



Community Spotlight: How a Small Town Made Big Changes to Reduce its Energy Consumption

NEEP

6/30/17

Welcome and Introductions



Ellen Tohn
Wayland Energy Committee



Ben Keefe
Town of Wayland



Alice Dasek
U.S. DOE



Carolyn Sarno Goldthwaite
NEEP



John Balfe
NEEP

Agenda

- Town of Wayland Case Study
- DOE Energy Services Performance Contracting Toolkit
- Q&A
- Short Takes
- Resources and Wrap-Up



Northeast Energy Efficiency Partnerships



“Assisting the Northeast & Mid-Atlantic Region in Reducing Total Carbon Emissions 80% by 2050”

Mission

Accelerate energy efficiency as an essential part of demand-side solutions that enable a sustainable regional energy system

Vision

That the region embraces next generation energy efficiency as a core strategy to meet energy needs in a carbon-constrained world

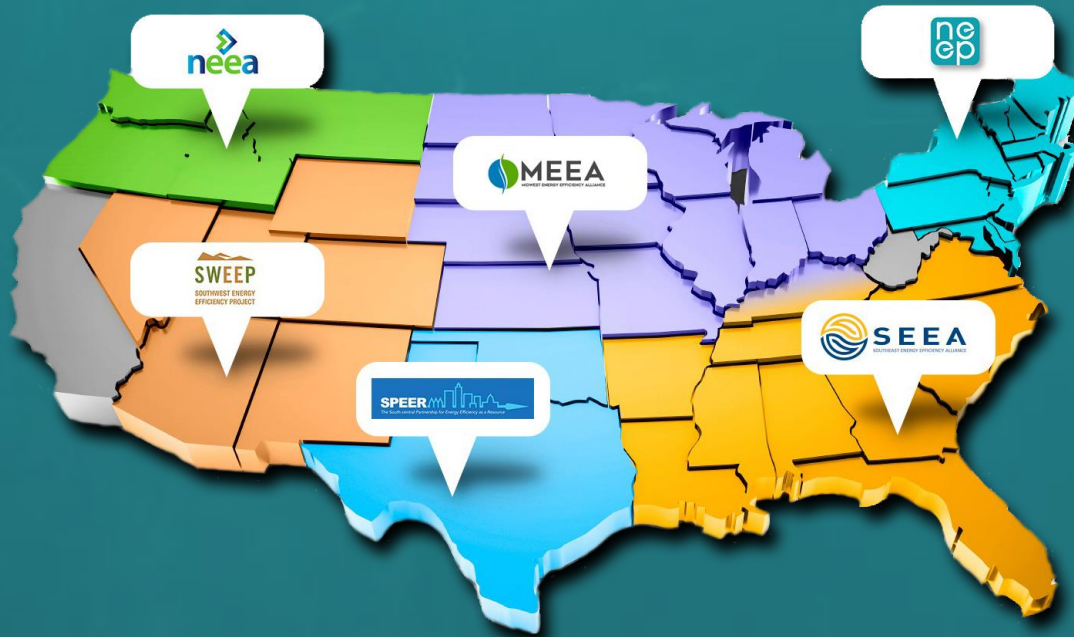
Approach

Overcome barriers and transform markets through *Collaboration, Education, and Enterprise*



About NEEP

A Regional Energy Efficiency Organization



One of six REEOs funded in-part by U.S. DOE to support state and local efficiency policies and programs.



Wayland – A Small Town Making Big Changes to Reduce its Energy Usage

Ellen Tohn – Co-Chair, Wayland Energy Committee

Ben Keefe – Public Buildings Director, Town of Wayland



Wayland Massachusetts Our Energy & Climate Story

SMALL TOWNS CAN DO BIG THINGS TO SAVE ENERGY & COMBAT
CLIMATE RISKS

ELLEN TOHN, ENERGY AND CLIMATE COMMITTEE CO-CHAIR

BEN KEEFE, WAYLAND PUBLIC BUILDINGS DIRECTOR

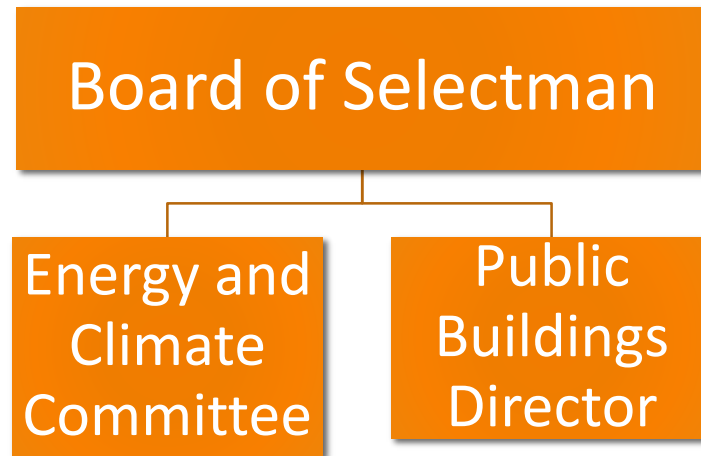
JUNE 30, 2017

An engaged community

Wayland is a stable and progressive community, characterized by a legacy of civic engagement and a commitment to citizen self-governance, advised and supported by professional staff.



The extended team



Committee Advisors
Residents

MAPC
Procurement & TA

Private contractors
ESCO, Solar, Lighting

The Energy and Climate Committee

A very skilled and knowledgeable group, with strong advisory support from other town residents. Originally the Energy Initiatives Advisory Committee; name change in 2017 to reflect climate mission.

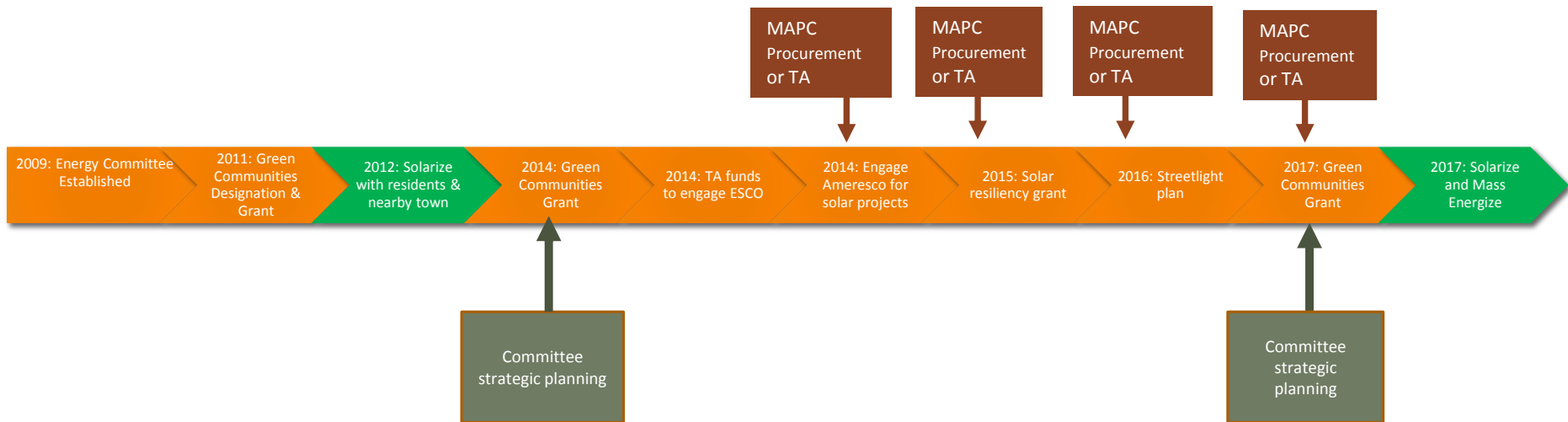
- Anne Harris, Co-Chair
- Ellen Tohn, Co-Chair
- Bill Huss
- Harvey Michaels
- Tom Sciacca
- John Harper, Associate Member with solar financing expertise
- Mike Staiti, Associate Member with solar development and finance expertise
- Kaat Vander Straeten, Associate Member with community engagement and Solarize expertise
- Ben Keefe, Public Buildings Director

Wayland at a glance

- 14,000 residents
- 6,000 households
- 1 high school, 1 middle school, 3 elementary schools – 2,660 students
- 15 square miles

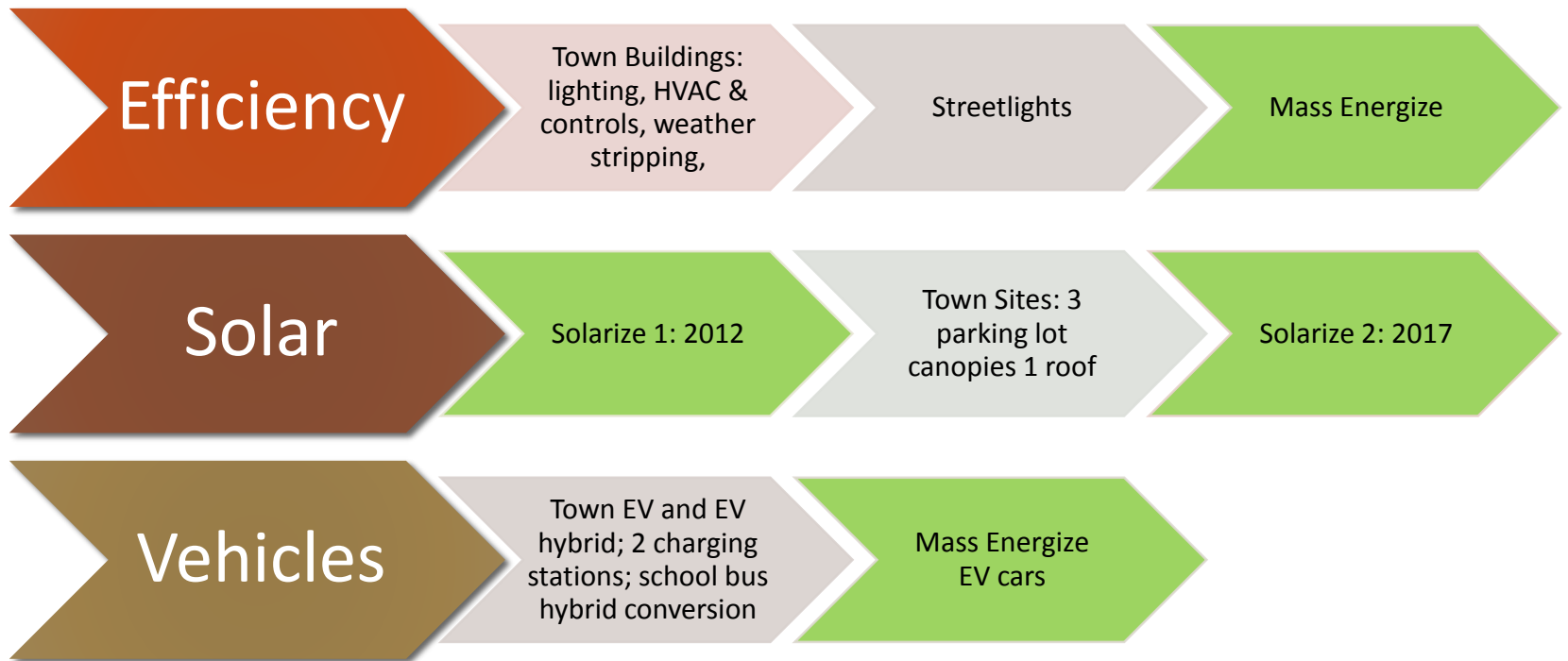


Wayland's energy journey 2009 -2017



 Engages residents

Wayland's energy journey to date



Town of Wayland – Energy Savings Performance Contract

Construction Cost: \$ 2.7M Utility Rebates: \$ 151k Annual Savings: \$ 143k Town of Wayland Energy Conservation Measures (ECMs)	Lighting System Improvements	Lighting Controls	Integrated and New Energy Management System Option A	Water Improvements	Controls for Kitchen Fridge/Freezer Fans	VFD's for Pumps	Weatherization	Boiler Improvements	Oil to Gas Conversion	Replace Transformers	Boiler Replacement - One Boiler	Demand Control Ventilation
	1	2	4	10	13	14	16	17	18	24	28A	33
Facility												
Public Safety Building	X	X		X			X					
Library	X	X		X			X		X			
Fire Station #2	X	X		X			X					
Middle School	X	X	X	X	X		X			X		X
Claypit Hill Elementary	X	X	X	X		X	X				X	
Happy Hollow Elementary	X	X	X	X	X	X	X				X	X
Loker Elementary	X	X	X	X			X	X				

Solar projects are visible and saves \$



A multi year process

Key ingredients:

- MAPC procurement for Ameresco
- Solid partner
- PPA structure, no \$ out for the town and financial gains is a value proposition that Town Meeting supports
- Committee expertise to guide process
- State incentives

The benefits

- \$100K/year in offset electric costs
- Visible climate action
- Resiliency at Middle School with back up power with new inverter

Streetlights in the works

Over 700 lights

Some incandescent, high pressure, mercury vapor

Three 1915 circa fixtures – time for new technology

Took time to address concerns over

- Ownership and liability
- Maintenance
- Process to purchase from utility
- Financing under current operating budget

Savings estimated at over \$60,000/year



Solarize and now Mass Energize Wayland!

Building upon successful 2012 Solarize with 2 nearby towns, we embark on Solarize 2017 and the broader Mass Energize which includes:

Simple lighting upgrades for all

Home assessments and energy upgrades

Electric vehicles

Green energy choices

Climate friendly food and food waste options

And more

The challenge: how to get community engagement around climate up and running using new models that we can scale!



Our accomplishments

11 percent energy reduction by entering in a **\$2.4MM ESCO** for municipal building improvements, supplementing prior lighting projects

4 solar projects **reduce town electric costs by 100,000 per year** through the installation of **1.4MW of solar** -- three parking lot canopies and one rooftop array generating enough solar to **offset 25 percent** of the town's municipal energy load

Converting streetlights to LED technology with anticipated savings of **\$60,000 per year**

2012 Solarize spurred **74 residential solar installations**, Solarize 2017 2.0 on the horizon with Sudbury and Lincoln

Resiliency effort will provide **solar powered back up at Middle School – our emergency shelter**

Secured **over \$900,000 in grant funds** to support efforts

Celebrating solar success!



Ingredients for success

Town leadership support – Board of Selectman

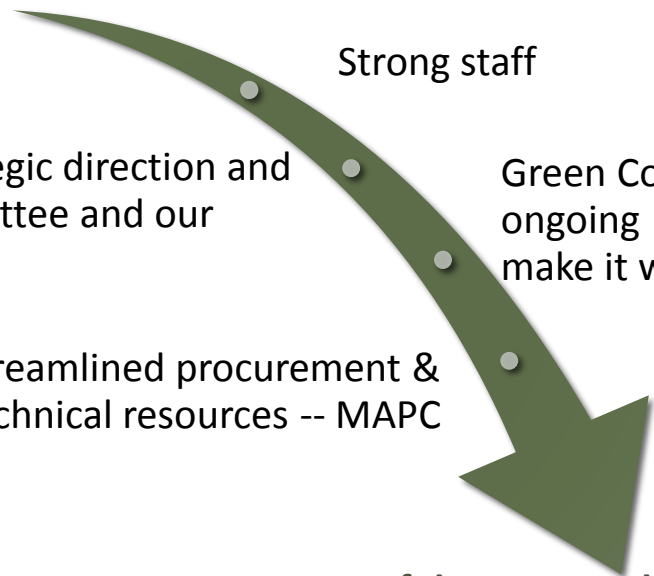
Strong staff

Experts with time to set strategic direction and look for opportunities (Committee and our broader strategic advisors)

Green Communities criteria and ongoing state and utility funding to make it work

Streamlined procurement & technical resources -- MAPC

Impactful energy and climate initiatives that make sound financial sense



For more information

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Ellen Tohn ellentohn@gmail.com



DOE's ESPC Toolkit

Alice G. Dasek

Overview

- **Profile of ESPC Accelerator**
- **Snapshot of ESPC Toolkit**
- **Tool Highlights**
- **Observations & Next Steps**

Accelerator Profile

Timeframe

2014-2016

Partners

25 partners (18 states, six cities, one school district)

Purpose

Expand access to Energy Savings Performance Contracting (ESPC) as a promising option for financing energy efficiency retrofits in the public sector

Outcome

24 More than \$2 billion invested in MUSH ESPC contracts

Final Partner List

- Alabama
- Cincinnati, OH
- Colorado
- Connecticut
- El Paso, TX
- Fort Lauderdale, FL
- Fort Worth, TX
- Hawaii
- Houston, TX
- Illinois
- Massachusetts
- Michigan
- Minnesota
- Missouri
- Montana
- Nevada
- New Hampshire
- New Mexico
- Newark, NJ
- North Carolina
- Philadelphia School District
- South Carolina
- Virgin Islands
- Virginia
- Washington State

Accelerator Activity Areas

Area 1: Streamlining the ESPC Process

- Partners reviewed existing model ESPC documents

Area 2: Empowering the Market

- Partners participated in ePB feedback & training

Area 3: Resolving Individual ESPC Barriers

- Support successful, permanent, innovative, and replicable resolution of individual partner barriers

The ESPC Toolkit

<https://betterbuildingsolutioncenter.energy.gov/espc/home>

- Considering ESPC
- Implementing ESPC
- Establishing ESPC
- Expanding ESPC
- ²⁷ Assessing ESPC Results



Considering ESPC

- Design-Bid-Build or ESPC?
- Self-Assessment Questions
- LBNL Market Study (2013)
- Legislative Library

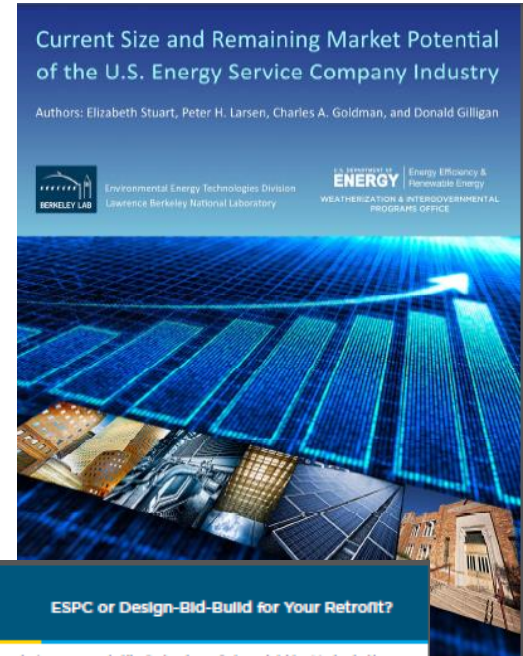


Figure 6: Preliminary Self-Diagnosis to Prioritize Projects

Preliminary Self-Diagnosis

Does your facility have more than 50,000 square feet of floor area?
 Do you spend more than \$60,000 each year on energy bills?
 If so, an energy performance contract may work for you. It is likely to benefit you even more if you have:

- Aging buildings or equipment
- Recurring maintenance problems or high maintenance costs
- Comfort complaints
- Scarce budget resources
- Too little energy management expertise
- Too many demands on your maintenance personnel
- No recent upgrades of your lighting or controls systems
- Energy-using equipment that is ready for replacement

ESPC or Design-Bid-Build for Your Retrofit?

Design Process	Financing	Project Implementation	Post-Acceptance Performance
<ul style="list-style-type: none"> • Client develops plans and specifications • Client solicits proposals • Client selects contractor 	<ul style="list-style-type: none"> • Projects must find their own financing 	<ul style="list-style-type: none"> • Contractor completes project • Commissioning performed by commissioning agent if included in contract 	<ul style="list-style-type: none"> • None, unless arrangements are made for a third-party firm or internal team to perform ongoing commissioning / measurement and verification
<ul style="list-style-type: none"> • Client solicits proposals • Client selects contractor 	<ul style="list-style-type: none"> • ESCOs that are registered municipal advisors in your state may facilitate financing. Otherwise, projects must find their own financing and ESCOs may provide or broker negotiations about how financing is generally managed 	<ul style="list-style-type: none"> • ESCO completes project • ESCO performs commissioning 	<ul style="list-style-type: none"> • ESCO performs ongoing measurement and verification to validate performance • ESCO provides reimbursement if guaranteed savings are not met and/or fixes the problem at no additional cost

Advantages of ESPC

- Can be cost effective for organizations with in-house technical expertise. For example, organizations that can perform their own investment-grade audits, have design capability, can perform their own commissioning or measurement and verification
- No upfront cost
- Guaranteed cost and energy savings
- ESCO may be able to facilitate financing

Tool: ESPC or Design-Bid-Build?

Barrier

“Which approach is better suited for our planned retrofit?”

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ESPC or Design-Bid-Build for Your Retrofit?

Choosing to save energy, whether to manage costs, improve operational efficiency, conserve natural resources, or protect the climate makes excellent sense, but determining how best to approach an energy savings project can be a challenge.

One approach is to use an Energy Savings Performance Contract (ESPC). With an ESPC, an institution enters into a contract with an Energy Service Company (ESCO) which is responsible for developing and implementing an energy savings plan and installing energy efficiency upgrades. The resulting energy savings are then used to pay for the upgrades over time. The ESCO guarantees the projected energy savings and provides ongoing reports verifying the actual savings.

Another approach is to take the “in-house” or “do-it-yourself” route where different aspects of an energy saving project, like project evaluation, engineering, construction, and post-installation verification are performed by the institution itself or procured through the traditional design-bid-build process.

How can you determine which process is better suited for upgrading your facilities and achieving long-term cost savings?

	Project Planning & Development	Selection Process & Negotiation	Financing	Project Implementation	Post-Acceptance Performance
Design-Bid-Build	<ul style="list-style-type: none"> Design engineering consultant (DEP) prepared and released DEP evaluated and engineering consultant selected Engineering consultant performs Investment Grade Audit (IGA) (requires funding) 	<ul style="list-style-type: none"> Engineer prepares plans and specs (requires funding) Project budget prepared Contractor DEP prepared and released DEP evaluated and contractor selected 	<ul style="list-style-type: none"> Projects must find their own financing 	<ul style="list-style-type: none"> Contractor completes project Commissioning performed by commissioning agent if included in contract 	<ul style="list-style-type: none"> None, unless arrangements are made for a third-party firm or internal team to perform ongoing commissioning / measurement and verification
Energy Savings Performance Contracting	<ul style="list-style-type: none"> ESCO selected through procurement process Contract for Investment Grade Audit (IGA) is negotiated and released ESCO performs Investment Grade Audit (IGA) (no upfront cost unless ESPC not pursued) 	<ul style="list-style-type: none"> ESCO presents a cash flow analysis with a bundled set of measures that can be paid for through savings Scope of project and contract are negotiated and executed with ESCO 	<ul style="list-style-type: none"> ESCOs that are registered municipal advisors in your state may facilitate financing. Otherwise, projects must find their own financing and ESCOs may provide information (education) about how financing is generally managed 	<ul style="list-style-type: none"> ESCO completes project ESCO performs commissioning 	<ul style="list-style-type: none"> ESCO performs ongoing measurement and verification to validate performance* ESCO provides reimbursement if guaranteed savings are not met and/or fails the problem at no additional cost

*Some states offer the best of pre-qualified ESCOs to expedite ESCO procurement. *Some states require measurement and verification for flow to an independent third party.

Advantages of Design-Bid-Build

- Familiar / traditional procurement approach
- Can be cost effective for organizations with in-house technical expertise. For example, organizations that can perform their own investment-grade audits, have design capability, can perform their own commissioning or measurement and verification

Advantages of ESPC

- ESCO accountable for project evaluation, design, construction, and post-installation monitoring
- Single point of contact
- No upfront cost
- Guaranteed cost and energy savings
- ESCO may be able to facilitate financing

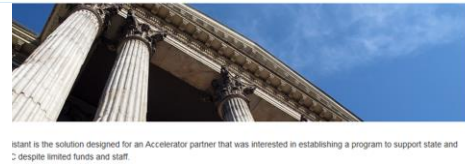
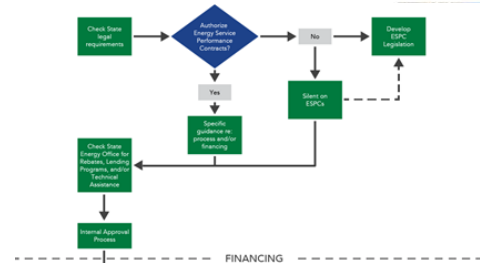
Office of Energy Efficiency and Renewable Energy | For more information about best practices and other resources visit: <http://www.energy.gov/>

Implementing ESPC Projects

- ESPC Virtual Technical Assistant



- Financing Decision Tree



Instant is the solution designed for an Accelerator partner that was interested in establishing a program to support state and despite limited funds and staff.

- Best Practices for Selecting an ESCO

Best Practices for Selecting an ESCO

The RFQ has been issued, the ESCOs have submitted their proposals... now what? The best practices that follow may be helpful in selecting which ESCOs to include on your pre-qualified list.

Use the DOE Evaluation Workbook

https://energy.gov/sites/eeo/files/2014/06/17/14_pre-qualified_escos_evaluation_workbook.xlsx

- Evaluation criteria are already tailored to match the DOE RFQ Template
- Accommodates up to 10 Evaluators and 10 ESCOs
- Handles both the Proposal Review and the Interview
- Simplifies the process of collecting scores from Evaluators
- Results are compiled automatically to save time and avoid transcription errors

Choose Evaluators Carefully

- Evaluating ESCO proposals is a major commitment of time – at least one to two hours per proposal, plus an hour each for any follow-up interviews. Each Evaluator has to review every proposal and participate in every interview to avoid biasing the results (e.g. some people score more generously than others). When inviting people to be Evaluators, explain the time requirements, and don't push if there is a reluctance to commit.
- Consider inviting people who have a stake in the outcome, such as local government entities who are interested in ESPC or utility energy efficiency managers.
- Try to invite people who have some basic understanding of ESPC.
- Avoid inviting people who might have a bias or conflict of interest.
- You'll want to be confident that at least three to four Evaluators are fully engaged and have the time to deliver their evaluations and participate in any follow-up interviews.

Proposal Review

- Allow time for review – probably two to three days for each proposal.
- Send reminders during the review period. Given two weeks for reviews, busy people will often wait until the second week to get started. Prompt people to review the first proposal ASAP so they can get a feel for how long to allow for the rest (and because taking the first step is often the hardest).

- Model ESPC Contract Documents

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Home » Model Documents for an Energy Savings Performance Contract Project

MODEL DOCUMENTS FOR AN ENERGY SAVINGS PERFORMANCE CONTRACT PROJECT

This page contains a model contract template and companion documents to help you launch energy efficiency projects through Energy Savings Performance Contracting (ESPC). Read about [how these documents were developed](#).

About the Office

The ESPC Model Documents were prepared as resources that can be used when developing or updating procurement and contracting documents for ESPC projects and programs. Neither the United States government nor any agency thereof, nor any of its employees, make any warranty, express or implied, or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed or represent that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States government or any agency thereof.

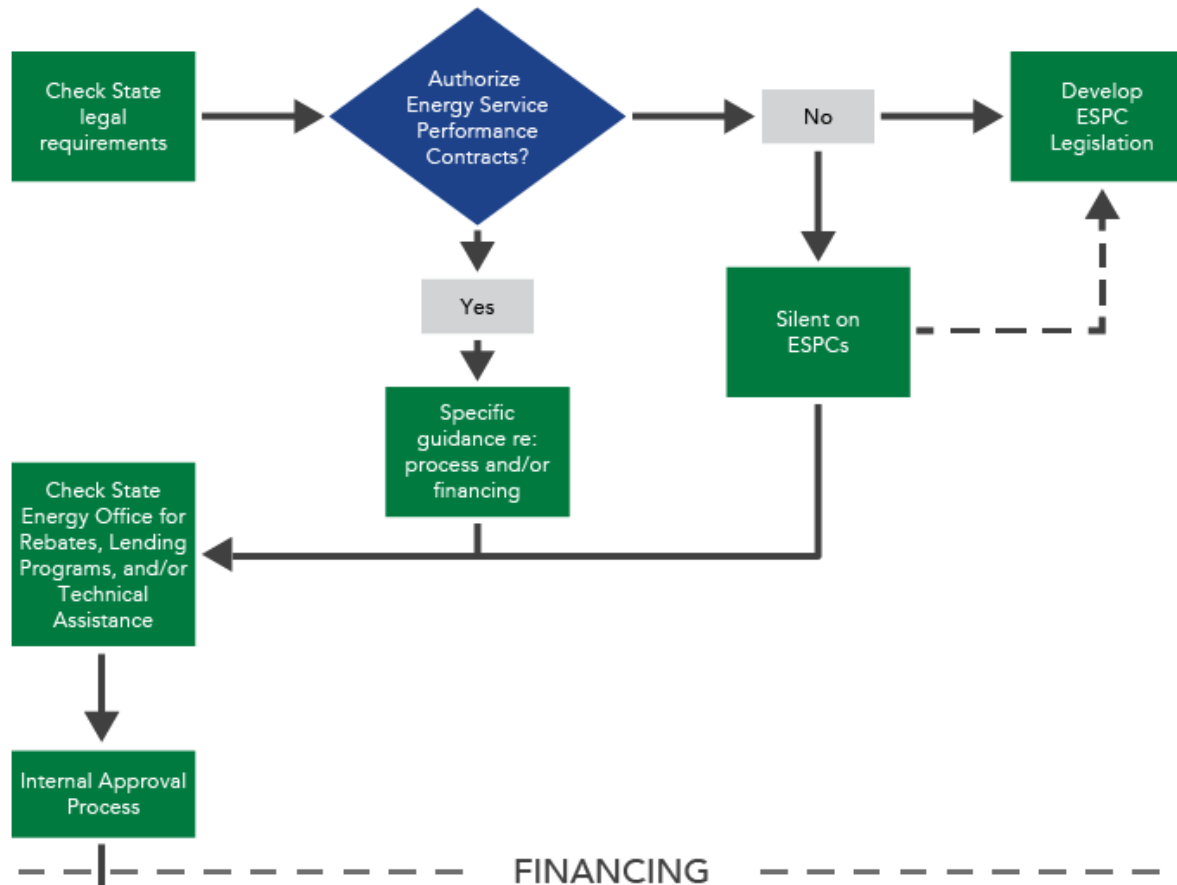
- eProject Builder



Tool: Financing Decision Tree

Barrier

“Have we considered all financing options available to us?”



Tool: Virtual Technical Assistant

Barrier

“We have one staff person and a limited budget. How can we offer a technical assistance program for ESPC?”



[Home](#) [Considering ESPC?](#) [Implementing Projects](#) [Establishing a Program](#) [New Markets](#) [Evaluation](#)

[Home](#) > Welcome to the ESPC Virtual Technical Assistant

Welcome to the ESPC Virtual Technical Assistant



Establishing ESPC

- ESPC Key Attributes
- Implementation Models
- Guidelines for Developing ESPC Program
- Virtual Technical Assistant (in document form)
- Networking Toolkit
- Champions Toolkit

GOAL
To reduce energy intensity in state-owned buildings by 20 percent by 2020, based on 2010 levels

BARRIER
State agencies were not undertaking energy efficiency projects due to lack of upfront financing

SOLUTION
Minnesota created the Guaranteed Energy Savings Program (GESP), a state-led initiative to deliver technical, financial, and contractual assistance to state agencies to support the implementation of Energy Savings Performance Contracting (ESPC), a mechanism that provides upfront project capital that is ultimately repaid by the energy savings generated by the project

OUTCOME
Within two years, GESP built a pipeline of 26 energy efficiency projects impacting more than 550 buildings and 26 million square feet

Implementation Model: Guaranteed Energy Savings Program

OVERVIEW
Energy savings performance contracting unlocks upfront capital that enables energy efficiency projects to go forward. For Minnesota, ESPC represented an opportunity to mobilize projects that would move the state toward its energy savings goals if building owners understood ESPC and how to use it effectively. Thus in 2012, Minnesota established a dedicated team in the Department of Commerce to offer comprehensive ESPC consulting services. The team is called the Guaranteed Energy Savings Program (GESP) a partnership of state agencies and local governments through the ESPC process, minimizing the perceived risk and unfamiliar approach to project implementation.



Minnesota Energy Efficiency & Renewable Energy



ESPC 10 Key Attributes of GESPC Program Readiness
The first step to achieving meaningful results

The ESPC 10 Key Attributes of GESPC Program Readiness are preconditions for developing and maintaining program success. The key Attributes in and of themselves do not guarantee success, but they are the foundation upon which to build a program. The true measure of success is in the achievement of meaningful results.

- 1. Enabling Legislation**
 - Effective legislation authorizes the legitimacy for public sector to enter into a guaranteed energy savings performance contract (GESPC). It also protects the state's interest and provides program participants clarity in specific areas such as the savings guarantee, retention of savings, empowerment of who can use it, fiscal situation, eligible financing period, measurement and verification and reporting requirements.
- 2. Established Substantial Support**
 - Substantial support conveys priorities to state agencies and institutions, assigns responsibility and directs ESPC consideration sector to capital budget requests. Continuous support is critical to maintain upon its success.

A successful program will have developed and will have garnered cooperative support among those, but are not limited to:

- that the process follows available ESPC
- scope the utility and operational savings budget dollars from and
- of (RFP, RFP, E&A, etc.) that recognizes that GESPC evolution and that facilitates the development and
- authorities early in the process is important and can
- the ESPC program, collaboration with other mechanisms that financing mechanisms are complementary, are supported.
- services to public agencies have already completed manual responsibility to support their performance and contractor list, endorsed by the state, will be the quality of projects. The pre-qualified providers priority of each party, that ensures the provider to
- of the state services on a condition of their

GOAL
Reduce energy use intensity 20 percent by 2010 and 30 percent by 2020 based on 2004 levels

BARRIER
Limited access to cost effective financing to implement clean energy projects

SOLUTION
In 2005, as part of the Commonwealth's commitment to lead by example, Massachusetts established the Clean Energy Investment Program (CEIP), a cost sharing mechanism to fund state energy projects through state bonds with project savings sufficient for repayment. This innovative financing model allows capital spending on energy projects that does not impact the state's bond debt.

Implementation Model: Clean Energy Investment Program

OVERVIEW
Driven to meet ambitious state energy savings targets set in 2002, Massachusetts planned a vital piece of energy efficiency related projects. However, in the wake of the 2003 national economic downturn, a steep decline in project financing from banks and Energy Service Companies (ESCs) stranded a three-year pipeline of \$27 million in projects. In 2004 Massachusetts responded by creating an innovative financing model called the Clean Energy Investment Program (CEIP). CEIP invests in projects using bond financing which is repaid from the energy savings generated by the projects. The bonds are obtained at the same time as general obligation bonds, however Massachusetts leverages the low cost financing without the state's general obligation bond debt.



ESPC Program Results as of December 31, 2016

Category	Count	CUMULATIVE since 2008
Projects Completed or Underway	10	24
Investment	\$10.5M	\$19.5M

Table 1. Target Audiences

Primary Stakeholders (ESPC Enabler)

- Engineering Agencies/Departments/Office (Finance Office)
- Legal Department/Office (Procurement/Contracts)
- Department of Management and Enterprise Services (Budget)
- Department of Public Works

Typical Key Motivations

- Fiscal - cost savings can fund other priorities, solve debt/financing problems, cut spending
- Credibility - support sound energy policy
- Economic Development - create jobs

What is the (State/City/County) ESPC Program?

How Does (State/City/County) Benefit?

Building Energy Audit, Energy Savings, Energy Efficiency, Energy Savings

Welcome to Your Virtual Technical Assistant for Energy Savings Performance Contracting (ESPC)

ESPC offers a way to make energy improvements to public facilities even when there is no budget to fund the work. The public entity contracts with an energy service company (ESCO) to identify and install cost-effective improvements and guarantee the energy savings. The ESCO can facilitate financing for the project, and the financing is repaid from the energy cost savings.

ESPC offers many benefits:

- Upfront project financing
- Guaranteed energy savings
- ESCO can offer information on how financing is generally managed
- The ESCO is the single point of contact - accountability
- Cuts visible energy prices and long-term rising costs
- Addresses deferred maintenance
- Improves productivity via better air quality, lighting, and temperature control

The goal of the Virtual Technical Assistant is to guide you through the five phases of the ESPC process, beginning with identifying potential projects and carrying all the way through to project completion. THE VIRTUAL TECHNICAL ASSISTANT can supplement this guide with an in-person visit at the outset of the process and by phone at key points along the way. THE VIRTUAL TECHNICAL ASSISTANT recommends engaging an external representative at the beginning support necessary for a project to be forced into the

Agency Upgrade Goals

- Use best practices to determine who, what, and how of upgrades
- Use best practices to determine who, what, and how of upgrades
- Use best practices to determine who, what, and how of upgrades

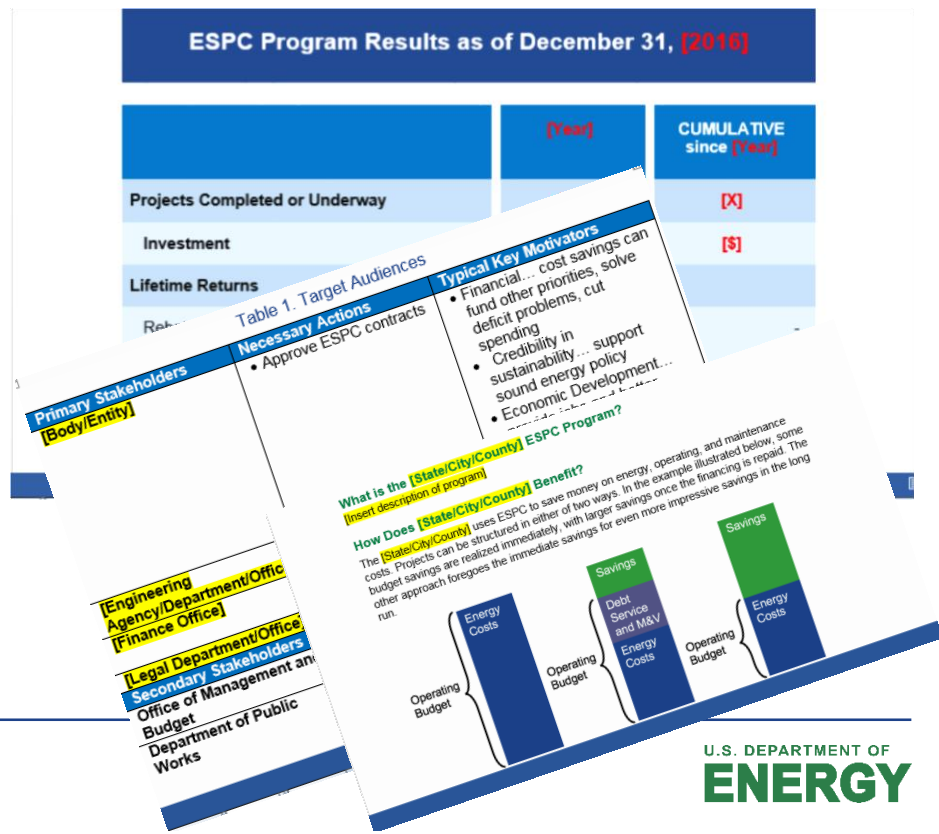
Tool: ESPC Networking Toolkit

Barrier

“How do we establish ESPC as our go-to vehicle for advancing energy efficiency projects, especially through leadership and staff transitions?”

Solution

Tools to make the business case for ESPC and a plan for sustained outreach to critical ESPC stakeholders in the community, including for new leaders and staff.



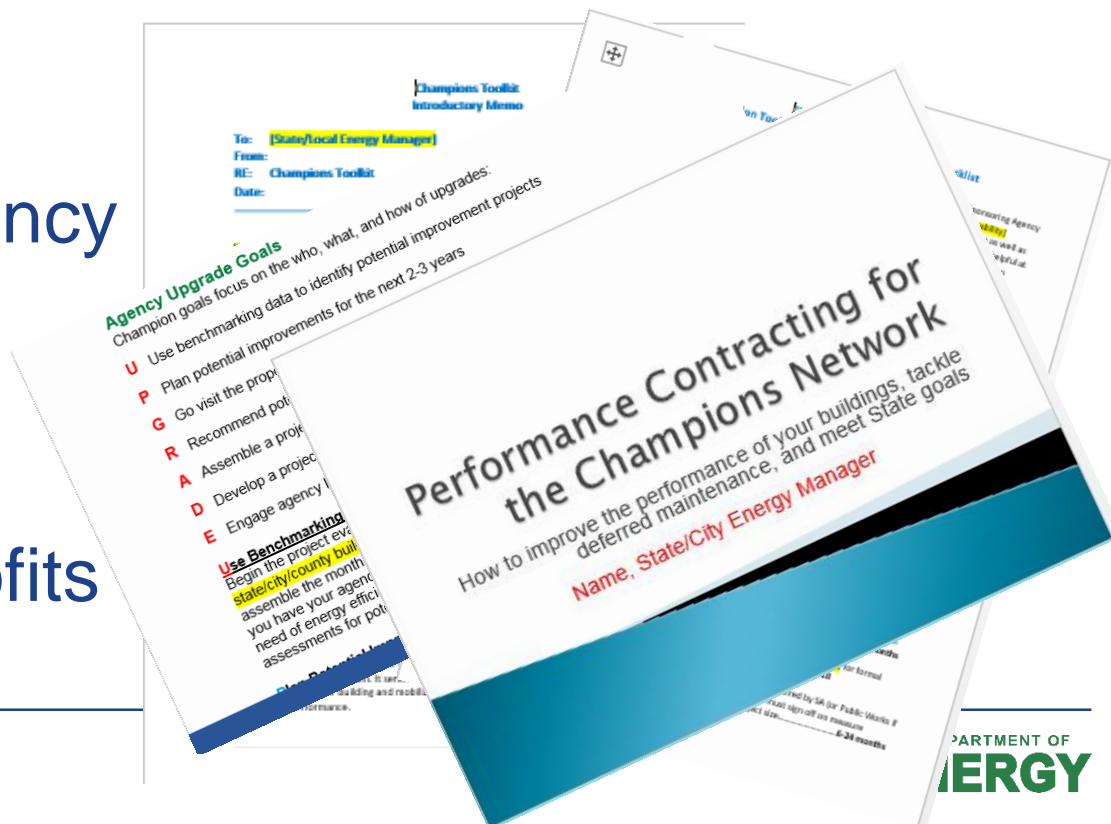
Tool: ESPC Champions Toolkit

Barrier

“We have one staff person but 17 agencies that own buildings. How can we cultivate ESPC projects to help us meet our ambitious state energy savings goals?”

Solution

Tools to empower agency staff to be the SEO's eyes and ears on the ground for developing energy efficiency retrofits via ESPC



Expanding ESPC

- ESPC Primer for K-12 Schools
- ESPC Guide for Fleets and Fueling Infrastructure
- ESPC Guide for Water Resource Recovery Facilities (coming soon)
- Implementation Model: Expanding ESPC to New Markets (coming soon)



Observations & Next Steps

- State and Local ESPC Market Healthy
- Substantial Opportunity Remains in the MUSH Market
- Technical Assistance Needs Still Remain
- Collaboration Will Continue with Stakeholder Organizations
- ESPC Toolkit Will Continue to Expand

Thank You!

Questions?

Alice Dasek

alice.dasek@ee.doe.gov

202-287-1595

Type your questions into the chat box.





Short Takes

MAPC Clean Energy



1. Regional Energy Projects

- ESCO Procurements
- Regional Solar Initiative
- LED Streetlight Purchasing
- Community Aggregation
- Green Fleets
- Energy Resiliency



2. Local Energy Action Program

- Connecting to incentives + plug-and-play programs
- Community energy and climate baselining & strategizing
- Net zero, climate, and energy planning
- Municipal-utility gas leaks coordination



3. Energy Technical Assistance

- Green Communities
- Grant Writing
- Peak Demand Notification
- State and Local Policy
- Solar Permitting and Zoning
- Outreach, Education, and Research





Cammy Peterson
Director of Clean Energy
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NEEP's Community Project

Project Overview and Task force



Focus: Small-Mid Size Communities



Objective: Reduce energy usage and carbon emissions



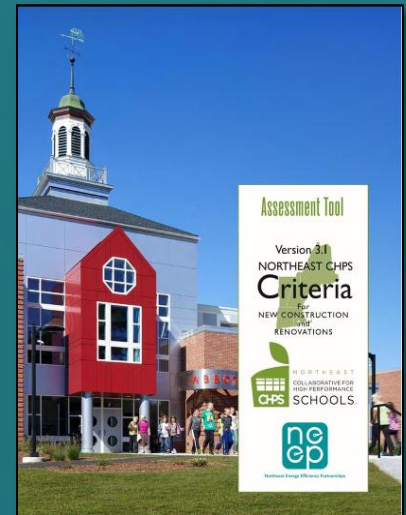
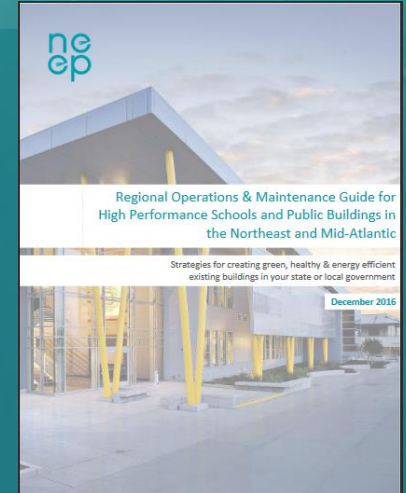
How: Interactive online platform with resources for any community, regardless of their current status



Task Force: Inform the project based on what you're seeing – join today!

Resources

- NE-CHPS
- NEEP's Regional Operations and Maintenance Guide
- Roadmap to Zero Energy Buildings: Progress Report
- Building Energy Rating and Disclosure Policies; Lessons from the Field
- LED Street Lighting Assessment
- Streamlining Data Access Report
- School Exemplars



New Resources



Wayland, Massachusetts

Energy Efficiency Case Study

"With the passage of the Green Communities Act of 2008, the Commonwealth established an opportunity for municipalities to blaze a new path in the clean energy field. Wayland, was one of our earliest designations as a Green Community and I am pleased to see the town utilize the powerful opportunity provided by an energy management services program"

-Dan Knapik, Director, Green Communities Division, MASSDOER

Major cities have long been frontrunners when it comes to reducing energy consumption in municipal infrastructure. Limited resources, related specifically to funding and manpower, in smaller communities create a much tougher road, generally leading to their inability to match the energy reduction measures taken in larger cities.

This, however, does not always hold true. With a group of dedicated town officials, volunteers, and residents, making major improvements to the way a town operates is achievable. One of these small towns making big changes is Wayland, a town in Middlesex County, Massachusetts with a population of nearly 13,500.

Wayland was designated as a **Green Community** in 2010, signifying the town's commitment to reduce energy consumption (by 20 percent) and impact on the environment. "With the passage of the Green Communities Act of 2008, the Commonwealth established an opportunity for municipalities to blaze a new path in the clean energy field. Wayland, was one of our earliest designations as a Green Community and I am pleased to see the town utilize the powerful opportunity provided by an energy management services program" said Dan Knapik, Director of the Green Communities Division at the Massachusetts Department of Energy Resources. As of January 2017, 185 communities in the Commonwealth have received the Green Community designation.

Energy Improvement Highlights

11% **\$100K**

energy reduction by entering in a \$2.4MM ESCO for municipal building improvements

reduction per year in municipal electric costs

1.5MW

of solar at four sites including three parking lot canopies and one rooftop array

25%

of the town's municipal energy load offset by solar

74

households installed solar under the SolarizeMass program

\$60K

anticipated savings from ongoing LED streetlight conversion

Collaboration: the key to unlocking energy savings at the municipal level

"Wayland's success is directly attributable to the volunteer Energy and Climate Committee, comprised of volunteers who are not only passionate about energy savings and carbon reduction but also have energy sector expertise. Working with them is terrific; they push the agenda and help get the work done."
- Ben Keefe, Public Buildings Director



South Portland, Maine

Benchmarking Ordinance Overview

"It is the vision of the City of South Portland to create a sustainable city that benefits the lives of all citizens through energy savings, preservation of the environment, economic opportunity and improvement of the health and welfare of the employees and people of the city."
- Excerpt from the City's Climate Action Plan

South Portland Benchmarking Ordinance & Community Quick Facts:

Population: 25,556 (2015 Est.)

Number of Staff Members Dedicated to this Initiative: 1

Number of Buildings Covered: 30

Approved Date: January 4, 2017

First Required Reporting: May 1, 2018

Building Types Covered: Municipal, public, residential and non-residential

Building Sizes Covered (Sq. Ft.):

- Municipal or School Building 5,000 ft² +
- Non-residential 5,000 ft² +
- Residential buildings 10 or more dwelling units
- Residential apartment complex (10 or more units)

Total Square Footage of Buildings Covered:

Greater than 375,000 ft²

Complete text of the ordinance can be found at: [Article XVII, Energy and Water Use Performance Benchmarking](#) - South Portland Zoning Code

January 2017

First month to begin maintaining data for the Energy Performance Report

May 1, 2018

First required date for submitting Energy Performance Reports. Reporting date of May 1 each year thereafter.

September 1, 2019

City publishes benchmarking for the first time. First year Energy Performance Report is not published.

May 1, 2023

First required date for five-year comprehensive energy audit. Audit date is May 1 of every fifth year thereafter.

NH High Performance Schools Summit

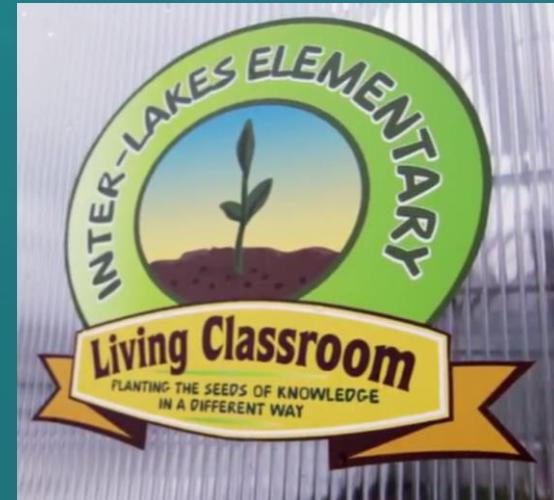


SAVE THE DATE:

October 20th

Inter-Lakes School
Meredith, NH

Registration Coming Soon!



THANK YOU!



Contact Information:

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