
Achieving Public Sector Success in Energy Efficiency

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CLEARResult Consulting, Inc.



CLEARResult
Consulting

CLEARResult is a consulting firm that designs and implements energy efficiency and renewable energy programs for utility organizations.

As our name says, we focus on:

- establishing clear goals with our clients
- delivering measurable, **CLEAR RESULTS**.



Barriers to Energy Efficiency in the Public Sector



Lack Internal Communication and Goal Alignment

- The greatest determining factor inhibiting public sector energy efficiency is whether the organization has senior level, cross-departmental commitment to using energy efficiently.
- Most often departments operate as individual silos and do not effectively set or communicate energy efficiency goals across departments
- Public sector entities are typically budget and first-cost-driven, with little or no alignment of budgetary or energy performance goals across departments.



Lack of Technical Expertise & Meaningful Data

- There is no single person responsible for energy efficiency and energy performance in about 80% of the public sector entities that participated in these programs.
- Personnel resources are stretched thin, staff has multiple responsibilities.
- It is difficult for internal staff to effectively collect and analyze energy use and cost data, report on the performance of their buildings, and take corrective action as needed to improve energy efficiency in their buildings.



Lack of Expertise in Evaluating, Budgeting & Funding EE

- It is very rare for public sector facilities managers and financial decision makers to have any methodology to evaluate the life-cycle benefits of energy efficiency investments.
- Procurement rules in public sector organizations typically require bids to be awarded on lowest cost basis.
- Too often capital projects are bundled into operating budgets with limited options to maximize energy efficiency.



Texas IOU's Reaching the Public Sector through SCORESM and CITYSMARTSM

- **Oncor Electric Delivery**
- **CenterPoint Electric Delivery**
- **Entergy – Texas**
- **AEP – Texas North**
- **AEP Texas Central**
- **AEP – SWEPCO**
- **Texas-New Mexico Power**
- **El Paso Electric**



Public Sector Participants

- 181 School Districts
- 1825 Schools
- 47 Cities and Counties

Results:

In 2008, we will achieve over 16 MW of peak demand reductions through these pilot programs



Knocking Down the Barriers to Energy Efficiency



Program Efforts to Overcome Barriers

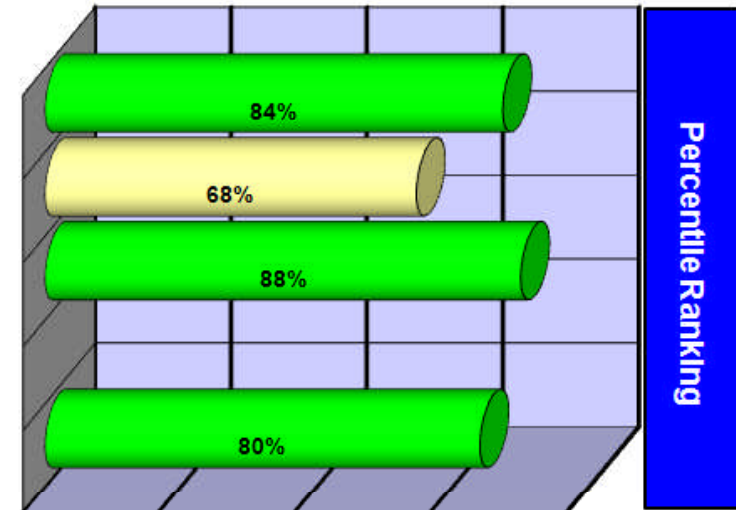
- Energy Performance Benchmarking
- Energy Master Planning
- Technical Support
- Financial Incentives
- Recognition



Energy Performance Benchmarking Analysis

Sample Elementary School / Sample ISD

Local Texas Benchmarks	TX Average*	Your School
Total Energy Use (kBtu/sq.ft.)	45.9	34.0
Total Energy Cost (\$/sq.ft.)	\$1.17	\$0.98
Total Energy Cost (\$/student)	\$153	\$93
National Benchmark	National Average	Your School
U.S. EPA Portfolio Manager Score	50	80



* Average for schools in similar climate regions of the state.

(Higher percentiles indicate lower energy use / lower costs)

Building Characteristics		Energy Use/Cost Data	
Year Built	1998	Beginning Billing Month	September-05
Floor Area (sq. ft.)	90,481	Ending Billing Month	August-06
Number of Students	959	Electricity Usage (KWh)	902,400
Number of PCs	274	Electricity Cost (\$)	\$88,966
Type of Heating System	Electric Heating Only	Natural Gas Usage (therms)	0
Weekly Operating Hours	48	Natural Gas Cost (\$)	\$0
		Total Energy Cost (\$)	\$88,966

Energy Master Planning

- 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.
- Assist in the goal alignment for the participating entity
- Help partner draft an Energy Master Plan that establishes processes by which projects are identified, financed, and implemented.



Technical Support

- Review new construction and retrofit plans to identify energy efficiency opportunities.
- Provide calculation tools to evaluate the economics of lighting, HVAC, and roofing 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

- \$150-185 per peak demand kW reduced, based on deemed savings.
- Funds are usually reserved on a first-come, first-served basis until they are fully allocated. All participants are given equal access to incentives.
- Experience has shown that participants place a greater value on the “non-cash” support from the program as apposed to the cash incentives



Recognition

- Press releases
- Newsletter articles
- Case studies
- Check presentations at School Board and City Council meetings



Recognition



Lessons Learned



Lessons Learned

- Bring key decision makers together and help them create an open line of communication and establish cross-departmental goals for energy management.
- Provide financial and financing education – it is paramount!
 - introduce risk-return concepts and opportunity cost calculations into the decision making process so that EE is viewed as an investment opportunity.
- Establish a process to keep data organized and up to date and regularly review data for energy savings opportunities.



More Lessons Learned

- Create competition among regional school districts and among local governments
- Leverage established and recognized initiatives such as ENERGY STAR Label or Leaders Awards, as well as LEED and other green building programs.



More Lessons Learned

- Public-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.



Q & A

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