



# Southwest Energy Efficiency Workshop

Presentation by:

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Demand Side Resources



Tucson Electric Power

# Overview

- Regulatory outcomes
- Spending and savings
- Experiences and Lessons Learned



# TEP Regulatory Outcomes

## Rate Case (July 1<sup>st</sup>)



- Programs
  - Continued all existing programs
  - New Programs were not approved
- Recovery of fixed costs
  - The ACC approved a Lost Fixed Cost Recovery Mechanism (LFCR)  
(TEP will recover a portion of the fixed costs for each kWh measured under an EE program)
- Performance Incentive (PI)
  - Calculated at 8% of net benefits capped at \$0.0125 per kWh saved
- Commission opened Generic EE docket on all things EE



# 2013 TEP Budgets by Program

<b>Residential Programs</b>	
Low-Income Weatherization	\$516,451
Residential New Construction	\$2,894,514
Shade Tree Program	\$242,791
ENERGY STAR® Lighting (CFL)	\$2,054,660
Existing Home Program	\$2,601,812
Res. & Small Business DLC	\$92,408
Residential Subtotal	<b>\$8,402,636</b>
<b>Non-Residential Programs</b>	
Non-Residential Existing Facilities	\$3,299,435
Small Business	\$2,617,049
Efficient Commercial Building Design	\$615,160
C&I Demand Response - Direct Load Control	\$2,738,350
Non-Residential Subtotal	<b>\$9,269,993</b>
<b>Support Programs</b>	
Home Energy Reports	\$527,968
Consumer Education & Outreach	\$384,500
Support Programs Subtotal	\$912,468
Program Totals	<b>\$18,585,097</b>
Program Development, Analysis & Reporting Software	\$649,145
<b>Total</b>	<b><u>\$19,234,242</u></b>



# 2013 Q1-Q3 Savings at Overall Portfolio

<i>AT GENERATOR</i>	<i>Coincident Demand Savings (MW)</i>	<i>Annual Energy Savings (MWh)</i>
<i>Utility</i>	<i>Verified</i>	<i>verified</i>
<b>TEP</b>	<b>5.56</b>	<b>63,319</b>



# 2013 TEP YTD EE Savings

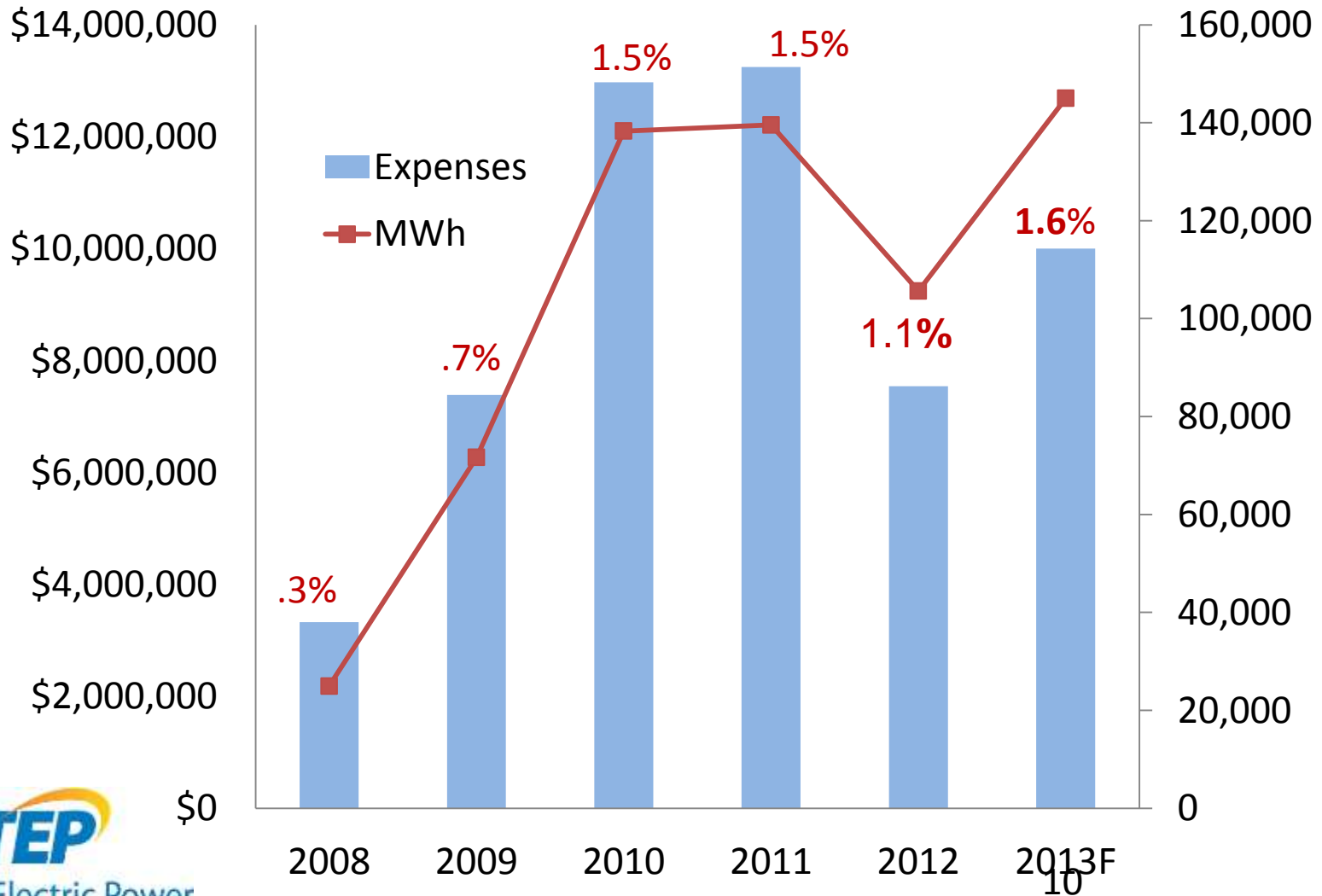
AT GENERATOR	Annual Coincident Demand Savings (MW)	Annual Energy Savings (MWh)
Program	Verified	Verified
C&I Comprehensive	2.08	14,321
Commercial New Construction	0.10	202
Small Business	0.20	2,871
Commercial Subtotal	2.38	17,394
ENERGY STAR Lighting	1.53	37,869
Existing Homes & Audit Direct-Install	0.47	585
Residential New Construction	0.07	103.53
Low-Income Weatherization	0.004	103
Shade Trees	0.06	141
Education & Outreach - Kits	0.03	855
Home Energy Reports	1.01	6,268
Residential & Behavioral Subtotal	3.18	45,925
<b>Total</b>	<b>5.56</b>	<b>63,319</b>



# TEP Results

Expenses

MWh



# TEP Implementation Contractors

Program	Implementation Contractor
C&I Comprehensive	KEMA Services, Inc.
Commercial New Construction	KEMA Services, Inc.
Small Business	KEMA Services, Inc.
C&I Direct Load Control	EnerNOC
ENERGY STAR Lighting	ECOVA
Existing Homes & Audit Direct-Install	Conservation Services Group
Low-Income Weatherization	Pima County, Tucson Urban League
Residential New Construction	Internal
Shade Trees	Trees for Tucson
Education & Outreach - Kits	Environmental Education Exchange
Home Energy Reports	Opower





# Residential New Home Construction

## Program Overview



- **Target Market**
  - Builders committed to designing and constructing higher quality more energy efficient homes
- **Program Rationale and/or Objective**
  - Most cost effective time to install energy efficient measures is at the time of construction
- **Products and Services Provided**
  - A home aligned with the Energy Star Standards
  - Lower ownership cost
- **Delivery Strategy and Administration**
  - In-house delivery administration for TEP



# Tucson Housing Market critical to local economy

## OCTOBER 2013 MARKET STATISTICS

	Oct-2013	Oct-2012	% Change	YTD-2013	YTD-2012	% Change	Annualized 2013	Forecast 2013
Permits	197	211	-6.6%	1,935	1,748	10.7%	2,322	2,450
New Home Closings	155	140	10.7%	1,557	1,235	26.1%	1,868	1,900
Resales (Total)	1,155	1,100	5.0%	12,371	12,267	0.8%	14,845	n/a
Traditional	923	831	11.1%	9,601	8,857	8.4%	11,521	n/a
Foreclosures	232	269	-13.8%	2,770	3,410	-18.8%	3,324	n/a



# Shade Trees

**Trees for Tucson was started in 1989 to encourage and facilitate desert-adapted tree planting in the Tucson metro area**



## Program Overview

- **Target Market**
  - Homes in the utility's service territory
- **Program Rationale and/or Objective**
  - The program is designed to reduce energy consumption and encourage conservation through planting trees
- **Products and Services Provided**
  - Desert-adaptive trees to be planted on the east, west, or south side homes
- **Delivery Strategy and Administration**
  - TEP Partners with Tucson Clean & Beautiful to provide trees at a reduced price



# Low Income Weatherization

## Program Overview

- **Target Market**
  - Low income customer homes at 200% of Federal Poverty Line
- **Program Rationale and/or Objective**
  - Helps low income customers lower their average household energy consumption to help lower their utility bills
- **Products and Services Provided**
  - Effective measures provided include duct repair, pressure management, attic insulation, and repair/replacement of non-functional or hazardous appliances
- **Delivery Strategy and Administration**
  - The appropriate agency will install cost effective measures at no cost to customers who qualify



# Residential Lighting

## Program Overview

- **Target Market**
  - Customers looking to purchase energy efficient lighting products at a discounted price
- **Program Rationale and /or Objective**
  - To offer residential customers additional opportunities to reduce their energy consumption and further the market transformation process through retail partnerships, training of retail staff, and increased stocking and selection of efficient lighting products
- **Products and Services Provided**
  - CFLs are currently offered at a buy-down rate
- **Delivery Strategy and Administration**
  - TEP partners with local retailers and lighting manufacturers to bring customers discount pricing on energy efficient lighting through in-store buy-down promotions



# Efficient Home Program

**A program designed to improve the safety, comfort, and energy efficiency of your house.**



## Program Overview

- **Target Market**
  - Existing homes in need of AC replacement.
- **Program Objective**
  - Incent the quality installation of energy star rated AC units and supporting energy efficiency improvements.
- **Products and/or Services Provided**
  - Incentives for AC replacement \$500-\$1,000
  - Incentive for duct sealing up to \$450
  - Incentive for Air Sealing up to \$250
  - Incentive for air sealing plus insulation up to \$800
  - Incentive for window screens & tinting up to \$250
- **Delivery Strategy and Administration**
  - Customers are required to work with an Efficient Home Program contractor to install energy efficient measures. The Contractor credits the incentive to the customer, submits completed program application to TEP, and is reimbursed by TEP.



# Education & Outreach-Bright Students

## Program Overview

- **Target Market**
  - Middle School Students/Classrooms
- **Program Rationale and /or Objective**
  - To provide students with education on energy efficiency concepts that they can share with their families to be implemented in their homes.
- **Products and Services Provided**
  - Take home energy efficiency kits
- **Delivery Strategy and Administration**
  - The Environmental Education Exchange, a nationally recognized Tucson based organization, currently implements the Bright Students Program



# Home Energy Reports

## Program Overview

- **Target Market**
  - Residential customers that have higher than average use
- **Program Rationale and/or Objective**
  - To influence behavioral change in customers to reduce their energy consumption through targeted and comparative education and awareness of their energy consumption compared to others.
  -
- **Products and/or Services Provided**
  - Direct mail reports on energy consumption and tips on how to save energy, at no cost to the customer.
- **Delivery Strategy and Administration**
  - An implementation contractor (OPower) will deliver the program with responsibility for customer selection, report generation, energy tips, savings quantification and customer communications





# TEP Power Partners

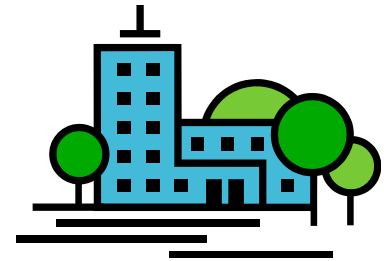
## Program Overview



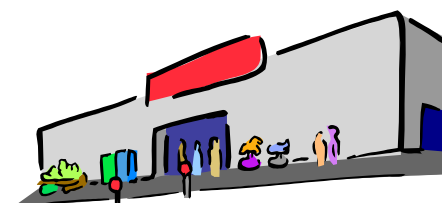
- **Target Market**
  - Residential customers in the TEP service area
- **Program Rationale and/or Objective**
  - To provide customers with more information to allow them to better understand and manage their energy usage and help them lower their energy bills.
- **Products and/or Services Provided**
  - Customers receive timely information on their energy use via a web portal or in-home display. This helps customers stick to an energy budget or achieve conservation goals they may set.
- **Delivery Strategy and Administration**
  - Delivery of the program will be made through a third party implementation contractor (Tendril) and TEP resources.

# C & I Comprehensive (Large Business)

## Program Overview



- **Target Market**
  - Large Businesses operating on TEP rates 10, 13, 14 or 40
- **Program Rationale and/or Objective**
  - To help businesses reduce the initial purchase cost of energy-efficient equipment
- **Products and/or Services Provided**
  - Large commercial customers are offered incentives to install energy efficient equipment/measures at their facilities.
  - Equipment/Measures currently include: lighting equipment and controls, air conditioning and heat pump equipment (“HVAC”), motors, air compressors, refrigeration equipment, and custom-efficiency measures.
- **Delivery Strategy and Administration**
  - The program is delivered by a third party implementation contractor (KEMA) who provides program administration, application review, participation tracking and reporting, project quality control, and technical support.



# Small Business

## Program Overview

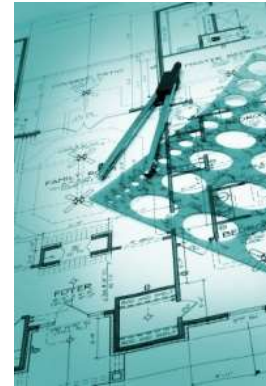
- **Target Market**
  - Small Commercial businesses on Rate 10 schedule
- **Program Rationale and/or Objective**
  - To encourage small commercial customers to upgrade existing equipment to more energy efficient equipment.
- **Products and/or Services Provided**
  - The program offers incentives for the installation of energy efficiency measures including lighting equipment and controls, HVAC equipment, motors and motor drives, compressed air and refrigeration measures.
- **Delivery Strategy and Administration**
  - The program is delivered by a third party implementation contractor (KEMA) who provides program administration, application review, participation tracking and reporting, project quality control, and technical support.



# New Construction

## Program Overview

- **Target Market**
  - Non-residential customers who will be constructing new facilities.
- **Program Rationale and/or Objective**
  - To assist customers in designing and constructing energy efficient buildings.
- **Products and/or Services Provided**
  - This program has two parts, Design Assistance and Building Performance.
    - In Design Assistance: rebates are available for customers to help offset the costs associated with having a design team create an energy efficient building design instead of a standard building design.
    - In Building Performance: Rebates are available for integrating energy efficient measures into the construction of a building.
- **Delivery Strategy and Administration**
  - The program is delivered by a third party implementation contractor (KEMA) who provides program administration, application review, participation tracking and reporting, project quality control, and technical support.



# Direct Load Control

The TEP  DemandSMART Program is a simple smart way to put money back into businesses with zero up front costs.



Tucson Electric Power

## Program Overview

- **Target Market**
  - Commercial, institutional, and industrial organizations.
- **Program Rationale and/or Objective**
  - To help businesses control their energy use and allow them to voluntarily reduce their electricity consumption during times of peak electricity demand or high wholesale electricity prices.
- **Products and/or Services Provided**
  - The program provides businesses on-demand access to their energy data, giving businesses the information they need to perform their best during demand response events and to better manage overall energy costs.
- **Delivery Strategy and Administration**
  - The program will be delivered on a turn-key basis by a third-party implementation contractor (EnerNoc), who will negotiate load reduction agreements with multiple customers and “aggregate” these customers to provide TEP a confirmed and guaranteed load reduction capacity available upon request.

# Customer Intelligence

- **Residential**

- Segment TEP/UNS customer data

- Demographics
    - Psychographics
    - Energy lifestyle, usage and program enrollment

- **Commercial**

- Segment TEP/UNS customer data

- Industrial classification
    - Business traits
    - Energy usage and program enrollment



# *Girl Scout Cookies & CFLs*

- *Cookies and a CFL – from a local Girl Scout. Y*
- This year the Tucson Electric Utilities program partnered with the Girl Scouts to distribute complimentary ENERGY STAR qualified CFL bulbs to customers who purchased a box (or more) of their famous cookies.
- The scouts distributed 100,000 CFLs during their annual cookie sale
- <https://www.youtube.com/watch?v=0mLZJMjAYPo#t=78>



# Experiences & Lessons Learned

- Program continuity is the biggest lesson learned
- Face to face sales is a necessity
- Relationship building with key customers plays a big role in success
- Need to have diversity across contractor and trade ally base. Do not count on a limited number of companies for success.
- Customer participation is increasing
- Must be able to quickly react to changing situations

