

AEP Texas CitySmart Program

A Market Transformation Success Story for Local Governments

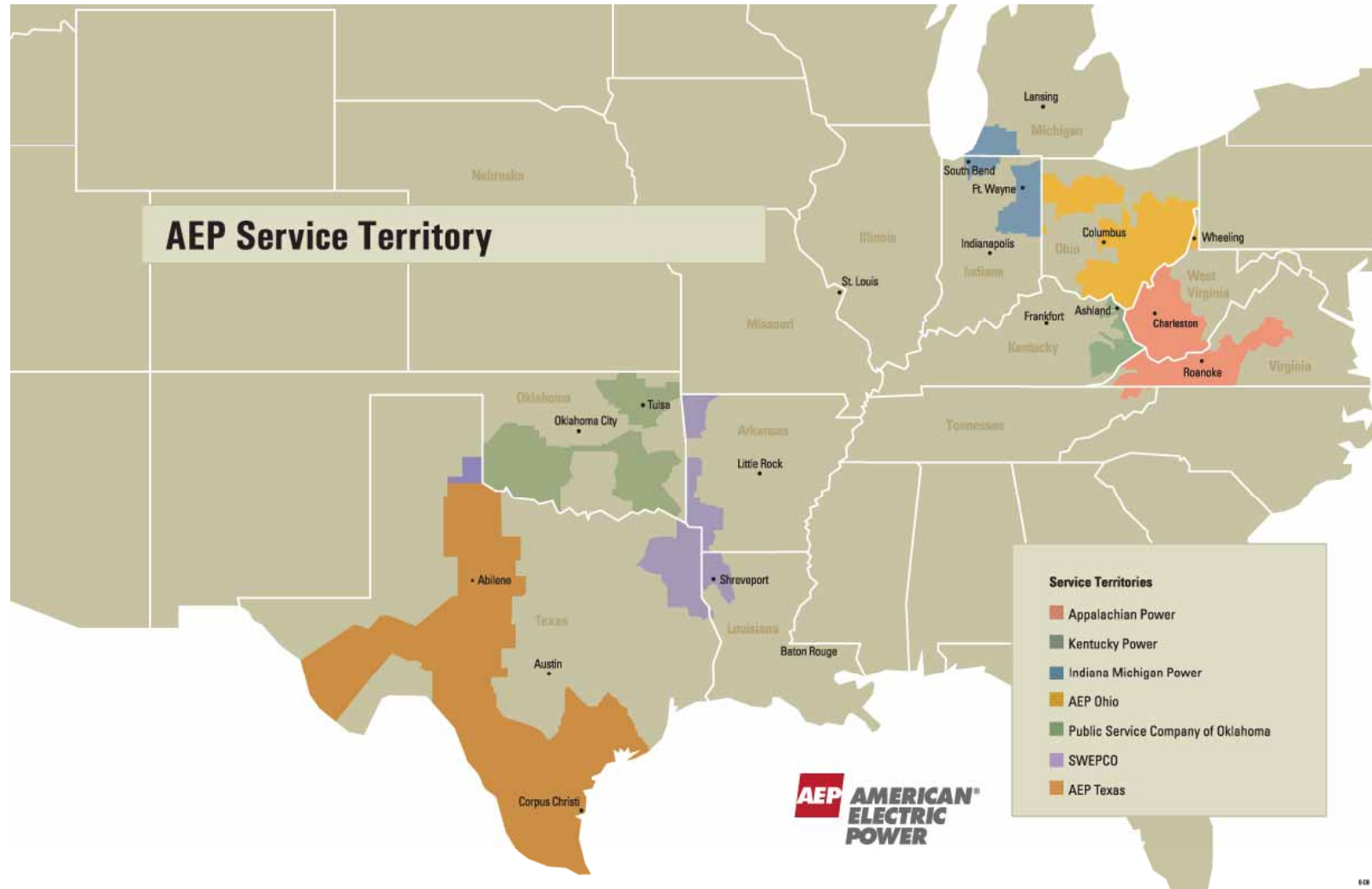
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About AEP



Overview

Overcoming Barriers

Success Stories

Lessons Learned

- **American Electric Power (AEP)** is one of the largest electric utilities in the United States, delivering electricity to more than 5 million customers in 11 states.
- **AEP** owns the nation's largest electricity transmission system and ranks among the nation's largest generators of electricity.
- **AEP Texas** is an energy delivery (wires) company in the deregulated Texas marketplace.
- **AEP Texas** delivers electricity to more than 900,000 residential, commercial, and industrial customers across its nearly 100,000 square mile service territory in south and west Texas.



CitySmart Overview



Overview

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Success Stories

Lessons Learned

- Local government sector historically fails to fully utilize utility programs.
- **AEP Texas** began offering the **CitySmart** Program to selected local government customers in August 2006.
- **CitySmart** helps local governments identify and overcome technical, financial, institutional, and political barriers.
- **CitySmart** provides the tools, technical expertise, and financial support necessary to help local governments realize long term energy savings.



About CLEAResult



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- **CLEAResult** is an energy efficiency consulting firm that specializes in program design, development, implementation, and evaluation.
- **CLEAResult** programs target the residential, commercial, institutional, and industrial sectors.
- CLEAResult programs include **CitySmart** which focuses on the unique efficiency needs of local governments, and **Schools Conserving Resources (**SCORE**)**, which focuses on energy efficiency in K-12 Schools.



Program Enrollment



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Lessons Learned

- To join CitySmart, local governments sign a Memorandum of Understanding (MOU) with AEP.
- The MOU contains program guidelines, participation steps, and commitments on the part of the program partner and AEP.
- Program participation is voluntary; partners agree to make their best efforts to evaluate and implement cost-effective EE measures.



Program Steps



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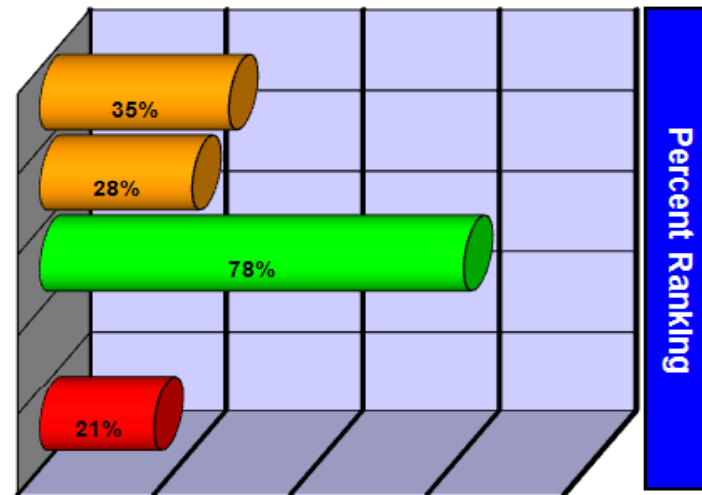
- Energy Performance Benchmarking
- Energy Master Planning
- Technical Support
- Financial Incentives
- Recognition



Energy Performance Benchmarking Analysis

City Hall / City of South Padre Island

National Benchmarks	National Average *	Your Building
Total Energy Use (kBtu/sq.ft.)	76.3	110.0
Total Energy Cost (\$/sq.ft.)	\$1.81	\$3.24
Total Energy Cost (\$/occupant)	\$786	\$506
U.S. EPA Benchmark	Average Score	Your Score
Portfolio Manager Score **	50	21



Percent Ranking is Your Building's percent of the National Average. Higher percents indicate lower energy use & lower costs.

Building Characteristics		Energy Use/Cost Data	
Type of Building ***	Office	Beginning Billing Month	January-06
Year Built	1985	Ending Billing Month	December-06
Floor Area (sq. ft.)	6,246	Electricity Usage (KWh)	201,280
Number of Students	40	Electricity Cost (\$)	\$20,228
Number of PCs	28	Natural Gas Usage (therms)	0
Type of Heating System	Electric Heating Only	Natural Gas Cost (\$)	\$0
Weekly Operating Hours	168	Total Energy Cost (\$)	\$20,228

* National Averages are from the Department of Energy's (DOE) Commercial Building Energy Consumption Survey (CBECS) and Building Energy Data Book.

** The EPA Portfolio Manager Score is currently not available for all building types.

*** This analysis compares similar building types to each other only (i.e. hospitals are only compared to hospitals, offices are only compared to offices, etc.).

Energy Master Planning



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Lessons Learned

- 3-4 hour workshop with the partner's senior executives, financial administrators, facility/energy managers, and engineers.
- Review benchmarking results and help partners complete diagnostic questions to assess planning and decision-making related to energy efficiency.
- Help partner draft an **Energy Master Plan** that establishes processes by which projects are identified, financed, and implemented.



Technical Support



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Learned

- Review new construction and retrofit plans to identify energy efficiency opportunities.
- Provide calculation tools to evaluate the economics of lighting, HVAC, roofing, booster heater upgrades, etc.
- Provide customized support and seminars to address the benefits of emerging technologies like T-5 lighting, cool roof applications, geothermal heat pumps, etc.



Financial Incentives



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Lessons Learned

- \$150 per peak demand kW reduced, based on deemed savings. Deemed savings are standardized savings values for a range of measures, and do not require measurement and verification (M&V).
- CitySmart does not currently pay an incentive for reducing kWh energy use.
- Funds are reserved on a first-come, first-served basis until they are fully allocated.



Recognition



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- News releases
- Newsletter articles
- Case studies
- Check presentations at Board or Council meetings



CitySmart Metrics



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Lessons Learned

CitySmart Program Metrics	2007 (Actual)	2008 (Projected)
Participating cities	10	10
Combined city population	1,056,359	1,056,359
Number of buildings	80	80
Buildings benchmarked	34	46
Master planning workshops	2	8
Projects completed	14	30
kW demand savings	224 kW	600 kW
kWh electricity reduction	493,000 kWh	1,320,000 kWh



Lack of Technical Expertise & Data



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Learned

- **Partners** are given the data and training they need to evaluate the performance of their buildings.
- **Partners** are aided in determining where there are opportunities for improvements.
- **Partners** are given energy engineering support to help evaluate energy efficiency alternatives for lighting, space conditioning, and water heating.



Lack of Internal Goal Alignment



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Learned

- **Local governments** are typically budget-driven, with little or no alignment of budgetary or performance goals across departments.
- **CitySmart** brings senior managers together to focus on how they can collectively take advantage of EE opportunities.
- **Energy Master Planning Workshops** evaluate whether goals are aligned, how energy usage is accounted for, and how energy efficiency decisions are made across departments.



Lack of Expertise in Evaluating & Funding EE



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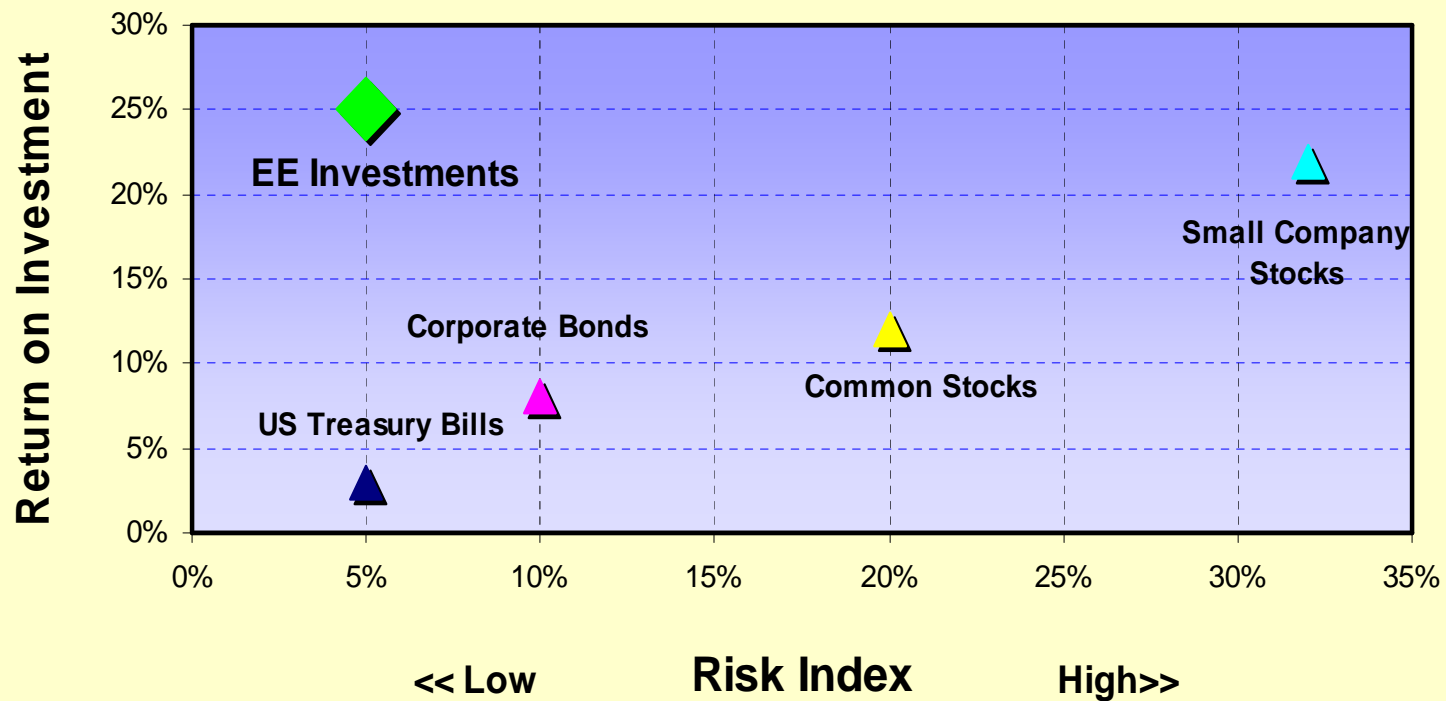
Success
Stories

Lessons
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- **Energy Upgrade Estimator** gives facility managers & business officials a better understanding of the economics of higher-efficiency choices, using a comparative “good-better-best” approach.
- **Booster Heater Model** provides a simple energy- and cost-savings analysis of replacing electric booster heaters with gas-fired booster heaters in kitchens.



Energy Efficiency is a Low-Risk, High Return Investment





Success Stories



Overview

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Lessons
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City of South Padre Island

- Helped the city evaluate a replacement of 130+ incandescent bulbs with CFLs.
- The change will save the city more than **10 kW** and **\$3,900** per year in electricity costs, paying for itself in one to two years.
- We are also making recommendations for energy efficient renovations of the old City Hall building.





Success Stories



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Lessons
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City of Abilene

- Advised the City on how to best procure energy efficiency upgrade services through a competitively-bid performance contract.
- CitySmart was seen as an impartial third-party that could give the City unbiased advice about what to look for in an ESPC and how to evaluate proposals.
- Contractor selected; project identification is ongoing.



Lessons Learned



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Lessons
Learned

- Government-sector planning and spending is a multi-year process that takes time to influence, particularly across departments and particularly in new construction.
- Decisions driven by budget are often different than decisions driven by profit.
- Decentralized authority and lack of goal alignment affect the decision-making process.
- Information is power, but only if organized in a manner that is useful and then used.



Key Take-Aways



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Lessons
Learned

- Local governments move slowly, so be patient and think long-term.
- Financial education is key.
- Get the key players talking & keep them talking
- Help them organize data, keep it up-to-date, and use it to drive decisions.



Q & A

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