ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANT (EECBG) PROGRAM

Key Activities Summary

Blueprint 2B: Energy Savings Performance Contracts -

Energy Efficiency and Electrification in Government Buildings

This Key Activities Summary provides a concise overview of the **Energy Savings Performance Contracts Blueprint**. DOE plans to provide technical assistance support to all entities who select this Blueprint, which may include one-on-one attention from DOE or national lab experts, webinars, and peer learning opportunities.

blueprints
Energy Efficiency & Conservation Block Grant Program

SCEP
STATE & COMMUNITY ENERGY PROGRAMS

What

Energy Savings Performance Contracting (ESPC) is a contracting and financing method that enables public and private-sector entities to implement facility improvements with little or no upfront capital by leveraging a guaranteed multi-year stream of avoided utility and other costs. This approach saves money by reducing energy, water, and operational expenses, thus freeing up those operating funds for other priorities. ESPC is not a financing option on its own, but rather a mechanism that must be paired with one or more funding sources (e.g., loans, leases, bonds, grants, internal funding, etc.). HVAC, lighting, building controls, and water efficiency have all been common targets for upgrades offered through ESPC. Distributed renewable technologies such as solar and ground source heat pumps as well as procurement of electric and hybrid vehicle fleets can often be integrated into ESPC projects as well, depending on state regulations.

Justice and Equity

Governments can state a preference for local, small, women- or minority-owned businesses (including sub-contractors) as they develop selection criteria for an ESPC provider.

Why

ESPC offers many economic benefits and a long, reliable energy savings track record. ESPC projects reduce total building energy consumption, thus reducing utility and other operational costs and the associated taxpayer burden. Under tight budgets, available funds for capital projects are often directed towards urgent equipment repairs or replacements, or more aesthetic upgrades. The upfront financing available through ESPC enables more retrofit projects to move forward than might otherwise. ESPC also allows customers to implement upgrades across their building portfolio with a single transaction, and they can be customized to align with specific energy, emissions, and performance goals. Building owners can use ESPC to support facility priorities like addressing deferred maintenance, managing increasing energy costs, streamlining ongoing operations and maintenance (O&M) of their facilities, improving indoor air quality and occupant health and comfort, and integrating energy security and resiliency. ESPC projects also support economic development by creating jobs and spurring local investment in materials and equipment.

The cornerstone of ESPC – the savings guarantee – offers customers peace of mind because the energy service company (ESCO) usually assumes certain project risks and guarantees the resulting utility savings, ensuring that project savings meet or exceed project costs. An ESCO is a turnkey contractor that designs, installs, and commissions the project, is responsible for monitoring, measuring, and verifying the savings, and in some cases, even maintains and operates the new equipment. Depending on the contract, the ESCO also guarantees the functional performance of the installed energy conservation measures (ECMs) (i.e., there must be sufficient light, comfortable temperatures, adequate indoor air quality, and so on, in the building's workspaces).

It is recommended that customers maximize funding sources and incorporate directly funded ECMs that do not need to be repaid into an ESPC project rather than implement them separately. Incorporating funds into ESPC has a leveraging effect, allowing the energy savings from the funded ECMs to be capitalized and used to either expand the project scope or reduce the payback period of the project. Incorporating funded ECMs in a performance contract also offers other benefits, such as streamlining contracting with a single provider, coordinated implementation, savings and performance guarantees, and proper operation and maintenance.

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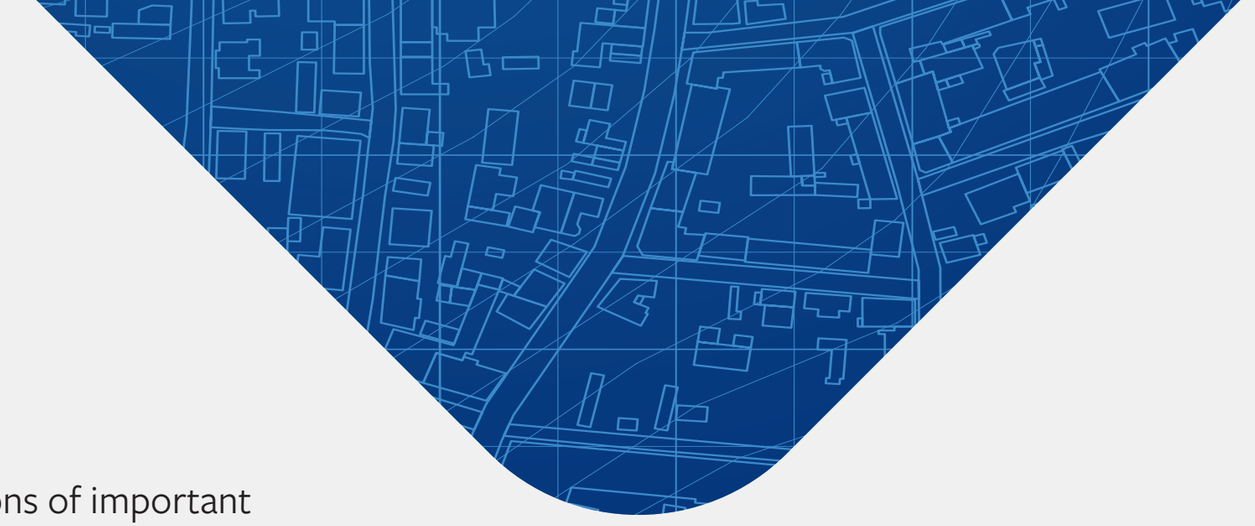
Key Activities

These selected Key Activities are suggestions of important steps a government could take to begin or make progress on their ESPC journey. EECBG Program awardees that utilize a blueprint will receive expedited application review from DOE. Applicants must execute at least one of the key activities listed under each selected blueprint but should avoid going beyond the recommended activities. Going beyond these key activities may trigger additional reviews of your EECBG Program project to ensure you're meeting National Environmental Policy Act (NEPA), historic preservation, and/or other federal regulations. While each step is important, they should be seen as a guide. Awardees should determine their own priority activities based on their local context.



1. **Explore Potential Financing Options**
2. **Procurement of Energy Savings Performance Contractor and Legal Support/Technical Assistance**
3. **Project Implementation and Acceptance**
4. **Post-Implementation Measurement & Verification**

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Explore Potential Financing Options

High-level plans for funding/financing the project are helpful to determine at the outset of the project, perhaps even before the ESCO is selected, and final details are determined once the project scope and terms are more defined, late in the Investment Grade Audit (IGA) process. Although financing is usually separate from the ESPC, the two are informally linked through payment schedules and the savings guarantee.

Many funding resources are available to public entities, including grants, rebates, and incentives. The balance of the project cost is financed, generally through bonds, loans (such as from state revolving loan funds or green banks), or tax-exempt lease purchase agreements. Legislation, regulations, or program policies may dictate what financing mechanisms are allowable in a jurisdiction.

Key Resource

The **ESPC Financing Decision Tree** outlines considerations for deciding between the financing options that are available for state and local ESPC projects, and includes a description of each option and pros and cons to consider.

Note: ESCOs (and owner's representatives) are prohibited from providing advice on ESPC financing, other than "general information that does not involve a recommendation regarding municipal financial products or the issuance of municipal securities," without appropriate registration as a municipal advisor. This important prohibition comes from a 2013 U.S. Securities and Exchange Commission (SEC) **rule** pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010.

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Procurement of Energy Savings Performance Contractor and Legal Support/Technical Assistance

There are multiple steps and considerations in selecting an ESCO and procurement for an ESPC project.

» **Retain an Owner's Representative (OR)** - An experienced OR can provide vital expertise in each phase of an ESPC project. Key roles include supporting the customer in selecting an ESCO; facilitating an understanding of the ESCO pricing and guarantee; acting as a critical communication liaison between customer stakeholders and the ESCO; facilitating the IGA; delineating risks and responsibilities of both parties; and reviewing and advising on ESCO engineering studies, financial proformas, measurement and verification (M&V) plans, and more. The owner's representative services can and should be tailored to the needs of the project and the customer. Even where government staff have ESPC experience and technical capacity, ORs can supplement staff expertise in key areas.

» **Solicit and Select an ESCO**

  » **Prepare the RFP or RFQ** – Prior to beginning an ESPC project, the customer team, including the OR, must define the objectives of the project. This includes understanding and documenting the building owner's needs and the building's requirements. Once the needs and objectives are defined, and preliminary information is gathered about the targeted building's condition, energy and water consumption, and annual utility costs, the RFP or RFQ can be developed. Some jurisdictions may prequalify ESCOs using an RFQ or RFP process, and then select an ESCO from a prequalified pool for a specific project.

  » **Solicit and Evaluate RFP/RFQ Responses** – Examples of evaluation categories include: the percentage of work that will be carried out in-house versus subcontracted; pricing and financing approach; the proposed technical solutions, including ECMs and electrification measures, and expected savings; how the response and proposed solutions address the customer's goals; and the applicant's previous experience.

» **IGA, Project Proposal, and Contract Negotiation** - The ESCO will perform an IGA to collect data on each building, determine the baseline consumption for each energy and utility type and operations and maintenance costs, and identify ECM opportunities and estimated savings and implementation costs. The IGA serves as the basis for the project proposal. Following submission of the project proposal, the ESCO and customer develop the final contract together, including creating project schedules, finalizing financing, developing measurement & verification (M&V) and operations & maintenance (O&M) plans, etc.

Key Resource

Model RFP/RFQ, IGA, ESPC contract and companion document templates are available to reduce ESPC project timeline and transaction costs.

Document presents the current U.S. Department of Energy (DOE) **Qualified List of Energy Service Companies (ESCOs)**

The General Services Administration (GSA) **cooperative purchasing program** allows state and local governments to access the GSA Multiple Award Schedule (MAS) Special Item Number (SIN) 334512 contract to procure ESCO services.

Best Practice: Good documentation is essential to ensuring the success of an ESPC project, from the planning and development stages throughout the contract term. Complete and well-organized documentation provides a history of decisions made throughout the project, information about any issues that arose and how they were resolved, details about the agreed-upon roles and responsibilities of the ESCO team and the building owner's team, and a record of project performance and M&V reports. This information is critical for responding to any potential audits and enables reporting of accurate project results to internal and external stakeholders, which also helps safeguard public trust in the jurisdiction's ESPC projects and programs.

Key Resource

eProject Builder and **eProject eXpress (ePX)** are tools that are available to support ESPC projects through the contract term and beyond. Standardized templates record key project and financial details and can capture the annual M&V data to quickly generate a report of project energy and cost savings. Additionally, stored files and data ensure continuity of access to project information in the case of personnel turnover.

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Project Implementation and Acceptance

During the construction phase, the customer's team must stay in sync with the ESCO to avoid delays and project complications. The facility owner's responsibilities during the construction and post-installation commissioning and performance verification stages include facilitating site access for the ESCO, witnessing tests and measurements (when required), reviewing reports and documentation provided by the ESCO, and understanding the commissioning results and report prior to project acceptance. The customer should ensure the project complies with contractual requirements, that performance verification is completed, and that any agreed-upon training and materials are provided, before notifying the ESCO of project acceptance in writing.

Post-Implementation Measurement & Verification

Effective and meaningful measurement and verification (M&V), which costs a small percentage of the project's savings, provides multiple benefits to ESPC customers. M&V enables documentation of ESPC project performance and whether guaranteed savings are being achieved and ensures that any needed corrective action or reimbursement is provided to the customer. Additionally, M&V can improve or optimize the performance of facilities by identifying deficiencies in equipment performance, as well as support the documentation of any non-energy benefits, such as improved occupant comfort and productivity and environmental sustainability, that are of value to the customer. The M&V report and supporting data should be reviewed and accepted by the ESPC customer each year to verify that contractually agreed-upon ECM performance is being sustained.

Key Resource

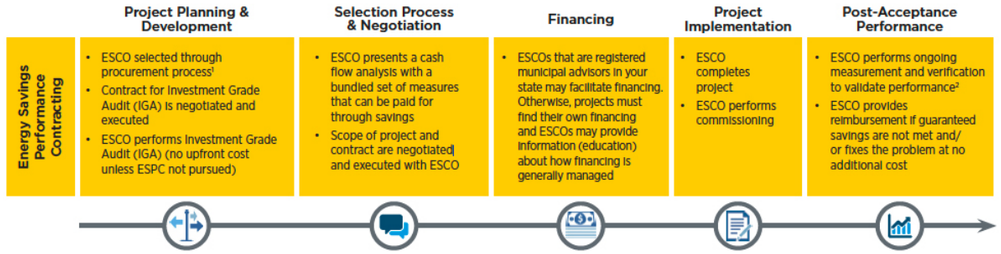
The ESCO can upload annual M&V data into **eProject Builder** or **eProject eXpress** to enable the customer to access and report on the project's M&V data at any time as needed.

Key Resource

The Performance Contracting National Resource Center (PCNRC) is a hub for all of the U.S. Department of Energy's (DOE) best practice resources and solutions for energy savings performance contracts (ESPCs).

Key Resource

The Business Case for Conducting Measurement and Verification in State and Local Government ESPC Projects highlights the substantial, cost-effective benefits of incorporating well-documented M&V in ESPC, including ongoing data collection and regular reporting of M&V results.



Stages of the ESPC Process. Source: U.S. DOE, **ESPC or Design-Bid-Build for Your Retrofit**?