Good Things Come in Small Packages: Strategies for Applying ESPC in Small Projects

July 10, 2019
1:30-3 PM
Speakers

- Philip Quebe, The Cadmus Group
- Reid Conway, State of North Carolina
- Ira Birnbaum, U.S. Department of Energy
- Alice Dasek, U.S. Department of Energy
Agenda

- Introduction to “Small” and ESPC
- Small Projects Challenges and Solutions
Introduction to “Small” and ESPC
What is “small” and why so important?

- Most buildings in the U.S. are “small”
- Small projects are often associated with small towns, counties or municipalities, often rural, that exist in every state.
- A potential ESPC project size of between $500,000 and $1 million.
  - Facility size less than 100,000 square feet
  - Annual utility expenditure less than $200,000
What is ESPC?

A contracting and financing method that provides upfront financing for energy efficiency projects and repaid by the savings on utility bills resulting from the upgrades.
ESPC Sector Guide Series

• Sector guides for several sectors:
  • K-12 Schools
  • Fleets and Fueling Infrastructure
  • Water Resource Recovery Facilities
  • Small Projects (Coming Soon)
  • Hospitals and Healthcare (Coming Soon)
Small Projects Challenges and Solutions
ESPC & Public Buildings

- Challenges facing all public buildings:
  - Tackling Deferred Maintenance
  - Managing Energy Costs
  - Maintaining the Indoor Environment
Challenges Facing Small Projects

- Unique challenges facing small projects:
  - Identifying staff to lead an ESPC project
  - Designing projects that adequately manage risk
  - Designing projects that are economically viable
Small Project Solutions

Six Key Strategies for Success

**Streamline the Process** - Reduce overhead for you and the ESCO

**Partner with Others** - Initiate a multi-government partnership

**Think More Broadly** - Include all community facilities and assets

**Use a Phased Approach** - Focus on small buildings as phases of a series

**Go Deeper** - Include more measures to capture all possible cost savings

**Leverage All Available Funding Streams** - Explore all options to bring in more funds
Streamline the Process

- Make Use of Expert Assistance Where Available
- Select an ESCO with Experience in Small Projects
- Streamline the Process

Town of Chapel Hill, North Carolina

$871,000 project, guaranteed to save $71,000 annually over 15 years

The NC SEO’s ESPC program provided technical support, pre-qualified ESCO list, and contract documents.
Partner with Others

- “Anchor project”
- Group procurement, individual contracting
- Joint procurement and contracting

“Green Communities” Program in Massachusetts

Metropolitan Area Planning Council coordinated a group procurement for ESPC. Fourteen cities and towns initially participated, agreeing to select the same ESCO, move forward independently to develop projects, and share their expertise and staff resources to evaluate ESCO proposals.
• Don’t focus on a single facility
• Bundle multiple facilities across multiple agencies
• Consider doing all facilities
• Go beyond buildings…

Town of Stafford, CT

Grouped 15 buildings, including five schools

Created a $1.6 million project, saving $144,000 per year
Use a Phased Approach

- Can’t do all facilities at once? Phase them.
- Make sure procurement covers all facilities. Perform work in waves/groups.
- Offers the potential for future work, minimizes cost of acquisition.

City of Hutchinson, Minnesota

$375,000 initial project, saving $32,000 per year.

Subsequent phase installed a 400-kilowatt solar array tied directly to the wastewater treatment plant helping to offset energy use.
Go Deeper

- Expand the types of measures you’re considering
- Consider less common, but equally viable upgrades such as solar PV or non-building assets such as fleet, parking lot, or wastewater treatment operations
- Adds cost, but can increase project size and savings

Montezuma-Cortez School District, Colorado
Vending machine controls on 13 refrigerated vending machines
Retro-commissioning of old equipment
An innovative educational program further reduced operating costs.
Leverage All Available Funding Streams

- Think Long-Term
- Capture Associated Operations & Maintenance Cost Savings
- Assign Budgeted Capital Dollars to Implement Planned Projects
- Leverage Guaranteed Cost Savings to Secure Added Grant Funds
- Attract Financial Incentives from Utilities
- Piggyback on a Bond Initiative to Reduce Financing Costs

Hamilton County, OH
Used a $3.4 million EECEBG grant to implement ESPC in its own facilities

Issued a group procurement, enabling towns to piggyback on its project
Good Things, Small Packages…

THE ENERGY SAVINGS PERFORMANCE CONTRACTING (ESPC) TOOLKIT

• Small buildings are a big deal!
• You can get small ESPC projects done!
• Look for the guide Energy Savings Performance Contracting for Small Projects this fall in DOE’s ESPC Toolkit (https://betterbuildingssolutioncenter.energy.gov/energy-savings-performance-contracting-espc-toolkit)
Reid Conway
State of North Carolina
Better Buildings Summit
Energy Savings Performance Contracting for Small Projects

Reid Conway, PEM
July 11, 2019
**History of ESPC in NC**

- ESPCs have been going on since the 90s and originally was only permitted for local governmental units until 2007.
- Since USI was established (2002) NC has completed ~85 projects totaling about $500 mil with savings about $700 mil.
  - 19 have been in state governmental units 54% of $500 mil
  - 66 have been in local governmental units.
- The projects that completed construction or are in construction now have provided employment for in excess of 5,400 people.
- USI began providing oversight in 2007 and this oversight has gradually climbed to the level it is now. GS 1993/2006/2011/2013
Utility Savings Initiative

North Carolina’s Public Building Energy Efficiency Program

• Program Purpose:
  • Assist all public sectors in managing utility consumption and costs

• Program Serves:
  • All governmental entities

• Comprehensive program that focuses on
  • Utility accounting and operations and maintenance
  • Facility assessments, audits and identification of possible projects
  • Awareness, education, outreach, and training

• Provides on-site assistance
• Provides oversight of Performance Contracting
ESPC in Small Local Governmental Units

How Successful is USI??

NC has avoided over $1.3 billion dollars of utility spend since 02-03

Currently, state agencies and UNC system are at a 32% reduction in BTUs/sqft and new goal of 40% by 2025 (EO 80 and pending HB330)
ESPC in Small Local Governmental Units

How Rural is NC?
ESPC Must Adapt for Rural Communities

NORTH CAROLINA COUNTIES

Tier Rating System
40 Tier 1
40 Tier 2
20 Tier 3
Based on each county’s unemployment rate, median household income, population growth, and assessed property value per capita.

NC is the 2nd largest rural population in the USA.

NC has 14 counties with no Urban Areas
ESPC in Small Local Governmental Units

Challenges for Rural Governments to do ESPC

• Lack of Financial Resources
• Lack of Technical Expertise (or not know help is available)
• Lack of ESPC Experience
• Against Borrowing Money Long Term (project size)
• Inaccurate or Misleading Information
• Lack of Manpower for Project Oversight
• Lack of Long-Term Planning for Facility Maintenance Replacement
• Local Boards may not Play Well Together
• Lack of Longevity of Buildings and Building Occupancy

ESPC is a different procurement process
**ESPC in Small Local Governmental Units**

What is needed??

- **Resources** (List of State Qualified ESCOs, Templates for RFP, IGA and ESA, Best practices documents, M and V Guidelines)
- **Technical Assistance** *(USI on-site Training and handholding through the process)*
- **Knowledge/Empowerment/Comfort** with the whole process
- **Outreach through:**
  - USI (site visits, emails, EMD, ACCFO, conferences, etc)
  - Energy Services Coalition Workshops
  - State Energy Conference
ESCO Challenges for Smaller PCs

- ESCO wants to do everything and does not have the ability to focus (This only adds time and expense to the project. Larger project-larger profit)
- Lower ESCO interest or competition in these small PCs
- Lack of owner participation
- Lack of owner direction
- Owner has already done the low-hanging fruit projects
- Owner is slow to move forward (sounds too good to be true)
- Staff/Board turnover
**ESPC in Small Local Governmental Units**

**Solving Problems with Small ESPCs**

- Financing small projects can be an issue. (Build relationships with lending institutions is key by both SEO andESCOs. ESC should be working to include lending institutions as members as well.)
- M&V Guidelines address small projects and reflect a more narrow scope for Measurement and Verification of projects.
- Directing the work of the ESCO in the IGA is important. (Making the ESCO focus)
- Setting realistic expectations early for what can and cannot be accomplished
**ESPC in Small Local Governmental Units**

**Successful Projects**

**City of Chapel Hill**

- The ESPC project of $871,000 is guaranteed to save $71,000 annually over 15 years.
- Replaced outdated interior and exterior light fixtures, installed occupancy and daylighting controls and redesigned the lighting system in the gym.
- Replaced and reconfigured the problematic and oversized pool dehumidification and air conditioning unit, implemented a new and improved building HVAC automation controls overcoming inefficiencies and maintenance problems and allowing central control and room scheduling, and upgraded other HVAC units and delivery systems.
- Installed insulation, weather-stripping, and door seals to reduce leaks.
- Increased the efficiency of pool filter pumps with variable frequency drives.
**ESPC in Small Local Governmental Units**

**Successful Projects**

**Kannapolis City Schools**

The ESPC project of $3,471,048 is guaranteed to save $280,286 annually over 18 years. All 12 schools part of project. Funding by BOA, because it is close to headquarters in Charlotte.

- LED Lighting retrofits district wide.
- Provided various water conservation measures district wide
- Provided building automation and system upgrades at various sites
- Replacement of 5 Air Cooled Chillers that were more than 19 years old

**Key Drivers**

- Pressure from deferred maintenance needs
- Tier 3 county with significant student growth and funding for new schools
- Charter School funding impacts on KCS budget
**ESPC in Small Local Governmental Units**

**Lessons Learned**

- Drive the need for annual M&V for life of project
- Owner and ESCO turnover must be addressed and communications must be ongoing for life of contract
- Technical assistance is available even after the project
- Always work on making the ESPC process better, quicker and less time-consuming
- Reporting should be more open in NC
- Zero to no publication of good ESPCs in NC
- Set realistic expectations early on what can and cannot be accomplished
Thank you all very much

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ESPC ENABLE TOOLS FOR STATE & LOCAL GOVERNMENTS
Better Buildings Summit
July 10, 2019

Ira Birnbaum
Federal Program Manager for ESPC ENABLE
Agenda

• ESPC ENABLE Overview
• ESPC ENABLE Process & Tools
  • NOO Best Practices
  • Investment Grade Audit (IGA) Tool
  • Available Templates
• ESPC ENABLE Program Status
• ESPC ENABLE-Eligible ESCOs
• Questions
The U.S. Department of Energy’s Federal Energy Management Program (FEMP) works with key individuals to accomplish energy change within organizations, by bringing expertise from all levels of project and policy implementation, to enable Federal agencies to meet energy-related goals and to provide energy leadership to the country.
## ESPC ENABLE Tool Contacts

<table>
<thead>
<tr>
<th>Roles/Responsibilities</th>
<th>Contact Information</th>
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</thead>
<tbody>
<tr>
<td>ESPC ENABLE Program Manager</td>
<td>Ira Birnbaum – DOE-FEMP</td>
</tr>
<tr>
<td></td>
<td>202-287-1869 ♦ <a href="mailto:Ira.Birnbaum@ee.doe.gov">Ira.Birnbaum@ee.doe.gov</a></td>
</tr>
<tr>
<td>GSA Schedule 84</td>
<td>Kevin Mitchell – Program Manager</td>
</tr>
<tr>
<td><a href="https://www.gsaelibrary.gsa.gov/ElibMain/sinDetails.do?executeQuery=YES&amp;scheduleNumber=84&amp;flag=&amp;specialItemNumber=246+53">https://www.gsaelibrary.gsa.gov/ElibMain/sinDetails.do?executeQuery=YES&amp;scheduleNumber=84&amp;flag=&amp;specialItemNumber=246+53</a></td>
<td>(817) 850-5555 (P)</td>
</tr>
<tr>
<td></td>
<td>(817) 320-2030 (C)</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:Kevin.Mitchell@gsa.gov">Kevin.Mitchell@gsa.gov</a></td>
</tr>
<tr>
<td></td>
<td>Rocky Miller - Senior Contracting Officer</td>
</tr>
<tr>
<td></td>
<td>(817) 978-0337 (P)</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:rocky.miller@gsa.gov">rocky.miller@gsa.gov</a></td>
</tr>
<tr>
<td></td>
<td>Bryon E Boyer – Section Chief</td>
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<td></td>
<td>817-850-5580 (P)</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:Bryon.Boyer@gsa.gov">Bryon.Boyer@gsa.gov</a></td>
</tr>
<tr>
<td>IGA Audit Tool</td>
<td>Bob Slattery – ORNL</td>
</tr>
<tr>
<td></td>
<td>865-548-0549 ♦ <a href="mailto:slatteryrs@ornl.gov">slatteryrs@ornl.gov</a></td>
</tr>
<tr>
<td>State &amp; Local ESPC Contact</td>
<td>Alice Dasek – DOE-WIP</td>
</tr>
<tr>
<td></td>
<td>202-287-1595 ♦ <a href="mailto:alice.dasek@ee.doe.gov">alice.dasek@ee.doe.gov</a></td>
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</table>
ESPC ENABLE Overview

ESPC ENABLE is an alternative savings energy performance contracting program:

- Intended for smaller projects at federal facilities (underserved market)
  - Or where ENABLE presents the best or only option for the agency to fund a project
  - Is suitable for Federal facilities with buildings under 200,000 square feet
  - Project size $200k - $11 million
  - No fixed minimum or maximum facility or $ size
- Standardized and streamlined process to quickly award projects and realize savings using GSA Federal Supply Schedule 84, SIN 246-53
  - Templates, IGA tool
  - No preliminary assessment
  - https://www.gsaelibrary.gsa.gov/ElibMain/sinDetails.do?executeQuery=YES&scheduleNumber=84&flag=&filter=&specialItemNumber=246+53
- Targets straight-forward ECMs including lighting, water fixtures, basic HVAC controls, HVAC equipment replacement, solar PV, boilers and chillers
  - Other ECMs available under “hybrid” projects
- Prescribes basic levels of measurement and verification (M&V) for each ECM
  - Primarily Option A
  - Solar PV and chillers use Option B

- Website: https://www.energy.gov/eere/femp/energy-savings-performance-contract-enable-federal-projects
# ESPC ENABLE: ECM Summary

<table>
<thead>
<tr>
<th>ECM</th>
<th>Included</th>
<th>Outside IGA Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting</td>
<td>• Lamps, Ballasts, Fixtures</td>
<td>• Solar Lighting (off-grid installations allowed)</td>
</tr>
<tr>
<td></td>
<td>• Controls: Occupancy, Day lighting (on/off, dimming)</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>• Sanitary plumbing fixtures: sinks, toilets, urinals, showers</td>
<td>• Heating/Cooling system improvements</td>
</tr>
<tr>
<td></td>
<td>• Irrigation</td>
<td>• (cooling towers, once through cooling, condensate reclaim)</td>
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<tr>
<td></td>
<td>• Leak repair</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Domestic/commercial hot water heaters</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Water based appliances: dishwasher, ice machine, clothes washer, etc.</td>
<td></td>
</tr>
<tr>
<td>HVAC Controls</td>
<td>Whole building control strategies including:</td>
<td>• Advanced Controls 1: Energy Management Control Systems (EMCS) / Building Automation Systems (BAS)</td>
</tr>
<tr>
<td></td>
<td>• Time/Temperature Set-back</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Demand/Night Ventilation</td>
<td></td>
</tr>
<tr>
<td>HVAC Equipment</td>
<td>Basic whole building/system one-for-one replacement 2 of:</td>
<td>• Central Boiler/Chiller Plants</td>
</tr>
<tr>
<td></td>
<td>• Window AC units / Electric Baseboard heat</td>
<td>• Retro-commissioning based activities</td>
</tr>
<tr>
<td></td>
<td>• Split AC/Furnace</td>
<td>• Non-building related heating/cooling/ventilation</td>
</tr>
<tr>
<td></td>
<td>• Heat Pumps</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Packaged Terminal Air Conditioner (PTAC)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Packaged Single Zone Air Conditioner (PSZ)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Roof Top Units (RTU)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Single building Boiler/Chiller</td>
<td></td>
</tr>
<tr>
<td>Solar PV</td>
<td>• Ground, Roof, Parking Canopy mount</td>
<td>• Solar Thermal (Hot Water)</td>
</tr>
<tr>
<td></td>
<td>• Fixed and Tracking Arrays</td>
<td>• Hybrid PV/Hot water systems</td>
</tr>
<tr>
<td></td>
<td>• Grid Tied and Off-grid</td>
<td></td>
</tr>
</tbody>
</table>

1. Advanced Controls may be considered, however savings calculations within the ENABLE IGA tool are limited to time/temp set-back, demand/night ventilation
2. Current ENABLE IGA tool is presently configured to model one-for one replacement of whole system(s) across an entire building with “like” systems (ex: replace (3) RTU’s with (3) higher efficiency RTU’s.) IGA Tool not presently configured to model partial replacement of building HVAC systems or replacement/modification of sub-systems (ex: VFD’s on select fan units).
ESPC ENABLE: Hybrid Approach

Projects may combine the ESPC ENABLE ECMs with other ECMs available under GSA Schedule 84, SIN 246-53 under a hybrid approach:

• Would fall under same award; no need for different funding
• Agency and ESCO must come to agreement about how ESCO will calculate guaranteed savings outside IGA Tool for non-ENABLE ECMs; ESCO must also propose an M&V methodology for non-ENABLE ECMs
• Your NOO should state that ESCO must demonstrate capability to do this for your particular ECMs
• FEMP ENABLE team will review ESCO savings and cost estimates and M&V plans
• ENABLE plans to expand the IGA Tool to address some ECMs currently outside of ENABLE, such as motors; until then these ECMs would be treated under a hybrid approach
• Note that FEMP cannot provide the same level of confidence for non-ENABLE ECMs’ savings as for ECMs run through IGA Tool
## Comparison of Project Funding Options

<table>
<thead>
<tr>
<th></th>
<th>DOE ESPCs</th>
<th>ESPC ENABLE</th>
<th>UESCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract type</td>
<td>TOs under DOE IDIQ</td>
<td>GSA Schedule 84 (SIN246-53)</td>
<td>Task Order issued under a GSA Area-wide contract; Basic ordering agrmt.</td>
</tr>
<tr>
<td>Private-sector partner</td>
<td>ESCOs: 21 on IDIQ</td>
<td>ESCOs on GSA Schedule 84 (SIN246-53): 24 ESCOs - 9 small business, 7 on IDIQ</td>
<td>Serving utility company</td>
</tr>
<tr>
<td>Eligible facilities</td>
<td>Federally owned worldwide</td>
<td>Federally owned worldwide</td>
<td>Where government pays utility bill including leased buildings; where offered/authorized</td>
</tr>
<tr>
<td>Project size</td>
<td>$2 million or larger</td>
<td>No fixed size or $ limits; suitable for smaller projects</td>
<td>Any</td>
</tr>
<tr>
<td>ECMs</td>
<td>Unlimited</td>
<td>Lighting, water, basic HVAC controls, HVAC equipment, solar PV, boilers, chillers; motors being added</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Savings guarantees and M&amp;V</td>
<td>Required</td>
<td>Required; simplified M&amp;V</td>
<td>Performance assurance (or savings guarantees) and M&amp;V through commissioning or retrocommissioning required for annual scoring</td>
</tr>
<tr>
<td>O &amp; M</td>
<td>ESCO responsible; tasking negotiable</td>
<td>Government or ESCO; ESCO provides training</td>
<td>Negotiable</td>
</tr>
<tr>
<td>Preliminary assessment and IGA Requirement</td>
<td>Both PA and IGA required</td>
<td>Only IGA required</td>
<td>PA recommended, IGA required</td>
</tr>
<tr>
<td>FEMP ESPC Life of Contract Service</td>
<td>Included</td>
<td>Not included</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Use Fee</td>
<td>none</td>
<td>$7,500 for each $1M contract value – paid by ESCO to GSA</td>
<td>none</td>
</tr>
</tbody>
</table>
ESPC ENABLE: Process Cycle

- Projects awarded in about 6 months
- Energy/cost savings in 8-12 months
ESPC ENABLE Process, Acquisition Planning

Activities: Estimated timeline – 2-4 Weeks

- Essential members of the acquisition team are identified
- Agency hosts kickoff meeting with acquisition team members
- Agency procures Project Facilitator**
- Agency develops an Acquisition Plan*
- Agency develops the Request for Quotation/Notice of Opportunity*

*Indicates FEMP-provided template

**03 FAC 871 200-211 (ENERGY MANAGEMENT, WATER CONSERVATION AND SUPPORT SERVICES)
https://www.gsa.gov/buying-selling/purchasing-programs/gsa-schedules/list-of-gsa-schedules/schedule-03facfacilities-maintenance-and-management
DOE approved PFs: Booz Allen Hamilton, EMP2, EME, and Celtic
Activities: Estimated timeline – 3-4 Weeks

- Request for Quotation/Notice of Opportunity is released
- ESCOs expression of interest (EOI)*
- Agency evaluates responses based on best value criteria outlined in the RFQ/NOO*
- Agency notifies unsuccessful offerors* and issues the notice of intent to award (NOITA)*

*Indicates FEMP-provided/required template

Tools can be found at:
http://energy.gov/eere/femp/espc-enable-procurement-process
General Best Practices for an Effective NOO

• Use the ENABLE Notice of Opportunity (NOO) Template! 
  https://www.energy.gov/eere/femp/downloads/espc-enable-request-quotenotice-opportunity-template

• Keep NOO as broad as possible to allow ESCO to propose comprehensive, innovative solutions using standard ECMs.

• Ask ESCOs to provide examples of familiarity with any non-standard ("hybrid") ECMs you would like to consider

• Identify two or three site-specific needs or wish-list items, such as renewable ECMs. ESCO responses will allow agencies to match ESCO capabilities with site needs.
General Best Practices (cont.)

Require the ESCOs’ responses to the NOO to include description of the following:

- ESCO’s management approach (how they’re going to get the job done)
- The ESCO’s approach to developing energy baselines and the M&V approach for this project
Evaluation Factors and Selection Criteria

• Each ESCO response must address the ESCO’s Qualifications, Past Performance, and a Price Component, plus any other requirements the agency deems necessary, such as experience working with local subcontractors; or, where applicable, experience with projects in coastal, maritime and/or island locations.

• Keep evaluation factors and selection criteria to the minimum necessary. Evaluation factors should be weighted to reflect the agency’s priorities, rather than all factors being weighted equally.
Evaluation Factors and Selection Criteria (cont.)

• Weight the Price Component less heavily than ESCO Qualifications.* ESCO has not yet walked the facility(ies) and can only rely on the data provided with the NOO.

• Require ESCO to demonstrate ability to obtain low-cost financing, reflecting:
  – Interest rate index and spread of last 3 projects, with term and size of loan
  – Whether ESCO has Master Purchase Agreement with at least one financier
  – Any credit ratings issued by Moody’s, S&P, or Fitch
  – Whether ESCO is covered under a parent company guarantee
  – Who underwrites ESCO’s performance/payment bond, and that firm’s credit rating

*See end of next slide for exception.
Evaluation Factors and Selection Criteria (cont.)

• More Best Practices for Price Component:
  – For the ECMs likely to be included in project, require ESCO to estimate the extent to which work will be self-performed vs. subcontracted (%)
  – Require ESCO to describe methods, procedures used to obtain competitive prices on ECMs and financing
  – Projects with a single or predominant ECM can select ESCO based on anticipated project price by including price component of unit installed cost, e.g., $/kWh for solar PV, or $/installed LED fixture. In these cases, weight price component more heavily.
ESPC ENABLE Process, IGA to Award

**Activities: Estimated timeline – 2-4 Months**

- Agency prepares Scope of Work (SOW)*, then hosts Investment Grade Audit (IGA) kickoff meeting
- ESCO performs IGA using FEMP-provided survey tools*
- ESCO submits final proposal*, final negotiations occur
- Agency awards task order

*Indicates FEMP-provided template
ENABLE Investment Grade Audit (IGA) Tool

• **Intended Users:** ESCOs

• **Purpose:**
  – Standardize energy and cost savings methodology across the set of ENABLE ECMs.
  – Standardize outputs for inclusion in prescribed final proposal outline.

• **Intention:** Minimize need for customer’s technical review of proposals

• **Functionality**
  – The tool will be used to identify pre- and post-retrofit conditions and estimate energy and cost savings for the project via embedded equations, Energy Plus and PV Watts.
  – Generates a Summary Project Report
  – Generates outputs that form the basis for contract documents
    • Summary data tables by ECM for M&V Plan
    • Completed TO Schedule #4 (data needed for entry into ePB)
    • ECM equipment summaries (quantities by type)
ENABLE IGA Tool

IGA Tool (new web based interface)

- Energy and Cost Savings Tables (M&V Plan)
- Financial TO Schedule #4 (TO-4)
- ECM Equipment Summaries

IGA Summary Report

EnergyPlus Building Simulation Software
PVWatts NREL web service
IGA Summary Report

High Level Project Details
- Total kwh, Gal. Water, Therms
- Simple Payback (before financing)

ECM level detail on:
- Direct cost
- Estimated Implementation Price
- Incentives
- Cost Savings by Utility Type
- Simple Payback

ECM level detail on:
- Energy savings by utility type

Submitted to the agency prior to final proposal
NEW! ENABLE IGA Tool

- New web-based interface (no longer Excel)
- Allows for multiple project sites under one project
- Additional ECMs - Boilers and Chillers
- Ability to add “other” ECMs (ENABLE Hybrid projects)
Improved Building/Equipment Representation

Enhanced tool interface to allow for 2D and 3D representation of building floors and heating/cooling zones.

- Allows for more complex HVAC, boiler and chiller scenarios
- Can represent buildings with multiple/dissimilar HVAC systems
- Assignment of equipment by zone

![2D footprint](image1)

![Zone assignment](image2)

![Equipment assignment by zone](image3)
IGA Tool: Additional Details

User Permissions/Access similar to eProject Builder
• Agency establishes project in IGA tool
• ESCO granted access to project
• ESCO can grant access to subcontractors
• Agencies/ESCOs only have access to their projects

Request ENABLE Project Tool from Bob Slattery, ORNL: slatteryrs@ornl.gov, 865-548-0549
Activities: Estimated timeline – 8-16 Weeks

- Installation
- Commissioning*
- Measurement and Verification (M&V)*
- Agency Acceptance*

* Indicates FEMP provided plan templates and report outlines
ESPC ENABLE Process, Performance Period

Activities: Annual M&V audit performed to verify achievement of annual cost savings
- ESCO or agency must perform annual audit
- Equipment inspections are performed as prescribed in the M&V plan to verify savings achievement
  - Primarily Option A (Option B for solar PV and chillers)
- An annual M&V Report* is generated by the ESCO and submitted to the agency

* Indicates FEMP provided report outline
Available Templates

- **Acquisition Planning**
  - Acquisition Plan
  - Request for Quotation/Notice of Opportunity (RFQ/NOO)

- **ESCO Selection**
  - ESCO Expression of Interest
  - Unsuccessful Offerors Letter
  - Notice of Intent to Award (NOITA)

- **IGA and Award**
  - Scope of Work (SOW)
  - Final Proposal
  - Task Order award

- **Installation**
  - M&V Report (Outline)
  - Commissioning
  - M&V Plan
  - Agency Acceptance

- **Performance Period**
ESPC ENABLE: Program Status as of Jan. 2019

ESCOs in the Program

- 26 qualified ESCOs under GSA Schedule 84
  - 10 Small Business contractors
    - Three Disabled Veteran contractors
  - Nine IDIQ contractors

Project Status

- 19 projects awarded: USAF, USN, GSA (4), USFS (4), State Dept, CBP, BoP, DOE HQ, DEA, ICE, NOAA, NIST, FAA ($0.2-$11m)
  - 2 solar PV projects under ESPC ESA
  - Awards have gone to 5 small business ESCOs (including 2 Disabled Veteran ESCOs), 5 ESPC IDIQ ESCOs
- Scopes range from one to multiple ECMs
## ESPC ENABLE: Eligible ESCOs as of Jan. 2019

<table>
<thead>
<tr>
<th>Company</th>
<th>Type</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABM Facility Support Services</td>
<td>*</td>
<td>Johnson Controls</td>
</tr>
<tr>
<td>AMEC Foster Wheeler Environment &amp; Infrastructure</td>
<td></td>
<td>Legatus6</td>
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<td>AMERESCO Federal Solutions</td>
<td>*</td>
<td>Onix, Inc.</td>
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<tr>
<td>American Development Institute</td>
<td>**</td>
<td>Orion Energy Systems</td>
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<tr>
<td>Brewer-Garrett Co</td>
<td>*</td>
<td>Pacific Lighting Management</td>
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<td>CCI Group</td>
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<td>Philips Lighting North America Corp.</td>
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<td>Constellation NewEnergy</td>
<td>*</td>
<td>Siemens Industry</td>
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<td>CTI Energy Services</td>
<td>**</td>
<td>Stronghold Engineering Inc.</td>
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<td>The Efficiency Network</td>
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<td>Enovity, Inc.</td>
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<tr>
<td>Green Generation Solutions</td>
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<td>Williams Electric Co</td>
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<tr>
<td>Honeywell International</td>
<td>*</td>
<td>Woodstone Energy</td>
</tr>
</tbody>
</table>

* = DOE IDIQ ESPC ESCO  
** = Small Business  
1 Same parent company as IDIQ contractor
Questions?
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Thank You

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