



# Connecticut Department of Energy and Environmental Protection



# CT's New Standardized Energy-Savings Performance Contracting Program

Lynn Stoddard  
DEEP, Lead by Example Program



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# What is ESPC?

- Implementation of energy savings measures with no upfront capital
- The costs of energy savings measures are paid for by future guaranteed savings from utility budget
- Approach over 30 years old, approx. \$6B - \$7B in U.S. annually
  - Most ESPC projects in municipal, state, and federal government facilities (also in universities, hospitals, and some commercial)



# Benefits of ESPC

## Re-purpose wasted utility dollars to:

- Stabilize energy costs, improve budget accuracy, stabilize load profiles
- Upgrade facilities to highly efficient energy systems
- Reduce budgetary burdens of deferred maintenance
- Eliminate costly emergency repairs
- Encourage action on energy efficiency – lead by example
- Help to stimulate a clean energy economy in CT



# Typical Energy-Savings Measures

- Lighting
- Heating ventilation & air conditioning
- Energy management systems
- Motors and variable speed drives
- Building envelope measures
- Water savings measures
- Renewable energy
- Other



# Who Benefits?

- Municipal leaders – finance projects outside of capital budgets
- Taxpayers – reduced budget burden
- Building occupants – healthier working and learning environments, increased comfort
- Facility managers – improved efficiency, fewer complaints, fewer emergency repairs



# CT Towns With ESPC Experience

Bridgeport

East Hartford

Fairfield

Farmington

Hebron

Middletown

Milford

Naugatuck

Norwalk

New Britain

South Windsor

Stamford

Stratford

Waterbury

Windham



# Development of CT Program

- Public Act 11-80 required DEEP to develop standardized ESPC process
- Developed by Interagency Workgroup
  - DEEP, Administrative Services, Construction Services, Policy and Management, Attorney General, Treasurer
- US Department of Energy provided technical assistance on best practices, processes, standardized documents
- Started with templates developed out of years of experience in other states nationwide



# CT Program Users

- State agencies, including higher education
- Municipalities *may* use program
- State/local government facilities including:
  - K-12 schools (including regional school districts)
  - Offices
  - Wastewater treatment facilities
  - Campuses, dormitories
  - Prisons
  - Hospitals



# Confidence, Ease for Program Users

- Clear, streamlined, repeatable, transparent process
- Program approval by key state agencies provides legal, procurement, and financial confidence
- Consistent, level playing field for vendors
- Designed to mitigate risk for agencies and municipalities:
  - payment is contingent on appropriation of funds
  - vendor's energy savings guarantee must be  $\geq$  total project costs
  - vendor pays if there is an energy savings shortfall



# State Program Resources

**Pre-qualified vendor list**



**Standardized contracts**

**Energy technical support**



**Financing technical support**



# Pre-Qualified Vendor List

- State contract with pre-qualified list of Qualified Energy Services Providers (QESPs) – currently 12 QESPs on contract
- Municipalities can use state contract



# Standardized Contract Documents

- Base contract between DAS and QESPs
- Pre-approved contract exhibits, details to be added for each project
  - Fixed cost and pricing
  - RFP to select QESPs to do Cost-Effective Feasibility Analysis
  - Investment-Grade Energy Audit
  - Energy-Savings Performance Project Statement of Work, Schedules



# Technical Support - Energy

- Program Manager at DEEP
- Utilities – Review of Energy Savings Measures for incentives through CT Energy Efficiency Fund
- Pool of vendors to provide 3<sup>rd</sup> party review of energy savings measures, performance guarantees, measurement and verification, etc. – funded through CT Energy Efficiency Fund



# Technical Support - Financing

- Clean Energy Finance and Investment Authority staff to provide advice and support on financing options, introductions to capital providers and financial institutions
- Tax-exempt municipal lease/loan guidance documents



# First Steps

1. Build support in your town:

Educate and engage champions – Energy Task Force, facilities director, finance director, purchasing director, Board of Education, etc.

2. Identify potential facilities and energy opportunities:

Consider buildings with high utility bills, recurring/high maintenance, no recent lighting or controls upgrades, major equipment replacement needs (e.g., boilers), comfort complaints, poor energy performance (low Energy Star score)



# First Steps: Continued

3. Prepare your Technical Facility Profile:
  - Include 3 years of energy use data (all fuels, water), detailed description of HVAC control system and energy management system, square footage of conditioned space, area and types of lighting, any anticipated replacement of energy or control systems, previous audit reports or studies.
  - Use DEEP Technical Facility Profile template or other format, e.g., Energy Star Portfolio Manager



# More Info

[www.ct.gov/deep/leadbyexample](http://www.ct.gov/deep/leadbyexample)

Lynn Stoddard

CT Department of Energy & Environmental Protection

[lynn.stoddard@ct.gov](mailto:lynn.stoddard@ct.gov)

860-827-2685

Matthew Cohen

ESPC Program Manager

[Matthew.cohen@ct.gov](mailto:Matthew.cohen@ct.gov)

518-542-0548



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# Overview of ESP Project Process, 1



# Overview of ESP Project Process, 2

QESP and Municipality negotiate Energy Savings Performance Project Statement of Work & Schedules



QESP and Municipality sign completed exhibit for Energy Savings Performance Project Statement of Work & Schedules



Municipality makes full project payment with bond funds or periodic payments to lessor and QESP



QESP implements energy-savings measures during construction and installation phase



# Overview of ESP Project Process, 3

QESP provides M&V reports annually



QESP makes annual reconciliation payments to Municipality if guaranteed savings are not achieved

DEEP performs annual review of all QESPs and M&V reports to ensure compliance with CT program

