The Mechanics of Energy Contracting for Municipalities

By Steven A. Torres



Energy-efficient retrofits make sense in the long run, but how can cash-strapped local governments cover the formidable up-front costs? Try Energy Savings Performance Contracting.

Energy Savings Performance Contracting ("ESPC") is a combination of project finance, project design, construction, operation and assessment. It enables municipalities to fund modifications to buildings, equipment and practices with guaranteed energy savings. ESPC has been described as a "turn-key" service, compared to design-build construction, providing the customer with a comprehensive set of energy efficiency, renewable energy and distributed generation measures and a guarantee that the savings generated will finance the project costs.[1] Operational savings realized through the design and installation of Energy Conservation Measures ("ECMs"), pay for building, equipment and management practices modifications.

ECM's are the central functional component of the ESPC relationship. ECMs are the physical, mechanical, operational or management components that result in the measured energy or water savings. Florida law describes an ECM as a "training program, facility alteration or equipment purchase to be used in new construction, including an addition to existing facilities or infrastructure, which reduces energy or water consumption, wastewater production, or energy-related operating costs...."[2] Arriving at the particular combination of ECMs appropriate for a facility is part of a complex set of prerequisite steps that form the basis of the ESPC.

Almost all states authorize some form of ESPC for municipalities. Because of the unique nature of the services provided in the ESPC arrangement, traditional procurement statutes do not form a sufficient statutory basis for these contracts. The ESPC arrangement is a combination of functions often subject to myriad procurement laws. A complete, beginning-to-end ESPC arrangement involves design and construction services, operations and maintenance, traditional and non-traditional finance, project management services, and training. States have specifically enacted procurement laws to facilitate ESPC and in many cases, on site renewable energy generation.

Statutory Enabling Authority and Legislative Models

Although statutes will vary by jurisdiction, you may expect the statute to address competitive selection or procurement, authority to finance, term, guarantee requirements, performance and security and measurement and verification.

Procurement – Most state statutes governing ESPCs require some type of advertised, open, competitive procurement prior to engaging the Energy Services Company ("ESCO"). A statute may provide ESPC-specific procurement processes in the enabling legislation itself or may refer the municipality to procurement procedures contained in a separate section of state code. Due to the nature of the services performed by an ESCO and the need for selection of a preferred ESCO on criteria other than price, ESPC procurement should be conducted on a "best value" basis. When performing a best-value as opposed to low-bid solicitation in a public procurement, the use of standardized evaluation criteria protects both the process and the public interest.

Finance - The enabling statute will define the allowable forms of financing and may specify annual appropriation restrictions. Traditionally, municipal finance law will require statutory authorization for annual appropriations, municipal debt and/or options to lease/purchase. The ESPC arrangement will normally involve at least two of these three components. States often limit obligations to fund contracts to the annual appropriations available for the contractual purpose. Contrast, however, states which recognize that the ESPC arrangement can involve both financing where the ESCO places significant capital and labor at risk in the front-end of the transaction in the form of design, construction, and installation of permanent and semi-permanent assets. Annual appropriations language normally will apply to the service portion of the ESPC and the capital

debt may be separate in the statutory framework. As a result, debt or third-party financing of the capital portion is often treated and contained separately. ESCOs are familiar with these limitations in public contracts and have historically been willing to accept them as part of the contract.

Term – To be sustainable from a cost perspective yet attractive enough to industry, ESPC contracts must run for an extended period of time. Contracts of sufficient duration enable the municipality to amortize costs and often fund improvements not as capital long term debt but as operational expenses, representing the energy and water savings. This is the essence of the ESPC. Most statutes will limit the duration of the contract to corresponding bond statutes or the useful life of the equipment.

Guarantee provision - In order to protect the integrity of the ESPC arrangement, some statutes require that the contract guarantee that costs of the improvements and the service will be offset by the guaranteed savings. Although virtually all ESPC contracts contain a savings guarantee clause, in many states inclusion of the clause is mandated. Although this seems duplicative, simply enabling municipalities to engage in ESPC procurements does not guarantee that the savings will inure after expenditures of initial capital costs.

Surety and Performance – To protect municipalities, many statutes include a provision requiring the ESCO to provide payment and performance bonds. Statutes may also provide for bonds protecting not simply installation, but the ESCO's ongoing performance.

Procurement and Contracting

Identifying a Procurement Method

The procurement process will begin with selection of the statutorily-authorized procurement vehicle. The municipality may wish to proceed under either a Request for Qualifications (RFQ) or Request for Proposals (RFP). Where both methods are authorized by statute, the municipality must decide whether it wishes to first select an ESCO to perform both audit and implementation services or whether it would like to proceed directly to a RFP for the full range of audit, design, construction and implementation phases. By issuing an RFQ, the municipality looks strictly at the qualifications of the various ESCOs, their competencies, performance history, references, size, financial strength and business structure and selects the most qualified firm without respect to evaluation of a specific proposal or scope of services associated with the municipality's physical plant needs. The ESCO fee would be the only price point contained in the evaluation under the RFQ model.

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An RFP will include project and price specific information and contain additional evaluation criteria. An RFP facilitates a shorter project delivery window and saves the municipality from an additional step in the procurement process. In contrast, the RFQ allows the owner to secure the most qualified ESCO and then proceed to a period of negotiations over the scope and cost of the Investment Grade Energy Audit (discussed below), project design and implementation, methodology for measurement and verification of savings, savings guarantee, and pricing. Proceeding under either procurement model, the municipality should short-list three most-qualified ESCOs and condition final award of the contract upon successfully completing the negotiations, leaving open the option to discontinue negotiations with the selected ESCO and proceed to negotiate with the next highest-ranked proposer.

Understanding the ESPC Transaction

The transactional arrangement and the associated contractual documents trace the functional areas of the ESPC relationship. The components include the Investment Grade Energy Audit and Project Proposal, the Energy Savings Performance Contract and Guarantee, the Measurement and Verification of savings, and the financial transaction. Each functional area has its own set or "schedule" of documents.

Investment Grade Energy Audit.

The Investment Grade Energy Audit ("IGEA"), is the functional starting point for the project. Connecticut law defines the IGEA as "a study by the qualified energy services provider selected for a particular energy savings performance contract project which includes detailed descriptions of the improvements recommended for the project, the estimated costs of the improvements, and the utility and operations and maintenance cost savings projected to result from the recommended improvements."[3] Essentially, as defined in the Best Practices Guide, the "IGEA is conducted to analyze all cost-effective ECMs for systems such as lighting, HVAC equipment, building envelope, steam, chilled water, domestic hot water and other water using systems, building controls, energy generation and distribution and waste management systems."[4]

When the ESCO performs the IGEA, the municipality has a picture of the proposed energy, water and process improvements that are recommended to generate savings, and how much those savings will cost over the life of an ESPC. The IGEA will then become an integral part of the ESPC relationship. The IGEA will include information describing the existing facilities and systems, base line energy consumption data to be used later in measurement and verification, proposed retrofits for consideration, post-construction conditions and standards of comfort, firm fixed price for implementation of ECMs, guaranteed savings, construction means and schedules, recommended measurement and verification protocols and other general information regarding the proposed project.

Generally, the parties contract separately

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for the IGEA and a fixed cost for this phase of the project is contained in the ESCO's response to the RFP. The cost of the IGEA is typically borne by the ESCO or rolled into the overall project cost if the transaction moves forward to an ESPC; otherwise, the owner will absorb the cost if it walks away from the project after an IGEA. This phase of the project will be governed by the Investment Grade Energy Audit and Proposal Agreement.

Project Design and Implementation

The project design and implementation phase is next and involves design, implementation and construction of the system modifications, new systems, controls or training identified in the IGEA. During this phase, the ESCO will provide design, construction management, construction, implementation, testing, commissioning, start up and operation of the cost-effective ECMs agreed upon with the owner. Properly implemented and phased, cost-savings can begin as early as the commissioning and start-up of the earlier ECMs. It is common for the ESCO and the municipality to agree upon a construction schedule which permits installations which are least costly but achieve greater savings in earlier phases while extending more costly or time consuming modifications to later phases of the project to satisfy the investment based objectives of each party and make the transaction financeable. This phase of the project will be governed by either the ESPC and schedule of design and construction related sub-agreements or the ESPC and a separate, stand-alone design and construction contract.

Operation of the Installed ECMs

The next phase involves operation of the ECMs. In this phase, the following functional processes take place: operations, maintenance, monitoring of systems, training of personnel, repair of systems and quality assurance. These functions begin subsequent to installation and start-up of the first ECM and run simultaneously with continued project construction and implementation through the end of the ESPC term. It is significant to note that some of the preceding functions may be ESCO functions or shared with the owner and its operations and maintenance staff, depending upon the nature of the ECM and the terms of the contract. It is important to specifically define in the contract documents who bears the operational, monitoring and maintenance responsibility for each ECM and who bears the risk of failure. The standard arrangement may be for an owner's maintenance staff to operate and maintain the ECMs in accordance with the manufacturer's and ESCO's required standards and to record compliance steps and activities in maintenance and reporting logs. This phase of the project will be governed by the ESPC document and its schedules.

The savings guarantee contained in the ESPC contract allows financing the ECMs. By providing savings on the demand side of the energy equation that converts to reduced utility bills or decreased maintenance and operations costs, municipalities are able to accelerate (or simply to afford, where previously unaffordable) system repairs, modifications, improvements or replacements.

Measurement and Verification

Just as the ECM is the cornerstone of the ESPC project, the ongoing Measurement and Verification of savings is the operative cornerstone of the contract's savings guarantee. Measurement and Verification, ("M&V"), like operations and maintenance, are ongoing processes during the term of the agreement. As the Best Practices Guide suggests, "the measurement and verification of energy savings is the most important metric of an ESPC project."[5] The Guide acknowledges the Efficiency Value Organization's ("EVO") definition as follows: "Measurement & Verification, (M&V) is the process of using measurement to reliably determine actual savings created within an individual facility by an energy management, energy conservation or energy efficiency project or program. As savings cannot be directly measured, the savings can be determined by comparing measured use before and after implementation of a project, making appropriate adjustments for changes in conditions."[6] Measurement and Verification will rely upon the initial baseline energy usage and conditions contained in the IGEA, adjusted for changes in conditions, levels of comfort and operation, occupancy or other changes in use which effect the baseline measurement. This process will be governed by a schedule to the ESPC specifically addressing M&V. The industry standard is the International Performance Measurement and Verification Protocol ("IPMVP"). This standard, in its most recent iteration, should be incorporated into the ESPC.

Project Finance

The savings guarantee contained in the ESPC contract allows financing the ECMs. By providing savings on the demand side of the energy equation that converts to reduced utility bills or decreased maintenance and operations costs, municipalities are able to accelerate (or simply to afford, where previously unaffordable) system repairs, modifications, improvements or replacements. As the Best Practices Guide notes, "A primary feature of an ESPC is the ability to finance energy savings measures to ensure that finance payments are equal to or less than the monetary savings gained from the measures."[7] The financing vehicles most commonly used in public ESPC projects are:

- Tax-Exempt Lease Purchase Agreements, also called Municipal Leases which allow the customer to finance an ESPC project without carrying a liability on its balance sheet;
- State or Local Government Leasing Pools, sometimes called Master Leases, which allow individual projects to lower their financing costs by participating in a larger aggregated financing;

–State or Local Government Bonds, which can offer slightly lower interest rates than Municipal Leases, but are time-consuming to execute and often require voter approval;
–Revolving Loan Pools, which offer subsidized interest rates, but have multi-year waiting lists; and
–Power Purchase Agreements ("PPAs"), in which the customer buys the output of a distributed generation project, rather than the actual project.[8]

The Finance Agreements are separate and distinct from the ESPC and are normally executed between a third-party financing entity and the municipality. In many cases, as part of the service provided by the ESCO, the ESCO can facilitate or provide project financing. The ESPC and Finance Agreement are normally coterminous and executed at the same time. It goes without saying that the two are entirely interdependent.

The Contractual Family of Documents and Essential Provisions for Successful and Owner Protective ESPC Arrangements.

Three major agreements will normally comprise the ESPC transaction. These include:

1. The Investment Grade Energy Audit and Proposal Contract
2. The Energy Performance Contract
3. The Finance Agreement

The nature, number of, and delineation between functional areas will vary among the various projects based in part on project scope, owner and contractor preference, third-party lender requirements and preference of project counsel. What in some cases may be a stand-alone agreement may in another ESPC arrangement be an attachment, exhibit, or schedule to a master agreement. A perfect example of this is whether the construction contract will be a separate contract or be a schedule or attachment to the ESPC contract.

Given the complexity, number and inter-relationship of documents in the energy services transaction, it will be increasingly important to include conflicts and prioritization language in some master agreement and proceed carefully when incorporating by reference the terms of one agreement into another. Where multiple agreements are used, treating the ESPC contract as a "Master-agreement" and including the prioritization and resolution of conflicts between documents language in that agreement is a best practice in this transactional field.

ii. Recommended Documents and Schedules and Their Prescribed Purpose.

1. Investment Grade Audit Agreement and Project Proposal Contract: This document is the first transaction between the parties after selection of the ESCO. This document provides the parameters for the ESCO to proceed with the IGEA. It defines ESCO compensation for the Audit and provides an option for the owner to pay the cost of the audit if it does not proceed to an ESPC. It contains a scope of work and schedule of facilities and systems. The contract should limit the time allowed for the ESCO to complete the audit. The IGEA contract may include a statement of the parties' intent to negotiate an ESPC but will not obligate them to enter into an agreement. Standard insurance and indemnification language should be included. The IGEA agreement should specifically provide a mechanism for the owner to accept the IGEA report.
2. Energy Savings Performance Contract: This complex document addresses design and implementation of ECMs, project scope, the savings guarantee, ESCO compensation, shortfalls, sharing of excess savings, performance and surety, insurance and indemnification, operations and maintenance responsibility, measurement and verification, reporting, where not addressed in a separate construction contract: testing, start-up and commissioning, labor and materials bonds, where not covered in a separate design or construction contract: review of ECM designs, ownership of project documents and software, allocation of installation period savings, term, commencement, performance period, access to premises and work schedules, training, equipment malfunction, repair and replacement, emergency repair, termination, default and remedies. A key provision of this contract is the requirement that the energy savings guarantee be sufficient to fund the cost of the improvements, including the ESCO fee for ongoing services. The contract should require the ESCO to make up for savings shortfalls in a given year but should not permit the ESCO to aggregate excess savings in one or more years to apply to future or past shortfalls. The contract should include a mechanism to use qualified professionals to resolve any disputes regarding measurement and verification applications during the life of the contract.
3. Design and Construction Contracts. The owner has the option of including the ESCO's design and construction responsibilities in the ESPC itself, in a separate schedule to the ESPC or as a stand-alone construction contract. The key issues to address are schedule, quality of workmanship and materials, warranties, performance and surety, technical and performance based specifications for equipment and equipment operation, commissioning, start-up and testing, insurance and indemnity, delay damages, liquidated damages, change orders, unforeseen circumstances, permits, hazardous materials, standards of comfort and project acceptance.

Notes

1. Introduction to Energy Performance Contracting, Prepared for the US EPA ENERGY STAR Buildings, by ICF International, October 2007 at 1.
2. Fla. Statutes Annotated, CH. XXIII, Ch. 489.145(3)(b).
3. Connecticut Public Act #11-80 Section 123(10).
4. Best Practices Guide for Energy Performance Savings Contracts, Celtic Energy Inc. September 30, 2011 at 29 (http://www.ctenergyinfo.com/111003%20Final%20CT%20ESPC%20Best%20Practices-1.pdf (last accessed August 28, 2013)
5. *Id. at 49*
6. *Id.*
7. *Id.* at 35.
8. *Id. at 4-6*

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