



ENERGY PERFORMANCE CONTRACTING

A proven tool for financing public facility improvements from utility cost savings

Are you a Board or Council member, chief administrator, finance manager or facility manager at one of Colorado's state agencies, institutions of higher education or local governments? If so, are you concerned about utility bill expenses, and/or outdated, inefficient mechanical, electrical and plumbing equipment subject to repairs?

Finding capital improvement funding for public facilities can be challenging. Energy Performance Contracting (EPC) is a time-tested tool for alleviating those concerns. Since the mid 1990s, Colorado's public sector has successfully used the Colorado EPC program to finance facility improvements with guaranteed savings. EPC is authorized by state statutes and complies with other requirements, such as Colorado Constitution TABOR and federal Dodd Frank regulations, as well as industry standards.

With EPC, public jurisdictions first contract an energy service company (ESCO) to analyze utility bills, conduct a detailed, investment-grade audit of your facilities and discuss how a list of potential facility improvement measures might be incorporated into a scope of work for a subsequent construction and improvement project. Then, in an energy performance contract, the ESCO guarantees you will realize energy, water and associated operations and maintenance savings from a set of facility improvements. Those utility savings offset construction costs. After construction, you enter a period of measurement and verification to ensure the ESCO savings guarantee is realized.

After the financing period ends, *all* subsequent cost savings accrue to you. You can then redirect tax dollars, tuition and fees toward programs and services. EPC creates or sustains local private sector jobs during the construction period, and Colorado saves energy and water resources.

As of June 2015, Colorado's EPC Program portfolio includes 188 executed projects, totaling \$487 million in investments. It ranks #4 nationally in total investments and #6 in investments per capita (Energy Services Coalition's *Race to the Top*). Perhaps even more importantly to Coloradans, projects are benefitting communities across 75% of Colorado counties, guaranteeing \$30.8 million in annual utility costs savings.

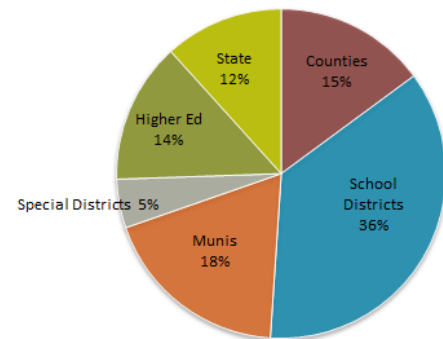
The Colorado Energy Office infuses its EPC program with high standards, continuous improvement and collaboration. Colorado standards for success are represented in its program documents, contracts with program consultants and ESCOs and transparent partnerships with public facility owners and their ESCOs.

Public sector clients, ESCOs, project financiers and others attribute the Colorado program's success to several key features, all designed to facilitate the process and foster satisfying experiences and results:

- ◆ A field of pre-qualified ESCOs
- ◆ Procurement guidelines, when a bid process is required
- ◆ Standardized, state-approved contracts
- ◆ Private market-based project financing
- ◆ Third-party advice and technical assistance, provided *free of charge* to participants signing a non-binding Memorandum of Understanding with the CEO.

For more information about how your State agency, institution of higher education or local government might benefit from EPC, please contact the Colorado Energy Office.

Portfolio distribution by market segment
188 executed projects





COLORADO'S STANDARDS FOR SUCCESS

The Colorado Energy Office wants every client state agency, institution of higher education and local government venturing into energy performance contracting to have a successful experience. To that end, CEO has designed a five-step process for managing EPC projects. Visit <https://www.colorado.gov/pacific/energyoffice/public-energy-performance-contracting> for direct access to all EPC program documents.

Step 1: Introductions and approval

You (a public facility owner) and CEO talk through the EPC process and determine whether EPC is a good tool to accomplish your goals. (If you are already in conversation with a Colorado pre-qualified Energy Service Company (ESCO), the ESCO will organize a meeting with a Colorado EPC Program representative to discuss the advice and technical assistance available.)

- CEO assigns an EPC Program representative to provide you advice and technical assistance at every step in the lifecycle of an EPC project. If you are contacting CEO directly, your EPC Program rep meets with your team to (1) present EPC 101 and describe the free advice and technical assistance available to all, (2) assesses the appropriateness of EPC as a tool to meet your goals and (3) makes a recommendation whether to pursue EPC.
- If EPC is feasible, CEO and/or an ESCO presents to your Board, Council, Commission or other decision-making body that describes EPC process and offers CEO assistance through a Memorandum of Understanding.
- If your decision-making body agrees to pursue an EPC project, an authorized signer executes the CEO's *Memorandum of Understanding*. That allows you to receive CEO advice and technical assistance throughout your project.

(Step 2: Energy Service Company selection)

You hire a pre-qualified ESCO best suited to achieving your goals. State agencies, institutions of higher education and many local governments require a competitive selection process in procuring contractors; some local governments do not. CEO supports you either way. Open book pricing applies to all projects.

If you require a competitive selection process, this Step 2 is followed:

- You and CEO meet to discuss your selection process and establish a clear project scope.
- CEO provides the full list of pre-qualified ESCOs, as well as the ESCO Selection Toolkit. The Toolkit includes a guidance document, a RFP template, suggested interview questions and suggested Selection Committee practices.
- CEO reviews the draft solicitation for completeness prior to its issuance.
- CEO serves as an advisor throughout the selection process. CEO must remain neutral and unbiased during ESCO selection and cannot be a scoring member of a selection committee. However, CEO can answer questions, provide clarification and point out possible differentiators.
- You select a pre-qualified ESCO that best suits your needs.

Step 3: Technical Energy Audit and EPC Project Proposal

With your staff's assistance, your ESCO does the detective work to find energy, water and cost savings.

- Your key decision-makers and facility management staff, your selected pre-qualified ESCO, and your CEO Program rep meet to develop the project's scope of work. The goal is clear understanding and agreement on intent, your ESCO's proposed services and CEO's ongoing assistance.
- To ensure an investment-grade audit, CEO and its pre-qualified ESCOs provide clients with the standardized State-approved *Technical Energy Audit and EPC Project Proposal Contract*. CEO assists in developing and negotiating final contract terms, ensuring that terms and expectations are incorporated into the contract. State agencies and higher education are provided standardized contracts; local jurisdictions, can customize contract templates.
- You and your ESCO execute the negotiated *Technical Energy Audit Report and EPC Project Proposal Contract*.



- You and your ESCO execute the negotiated *Technical Energy Audit Report and EPC Project Proposal Contract*.
- Your key decision-makers and finance and facility staff, your ESCO and CEO hold a kickoff meeting.
- Your ESCO conducts the investment-grade technical energy audit.
- Your ESCO develops a preliminary and updated audit findings and a draft *EPC Project Proposal*, and then provides copies to both you and CEO for review and discussion.
- CEO provides independent review of the audit to ensure the (1) process, technical, financial and legal terms of the ESCO's contract with CEO are fulfilled, and (2) energy and cost calculations, proposed facility improvement measures and measurement and verification plan are reasonable.
- You, your ESCO, and CEO meet to discuss the draft *Technical Energy Audit Report and EPC Project Proposal*.
- Your ESCO refines the draft report and proposal based on your input and provides you and CEO with final copies.
- If acceptable, you sign a *Notice of Final Acceptance*.

Step 4: Performance contracting

Upon your approval, your ESCO makes facility improvements.

- You, your ESCO, and CEO work with the standardized State-approved *Energy Performance Contract, Measurement and Verification (M&V) Guidelines* and *Commissioning Guidelines* to develop a draft contract. State agencies and higher education are provided standardized contracts. Local jurisdictions are provided templates that can be customized. CEO or your ESCO will provide M&V101 training that describes M&V options and implications.
- Your team, your ESCO and CEO meet to develop a Performance Contract that meets (1) all terms set forth in the Audit and (2) all your technical, financial and legal requirements as well as those of the Colorado EPC Program. CEO also ensures the document addresses potential future “what-if” scenarios.
- Your ESCO provides an acceptable M&V plan following CEO *Measurement and Verification Guidelines*. It is a component of the EPC Contract.
- If acceptable, you sign the *Energy Performance Contract*.
- You determine how the project will be financed. Most often, a municipal tax-exempt lease purchase is leveraged, in addition to any applicable utility incentives or grant funding. Colorado's private sector financial market is very supportive of EPC. State agencies (and some institutions of higher education) arrange financing through the Colorado Treasurer's Office. Local jurisdictions very often leverage the guidance and templates found *Financing Bid Package* used by state agencies and institutions of higher education.
- Your ESCO goes into construction, sees that facility improvement measures are installed as specified, and commissions the installations.
- CEO provides support during construction as necessary.
- CEO completes a post-construction walkthrough of facilities. (Required for all School District projects. Suggested for all other clients.)
- If acceptable, you sign a *Notice of Completion*.
- Your ESCO provides you and CEO a *Post Implementation Report* that documents as-built conditions and any changes to the energy savings guarantee.

Step 5: Measurement and verification of guaranteed savings

Congratulations. The energy and cost savings begin. And your ESCO verifies that!

- Your ESCO provides you and CEO with Measurement and Verification reports, as required by your Energy Performance Contract.
- CEO provides you with an independent review of M&V reports, prior to your acceptance.
- CEO provides you with trouble-shooting expertise as needed. CEO does not provide dispute resolution, but can assess whether you have grounds for dispute.
- You enjoy energy and costs savings!



PUBLIC SECTOR EPC PROGRAM RESULTS as of June 30, 2015

<p>Facility investments \$486,932,740 million</p> <p>Executed projects 188</p> <p>Public clients 140</p> <p>State agencies 8/18 Higher education 18/26 Counties 22/64 School districts 55/179 Municipalities 29/271 Special districts 8/?</p> <p>Public buildings 2426</p> <p>Square feet improved 76.5 million sf</p> <p><i>Office space, schools, housing, libraries, jails, hospitals, street lighting, water & wastewater facilities, swimming pools, ball fields</i></p>	<p style="text-align: center;">GUARANTEED ANNUAL UTILITY SAVINGS</p> <p>Electricity (kWh) 161.4 million</p> <p>Natural gas, propane, heating oil & coal (therms) 9.4 million</p> <p>Water (kgal) 66,646</p> <p>Utility cost savings \$30.9 million</p> <p>Operations & maintenance (O&M) cost savings \$2.6 million</p>	<p style="text-align: center;">FACILITY IMPROVEMENT MEASURES</p> <p>HVAC improvements Boiler replacements Pumps, fans & drivers Equipment controls Lighting fixtures & controls Occupancy sensors Operations & scheduling Building envelope improvements Water efficiency (low flow fixtures, irrigation, evapotranspiration & cooling tower controls, ice machine & laundry conversions, pool covers, valve replacements) Street & traffic lights Renewable energy installations</p>
---	--	--

PRE-QUALIFIED ENERGY SERVICE COMPANIES (ESCOs)

servicing Colorado's public jurisdictions

CEO reviews ESCO technical and organizational qualifications and pre-qualifies a select group of ESCOs to provide a deep and broad talent pool for Colorado's public sector EPC program clients. Each pre-qualified ESCO contractually commits to Colorado's standards for success and adheres to open book pricing. Per the terms of a Memorandum of Understanding with CEO, public facility owners may competitively select one of following companies, according to their jurisdiction's procurement guidelines.

*360 Energy Engineers
Ameresco
Apollo Solutions Group
Iconergy*

*Johnson Controls, Inc.
McKinstry
Navitas
Noresco*

*Opterra Energy Services
Schneider Electric
Siemens Industry, Inc.
Trane/Ingersoll Rand*

Interested? Contact the Colorado Energy Office to get started.

Jeanna M. Paluzzi, EPC Program Manager, 303.866.3464, jeanna.paluzzi@state.co.us
Matthew Robinson, Program Engineer, 303.866.2660, matthew.robinson@state.co.us

