

State Energy Conservation Office Update

Schools and Local Governments Technical Assistance Program Update

May 6, 2016

Stephen Ross – SECO
Schools / Local Governments
Pollution Mitigation

State Energy Conservation Office Schools / Local Governments Technical Assistance Program

Program Eligibility:

- Independent School Districts
- Local Governments – Cities, Counties
- Municipal Utilities – Water, Wastewater, and Electric
- Special Districts – Ports, Airports, Hospitals, Water Authorities

State Energy Conservation Office

Schools / Local Governments

Technical Assistance Program

Program Guidelines:

- Energy Engineering Related
- Existing Facilities and Infrastructure
- Publicly-Owned by the Entity Requesting Services
- Consider Low / No Cost Recommendations

State Energy Conservation Office

Schools / Local Governments

Technical Assistance Program

Program Functions:

- Identify Energy Savings Opportunities
- Collect and Analyze Utility Consumption / Costs
- Support Project Implementation
- Provide Analysis and Recommendations
- Prepare Reports
- Present Results to Leadership

State Energy Conservation Office

Schools / Local Governments

Technical Assistance Program

Program Services:

- Onsite Assessments
- Energy / Sustainability Program Guidance
- Identify Low / No Cost energy savings
- Energy / Water Management Plan Review
- Evaluation of HVAC and associated controls
- Training / Workshops – Benchmarking; Tracking
- Water / Wastewater Treatment Plants
- Water Conservation
- Renewable Energy Application Evaluation
- Recommended Project Budget / Payback
- Identify Funding Opportunities

State Energy Conservation Office

Schools / Local Governments

Technical Assistance Program

Technical Assistance Process:

- Entity Submits Service Agreement
- SECO assigns contractor
- Determine needs and scope of work
- Site Visit (if necessary)
- Report Completion
- Presentation of Results to Entity
 - Council, Commission, Board...

State Energy Conservation Office

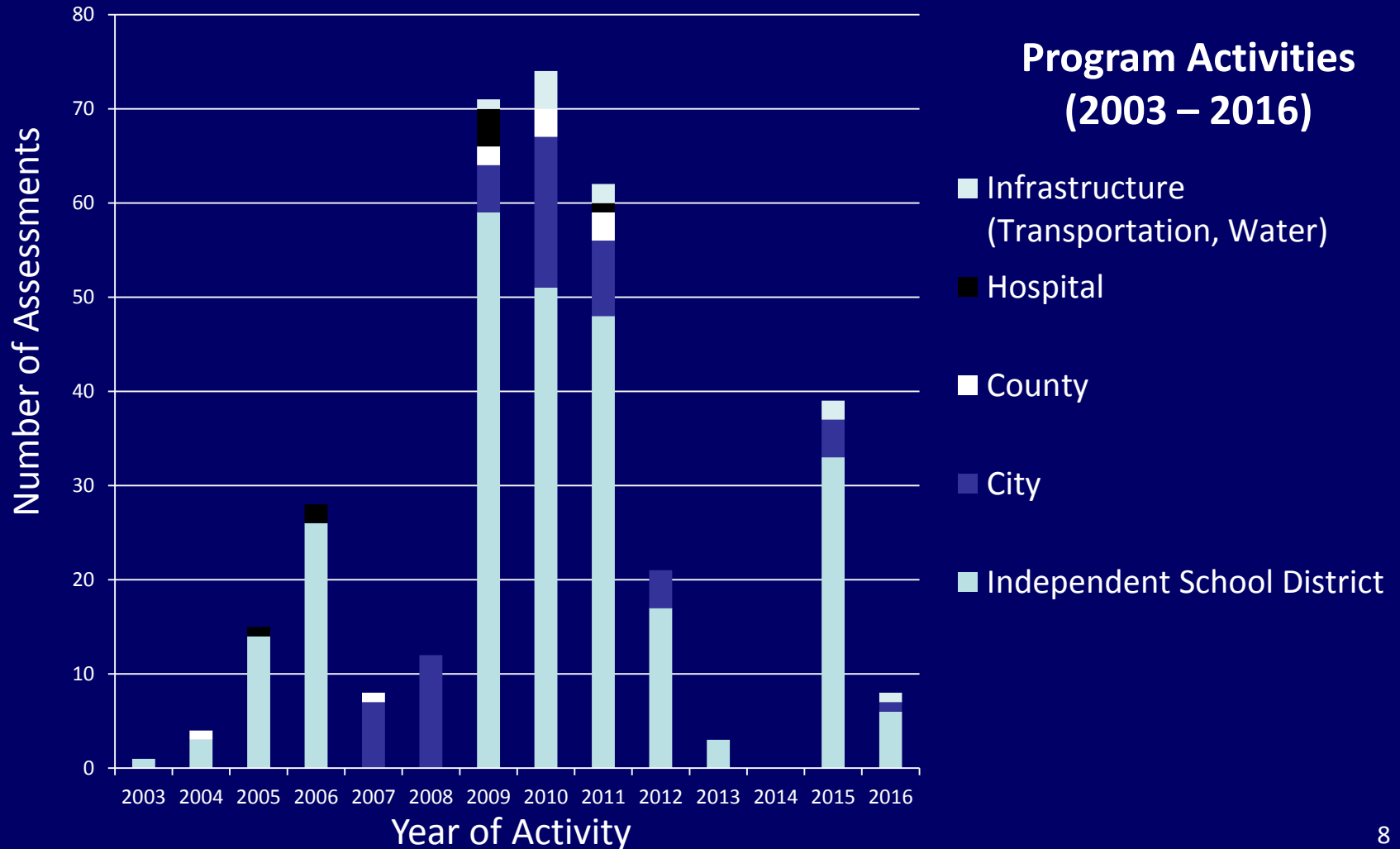
Schools / Local Governments

Technical Assistance Program

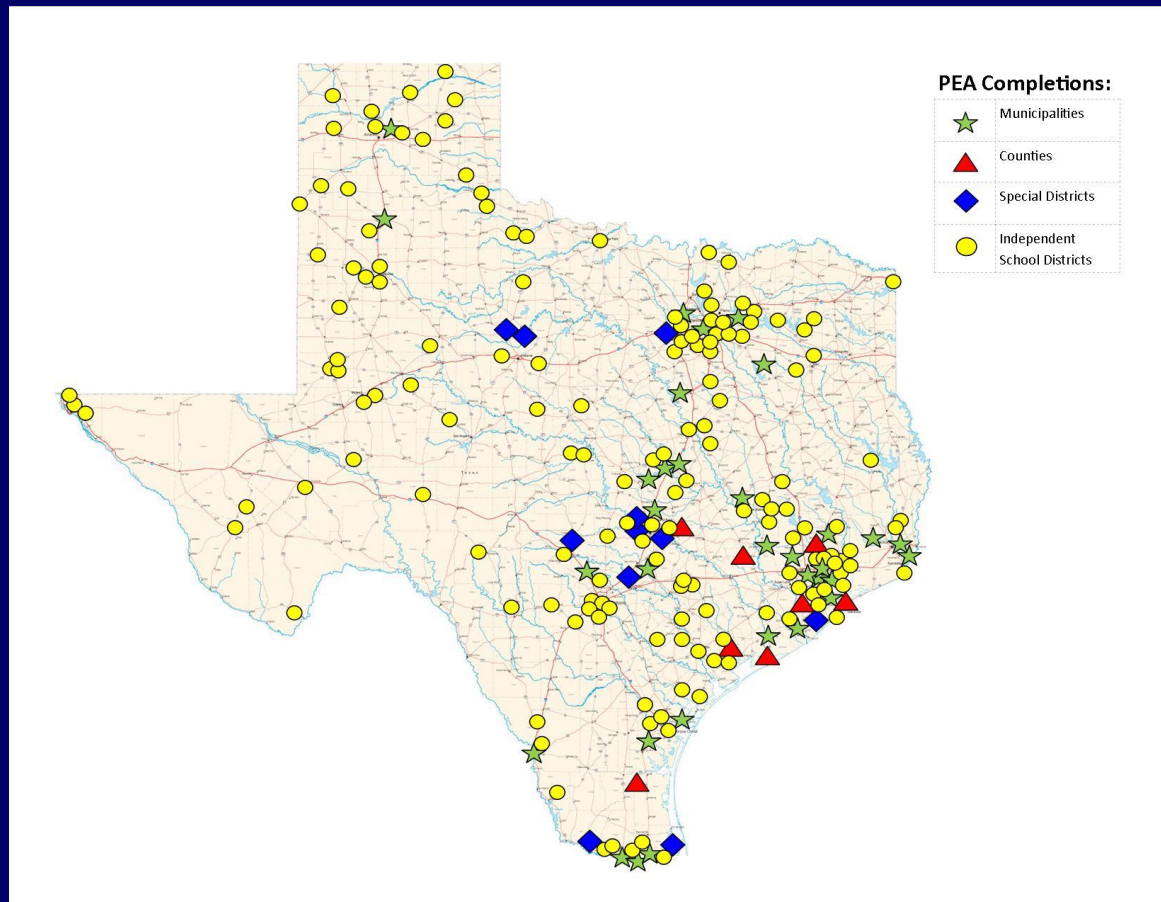
YR	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	SUM
TTL	1	4	15	28	8	12	71	74	62	21	3	0	39	8	346
ISD	1	3	14	26	0	0	59	51	48	17	3	0	33	6	261
City	0	0	0	0	7	12	5	16	8	4	0	0	4	1	57
County	0	1	0	0	1	0	2	3	3	0	0	0	0	0	10
Hospital	0	0	1	2	0	0	4	0	1	0	0	0	0	0	8
Infra-structure	0	0	0	0	0	0	1	4	2	0	0	0	2	1	10

Program Activities (2003 – 2016)

State Energy Conservation Office Schools / Local Governments Technical Assistance Program



State Energy Conservation Office Schools / Local Governments Technical Assistance Program



Preliminary Energy Assessments (2003 – 2015)

State Energy Conservation Office Schools / Local Governments Technical Assistance Program

Current Program Cycle Activities (2014 to March 2016)

- Total Number of Assessments: 46
 - 39 ISD
 - 5 Cities
 - 2 Infrastructure / Utilities
- Average Assessment Turnaround Time:
 - 2.2 Months

State Energy Conservation Office

Schools / Local Governments

Technical Assistance Program

Current Program Cycle Activities (2014 to March 2016)

- Assessment Results:
 - Total Square Feet Assessed: 27,166,395 sq ft
 - Total Buildings Assessed: 368 (8 buildings Avg.)
 - Some Water Facilities Not included in Sq Ft
 - Energy Star Benchmarking: 96%
 - Potential Annual Energy Savings (mmbtu)
 - 213,266 mmbtu
 - Potential Annual Water Savings (million gallons)
 - 71.52 Million Gallons

State Energy Conservation Office

Schools / Local Governments

Technical Assistance Program

Current Program Cycle Activities (2014 to March 2016)

- Assessment Results (continued):
 - Implementation Cost of PEA Recommendations (\$):
 - Total: \$53,129,782
 - Average: \$1,207,495
 - PEA Identified Potential Annual Savings (\$):
 - Total: \$8,496,201
 - Average: \$193,095
 - Return On Investment of PEA Recommendations:
 - 7.33 Average ROI

State Energy Conservation Office

Schools / Local Governments

Technical Assistance Program

Identified Potential Program Savings (2014 – 2016)

- ENERGY: 213,266 MMBtu
 - 38,417 Barrels of Oil Equivalent
 - 62,550,559 kWh
- WATER: 71.52 Million Gallons Water
 - 219.57 Acre Feet of Water
 - » 24,153 Olympic-Sized Pools

State Energy Conservation Office

Schools / Local Governments

Technical Assistance Program

Common Recommendations:

- Primary Identified PEA Recommendations:
 - T8 / T12 to LED Lighting
 - LED Exit Signs
 - Lighting / HVAC Controls Retrofits
 - HVAC / Chiller / Boiler Replacement
 - Smart Metering
 - Retro-commissioning
 - Replace Split System HVAC

State Energy Conservation Office Schools / Local Governments Technical Assistance Program

Common Recommendations: Exterior Lighting



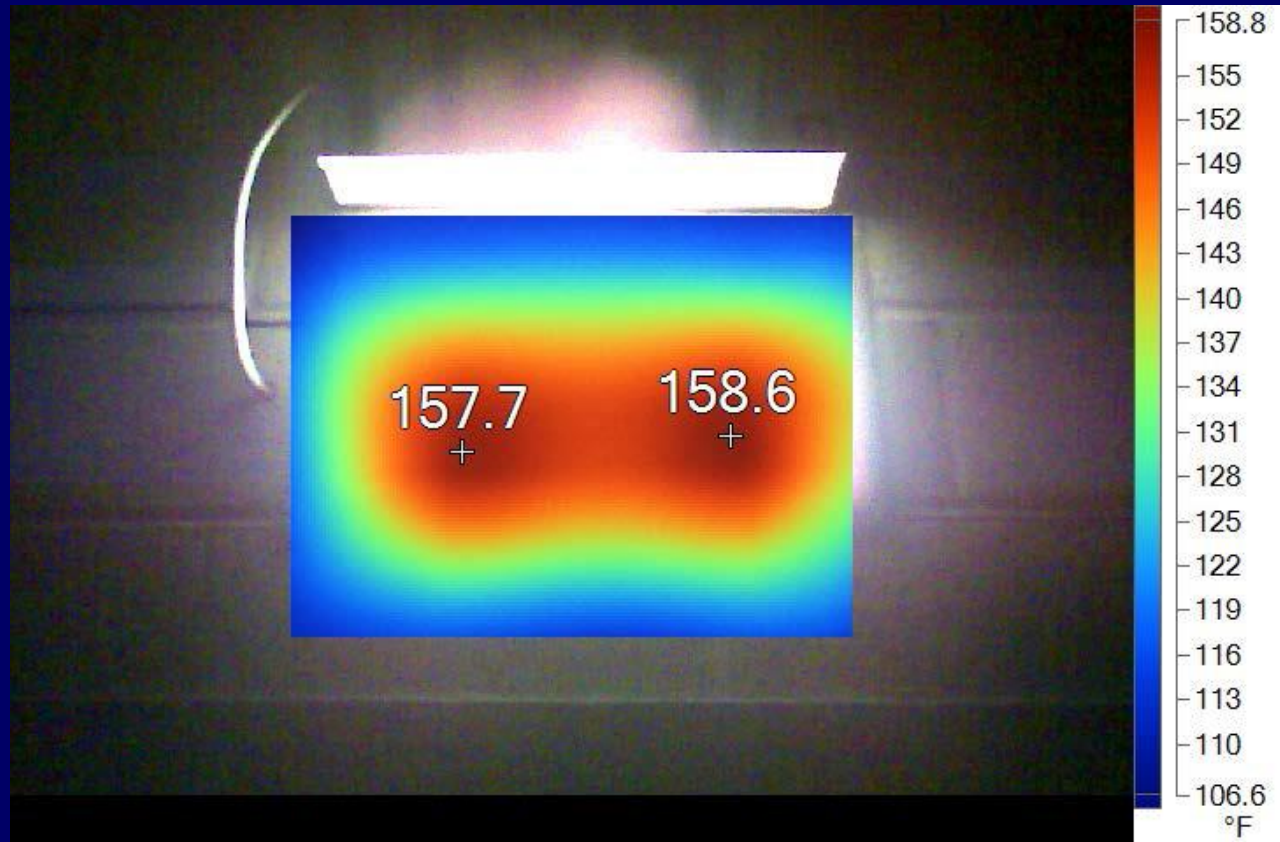
State Energy Conservation Office Schools / Local Governments Technical Assistance Program

Common Recommendations: Interior Lighting



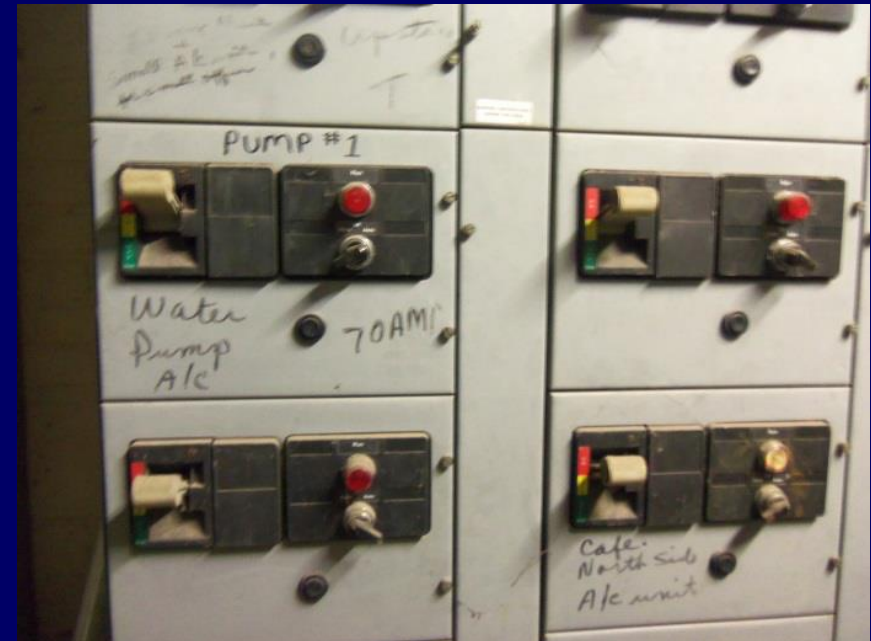
State Energy Conservation Office Schools / Local Governments Technical Assistance Program

Common Recommendations: LED Exit Signs



State Energy Conservation Office Schools / Local Governments Technical Assistance Program

Common Recommendations: Controls



State Energy Conservation Office Schools / Local Governments Technical Assistance Program

Common Recommendations: HVAC / Chiller / Boiler



State Energy Conservation Office Schools / Local Governments Technical Assistance Program

Common Recommendations: HVAC - Cooling Tower



State Energy Conservation Office Schools / Local Governments Technical Assistance Program

Common Recommendations: Heat Pumps / Coil Units



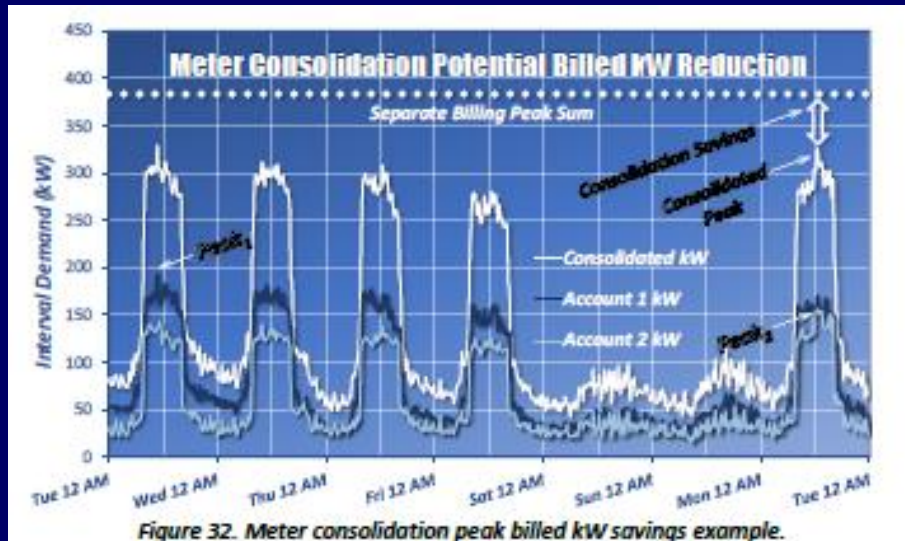
State Energy Conservation Office Schools / Local Governments Technical Assistance Program

Common Recommendations: Condensers



State Energy Conservation Office Schools / Local Governments Technical Assistance Program

Common Recommendations: Metering / Submetering



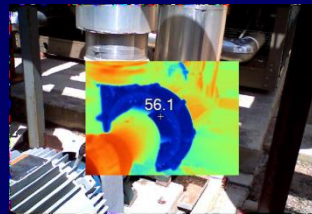
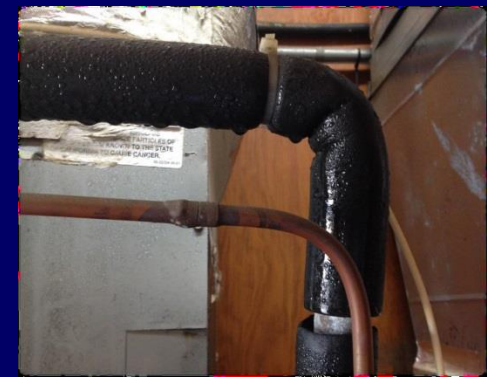
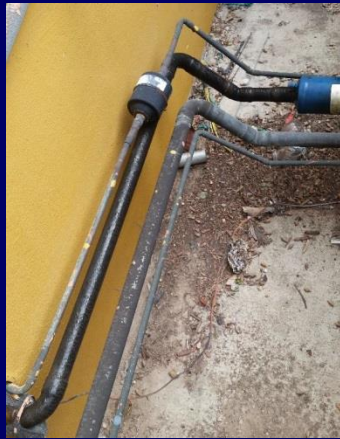
State Energy Conservation Office Schools / Local Governments Technical Assistance Program

Common Recommendations: Hail Guards



State Energy Conservation Office Schools / Local Governments Technical Assistance Program

Common Recommendations: Ductwork and Insulation



State Energy Conservation Office

HOW DO I SIGN UP?

http://www.seco.cpa.state.tx.us/sch-gov/docs/PEA_Service%20Agreement.doc

SECO Schools & Local Governments

Technical Assistance Process

- Complete Submit Service Agreement
- SECO Assigns to Engineering Contractor
- Engineer Contacts and Determines Needs
 - Utility Data
- SECO Approves Scope
- Engineer Collects Data
- Engineer Completes and Presents Report to Leadership

State Energy Conservation Office

HOW DO I SIGN UP?

http://www.seco.cpa.state.tx.us/sch-gov/docs/PEA_Service%20Agreement.doc

SECO Energy- Engineering Technical Assistance Service Agreement Form

Preliminary Energy Assessment Service Agreement



Investing in our communities through improved energy efficiency in public buildings is a win-win opportunity for our communities and the state. Energy-efficient buildings reduce energy costs, increase available capital, spur economic growth, and improve working and living environments. The Preliminary Energy Assessment Service provides a viable strategy to achieve these goals.

Description of the Service

The State Energy Conservation Office (SECO) will analyze electric, gas and other utility data and work with _____, hereinafter referred to as Partner, to identify energy cost-savings potential. To achieve this potential, SECO and Partner have agreed to work together to complete an energy assessment of mutually selected facilities.

SECO agrees to provide this service at no cost to the Partner with the understanding that the Partner is ready and willing to consider implementing the energy savings recommendations.

Principles of the Agreement

Specific responsibilities of the Partner and SECO in this agreement are listed below.

- ✓ Partner will select a contact person to work with SECO and its designated contractor to establish an Energy Policy and set realistic energy efficiency goals.
- ✓ SECO's contractor will go on site to provide walk-through assessments of selected facilities. SECO will provide a report which identifies no cost/low cost recommendations, Capital Retrofit Projects, and potential sources of funding. Portions of this report may be posted on the SECO website.
- ✓ Partner will schedule a time for SECO's contractor to make a presentation of the assessment findings key decision makers.

Acceptance of Agreement

This agreement should be signed by your organization's chief executive officer or other upper management staff.

Signature: _____ Date: _____

Name: _____ Title: _____

Contact Person

Name: _____ Title: _____

Organization: _____ Phone: _____

Street Address: _____ County: _____

Mailing Address: _____

Email Address: _____

Please sign and mail or email to: Stephen Ross, PEA Program Administrator, State Energy Conservation Office, 111 E. 17th Street, Austin, Texas 78774. Email: Stephen.Ross@cpa.state.tx.us

THANK YOU!

**Stephen Ross – Program Specialist
State Energy Conservation Office (SECO)
Email: Stephen.Ross@cpa.texas.gov
Phone: 512-463-1770**