ 969,344	\$ 1,997,222	1,329							
Total DSM Programs	39,666	105,962	48.4	\$12,043,288	\$17,074,459	9,140,746	1.59		3.87		10.00	1.14	\$ 353

Notes:

1. Operation expenses at 65% of DSM are utilized in the cost-benefit analysis based on a partially burdened analysis. The overhead of 35% is for other staff-related costs.

2. The avoided generator in cost-benefit analysis is the ERCOT grid predominant natural gas peaking turbine at EIA overnight cost. It is this grid cost that is used to estimate cost-benefit achievement.

3. Demand Response includes five programs and equates to 8.4 MW. Active Load Control is Power Partner (Com & Res) and Load Coop. Passive Load Control is Cycle Saver and Thermal Energy Storage.

4. Programs are tracked differently within Finance for general ledger purposes so individual line items may be different from financial reports but totals are equal.

5. By definition, Net Benefit is the same for TRC and Utility because of the cost/benefit ratio.

	Participants	MW				MWh	
	Actual	Goal	Actual	%Goal	Goal	Actual	%Goal
Residential Efficiency							
Appliance Efficiency Program	3,819	2.50	3.53	141%	3,226	4,631	144%
Home Perform. ES - Rebate	2,202	4.10	3.96	97%	4,499	4,349	97%
Home Performance ES - Loan	34	1.80	0.06	3%	1,975	67	3%
Free Weatherization	958	0.70	0.91	130%	805	1,047	130%
Multi-Family	18,213	2.30	5.48	238%	4,117	7,886	192%
Clothes Washer Rebate	414	0.04	0.02	52%	230	119	52%
Refrigerator Recycling	2,553	0.37	0.42	111%	2,062	1,667	81%
Power Partner	891	1.80	0.45	25%	27	9	33%
Cycle Saver	587	0.81	0.55	68%	7	4	47%
Subtotal Residential	29,671	14.42	15.38	107%	16,950	19,779	117%
Commercial Energy Mar	nagement						
Commercial Rebate	372	10.50	12.31	117%	38,990	55,930	143%
Small Business	233	2.50	0.75	30%	6,861	1,997	29%
Municipal	68	0.70	0.70	100%	9,630	1,380	14%
Power Partner (Comm & Muni)	142	0.60	0.03	5%	8	3	37%
Load Coop	78	3.30	6.11	185%	9	0	0%
Engineering Support & TES	3	1.43	1.24	87%	0	0	NA
Subtotal Commercial	896	19.03	21.14	111%	55,499	59,311	107%
Green Building							
Residential Ratings	352	0.35	0.21	59%	205	121	59%
Residential Energy Code	2,394	3.07	3.91	127%	7,427	9,357	126%
Multifamily Ratings	709	0.29	0.19	67%	1,100	1,813	165%
Multifamily Energy Code	5,631	1.33	3.78	284%	2,848	8,020	282%
Commercial Ratings	0	2.98	1.38	46%	12,840	1,747	14%
Commercial Energy Code	N.A.	3.44	2.43	71%	6,774	5,814	86%
Subtotal Green Building	9,086	11.46	11.90	104%	31,194	26,872	86%
Total DSM Programs	39,653	44.9	48.4	108%	103,642	105,962	102%

Table 2 - Participation, MW, and MWh – Actual vs. Goal

Note:

1. Commercial AEP savings are claimed in residential AEP due to program and budget logistics. The program budget is a single line item.

2. Several programs exceed the FY 2012 goal, supporting an overall increased savings of nearly 4 MW.

3. Commercial Smart Vendor does not have program goals so is not tracked here.

4. Megawatt hours can be readjusted year-to-year as programs reassess deemed savings versus actual savings and/or make adjustments to services within programs.

	1982-'07	2008	2009	2010	2011	2012	Total
Residential Efficiency						ľ	
Appliance Efficiency Program	163 853	3 745	4 000	4 444	5 367	3 819	185 228
Home Performance ES -	100,000	0,140	4,000		0,007	0,010	100,220
Rebate	22,087	2,223	2,463	2,941	2,919	2,202	34,835
Home Performance ES - Loan	15,034	213	191	109	71	34	15,652
Free Weatherization	13,192	505	538	456	1,044	958	16,693
Multi-Family	104,897	21,814	17,162	18,234	10,989	18,213	191,309
Clothes Washer Rebate	4,354	813	878	1,029	647	414	8,135
Duct Leaks Sealing/Diagnosis	1,794	231	0	0	0	0	2,025
Refrigerator Recycling	8,299	3,515	3,132	3,428	2,943	2,553	23,870
Power Partner	60,996	9,934	7,839	4,617	1,511	891	85,788
Cycle Saver	13,217	1,237	1,683	2,009	947	587	19,680
Discontinued Programs	103,518						103,518
Subtotal Residential	511,241	44,230	37,886	37,267	26,438	29,671	686,733
Commercial Energy Mana	gement						
Commercial Rebate	1,561	351	401	315	350	372	3,350
Small Business	1,240	264	202	384	336	233	2,659
Municipal	278	129	12	9	99	68	595
Power Partner (Comm & Muni)	7,549	1,331	771	780	167	142	10,740
Load Coop	35	29	27	20	55	78	244
Engineering Support & TES	28	3	4	1	1	3	40
Commercial Smart Vendor	6,367	420	155	120	143	13	7,218
Discontinued Programs	15,433						15,433
Subtotal Commercial	32,491	2,527	1,572	1,629	1,151	909	40,279
Green Building							
Residential Ratings	14,663	1,021	712	722	585	352	18,055
Residential Energy Code	25,860	2,941	1,738	1,909	1,857	2,394	36,699
Multifamily Ratings	12	0	1,721	971	370	709	3,783
Multifamily Energy Code	33,866	4,805	2,260	266	1,800	5,631	48,628
Commercial Ratings	41	28	30	19	20	0	138
Commercial Energy Code	2,452	0	0	0	0	0	2,452
Subtotal Green Building	76,894	8,795	6,461	3,887	4,632	9,086	109,755
Total DSM Programs	620,626	55,552	45,919	42,783	32,221	39,666	836,767

Table 3 - Annual Program Participation

Notes:

1. Fiscal year participation is based on inspection dates.

2. Duct Diagnostic after 2008 is incorporated into Multifamily.

3. Discontinued programs are the result of proper program monitoring and life cycle development and include multifamily AC service, water heater wraps, traffic signal LEDs, etc.

	1982-'07	2008	2009	2010	2011	2012	Total
Residential Efficiency							
Appliance Efficiency Program	137.2	3.4	3.4	4.1	4.7	3.5	156
Home Performance ES - Rebate	52.5	4.0	4.4	5.3	5.3	4.0	75
Home Performance ES - Loan	38.9	0.4	0.3	0.2	0.1	0.1	40
Free Weatherization	18.2	0.5	0.5	0.4	1.0	0.9	22
Multi-Family	52.7	4.6	3.1	4.5	4.0	5.5	74
Clothes Washer Rebate	0.6	0.0	0.0	0.1	0.0	0.0	0.7
Duct Leaks Sealing/Diagnosis	1.9	0.0	0.0	0.0	0.0	0.0	1.9
Refrigerator Recycling	2.0	0.8	0.7	0.7	0.5	0.4	5.1
Power Partner	67.5	9.8	3.6	2.3	0.9	0.4	85
Cycle Saver	9.0	0.8	1.1	1.3	0.6	0.6	13
Compact Fluorescent Lighting	1.7	1.0	2.2	0.0	0.0	0.0	4.8
Discontinued Programs	25.8						25.8
Subtotal Residential	408	25.3	19.4	18.9	17.2	15.4	504
Commercial Energy Manag	gement						
Commercial Rebate	68.1	12.8	11.8	10.0	11.9	12.3	127
Small Business	9.2	1.8	1.2	1.9	1.5	0.7	16.3
Municipal	10.9	0.1	0.3	0.4	0.8	0.7	13.2
Power Partner (Comm & Muni)	9.9	1.4	0.6	0.6	0.1	0.0	12.7
Load Coop	12.9	1.3	3.1	2.0	4.1	6.1	29.4
Engineering Support & TES	12.9	2.16	2.61	0.01	1.08	1.24	20.0
Commercial Smart Vendor	1.2	0.1	0.0	0.0	0.0	0.0	1.3
Discontinued Programs	141						141
Subtotal Commercial	266	19.7	19.6	14.9	19.5	21.1	361
Green Building							
Residential Ratings	15.0	0.9	0.6	0.6	0.3	0.2	18
Residential Energy Code	37.8	4.9	2.9	3.2	3.0	3.9	56
Multifamily Ratings	3.8	1.3	1.0	0.5	0.1	0.2	6.8
Multifamily Energy Code	14.8	2.2	1.0	0.1	1.2	3.8	23
Commercial Ratings	5.2	4.8	4.8	1.6	1.7	1.4	19
Commercial Energy Code	22.2	5.2	3.1	1.4	3.3	2.4	38
Subtotal Green Building	98.7	19.2	13.4	7.5	9.6	11.9	160
Total DSM Programs	773	64.1	52.4	41.2	46.3	48.4	1,025

Table 4 - Annual Peak Demand Reduction (MW)

Notes:

1. The avoided demand includes the avoided utility Reserve Margin of 13.75% and Transmission & Distribution Losses of 6%.

	2007-12	2013-2020	Total
Residential Efficiency			
Appliance Efficiency Program	21.4	16.4	37.7
Home Performance ES - Rebate	26.0	49.5	75.5
Home Performance ES - Loan	1.6	7.3	8.9
Free Weatherization	3.9	5.3	9.3
Multi-Family	26.9	34.4	61.3
Clothes Washer Rebate	0.3	0.0	0.3
Duct Leaks Sealing/Diagnosis	0.2	0.0	0.2
Refrigerator Recycling	3.8	0.0	3.8
Power Partner	27.3	8.0	35.3
Cycle Saver	5.9	25.4	31.3
Compact Fluorescent Lighting	4.1		4.1
Discontinued Programs			0.0
Subtotal Residential	121	146	268
Commercial Energy Mana	gement		
Commercial Rebate	72.9	106.1	179.0
Small Business	9.9	23.0	32.9
Municipal	2.3	6.7	9.0
Power Partner (Comm & Muni)	4.5	9.0	13.5
Load Coop	20.1	7.0	27.1
Engineering Support & TES	9.14	17.3	26.43
Commercial Smart Vendor	0.2		0.2
Discontinued Programs	0.0		0.0
Subtotal Commercial	119.1	169	288
Green Building			
Residential Ratings	3.4	5.2	8.6
Residential Energy Code	24.7	64.0	88.7
Multifamily Ratings	3.8	2.5	6.3
Multifamily Energy Code	11.0	16.4	27.5
Commercial Ratings	15.8	28.3	44.1
Commercial Energy Code	18.6	50.0	68.6
Subtotal Green Building	77.4	166	244
Total DSM Programs	318	482	800

Table 5 - Austin Climate Protection Plan (ACPP) in MW

Notes:

1. The Austin Climate Protection Plan dictates the 800 megawatt savings goal.

2. The 800 MW goal is a expression of a virtual power plant.

Program	1982-'07	2008	2009	2010	2011	2012	Total
Residential Efficiency							
Appliance Efficiency Program	131,552	4,092	4,542	5,353	6,205	4,631	156,375
Home Performance ES - Rebate	63,529	4,390	4,864	5,808	5,765	4,349	88,706
Home Performance ES - Loan	48,652	421	377	215	140	67	49,872
Free Weatherization	15,510	552	588	498	1,141	1,047	19,337
Multi-Family	75,851	23,847	11,359	13,231	7,197	7,886	139,372
Clothes Washer Rebate	1,993	234	253	296	186	119	3,082
Duct Leaks Sealing/Diagnosis	4,398	0	0	0	0	0	4,398
Refrigerator Recycling	7,552	2,988	2,562	2,694	2,057	1,667	19,520
Power Partner	767	97	77	45	15	9	1,010
Cycle Saver	619	7	10	12	6	4	658
Compact Fluorescent Lighting	9,617	6,244	13,890	0	0	0	29,751
Discontinued Programs	11,575						11,575
Subtotal Residential	371,616	42,873	38,522	28,154	22,712	19,779	523,657
Commercial Energy Management							
Commercial Rebate	227,384	42,783	29,998	37,126	53,244	55,927	446,462
Small Business	21,492	3,652	2,033	5,311	12,292	1,997	46,777
Municipal	45,185	383	646	1,802	3,150	1,380	52,546
Power Partner (Comm & Muni)	1,422	14	8	8	2	3	1,458
Load Coop	192	19	57	5	0	0	273
Engineering Support & TES	34	0	0	0	0	0	34
Commercial Smart Vendor	6,852	492	182	137	158	4	7,824
Discontinued Programs	365,564						365,564
Subtotal Commercial	668,124	47,343	32,923	44,390	68,846	59,311	920,938
Green Building							
Residential Ratings	21,911	1,529	1,067	1,082	200	121	25,910
Residential Energy Code	31,560	7,914	4,677	5,137	7,258	9,357	65,904
Multifamily Ratings	3,751	0	1,812	641	208	1,813	8,225
Multifamily Energy Code	31,399	4,627	2,176	281	2,564	8,020	49,067
Commercial Ratings	16,845	13,377	11,934	5,299	7,503	1,747	56,705
Commercial Energy Code	66,483	14,590	9,011	4,138	8,006	5,814	108,041
Subtotal Green Building	171,948	42,039	30,677	16,577	25,739	26,872	313,852
Total DSM Programs	1,211,689	132,255	102,122	89,121	117,298	105,962	1,758,447

Table 6 - Annual Energy Saving (Megawatt-Hours)

Notes:

1. The avoided energy includes Transmission & Distribution Losses of 6%.

2. Megawatt hours can be readjusted year-to-year as programs reassess deemed savings versus actual savings and/or make adjustments to services within programs.

3. The figures in the above table are as of August 2013.

Table 7 - Emissions Reductions

	Carbon	Nitrogen	Sulfur	Carbon	Suspended	NMOC	Total
	Dioxide	Oxides	Dioxide	Monoxide	Particulates	/ VOC	
Residential Efficiency	<u> </u>						
Appliance Efficiency Program	2,781	1.94	1.75	1.35	0.24	0.07	2,786
Home Performance ES - Rebate	2,611	1.82	1.65	1.27	0.22	0.06	2,616
Home Performance ES - Loan	40	0.03	0.03	0.02	0.00	0.00	40
Free Weatherization	629	0.44	0.40	0.30	0.05	0.02	630
Multi-Family	4,735	3.30	2.98	2.29	0.41	0.11	4,744
Clothes Washer Rebate	72	0.05	0.05	0.03	0.01	0.00	72
Duct Leaks Sealing/Diagnosis	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Refrigerator Recycling	1,001	0.70	0.63	0.48	0.09	0.02	1,003
Power Partner	5	0.00	0.00	0.00	0.00	0.00	5
Cycle Saver	2	0.00	0.00	0.00	0.00	0.00	2
Subtotal Residential	11,876	8.3	7.5	5.8	1.0	0.29	11,899
Commercial Energy Mar	nagemen	it					
Commercial Rebate	33,582	23.41	21.17	16.27	2.88	0.81	33,647
Small Business	1,199	0.84	0.76	0.58	0.10	0.03	1,202
Municipal	829	0.58	0.52	0.40	0.07	0.02	830
Power Partner (Comm & Muni)	1.89	0.00	0.00	0.00	0.00	0.00	1.90
Load Coop	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial Smart Vendor	2.11	0.00	0.00	0.00	0.00	0.00	2.11
Engineering Support & TES	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub-total Commercial	35,614	24.82	22.45	17.26	3.05	0.86	35,683
Green Building							
Residential Ratings	72	0.05	0.05	0.04	0.01	0.00	73
Residential Energy Code	5,619	3.92	3.54	2.72	0.48	0.14	5,630
Multifamily Ratings	1,089	0.76	0.69	0.53	0.09	0.03	1,091
Multifamily Energy Code	4,815	3.36	3.04	2.33	0.41	0.12	4,825
Commercial Ratings	1,049	0.73	0.66	0.51	0.09	0.03	1,051
Commercial Energy Code	3,491	2.43	2.20	1.69	0.30	0.08	3,498
Sub-total Green Building	16,136	11.25	10.17	7.82	1.38	0.39	16,167
TOTAL DSM Tonnes	63,627	44.3	40.1	30.8	5.45	1.530	63,749

Notes:

1. Metric ton is equal to 1,000 kilograms or 1.102 English tons (2,200 lbs).

2. DSM avoided incremental generation was 96.5% gas-fired and 3.5% coal-fired.

Table 8 – Program Expenditures

	Operating		Operating %	Op	Operating-65% Incentive		Incentives	Marketing		Total	
Residential Efficiency											
Appliance Efficiency Program	\$	538,038	7.5%	\$	349,725	\$	1,709,110	\$	31,549	\$	2,090,384
Home Performance ES - Rebate		991,177	13.8%		644,265		2,196,771		104,190		2,945,225
Home Performance ES - Loan		221,281	3.1%		143,833		24,137		14,058		182,028
Free Weatherization		214,729	3.0%		139,574		598,003		614		738,190
Multi-Family		435,337	6.1%		282,969		2,734,740		7,447		3,025,156
Clothes Washer Rebate		82,554	1.1%		53,660		20,750		-		74,410
Refrigerator Recycling		157,616	2.2%		102,450		346,040		24,014		472,504
Power Partner		744,388	10.3%		483,852		550,305		4,486		1,038,643
Cycle Saver		238,888	3.3%		155,277		186,409		-		341,686
Subtotal Residential	\$	3,624,007	50%	\$	2,355,605	\$	8,366,264	\$	186,357	\$	10,908,226
Commercial Energy Mana											
Commercial Rebate	\$	439,812	6.1%	\$	285,878	\$	3,005,474	\$	56,734	\$	3,348,085
Small Business		209,147	2.9%		135,946		379,963		22,118		538,027
Municipal		338,442	4.7%		219,987		58,957		-		278,944
Power Partner (Comm & Muni)		215,981	3.0%		140,388		97,381		-		237,768
Load Coop		185,606	2.6%		120,644		135,250		-		255,894
Engineering Support & TES		189,587	2.6%		123,231		-		-		123,231
Subtotal Commercial	\$	1,578,576	22%	\$	1,026,074	\$	3,677,024	\$	78,852	\$	4,781,950
Green Building											
Residential Ratings	\$	323,137	4.5%	\$	210,039	\$	· ·	\$	30,136	\$	240,175
Residential Energy Code	\$	262,756	3.7%		170,791		-		-		170,791
Multifamily Ratings	\$	284,321	4.0%		184,809		-		30,136		214,945
Multifamily Energy Code	\$	262,756	3.7%		170,791		-		-		170,791
Commercial Ratings	\$	594,850	8.3%		386,653		-		30,136		416,789
Commercial Energy Code	\$	262,756	3.7%		170,791				-		170,791
Subtotal Green Building	\$	1,990,576	28%	\$	1,293,874	\$	· -	\$	90,408	\$	1,384,282
Total DSM Programs	\$	7,193,159	100%	\$	4,675,553	\$	5 12,043,288	\$	355,617	\$	17,074,459

Notes:

1. The subtotal is the sum of incentives, marketing and 65% of operation expenses.

 The total for all DSM Programs (incentives, marketing and 65% of O&M) was \$17.2 Million. Solar is excluded starting in 2007. Approximately 65% of operating cost was full time and temporary salaries. The other 35% was insurance, phone allowance, taxes, medical, sick leave, etc.

3. \$12.04 MM incentives computed from the CRIF (Rebate incentive) of \$11.9 MM, plus O&M Power Partner equipment of \$0.36 MM and less EV funds of \$0.18 MM.

4. Programs are tracked differently within Finance for general ledger purposes so individual line items may be different from financial reports but totals are equal. For example, Appliance Efficiency Program in the above table includes AEP, AC Rebates and Rebate Options, and Home Performance ES – Rebate contains Nexus-Home Audit CD. For ledger purposes, these programs are individualized in financial tables.

Distributed Energy Services Performance Measures **FY 2012**

Table 9 - Solar Photovoltaic Program

		2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
Solar Photovoltaic											
Residential & Commercial											
Table 1: Participation		10	141	168	146	247	292	224	336	468	2.032
Table 2: Demand (MW)		0.02	0.46	0.45	0.44	0.80	1.18	0.92	1.51	2.00	7.78
Table 3: Energy (MWh)		0	1	1	1	1	2	2	3	3	14
Table 4: Goals					100%	94%	174%	100%	153%	95%	
Table 5: Emissions		2	41	37	37	65	96	79	136	163	655
Expenditures	\$	128,929	\$ 2,810,227	\$2,379,308	\$2,413,058	\$4,278,609	\$6,315,274	\$3,773,184	\$4,720,041	\$5,758,223	\$32,576,852
Municipal & Schools											
Table 1: Participation		2	1	19	7	8	7	10	2	23	79
Table 2: Demand (MW)		0.01	0.00	0.06	0.02	0.06	0.02	0.19	0.02	0.18	0.56
Table 3: Energy (MWh)		0	0	0	1	7	22	258	65	268	621
Table 5: Emissions		0	0	3	7	141	614	6,014	2,616	12,945	22,340
Expenditures	\$	115,812	\$ 34,744	\$ 745,278	\$ 161,746	\$ 608,842	\$ 122,126	\$1,200,920	\$ 147,423	\$1,667,922	\$ 4,804,813
Total Photovoltaic											
Table 1: Participation		12	142	187	153	255	299	234	338	491	2,111
Table 2: Demand (MW)		0.03	0.47	0.51	0.46	0.86	1.20	1.10	1.53	2.18	8.34
Table 3: Energy (MWh)		0	1	1	1	9	24	260	68	271	635
Table 5: Emissions		2	41	39	44	206	709	6,093	2,752	13,108	22,995
Expenditures	\$	244,741	\$ 2,844,971	\$3,124,586	\$2,574,804	\$4,887,450	\$6,437,400	\$4,974,104	\$4,867,464	\$7,426,145	\$37,381,665
Solar Hot Water											
Table 1: Participation					3	14	27	41	44	90	219
Table 2: Demand (MW)		0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.03	0.06	0.15
Table 3: Energy (MWh)					10.1	47.1	82.3	107	106	202	554
Table 5: Emissions		0	0	0	488	2,278	3,978	5,184	5,118	9,741	26,787
Expenditures					\$ 1,900	\$ 27,000	\$ 52,000	\$ 88,000	\$ 93,500	\$ 185,000	\$ 447,400

Note:

1. Solar Program commenced in FY 2004. Photovoltaic is categorized as generation and, therefore, not included in DSM Performance Measures Report.

2. Solar PV includes Residential, Commercial, Schools, and City Facilities.

3. No demand reduction after 2009. Requirement of Cycle Saver water heater timers that are credited with the demand savings.

End Report