



Department of
**Environment &
Conservation**

Energy Performance Contracting

Energy Efficiency and Renewable Energy Financing

**Tennessee Department of Environment and Conservation
Clean Energy Solutions, Inc.**



Acknowledgement & Disclaimer

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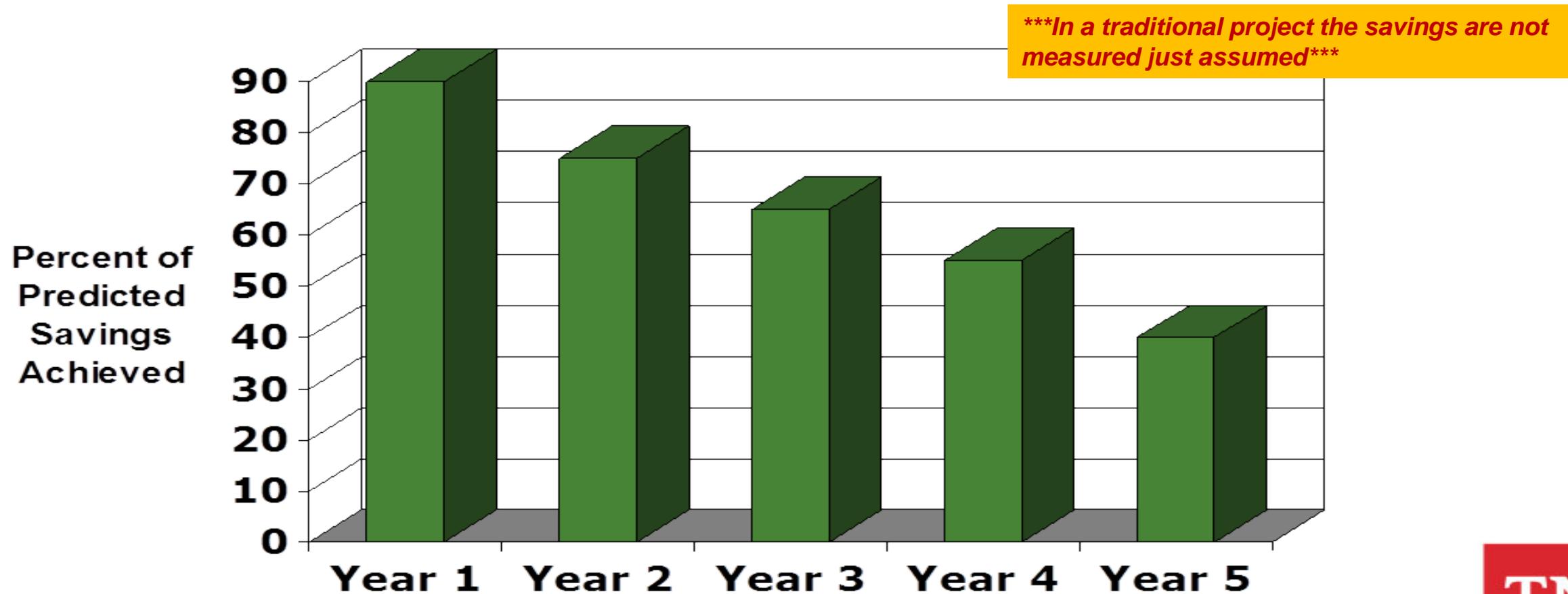
Energy Savings Performance Contracts

- Special type of design-build construction in which an energy services company (ESCO) develops, designs, arranges financing for, installs, and often operates & maintains energy- and water-saving improvements for a customer
- Customer uses future avoided costs (energy cost savings) to pay off the original investment, plus financing and maintenance costs over the term of a contract



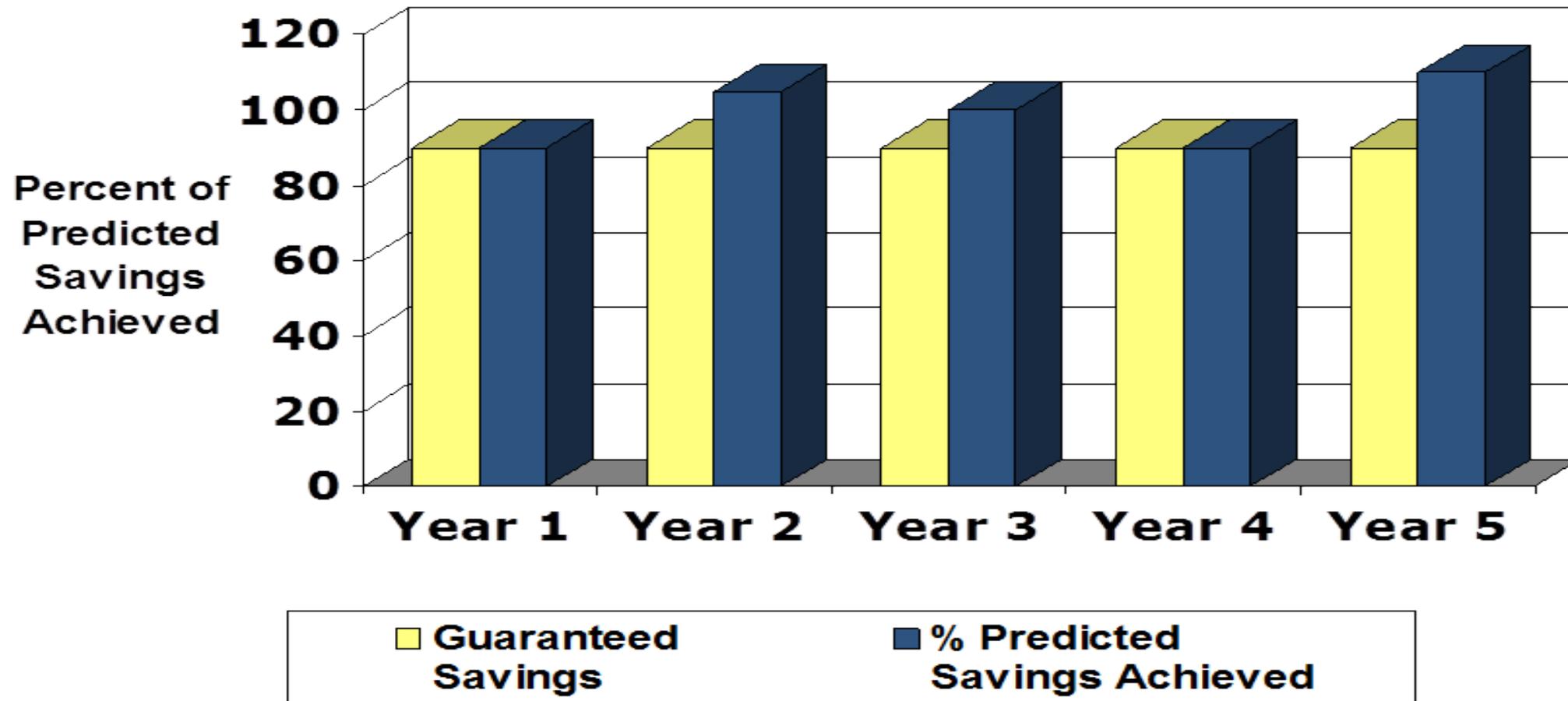
Why use Energy Performance Contracting?

Savings vs. Erosion from day one



Why use Energy Performance Contracting?

Savings are Stable for the Life of the Contract



Key Elements of ESPCs

- Financed with future cost savings
- Customer owns equipment
- ESCO provides corporate guarantee
- Comprehensive project with one provider
- Include M&V plan
- Create competition
- Provide technical training
- Create local jobs
- Reduce pollution and waste



Performance Contracting Process

- Identify Potential Energy Efficiency Projects
- Define and Develop the Project
- Select a Contractor
- Initiate Project
- Finalize Energy Savings Performance Contract (ESPC)

Financing Mechanisms for ESPCs

- Currently available internal funds
- Traditional debt financing
- Tax exempt lease-purchase agreement (TELP) and certificates of participation (COPs)
- Utility rebates and state & local govt. financial programs
- Special federal programs (e.g. QECBs and CREBs)
- Power purchase agreements (PPAs)

Tax-Exempt Lease Purchase (TELP)

- Alternative to traditional debt financing
- Most widely available method used by public agencies
- Allows public organization to pay for energy upgrades by using money that is already set aside in annual utility budget
- Allows public agencies to draw on future savings to pay for new equipment and services
- Cost of issuance is minimal
- Allows agency to receive title to equipment
- Flexible payment schedules & fast access to funding

Utility Rebates & Incentive Programs

- Can be used to reduce overall cost of project
- All ESCO contracts are obligated to seek out any applicable incentives and rebates from utilities
- TN electric utilities have robust set of energy efficiency incentives for commercial and residential buildings

TVA Energy Right Program

- Provides assessments of energy use and incentives for qualifying businesses
- Incentives are offered through local participating power companies in partnership with TVA
- Incentives are capped at 70% of total project cost
- Two types of financial assistance: standard and custom
- Minimum incentive allowed per standard site is \$500 & minimum for custom site is \$1000
- Multiple energy efficiency measures can be combined to reach minimum

TVA Energy Right Program

- Standard financial assistance eligible measures:
 - Pre-Approval Needed: Lighting, Refrigeration, and Miscellaneous
 - No Pre-Approval Needed: HVAC and Food Services
 - Standard assistance only applies to material costs
- Custom financial assistance is made in consultation with TVA and local power provider
 - Custom assistance may apply to material and design costs
- Incentives are NOT designed to subsidize an Applicant that has the ability to overcome internal financial barriers through the energy savings alone

Energy Services Team

- Created to meet emerging needs and opportunities to cut energy costs, reduce carbon, and create local jobs
- Services tailored for local capacities, efficiency and renewable opportunities
- Expertise in financing, energy performance contracting, energy engineering, benchmarking, commissioning, assessments, and siting
- No-cost technical assistance until 2016

Energy Services Team: Services

- ✓ Facilitate technical audits of public buildings, schools, and public housing
- ✓ Prioritize energy conservation measures for buildings
- ✓ Provide consultant to work with local jurisdictions, PHAs, and schools
- ✓ Pre-qualify projects and aggregate small projects
- ✓ Draft Request-for-Proposals
- ✓ Assist with Selection of Contractors
- ✓ Assist negotiation of Energy Audit Agreement

Candidate Projects

- **Typically, a good candidate project will have:**
 - Minimal available funds for energy related capital improvements
 - Annual utility costs greater than \$200,000 unless part of aggregation
 - Aging buildings and/or equipment that is ready for replacement
 - No recent upgrades to lighting, air conditioning or controls systems
 - Large amount of deferred maintenance or recurring maintenance problems/high costs
 - Limited energy management expertise
 - Comfort complaints and/or poor indoor environment

Aggregation for Small Projects

- One RFQ for multiple public customers
- Separate audit and Energy Service Agreements for each public entity
- Separate financings
- Should be economies in ESCO fees for audits, ESA services however, and lender fees

Hamilton County, Ohio: Aggregation Case Study



- Population of ~800,000
- Cincinnati is county seat
- County received EECBG funding, but some municipalities were too small to qualify for funding
- County decided to use EECBG funding to reach out to municipalities & encourage adoption of EPCs

Hamilton County, Ohio: Aggregation Case Study

- Team: Hamilton County, Greater Cincinnati Energy Alliance, and Clean Energy Solutions, Inc.
- CESI served as “owner’s agent” throughout project
- County issued RFP with assistance from CESI
- 9 ESCOs responded to proposal
- 4 communities ultimately moved forward with EPCs

Hamilton County, Ohio: Aggregation

- **Blue Ash**

- Suburb of Cincinnati
- Population 12,000
- Median household income \$81,000

- **Village of Lockland**

- Population 3,500
- Median household income \$34,000

- **Chevoit**

- Population 8,000
- Median household income \$50,000

- **St. Bernard**

- Population 4,400
- Median household income \$45,000

Hamilton County, Ohio: Aggregation

municipality	number of buildings	Square footage of buildings	energy cost baseline	utility incentives	other incentives	project cost	% project cost covered by incentives	estimated savings (15 year life of contract)
Blue Ash	10	310,529	\$ 559,459	\$ 15,000	\$ 279,000	\$ 1,966,155	15%	\$ 2,231,719
Cheviot	4	53,314	\$ 90,661	\$ 6,800	\$ 244,000	\$ 629,025	40%	\$ 632,235
Village of Lockland	5	29889	\$ 63,104	\$ 2,131	\$ 85,000	\$ 274,304	32%	\$ 160,048*
TOTAL	19	393,732	\$ 713,224	\$ 23,931	\$ 608,000	\$ 2,869,484	n/a	\$ 3,079,584

Hamilton County, Ohio: Lessons Learned

- Overcoming unfamiliarity with EPCs for stakeholders and decision makers
- Importance of incentive funds
- Financing
- Need for project champion & assistance of owner's agent
- Framing project in terms of sustainability
- Objective third-party review
- Single ESCO & single contractor
- Owner's agent aides communication between stakeholders
- County's role as host, convener, and co-participant

Next Steps

- **Contact us for more information or provide us with basic information, such as:**
 - Potential number of buildings
 - Total square footage
 - Total annual energy usage & expenditures
 - Office of Energy Programs: 615.741.2994

Thank you!

Contact Us!

**Office of Energy Programs
312 Rosa L Parks Ave.
Nashville, TN
615-741-2994**

<http://tn.gov/environment/section/energy>

The logo for the state of Tennessee, consisting of a red square with the letters "TN" in white, serif font. A thin blue horizontal line is positioned below the red square.

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