



# SCEP

STATE & COMMUNITY ENERGY PROGRAMS

## Setting the Stage for Success: Best Practices for ESPC Planning and Procurement

July 25, 2024

*A copy of the slides from today's presentation will be provided to you for reference.*



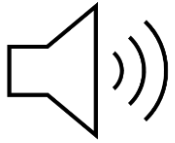
[www.energyservicescoalition.org](http://www.energyservicescoalition.org)



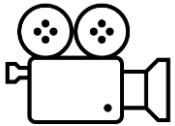
# Virtual Housekeeping



Drop your questions in the Q&A box – or raise your hand at the end!



Unmute your microphone to ask questions or join the conversation



A recording of this training (minus the Q&A) will be posted online

# Speakers



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# Presenter's Bio

- 39 years experience in energy efficiency industry, including engineering, management, marketing, and sales at several engineering firms and energy service companies (ESCOs)
- Founded and ran an ESPC Owner's Rep firm for 18+ years
- U.S. Department of Energy Project Facilitator for Federal ESPCs for 20+ years
- Quality Assurance on \$2.5 billion of ESPCs for DOE, DOD, FBI, FDA, GSA, and dozens of state and local governments, K-12, and higher education clients
- BSME from University of South Florida
- Registered Professional Engineer in Nevada
- Certified by the Association of Energy Engineers (AEE) as a Certified Energy Manager (CEM) and Certified Measurement & Verification Professional (CMVP).

**The Energy Services Coalition (ESC)** 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 **E**nergy **S**avings **P**erformance **C**ontracting.

***Local chapters; public and private sector individuals coming together to provide outreach and education.***

# Agenda

**Learning Objective:** This training will focus on the first two phases, **Planning and Procurement**, of a successful ESPC project.

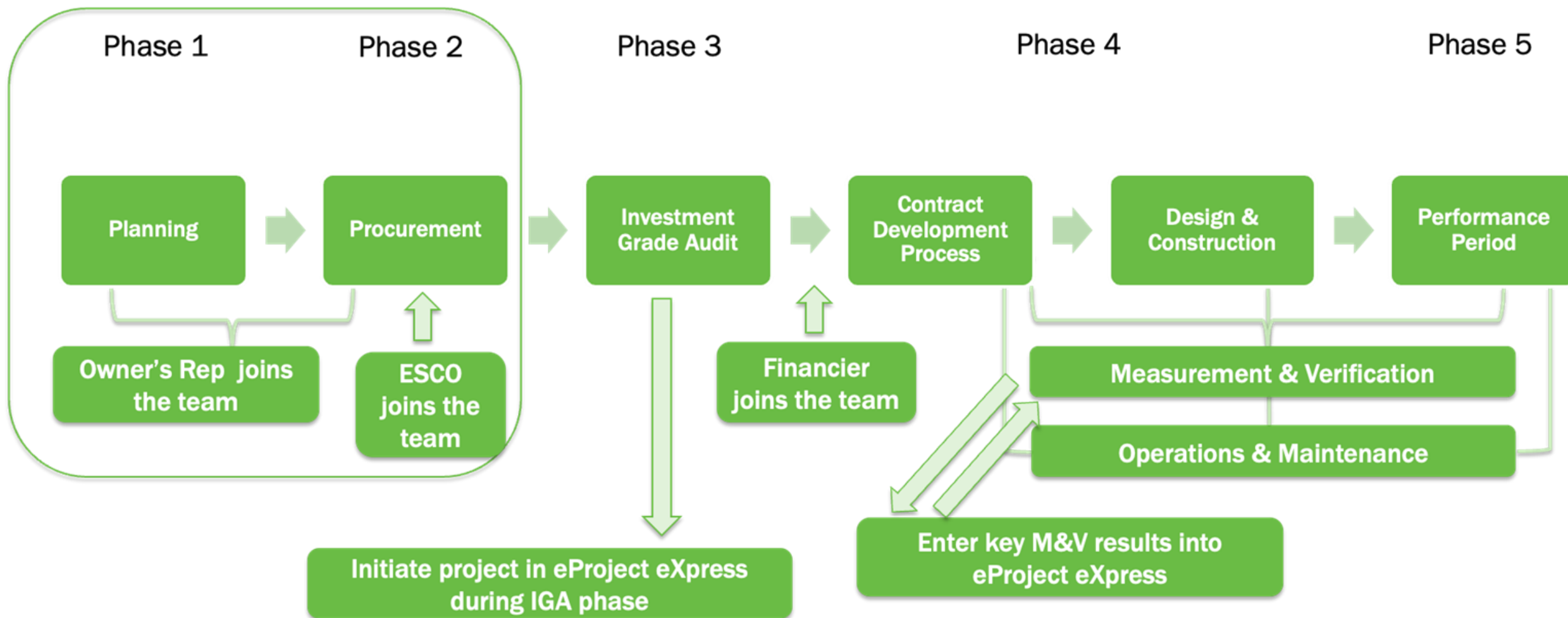
- Getting Started with ESPC
- Building a team
- Planning the Project (financial, contractual, technical)
- Selecting an ESCO partner
- Resources
- Closing Thoughts and Next Steps
- Questions and Discussion



***This symbol indicates that more information on this topic will be featured in future trainings.***

*Designed by Freepik*

# The Five Phases of ESPC



# Getting Started with Energy Savings Performance Contracting (ESPC)



# What is ESPC?

The use of **guaranteed savings** from the maintenance and operations budget (utilities) as capital to make needed upgrades and modernizations to your building environmental systems, financed over a specified period of time.”

- United States Department of Energy - 1999

“ESPC is a financial mechanism used to pay for today’s facility upgrades with tomorrow's energy savings – without tapping your organization’s capital budget. Done properly, it has the performance of a hedge fund, with the risk of a T-bill.”

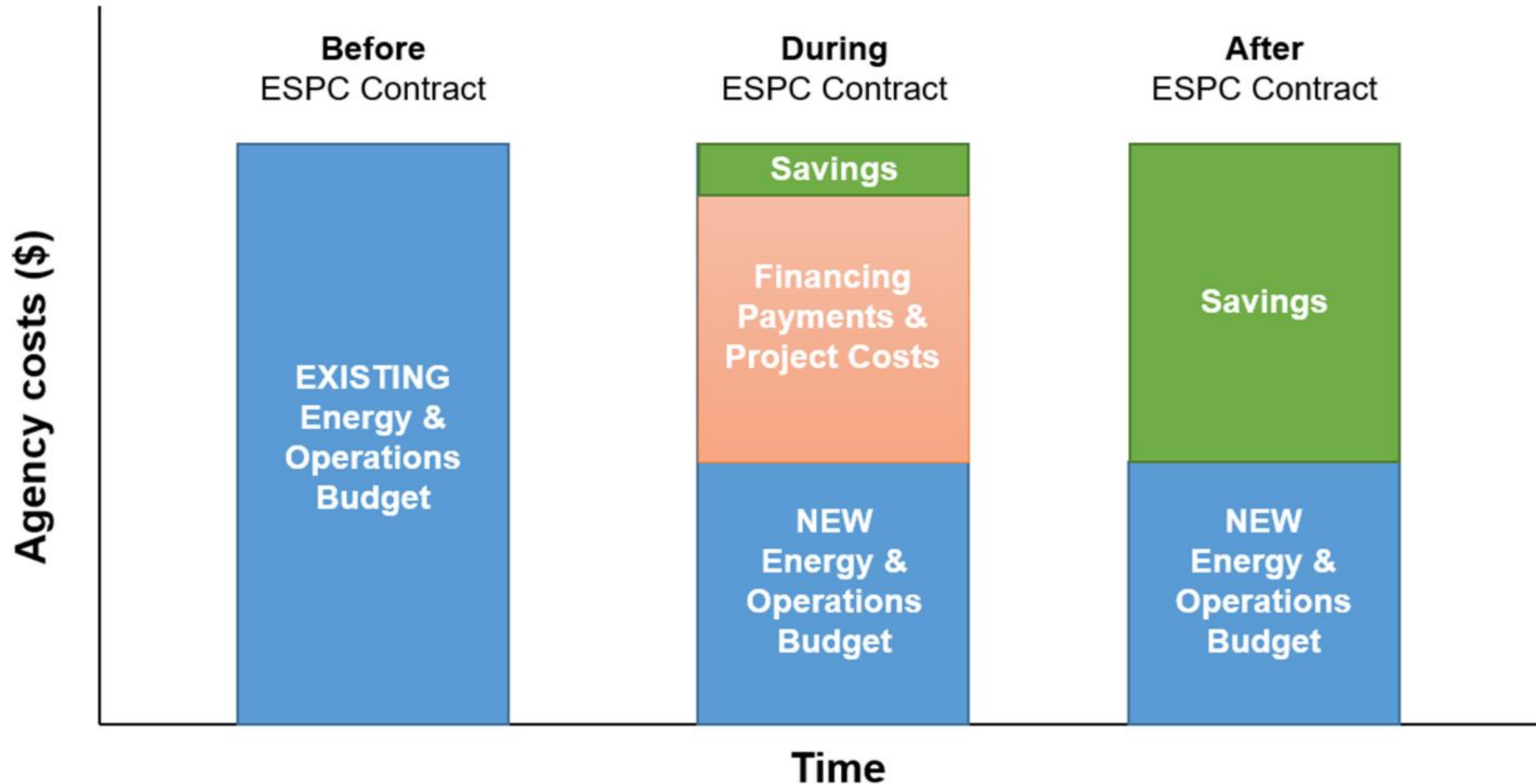
- Chris Halpin - seems like every day

A version of **design-build** contracting, with a focus on guaranteed energy savings.

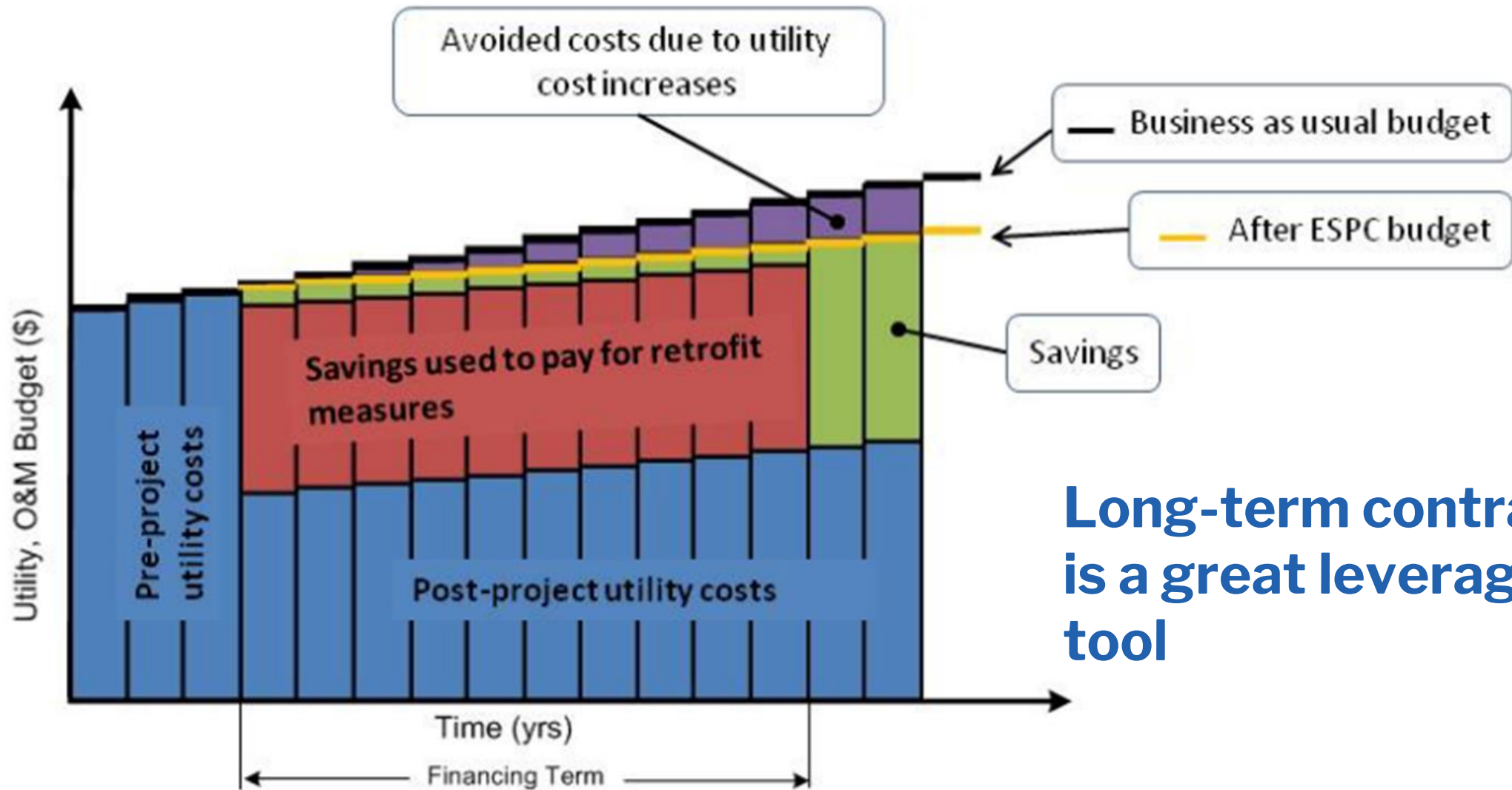
# What is ESPC?



## Budget Cost Neutral



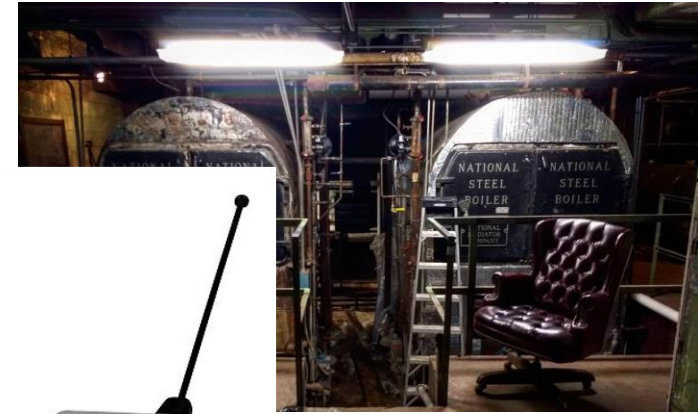
# What is ESPC?



**Long-term contract  
is a great leveraging  
tool**

# Today's Facilities

- Poor Indoor Air Quality
  - (Lack of) Temperature Control
  - Limited Fresh Air Supply
  - Mounting list of deferred maintenance needs
  - Failed and/or antiquated equipment
  - COVID-19 shined a bright light on the importance of Indoor Air Quality
- Lighting
  - Inconsistent equipment/manufacturers
- Significant fossil fuel use
- Massive unfunded deferred maintenance
- Subject to closures due to power outages





# Defining the 21<sup>st</sup> Century Facility



Indoor Air Quality



Modernized & Electrified HVAC Systems



Smart Lighting



Building Analytics



Energy Efficient, Renewable, and Resilient



# Why ESPC?

## What can it address for me?

### Benefits

- Available capital is lacking
- Failing facility and system infrastructure
- Hedge rising energy costs
- Meet energy reduction goals
- Support decarbonization
- Create local jobs
- Improve resilience
- Strengthen critical assets
- Leverage high payback measures with low ones for maximum value

## Features and

- Investment Grade Audits of buildings & systems
- Turn-key installation
- Guaranteed Energy Savings
- Mitigate risks using [Risk/Responsibility/Performance Matrix](#)
- Open-book pricing to ensure transparency and reasonable costs
- Reallocate current spending, without necessarily adding debt
- Energy savings and dollar savings can be reallocated to:
  - New HVAC, building envelope, building automation, lighting, solar PV, battery storage, EV fleet conversion, etc.
  - Project financing costs
  - Non-energy facility enhancements

# Getting Started



1. Contact State Energy Office to get info on resources and any technical assistance. **(Training 1)**
2. Small towns, counties, K-12 contact larger neighbors to leverage their size, economies of scale.
3. Identify a Project Champion to lead your ESPC effort.
4. Hire an **Owner's Representative** (OR) to assist with the rest of the steps below **(Future training topic)**.
5. Assemble and educate internal team.
6. Identify project goals and objectives, including scope, approvals, roles and responsibilities.
7. Establish communication protocols and engage community.
8. Develop a high-level pre-qualification study to determine if there is a viable, self-funding project.
9. Understand approval process for each phase...and make sure the team understands the process.
10. Secure commitment from financial and legal departments.
11. Issue Energy Service Company (ESCO) Request for Proposals.
12. Select ESCO partner, execute **Investment Grade Audit** Agreement (IGAA) **(Future training topic)**

# Building a Team



# Identify a Project Champion

## A project champion...

- Drives progress
- Builds site and owner support
- Educates decision makers and stakeholders
- Addresses decision makers' priorities
- Ensures the right people engage at the right time
- Works closely with Owner's Representative to assist with heavy lifting and address questions/concerns
- Understands the organization's processes

*The champion is someone internal to the customer's organization!*



# Benefits of an Owner's Representative (OR)



## **Overarching role of the OR is to ensure that the project:**

- Offers good long-term value to customer and meets their objectives
- Has been explained to all primary Owner stakeholders (from executive leadership through O&M)
- Is built upon a strong baseline and sound engineering analysis
- Identifies, minimizes, and manages customer risk
- Offers a high probability of long-term success
- Has a clear division of responsibilities for future construction, operation and maintenance of new systems, etc.

[U.S. DOE's An Ally in Your Corner: Benefits of Using Owner's Representatives](#)

# Owner's Rep (OR) : Best Practices

- Best to hire them as early as possible. As soon as you start thinking about how to upgrade facilities.
- Main value is providing **independent** education and validation.

## Finding an OR

- As [ESPC Campaign Supporters](#) on the Partners page of our website.
- As Project Facilitators the [DOE PF list](#) (Note, many listed PFs are Federal employees, and are not available to non-Federal agencies).

## Contracting and Payment

- DOE is assembling template procurement and contract docs.
- They are paid fee for service, until financing is in place. Then financed funds pay for OR. Owner can reimburse themselves for costs to date.
- Utilize Bipartisan Infrastructure Law's EECBG funds to offset costs.

# Assembling an ESPC Team

## APPROVING AUTHORITIES

You need these folks fully bought in and supportive of the rigor the team will provide to help mitigate risk and see that you get what you set out to achieve.

## ENERGY CHAMPION

Typically, the ringleader or champion for the concept. Required to help assemble needed resources, tools, topical expertise.

## OVERSIGHT

This role is becoming far more common. Provide experience, insight and education along every step of the way. Professional ESPC Owner's Reps can save time, money, and aggravation.

## CONSTRUCTION

Require that these projects meet or exceed your quality standards and BAU documentation and process. Assist with witnessing, approvals and invoice review.

## MAINTENANCE

Know what's needed, where the challenges are today and what will be required of you in the future to maintain

## LEGAL

Customize documents, review all ESCO-provided input to ensure compliance and avoid contradictions.

## FINANCE

Know how the money moves from operating cost to note repayment and how to manage incentives or other revenues. Commit to full term budgeting.

## PROCUREMENT

Ensure a competitive procurement. Generally, this is two step; first for prequalified providers and later for each project.



# Stakeholder Engagement

## **Have a stakeholder engagement plan**

Ensures timely input from correct decision-makers

Include plans for stakeholder turnover

## **Know who to involve and why, when, and how to involve them**

Key decision makers for specific input (i.e., ECMs considered, goals, O&M strategy approval)

May be responsibility of project champion, with OR support

## **Be careful with "too many cooks in the kitchen."**

**ESPC Champions Toolkit – [Stakeholder engagement resources](#)**



# Communication Protocols

***Open, clear communication within the Team is critical to success!***

- Establish clear communication protocols early
- Designate lead point of contact for both the Owner's team and ESCO
- Determine whom to engage and when
- Determine who is responsible for documenting discussions, decisions, issues and resolutions (Best practice is the OR)
- Establish Q/A & Communication Log to document questions, address, and "close out" the issue
- Lesson Learned: Ensure the OR is involved in every meeting, call, and email exchange to ensure the integrity of the process.

# Roles and Responsibilities

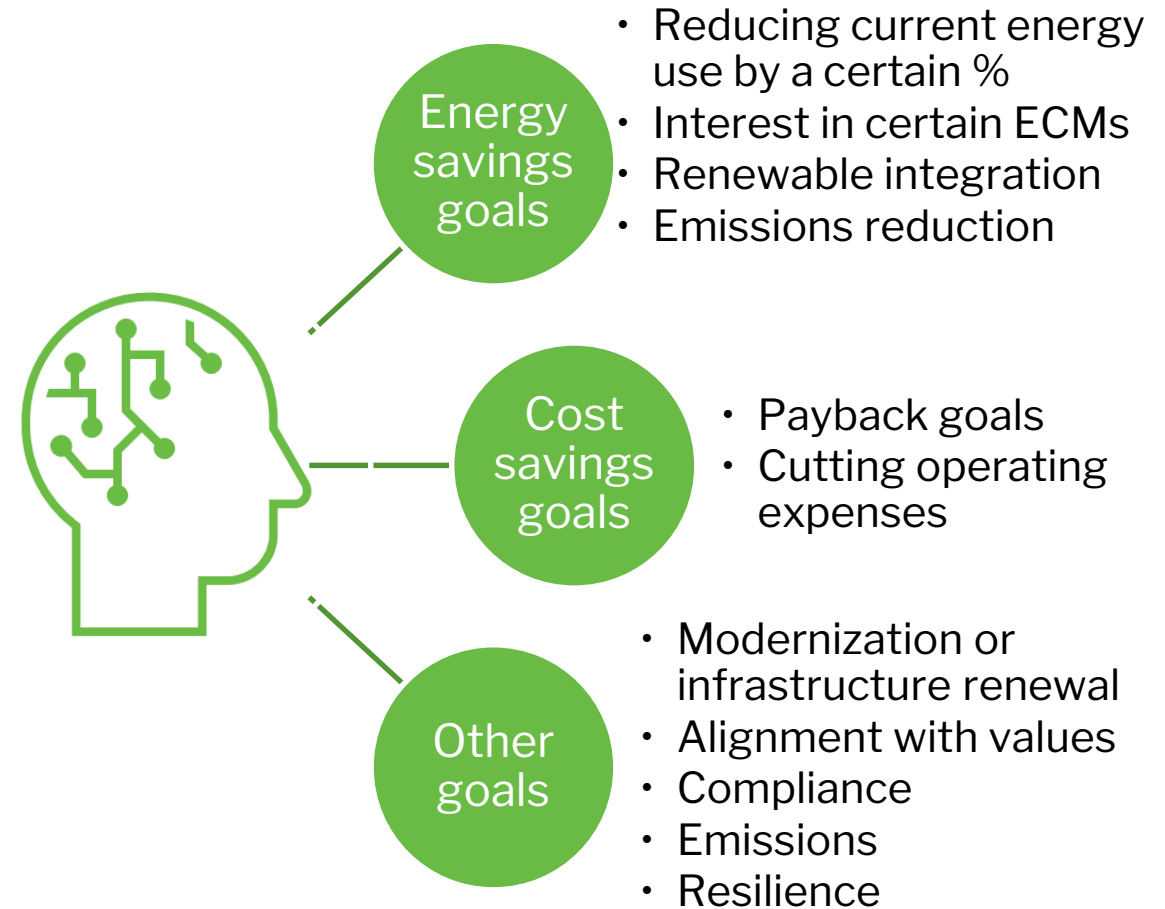
- Establish roles and responsibilities at the outset of procurement planning
  - Delineate responsibilities of OR and facility staff
  - Roles for various facility staff to assist project development
  - Identify any gaps, and determine how to fill them
- Determine who will drive the schedule (and how)
- Define (and manage) expectations through feasibility studies and preliminary site assessments – very important!

# Planning the Project



# Project Discovery - Project Intent and Goals

- Identify project goals and customize the project to advance your mission
- Why are you initiating an ESPC project?
- What are the anticipated (or desired) project outcomes?
- Do you have specific energy savings, cost savings, or other goals?
- What experience (if any) does the Team have with ESPC projects?



# Project Scope



## ESPC Project Components

- Identify affected buildings, facilities, equipment.
- **OR conducts a “high level” pre-qualification assessment with “ROM” (Rough Order of Magnitude) economics**
- Select energy conservation measures (consider non-facility measures)
- Risk and responsibility allocation
- Staff training & building operations instructions
- Project performance – Measurement & Verification
- Operation & Maintenance
- Repair & replacement
- Training

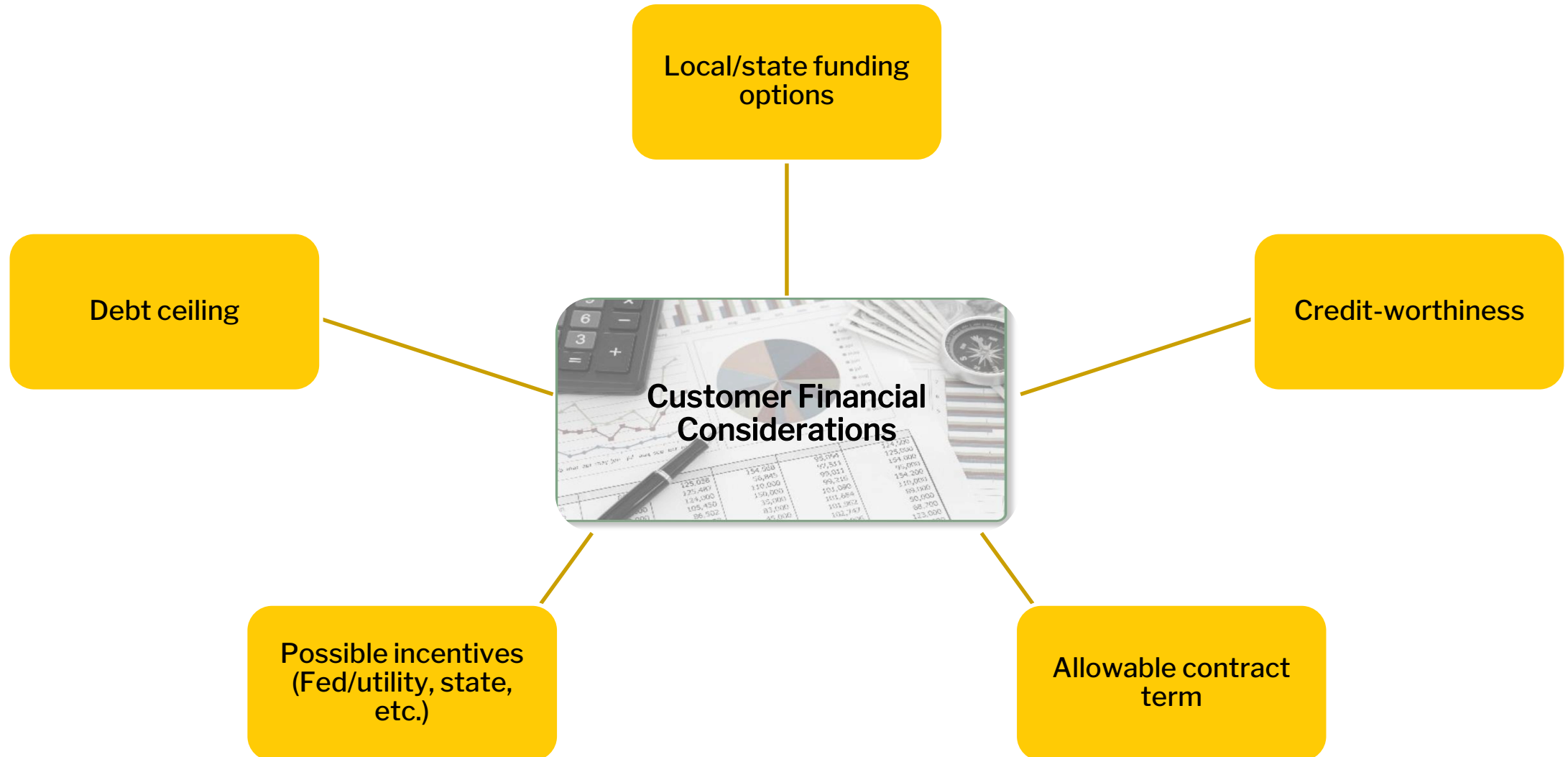


# Project Approval Structure

## **Understand approval process for each phase...and make sure the Team understands the process**

- Understand who has approval authority vs. who needs information
- Understand who has veto power, and who else has influence (and possibly unofficial veto power)
- Implement a process for informing, getting feedback/reviews/approvals
- Does governing body or facility owner approve intermediate components (ECMs, M&V plan, O&M strategy, etc.) or just final ESPC project proposal?
- What input and influence will external stakeholders have (i.e., school district committees, city council, elected officials, supervisory board members, State construction office, fire marshal, debt commission, etc.)?

# Financial Considerations



# ESPC Contractual Considerations

## Legal and Procurement Departments must become familiar with...

### Type of document set

1. Contract for owner's representative (OR)
2. Program request for qualifications (RFQ) or request for proposal (RFP)
3. Project request for proposal (RFP)
4. Investment grade audit (IGA)
5. ESCO base contract (or master contract)
6. Energy services agreement
7. Financing solicitation

### Purpose of document set

1. Owner should secure OR at onset of process to assist with the following steps
2. Pre-qualify ESCOs for a program
3. Final ESCO selection for a project
4. Detailed project evaluation and proposal
5. Contract between the ESCO and State Energy Office that establishes requirements for pre-qualified ESCOs to provide ESPC services
6. Defines project and quantifies expected results, defines how project will be implemented and managed, details roles and responsibilities, M&V plan and O&M plan
7. Competitively select financier

# Understanding ESPC Project Risks

- ESPCs are different than traditional construction projects
- Unique attributes
  - Performance guarantees
  - Firm-fixed price
  - Guaranteed Maximum Price: Cost underruns accrue to owner or commitment to profit percentage is negated
  - Assignment of O&M and/or R&R (Repair & Replacement) responsibilities
- Understand project risks so you can mitigate them!

# Risk Mitigation - Perceived Risks for ESPCs

## Organization/Customer Risks

- Savings not realized
- Performance not maintained
- Operational/Maintenance (if customer taking on O&M of equipment)
- Major changes in facilities (operational, loads, construction)
- Change in leadership may cancel project before complete

## ESCO Risks

- Unable to identify project that meets customer's financial goals
- Upfront costs to conduct the IGA
- No change orders (price risk)
- Performance of subcontractors
- Guaranteed equipment performance and associated savings
- Delays cause excess interest payment risk on bridge loan



# On your Mark, Get Set, Go!!

## **Now you have your:**

- OR in place, educated stakeholders, scoped out potential project
- Team assembled, and trained on ESPC project expectations
- Necessary technical, financial, and contractual approvals determined
- Funding sources identified
- Internal and external stakeholders, including all AHJs (Authorities Having Jurisdiction) briefed

***It's time to go to the market, and select your second, and most important project partner:  
The Energy Services Company (ESCO)!***

***This will be your long-term, turnkey provider of professional, construction, commissioning,  
measurement & verification, and operations & maintenance services***



# Selecting your Energy Services Company (ESCO)

# Developing an RFP/RFQ and Selecting an ESCO



# Collecting Supporting Information for the RFP or RFQ

## Overview

- ESCOs need information about the project to respond to the RFP/Q
  - Information on condition of the facilities
- Contractor is responsible for verifying accuracy, as necessary
- Only include information that is readily available in order to expedite the RFP/Q process. At a minimum, include:
  - Building list, square feet, age
  - Energy and water consumption and cost / rate information

***Requests for Qualifications (RFQ) - tends to be used for developing a list of pre-qualified ESCOs.***

***Requests for Proposal (RFP) - typically used for selecting an ESCO for a project. Usually includes financial information as well.***

***Don't ask for an energy audit as part of the response. Until a comprehensive IGA is completed, everything else is a fairy tale.***

# Developing and Publishing the RFP or RFQ

- Draft statement of goals and objectives for RFP.
- Include existing conditions info from OR's pre-qual report. No economics, that's for IGA phase
- Don't be too prescriptive in developing scope. Use ESCO creativity and innovation to Owner's benefit.
- What information to seek from the ESCO as part of their response to RFP/Q?
  - Experience & Qualifications on similar projects
  - Resumes of staff who will actually work on your project, not out of town
  - Request maximum % of hard costs pricing for overhead, profit, engineering, project management, commissioning (Cx), M&V fees, etc.
  - References for similar projects
  - Abide by Dodd-Frank for MUSH
  - Credit worthiness of ESCO
  - Examples of recent project financials, including guarantees (Any savings shortfalls?)
  - Include standardized contract terms & conditions for the IGAA & Performance Contract
  - Establish a timeline & stick to it – Demonstrates to ESCO market that you're serious about ESPC!
  - Discuss “leading”, not “bleeding” edge technologies they have implemented
  - Familiarity and experience with U.S. DOE's [eProject eXpress](#), a secure, web-based system that enables states, agencies, institutions and ESCOs to preserve, track, and report information
  - Experience securing government/utility incentives and rebates

# During the response period

- Set up pre-proposal call to discuss your objectives and goals, review the RFP/Q, and answer high level and procurement oriented questions.
- Any additional questions must be submitted in writing!
- Use OR to help answer questions, and provide in a timely manner.
- Give respondents at least a week or two to finalize proposals after answers have been provided.
- ESCOs may request site tours, but they are difficult to manage.
- Critical to ensure each firm receives the exact same info for a level playing field.
- Lead Procurement/Purchasing agent is the only person they are allowed to contact.
- Most ESCO procurements are for 60-90 days.
- Save a tree and ask for electronic submittals only!

# Best Practices for Selecting an ESCO

The RFP/Q has been issued, the ESCOs have submitted their proposals... now what?

Use the DOE Evaluation Workbook

- 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 Interviews
- Simplifies the process of collecting scores from Evaluators
- Results are compiled automatically to save time and avoid transcription errors

**U.S. DOE Better Buildings Solutions Center:**  
**Best Practices for Selecting an ESCO**





- Work with SEO, if able.
- Align owner objectives with evaluation of ESCOs technical capability and innovativeness
- Include the template that the ESCOs must complete in the RFP, to compare responses apples-to-apples
- Detailed review of ESCO proposal submissions, use OR
- Understand markups and indicative pricing
- Always shortlist and interview top 3 or 4 firms. It's all about the local people supporting you!
- Check references for all shortlisted firms
- Debrief unsuccessful ESCOs - improves future responses
- “The comfort factor”

# Resources



# Resources

- [ESPC Podcasts | Energy Services Coalition](#)
- [Energy Savings Performance Contracting \(ESPC\) Toolkit | U.S. DOE](#)
- [Performance Contracting National Resource Center | U.S. DOE](#)
- [Financing Navigator | U.S. DOE](#)
- [eProject eXpress | U.S. DOE](#)
- [ENERGY STAR Portfolio Manager | U.S. EPA](#)
- [Funding and Incentives Resource Hub | U.S. DOE](#)
- [Financing Navigator | U.S. DOE](#)

# Closing Thoughts and Next Steps

# This was a LOT of information, and it may seem tough, but...

## Consider this, ESPC is a:

- Tried and true process
  - \$7 Billion per year invested (with average project size of roughly \$4.5 m – that's about 30 projects in every state, every year)
- Nearly 50 years of history
- National model instruments, program design and resources
- A veritable army of knowledgeable, capable expert providers
- A burgeoning industry of 3<sup>rd</sup> Party Owner's Reps
- U.S. DOE's ESPC Campaign is here to provide trainings, webinars, peer-to-peer exchanges, and limited direct technical assistance

# Success awaits just around the corner

## **Benefits of ESPC**

- Energy Saved
- Environmental Stewardship
- Jobs Created
- Resiliency Achieved
- Deferred Maintenance Reduced
- Healthier Learning and Working Environments
- Targets Reached

**So, if you haven't done so, please join the ESPC campaign!**

**Get started on an ESPC project today!**

# Future Training and Webinar Topics

- **Trainings**

[Getting Started with eProject eXpress | Department of Energy](#)

Join the U.S. Department of Energy's ESPC Campaign and Lawrence Berkeley National Laboratory for a 90-minute training on the eProject eXpress tool on August 15th.

eProject eXpress (ePX) is a free-to-use, secure, online data management tool designed to meet the energy project data tracking and reporting needs of state and local governments. With streamlined functionality and standardized data collection, ePX can save time and effort and help program administrators and project owners easily demonstrate and report on the ongoing value of their ESPC projects and programs.

- **Webinars**

Case Study of Texas GSA's Six Phases of ESPC

**Note:** If you have more questions, please reach out for support via the [Office Hours Request Form](#). We can provide one on one assistance to help you accelerate your project!

# Q&A and Discussion



# SCEP

STATE & COMMUNITY ENERGY PROGRAMS



# Thank you!

**Chris Halpin**

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