The Commonwealth of Pennsylvanía turns energy challenges into innovative program

approaches to advance performance contracting. The Department of General Services (DGS) Energy Management Office pro-actively oversees performance contracting projects for Commonwealth agencies and also consults on local government projects. Through the legislated Guaranteed Energy Savings Act (GESA) performance contracting program, DGS has developed sound procurement and contracting processes, come up with strategies to embrace new industry trends, designed new approaches for under-served customers, and met seemingly impossible goals with aggressive deadlines. "We're using performance contracts to establish longterm savings opportunities through more efficient buildings," said Bruce Stultz, Director of Energy Management, DGS.

DGS is linked with the state energy office (the Department of Environmental Protection) through the bridge office of the Governor's Green Government Council, essentially serving as the state energy office's arm for building-related program services. Performance contracting gained acceptance as a way to get projects going and capture deep energy savings. To date, DGS has 44 projects underway totaling \$449 million in facility upgrades and is working on local government projects as well. With a recent 20% hike in utility rates, the energy-saving measures are heading off a utility budget deficit.

An Innovative Program

Challenge: Meet the Governor's Aggressive Energy Efficiency Goals

Solution: Strategic approach to bring projects on quickly.

In 2008, Governor Edward G. Rendell challenged DGS with a goal to reduce energy use by 20% in DGS facilities (compared to the 2004/2005 baseline year). Not only is this an aggressive goal but the deadline was aggressive as well – to achieve the 20% reduction in less than 2 years. DGS met that goal by July 2009, within only six months – 18 months early.

The governor responded with a bigger challenge, setting the bar to 25% by the same date.

"We're using performance contracts to establish long-term savings opportunities through more efficient buildings."

- Bruce Stultz, Director of Energy Management, Department of General Services (DGS)



Bruce Stultz (right) with Central Plant Manager Mike Penyak and a new chiller in a DGS facility.

DGS is on-track to meet that. With this high-profile success, performance contracting gained local acceptance.

Challenge: Fast-

Track Projects to Stimulate the Economy.

Solution: Strategic plan to stagger the roll-out of RFPs for commonwealth agencies.

On the heels of the governor's challenge, DGS was challenged to do even more. Because DGS is so effective in mobilizing projects, it was *not* given federal stimulus funds, but performance contracting



was viewed as a way to get a big and quick economic impact in the state and DGS' selfsufficient GESA program was viewed as a program that could deliver.

In March 2009, DGS was challenged to fast-track 15 "shovel-ready" projects to be completed and under construction by December 2010! The DGS Energy Management Team rose to the challenge, agencies stepped up to the plate, a roll-out schedule for RFPs was developed along with project timelines, and multiple RFPs were issued every 2-3 weeks. ESCOs were given a heads-up on agency schedules for RFPs so they could do advance planning to assign their resources to the potential projects of choice.

Construction actually began in six months, putting people to work and stimulating the Commonwealth's economy. An estimated \$124 million in project scope was in the works in just over a year.

Challenge: Utility rate hikes.

Solution: Load shaping for competitive utility pricing.

The utility rate-hike in early 2010 inspired DGS to dig for further savings. "We believe that with more sophisticated controls we can control 15% of the load in each building, shaping utility usage patterns to negotiate better electricity rates," said Stultz. "We will retain a portion of the rate savings to help fund performance contracting projects that invest further in building controls. We're using performance contracting to establish long-term savings opportunities through more efficient buildings."

Challenge: Push innovation in performance contracts.

Solution: Incorporate LEED®, ENERGY STAR® and other leading programs.

DGS pushed the boundaries of performance contracting to attain LEED® certification, attaining gold in two facilities and going for silver in two others. After working through the LEED process the first time, DGS applied its new-found expertise to develop a how-to manual for state agencies doing that fetched 27 more LEED credits pertaining to Commonwealth policy and procurement practices.

DGS encourages ENERGY STAR® Portfolio Manager to monitor buildings from the first-look through follow-up monitoring and verification to validate savings. Two buildings already display an ENERGY STAR



plaque indicating superior performance and two more are close to achieving the threshold rating.

Challenge: Keep financing competitive.

Solution: Make available a variety of financing mechanisms with streamlined processes.

Despite the current economic challenges, DGS is keeping the financing arena competitive with the standard lease option - Certificates of Participation (COPs), Build America Bonds and Qualified Energy Conservation Bonds (QECBs). DGS works actively with lenders to get the best rates, developing protocols and documents acceptable to both parties. Then DGS provides lender information with standardized forms to ESCOs and end-users, pro-actively brokering the financial deals. "The goal is to make money available and keep rates as low as possible," said Stultz. DGS is developing contract templates to make it easier to use various bonds as well.

There are also funding options dedicated exclusively to the local government market. DGS works with the Commonwealth's Department of Community and Economic Development to



leverage their insight and connections with the local government sector to make those funding resources available to local governments.

Challenge: Develop large-scale renewables projects.

Solution: Apply performance contracting program strategies to PPAs.

On top of all this, DGS is pioneering a parallel program to establish Power Purchase Agreements (PPAs) to install and lease renewable energy systems. The GESA model will be customized for this use and companies will be pre-qualified to provide this service.



A delegation from Turkey met with DGS staff to learn more about the program, posing here in the Capitol's Rotunda.

Challenge: Provide professional technical assistance to projects and program staff, on a limited program budget.

Solution: Fees help support the program.

DGS is the only agency to authorize performance contracting projects for state agencies. The eightperson staff provides intensive oversight to assess project viability, help select an ESCO, evaluate the audit, put together a sound performance contract agreement, participate in construction meetings, and ensure monitoring and verification processes are followed to validate savings. Two different consultants with differing areas of expertise work on each project.

The cost of consultants is supported through a nominal sliding-scale fee in each state agency's performance contract (a flat fee of \$15,000 for a \$1-



2 million project and \$60,000 for a \$10-\$20 million project). The fee is set in the agency's performance contract along with other project costs, so is supported by the guaranteed energy savings. The fee is collected not from the agency but from the ESCO. When the ESCO is paid its first draw during the construction period through the financed escrow account, the ESCO makes the payment to DGS. DGS has an escrow account set-aside to hold the fees collected over multiple years and to make payments to the consultants.

This income enables DGS to bring in expert advisors to provide direct technical assistance to DGS and participating state agencies. It also provides creative options for the clients as they explore various technical alternatives with the help of the consultants.

Because of DGS' work within the state energy office, it breaks away from its state agency focus to work with school districts and local governments. DGS provides free facilitation services to them, now in high demand because local governments were hard-hit by the recent utility rate hike.

"The more services we're structuring to offer, the more important this fee-based service becomes," said Stultz. It was started about two years ago, with a huge demand about 1-1/2 years ago. "We were working in the red for awhile before the projects closed and we're just now getting into the black."

Challenge: Serve small projects when the ESCO industry is at capacity.

Solution: Build an industry to serve this sector.

With so much performance contracting activity in large state agencies keeping ESCOs busy, DGS wanted a way to meet the increasing demand of small state agencies, local governments and small school districts. DGS is pioneering a Small ESCO program (SESCO) as a streamlined version of GESA. Seven small businesses were just pre-

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qualified to fill this niche. Projects will involve simpler measures of lighting, controls, water and HVAC, with a combined total no more than \$700,000 financed within a 15-year lease term. A pilot project is in the works for a county, borough and township, bundling these projects to a scale for financing. SESCO may also be a good fit for single-building or single-measure applications in larger facilities.

Challenge: Expand education and leverage "boots on the ground."

Solution: Create an ESC State Chapter.

The state just held a kick-off meeting to start an ESC Chapter. Stultz said, "I think a chapter will create a rich opportunity and achieve two goals - continuing education for potential users and a forum for constructive dialogue among parties familiar with the processes to help move the program forward."



The Outreach Committee of the new Pennsylvania ESC Chapter identifies what organizations would benefit from learning about performance contracting.

Challenge: Overcome procurement and legal barriers for state agencies to engage in performance contracting.

Solution: Pre-qualified ESCOs, standardized contracts.

Pennsylvania's market transformation in performance contracting demonstrates the Best



Practices that ESC recommends for all states as indicated below. With the new state chapter, Pennsylvania checks off the last Best Practice recommended for state performance contracting programs.

AT A GLANCE ESC's Best Practices in Action

State Leadership (point person; program)	Х
Legislation and Governor's Support	Х
Pre-Qualified ESCOs	Х
Consensus - procurement, legal, finance	Х
Pre-Approved Contracts	Х
Public/Private Partnership (ESC	Х
Chapter)	
Project Oversight; Technical Assistance	Х
Education & Outreach	Х
Program Funding through Savings	Х
Data Tracking	Х
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The **Energy Services Coalition** is a national nonprofit organization composed of a network of experts from a wide range of organizations working together at the state and local level to increase energy efficiency and building upgrades through energy savings performance contracting.

Energy savings performance contracting enables building owners to use future energy savings to pay for up-front costs of energy-saving projects, eliminating the need to dip into capital budgets.

Funding for ESC to develop this success story was provided by the **U.S. Department of Energy**.

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