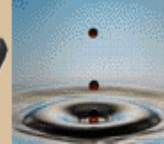
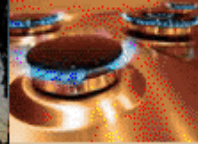




Arkansas
Public Service Commission



Energy Efficiency (EE) Programs in Arkansas

Arkansas Alternative Energy Commission

December 10, 2015

Presented By: John P. Bethel

Topics Addressed



- **Description of Commission**
- **Legal Background**
- **EE and Conservation Program Rules**
- **Quick Start Programs**
- **Informal Working Group Process**
- **Overview of EE Programs**

Topics Addressed

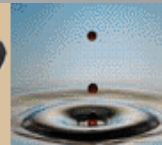
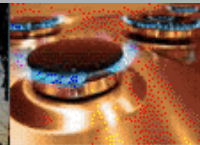
- EE Program Cost
- Utility EE Program Budgets
- Evaluation, Measurement, and Verification (EM&V)
- EE Program Modifications



Overview of the Arkansas Public Service Commission



Arkansas
Public Service Commission



Arkansas Public Service Commission

- Three Commissioners
- Ted Thomas, Chairman; Elana Wills, Commissioner; Lamar Davis, Commissioner
- Appointed by Governor to six-year terms



Arkansas Public Service Commission

Regulated Utilities

- 4 Investor Owned Electric Utilities
- 17 Electric Distribution Cooperatives
- 1 Electric Generation & Transmission Cooperative
- 2 Electric Regional Transmission Organization
- 3 Investor Owned Natural Gas Distribution Companies
- 1 Water Utility
- Approximately 300 Telecommunications Utilities

Arkansas Public Service Commission

- Safe
- Reliable
- Reasonable Price



Legal Background



Energy Conservation Endorsement Act

- Ark Code Ann. §23-3-401 et seq.
- Authorizes Commission to approve conservation and EE programs and measures
- Law provides for utility cost recovery



Energy Conservation Endorsement Act

- In 2006 Commission recognizes EE programs and measures as a resource
- January 2006 Commission issued Order No. 1 in Docket No. 06-004-R to explore EE.



Rules for Conservation and Energy Efficiency Programs

Intelligent Efficiency:
Innovations Reshaping the
Energy Efficiency Market



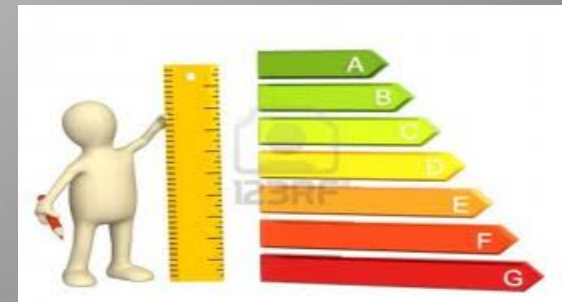
Energy Efficiency and Conservation: Docket No. 06-004-R

- Initiated in January 2006
- Current high energy prices
- Potential for cost effective EE and conservation programs
- The degree to which utility programs can cost effectively reduce consumption and result in efficient energy use



Energy Efficiency and Conservation: Docket No. 06-004-R

- The types of programs that will produce the quickest and most cost effective results for Arkansas
- The best methods of tracking and measuring the effectiveness of any programs
- Conducted a series of workshops



Energy Efficiency and Conservation: Docket No. 06-004-R

- Commission issued C&EE Rules on January 11, 2007.
- Proposed “quick start or pilot” programs filed by July 1, 2007.
- Programs should have a high probability of providing benefits to a majority of customers



Energy Efficiency and Conservation: Docket No. 06-004-R

- Utility “quick start” programs begin in October of 2007.
- The Energy Efficiency Cost Recover (EECR) tariff was implemented to recover direct program cost.
- Beginning April 1, 2008, all utilities were required to submit annual reports describing all EE activities

Comprehensive EE Plans

- In December 2010, the Commission issues orders regarding:
 - Lost Contribution to Fixed Cost (LCFC)
 - Utility EE incentives
 - “Comprehensiveness Checklist”
 - EM&V
 - Self-Direct Option



Energy Efficiency and Conservation: Docket No. 06-004-R

- Comprehensive EE programs were filed April 1, 2011
- Utilities implemented Comprehensive EE plans in July of 2011, for program years 2011-2013.
- Must perform prescribed evaluation and measurement to gauge the effectiveness of each program





Quick Start Programs

SAVING ELECTRICITY
The energy used to light your home accounts for 15 percent of your electricity bill. By using energy smart products you can save money on your lighting, entertainment, and electronics you can save money in the long run, too.

Start saving by unplugging your devices when you're not using them and only using full loads of laundry.

Businesses account for 15 percent of your household energy costs.

Get 10 percent off on energy-efficient products when you buy 10 or more.

BRIGHT LIGHTS, BIG SAVINGS

Replacing 10 incandescent household bulbs in your home will save you money and cost you less than \$100 per year.

Incandescent light bulbs use 75 percent less energy and last 25 times longer than fluorescent light bulbs.

85 percent of the energy used by traditional incandescent bulbs is given off as heat.

LED light bulbs use 75 percent less energy and last 25 times longer than incandescent lighting.

Quick Start Program Overall Cost

- Approximately \$31.4 million in expenses over three years (2008-2010)
- Recovered through a monthly EECR charge on customer bills
- Total cost of the quick start programs were as high as \$0.50 per month for an average residential customer



Quick Start Programs

- Energy Efficiency Arkansas
- Arkansas Weatherization Program
- Commercial & Industrial Energy Audits
- Compact Fluorescent Light Program
- Home Energy Solutions
- Living Wise School Education Program
- Residential Energy Audits



Quick Start Programs

- Commercial Lighting Programs
- Electric Motor Replacements
- Load Management Programs
- Energy Star Appliance Program
- Commercial & Industrial Programs
- City and County Government Programs
- Air Conditioner Tune Up Programs





Informal Working Group Process



Informal Working Group Process

- Parties Working Collaboratively (PWC)
- Established to address EE issues
- Strive to reach consensus
- Meet frequently
- Identify issues
- Present recommendations to the Commission for approval



Overview of Energy Efficiency Programs



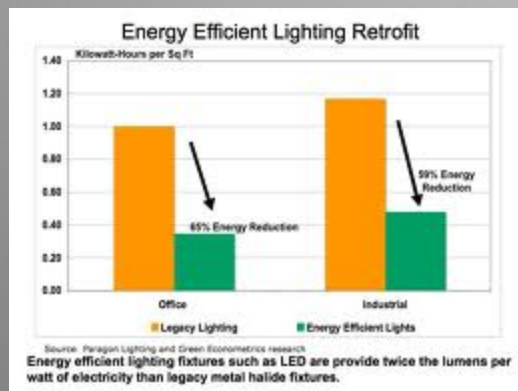
Overview of Energy Efficiency Programs

- Energy Efficiency Arkansas
- Arkansas Weatherization Program
- Energy Audits
- HVAC Tune Up
- Lighting



Overview of Energy Efficiency Programs

- Appliance Replacements
- Custom Programs for Commercial & Industrial Customers
- Various Rate Schedules
- Self Direct Option for Large Customers
- Evaluation, Measurement & Verification



Utility Energy Efficiency Programs

- Motors
- Boilers
- Chillers
- Potential Opportunities for All Customer classes



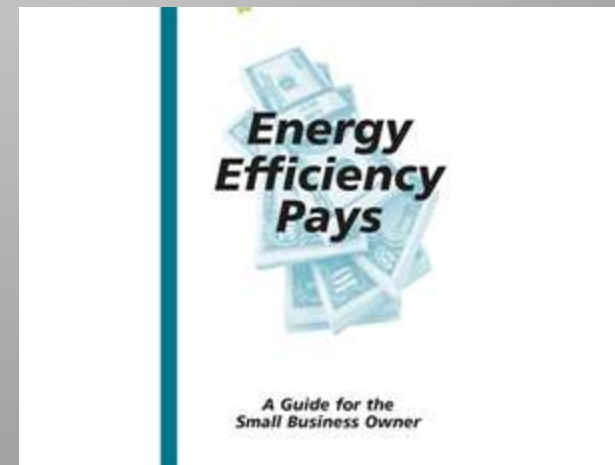
Energy Efficiency Program Performance



Goals for EE Programs

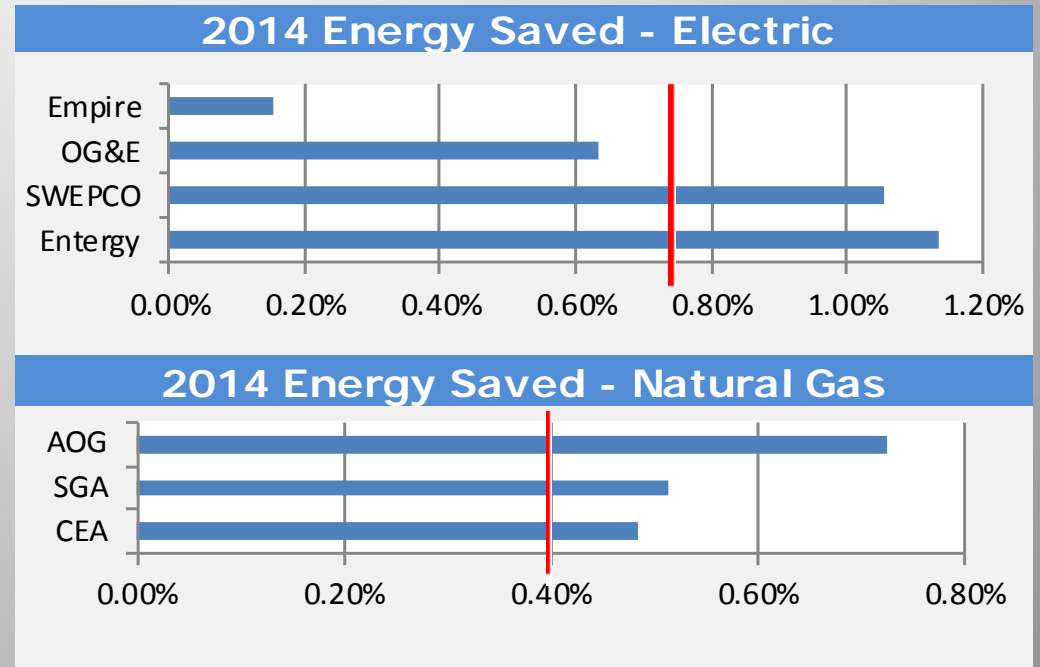
■ Commission Established EE Targets:

Program Year	Electric	Natural Gas	Baseline Year
2011	0.25%	0.20%	2010
2012	0.50%	0.30%	2010
2013	0.75%	0.40%	2010
2014	0.75%	0.40%	2010
2015	0.90%	0.50%	2013
2016	0.90%	0.50%	2013



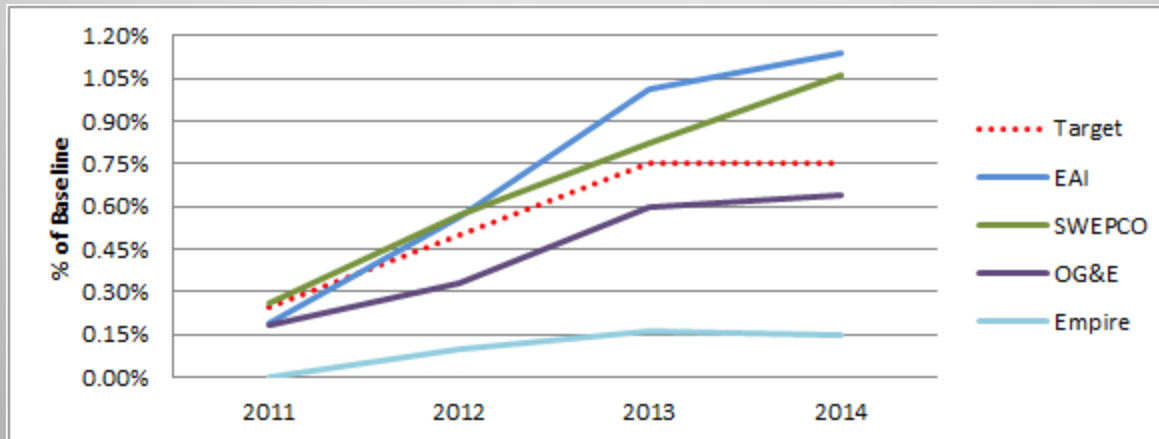
2014 Results From Energy Efficiency Programs

- EAI – 1.14%
- SWEPCO - 1.06%
- OG&E – 0.64%
- Empire – 0.15%
- CEA – 0.48%
- SGA – 0.51%
- AOG – 0.72%

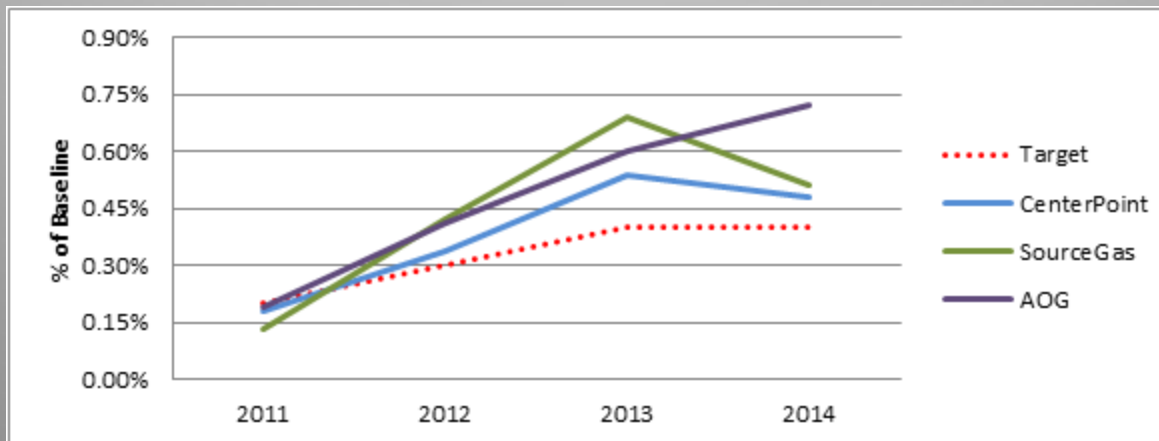


EE Target Achievement Since 2011

Electricity



Natural Gas





Utility Energy Efficiency Program Budgets



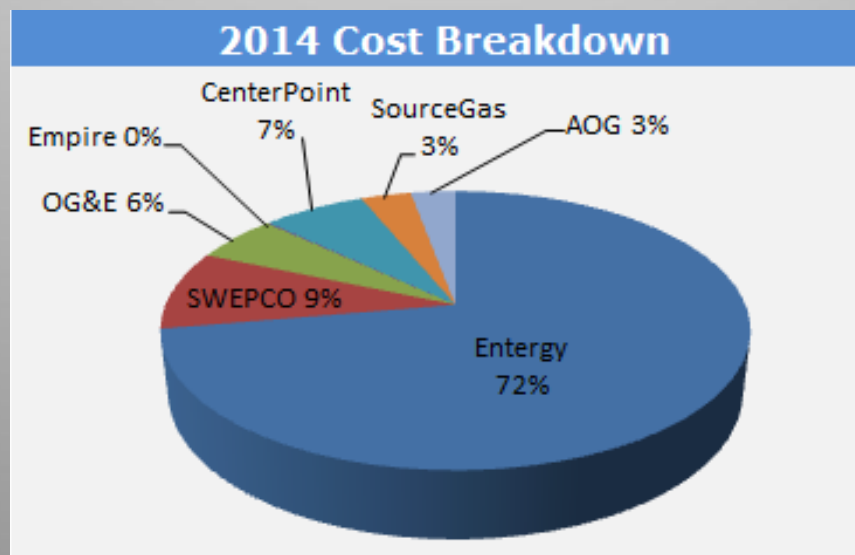
Utility Energy Efficiency Program Budgets

- Quick Start Program total expenses ranged from approximately \$7.2 million in 2008 to over \$16.7 million in 2010.
- The comprehensive programs started at \$24.9 million in 2011 and escalated to over \$74.1 million in 2013.
- EE Program budgets for PY 2015 are estimated at over \$103 million.

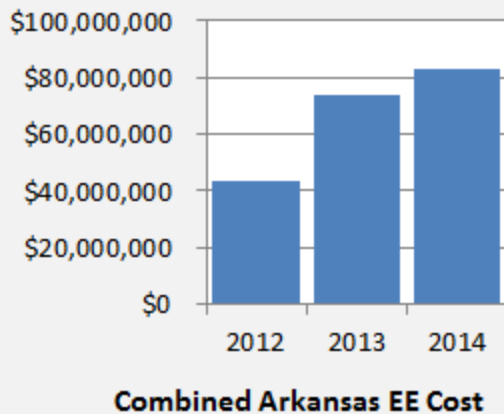
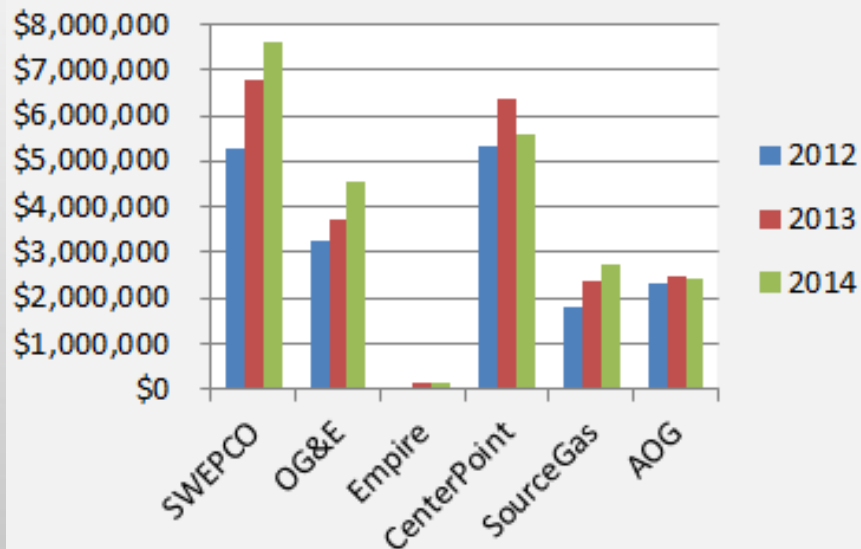
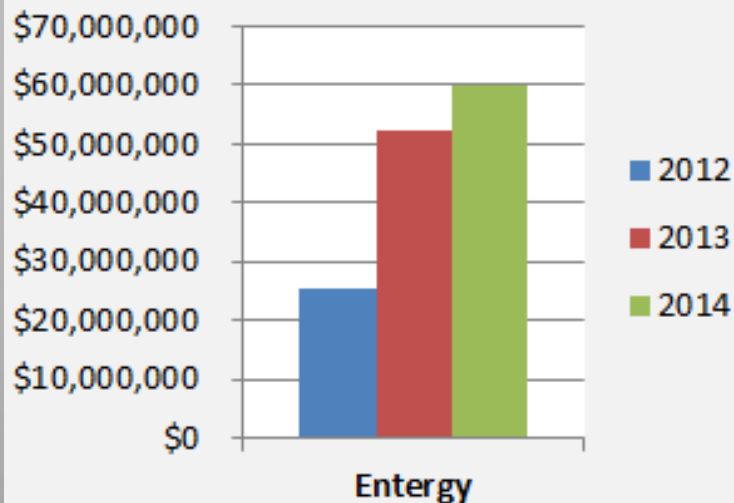


Utility EE Program Expenses PY 2012-2014

Cost	2012	2013	2014
Entergy	\$25,515,019	\$52,285,262	\$59,913,755
SWEPCO	\$5,289,095	\$6,803,249	\$7,611,826
OG&E	\$3,255,512	\$3,714,378	\$4,547,081
Empire	\$56,406	\$114,632	\$115,688
CenterPoint	\$5,335,789	\$6,367,110	\$5,584,482
SourceGas	\$1,780,096	\$2,358,944	\$2,718,131
AOG	\$2,304,511	\$2,467,229	\$2,438,257
Total	\$43,536,428	\$74,110,804	\$82,929,220



Utility Energy Efficiency Program Expenses PY 2012 - 2014



Utility Energy Efficiency Program Budgets

- 2015 EECR recoverable cost estimated at \$130 million in 2015. Recoverable cost includes:
 - \$103.8 million dollar EE budgets
 - \$19.9 million in LCFC
 - \$6.5 million in utility incentives



Energy Efficiency Programs Overall 2015 Cost

Individual Company EECR Summary - 2015 Filing Year

Utility (Docket No.)	Budget	LCFC	Utility Incentive	Recoverable Cost*	LCFC as % of Total Cost**	Incentive as % of Total Cost**
Entergy (07-085-TF)	\$ 72,908,762	\$ 14,125,022	\$ 4,581,715	\$ 97,562,674	15.4%	5.0%
SWEPCO (07-082-TF)	\$ 10,313,940	\$ 2,781,862	\$ 721,976	\$ 13,020,899	20.1%	5.2%
OG&E (07-075-TF)	\$ 6,470,885	\$ 1,462,667	\$ 229,548	\$ 9,177,636	17.9%	2.8%
Empire (07-076-TF)	\$ 449,035	\$ 11,777	\$ -	\$ (38,234)	2.6%	0.0%
CenterPoint (07-081-TF)	\$ 7,272,764	\$ 1,095,723	\$ 509,093	\$ 5,886,393	12.3%	5.7%
SourceGas (07-078-TF)	\$ 3,772,422	\$ 196,916	\$ 221,958	\$ 1,888,353	4.7%	5.3%
AOG (07-077-TF)	\$ 2,599,676	\$ 180,717	\$ 181,977	\$ 2,827,378	6.1%	6.1%
Arkansas Utility Grand Total	\$ 103,787,484	\$ 19,854,685	\$ 6,446,267	\$ 130,325,098	15.3%	5.0%

* Total Recoverable cost includes budget, LCFC, incentive and prior year true-up.

** Total Cost includes Budget, LCFC and Incentive.

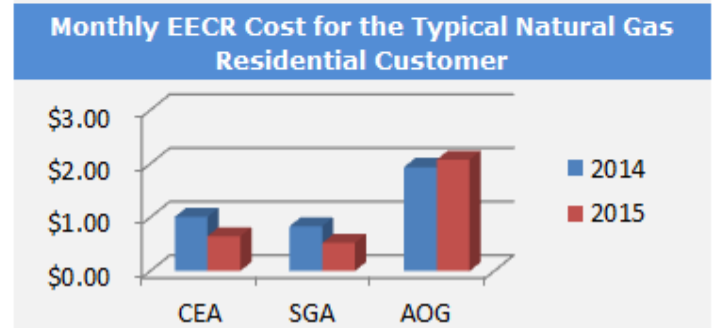
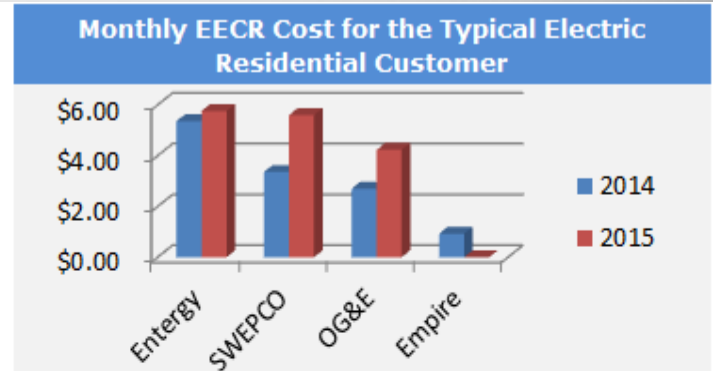
Energy Efficiency Programs Overall Cost

Monthly EECR Cost for the Typical Electric Residential Customer		2014	2015	% Change
Entergy		\$5.36	\$5.76	7%
SWEPCO		\$3.36	\$5.60	67%
OG&E		\$2.70	\$4.23	57%
Empire		\$0.93	(\$0.40)	-143%
	Min	\$0.93	(\$0.40)	-143%
	Max	\$5.36	\$5.76	67%

-customer using 1,000 kWh per month.

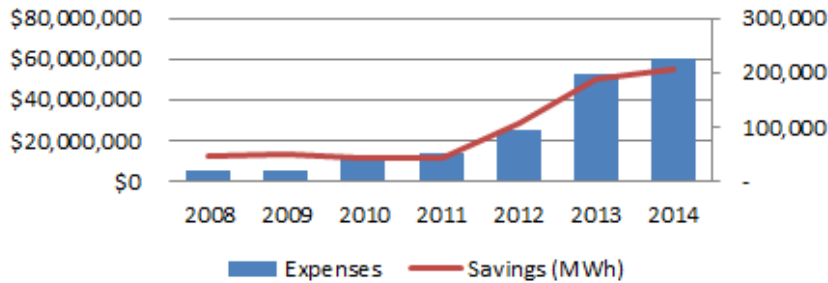
Monthly EECR Cost for the Typical Natural Gas Residential Customer		2014	2015	% Change
CEA		\$1.01	\$0.65	-36%
SGA		\$0.83	\$0.52	-37%
AOG		\$1.94	\$2.08	7%
	Min	\$0.83	\$0.52	-37%
	Max	\$1.94	\$2.08	7%

-customer using 50 CCF per month.

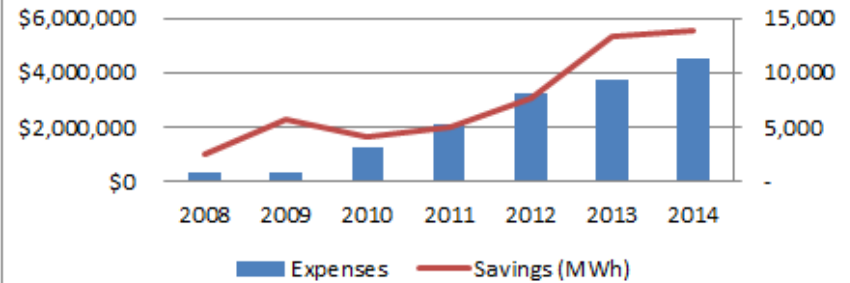


Electric EE Expenses and Savings Since 2008

Entergy



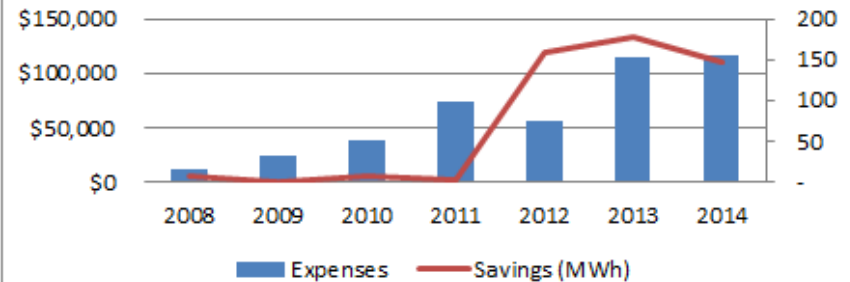
OG&E



SWEPCO

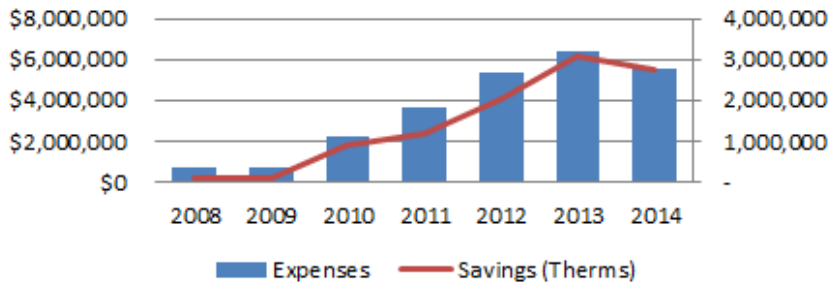


Empire

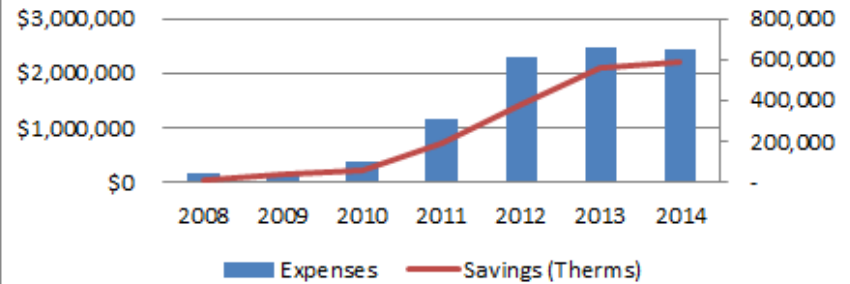


Natural Gas EE Expenses and Savings Since 2008

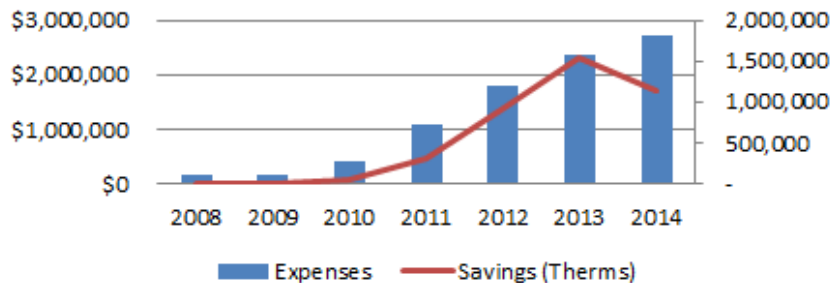
CenterPoint



AOG

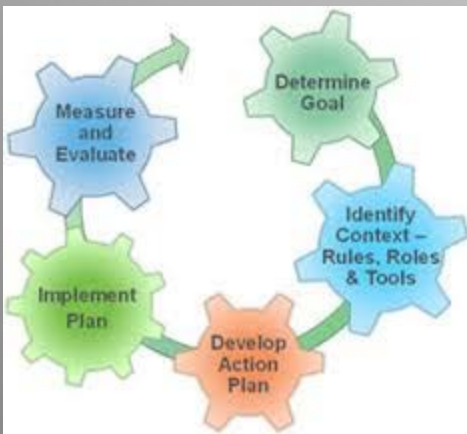


SourceGas





Evaluation, Measurement, and Verification (EM&V)



EM&V

- Section 12 of the C&EE Rules
- Technical Resource Manual (TRM)
- EM&V Protocols
- Annual Reports Due May 1
- EM&V Independent Monitor
- EM&V Independent Monitor Report



Energy Efficiency Program Modifications



Energy Efficiency Program Modifications

- Extended existing program portfolios through 2016
- Directed an EE Potential Study to be filed June 1, 2015
- Modified the incentive mechanism to award 10% of net benefits and capped on a sliding scale between 4% to 8% of budget, based on 80% to 120% of goal attainment.



Energy Efficiency Program Modifications

- Consistent weatherization programs
- Consistent C&I programs
- Non-Energy Benefits



The End

■ Questions?



Arkansas
Public Service Commission

