




Energy Services Coalition (ESC)

Presents an Overview of Energy Performance Contracting

- September 26, 2017
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• Colorado ESC Chapter

Mission

To promote the benefits of, provide education on, and serve as an advocate for the widespread use of energy performance contracting in public and private facilities


Diverse membership provides a unique opportunity to:

- Provide independent third party information and education
- Identify and overcome barriers



Energy Performance Contracting At A Glance

Projects pay for themselves!



Savings stack up over time...

A way to upgrade your facilities without dipping into your capital budget


Use future energy savings to pay for projects

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What Challenges Do You Face At Your Facilities? We've Got The Solution!

Challenges	The Solution	Results
<ul style="list-style-type: none"> • Sustainability Policies • Conservation Concerns • Aging Infrastructure • Rising Operations Costs • Lack of Capital • Code and Regulation • Comfort Issues • Deferred Maintenance • Inadequate In-House Staffing/Training 	 Energy Performance Contracting	<ul style="list-style-type: none"> • Reduced Energy & Operational Costs • Modernized Facilities • Reduced Waste • Single Source Responsibility • Guaranteed Results • Project Risk Mitigation • Environmental Compliance • Sustainability Initiatives • Reduced Emissions



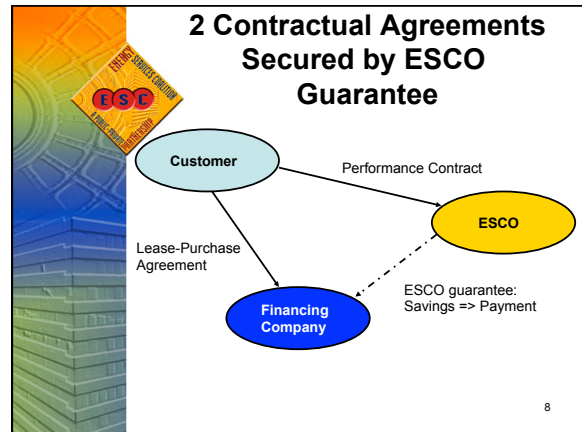
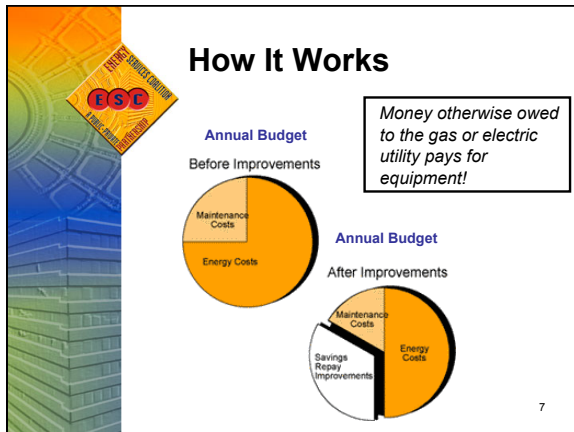
Typical Project Selection Profile

<p>Typical Payback Term 13–100+ yrs.</p>	<p>Larger Capital Improvements, Lower Savings or Return Items</p> <ul style="list-style-type: none"> • Major Mechanical Replacements • Capital Improvement Item Priority List • Central Plant and/or Heating & Cooling System Replacements • Cogeneration CHP, Bio-Fuels and Bio-Mass 	<p>Combined Projects</p> <p>Typical Program Term - 10 to 20 yrs.</p> <p>Shorter term paybacks fund capital intensive Projects</p>
<p>Typical Payback Term 7-12 yrs.</p>	<p>Medium Capital Cost Medium Return Items</p> <ul style="list-style-type: none"> • Air Quality & Emissions Reduction • Wastewater Reduction • P2, Energy Star, CO2 • Safety & Environmental Controls • Recycling and Waste Management • Medical Equipment 	
<p>Typical Payback Term 0-6 yrs.</p>	<p>Lower Capital Cost + High Return Items</p> <ul style="list-style-type: none"> • Building Lighting, Controls, HVAC • Equipment & Process • Water Conservation • Utility Supply Contract Purchasing Support • On Site Energy Manager 	

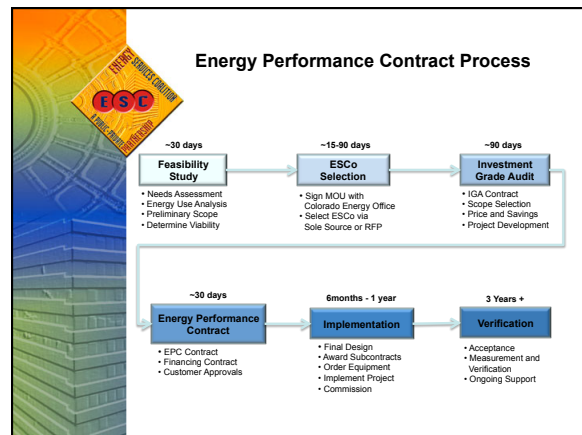


An Alternative Approach for Building Improvements

Traditional Design-Bid-Build	Energy Performance Contracting (EPC)
<ul style="list-style-type: none"> • Longer design and development process • Cost not known until design is complete • Lowest bid drives subcontractor selection • Many contracts and lack of accountability • Design misses cause change orders • Customer at risk for costs and savings 	<ul style="list-style-type: none"> • Collaborative design reduces development time • Project price defined at TEA/IGA completion • Collaboration with subcontractors develops best cost solutions • Single point of responsibility resides with ESCo • No change orders – fixed project price • ESCo at risk for costs and savings



- ### Financing & Funding
- Lease-purchase finance agreement where savings meet annual payments
 - Other funding sources (bonds, treasury)
 - Supplemental funds for cash infusion to expand the project funding and scope (utility rebates, grants, in-house funds, etc.)
 - Blend lease-purchase financing with supplemental funds
 - ESCO facilitates financing but does not profit from financing



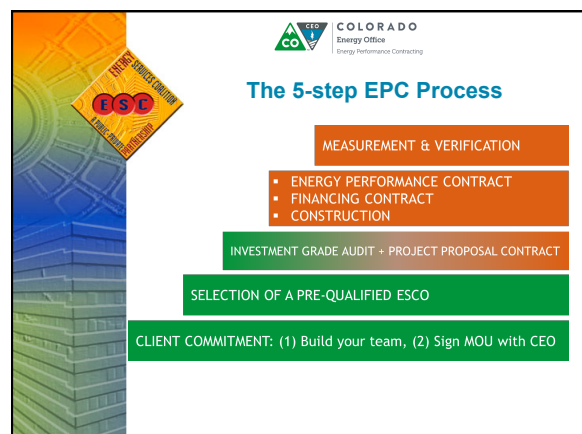
The Colorado Energy Office


MISSION STATEMENT

The CEO's mission is to deliver cost-effective energy services and advance innovative energy solutions for the benefit of all Coloradans.

EPC PROGRAM VISION


The EPC Program's goal is for every public jurisdiction to recognize the potential for future utility savings to pay for today's facility improvements, have a successful experience with the public/private partnership that is EPC, and realize the benefits of energy efficiency.





ESC Program Key Elements of Success


- Standardized, state-approved documents
 - Developed by consensus, and approved by State Architect +AG
 - Toolkits, contracts, guidance, protocols on website
- Pre-qualified ESCOs
 - Contracted with the state
 - Qualified on basis of engineering capacity and organizational strength
- CEO advice and free technical support
 - Available with MOU and selection of pre-qualified ESCO
 - At no cost to the client for the life of project
 - Dedicated CEO engineer providing third party review
- Private market-based financing
 - Active EPC finance community in CO



State EPC Program Results through FY17

PUBLIC SECTOR EPC PROGRAM RESULTS as of June 30, 2017

Facility Investments	GUARANTEED ANNUAL UTILITY SAVINGS		ENERGY + WATER CONSERVATION MEASURES
Executed projects	5546,416,348	199	
Public clients	145	Electricity (kWh) 180.6 million	HVAC improvements
State agencies	8/18	Natural gas, propane, heating oil & coal (therms) 9.9 million	Boiler replacements
Higher education	18/26	Water (kgal) 506,189	Pumps, fans & drivers
Counties	23/64	Utility cost savings \$32.8 million	Equipment controls
School districts	55/179	Operations & maintenance (O&M) cost savings \$2.8 million	Lighting fixtures & controls
Municipalities	32/271		Occupancy sensors
Special districts	9/7		Operations & scheduling
Public buildings	2525		Building envelope improvements
Square feet improved	30.6 million sf		Water efficiency (low flow fixtures, irrigation, evapotranspiration & cooling tower controls, ice machine & laundry conversions, pool covers, valve replacements)
			Street & traffic lights
			Renewable energy installations



ESC / CEO Collaboration

- CEO membership in ESC (CO chapter and National)
- CEO officer posts in ESC (Co-Chair; Outreach Committee; Water Subcommittee).
- Shared participation in EPC contract development and updating
- ESC meetings as a forum for ongoing coordination

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Questions?

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