Financing Energy Efficiency Projects

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Getting an energy project financed should be a shared effort between the ESCO and the customer, but the perspectives are different. It is the ESCO's responsibility to put together a bankable project. The ESCO typically arranges the financing. Its reputation and history often add surety, which offers financiers added confidence. The customer usually incurs the debt and needs to know the financing options available. This article will first address what constitutes a bankable project from the ESCO perspective. Then, the types of financing available to owners will be explored.

ESCO's, who have been in this business for a few years, remember knocking on the financial doors until their knuckles were bloody. Today, the financiers knock on the ESCO doors ... if, and it's a big IF, ESCOs can put together *bankable* projects.

CREATING BANKABLE PROJECTS

What is a "bankable" project? Simply put, it is a clearly documented economically viable project.

Building a bankable project starts with sorting out the pieces that make a project economically viable. The first step is to examine the key components and make sure each aspect is properly assessed and the plan to effectively manage that aspect is clearly presented. Each compo-

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nent carries a risk factor, and each risk factor carries a price tag. An effective ESCO knows how to assess the components and how to package them into a project that can be financed.

The Customer

Pre-qualifying customers is an art. The critical aspects for the ESCO are developing the criteria, asking the right questions and *learning to walk away* when a "lucrative" project doesn't match those criteria.

Ironically, one of the major drivers of performance contracting is the owner's need for financing, so it seems like a dichotomy that a primary pre-qualification for a customer that needs financing is to be creditworthy. But a customer can be cash poor and creditworthy at the same time. In fact, a potential customer who is creditworthy and cash poor is an especially promising candidate for performance contracting. A school district, for example, is typically creditworthy and legally backed by the state, but its revenue stream is often sparse.

Most ESCOs have an understanding with a financial house (or houses) as to what constitutes acceptable credit standing. Some even have prescribed forms for the ESCO's sales people to fill out; so all the pertinent information is acquired and presented in a routine fashion. The credit check at this stage is like most others. Financiers want the information that can reasonably assure them that the loan will be paid back.

The range of information a financial house will need regarding a potential customer will typically include:

- the type of transaction proposed, e.g., equipment title provisions, purchase options, and payment terms;
- the organization's tax status;
- longevity of the customer's organization; ownership;
- its business prospects;
- evidence that the customer can keep the savings, the all important revenue stream from which the payments and the incentive to participate are drawn;

- financial condition with three years of complete and current financial statements i.e., bond rating, 10K, audited financial statement; and

- preliminary project calculations.

The critical financial information needs to be adequately documented. No matter how charming, persuasive and attractive a potential customer may be, the financials must be in print—and signed. In their zeal to make a sale, sales people are sometimes tempted to take the customer's word for credit standing. But the financier won't. Don't do as one major ESCO did with a seemingly lucrative opportunity—a 22-story building in San Francisco with major energy efficiency opportunities. The ESCO became "savings opportunity blind" and spent a lot of money developing the project based on false financial assurances only to eventually learn the building was owned by a foreign firm, which just happened to be going bankrupt.

In addition to the customer's creditworthiness, financiers are more inclined to loan money when larger ESCOs are involved. Their size and track record often offer the surety needed to lower interest rates. Smaller firms, however, need not be discouraged by this apparent market advantage; for the small firm can typically get performance bonds or insurance to cover the savings guarantees and even with these added costs and higher interest rates can still compete with the margins charged, for example, by an ESCO affiliated with a controls manufacturer.

The above concerns relate to the financial pre-qualification of the customer. Once the ESCO is satisfied with the customer's creditworthiness, consideration can be given to other criteria which will be used to weigh the customer's partnership quality, including the administrative commitment to the project, the attitudes and abilities of the operations and maintenance people, etc. These "people factors" and other critical concerns are generally folded into a scoping audit that assesses project potential. The scoping audit is little more than a walk-through audit with a very educated eye. The purpose is to be sure that further pre-qualification and marketing efforts are warranted.

Start-up ESCOs, or "WISHCOs" as they are sometimes called, too often do not pay sufficient attention to the people factor risks. It is vital to project success and is touched on below.

Once the other pre-qualification criteria has been met and the potential customer has accepted the concept, then a full feasibility study is needed. Before the ESCO incurs the expense of a premium quality energy analysis, an agreement to cover the costs of the audit if the project does not go forward is increasingly used to protect the ESCO's investment.

Energy Audit Quality

A standard energy audit with its "snapshot" of current conditions is not good enough for performance contracting. These audits typically assume present conditions will prevail for the life of a project. When an ESCO bets money on predicted *future* savings, these assumptions must be tested through a careful risk assessment procedure.

Only an *investment grade audit* that adds specific risk appraisals to the standard name plate/run calculations will meet performance contracting needs. In recent years, energy engineers have learned to look at facility and mechanical conditions and determine the ability of the remaining equipment and energy consuming subsystems to accept the recommended measures. An investment grade audit (IGA) goes beyond these engineering skills and requires the art of assessing people; the level of commitment of the management to the project, the extent to which the occupants are informed and supportive, as well as the O&M staff's abilities, manpower depth and *attitude.*

A key aspect of a quality IGA is a carefully detailed baseyear with the average energy consumed over several years *and the current operating conditions,* which affect that consumption.

The ESCO that consistently delivers a quality IGA, which in turn accurately predicts potential savings, builds a track record that financiers find very heart warming. A good IGA is at the heart of a bankable project. When the total project plan is wrapped around a quality IGA and delivered by an ESCO, who can back its predictions with a solid history of successful projects, financiers smile.

Equipment Selection and Installation

Predictive consistency comes from knowing what works. And what doesn't! To support a guarantee, ESCOs must have considerable control over the equipment specifications and the selection of the instal-

lation subcontractors. Generally, this control manifests itself in order of preference from the ESCO's point of view in (1) working as a general contractor or construction manager, which supplies all the equipment and installation; (2) having primary responsibility for developing the specs in cooperation with the owner and making the final equipment selection; and (3) preparing specs in cooperation with the owner and identifying acceptable bidders for the owner's final selection. For the owner these options offer him or her progressively more control and increasingly transparent costing. The more control an owner exerts, however, the more risk the ESCO assumes, the lower the project economic viability becomes, and the project bankability drops accordingly.

A financier's due diligence carefully assesses the ESCO's ability to make good on its guarantee and to control the variables that threaten the savings and the guarantee. As always, money follows risk. Interest rates are directly related to the project risks as perceived by the financier.

For both parties, the predicted benefits must outweigh the expected risks or the project is not bankable. It follows that the control exercised by the owner directly affects the project benefits—inversely. The owner control level translates directly into ESCO risks, project viability and interest rates. Money that goes to pay interest is not available to buy services and equipment, which produce the savings.

What the industry needs, but presently lacks, is the equivalent of the insurance industry's actuarial tables for the considered measures against specific conditions that significantly impact savings projections. Manufacturer warranties may ameliorate ESCO risks, but the ESCO can't carry performance claims to the bank. The data are building up, but the science has a way to go.

Project Management

One of the great appeals of performance contracting is the extent to which the ESCO's fee, and profit, rides on the project's success. The truly successful ESCOs know the project is only beginning once the construction/installation/commissioning is done. There are three key components to managing a project which are closely related to its success. A good bankable project presentation pays close attention to each one; and so does the knowledgeable financier. They are summarized here in terms of presenting a bankable project.

1. *A planned effective partnership.* This critical aspect is the most obvious and most frequently ignored. It rests on a carefully orchestrated communication strategy where:

   a) problems are aired, not hidden, and resolved collectively;

   b) successes and the means of communicating them to the customer's internal and external publics are developed in concert;

   c) day-to-day incidents are shared and resolved with a sense of camaraderie;

   d) the ESCO's Project Manager identifies problems and offers business solutions as an adjunct to the customer's operation; and

   e) the communications strategies are reviewed and enhanced as needed for the life of the project.

2. *Maintenance* (and operations to a lesser extent.) Maintenance and operations must be carefully planned and executed in a routine fashion appropriate to the installed equipment. This maintenance may be performed by the ESCO, its trained representative, or the owner's personnel. A checklist and routine policing are needed in all cases.

   An evaluation of the federal energy grants program for schools and hospitals underscores the critical need for effective operations and maintenance (O&M). A study for the U.S. Department of Energy revealed that in an effective energy management program up to 80 percent of the energy savings are due to energy efficient O&M practices; not the hardware. Without a good O&M program, guarantees are impossible.

   Owners frequently want to keep the maintenance responsibilities for a variety of reasons, including a sense of control, personnel needs, or union issues. If the primary reason is a perceived economic advantage, owners should be aware that ESCOs view reliance on owner maintenance as a significant risk and will financially structure their projects to protect themselves against this risk.

In the long run, an owner budgets so much for maintenance, which it could have outsourced for a little more money. In the process, the owner receives a smaller project. The financials for both scenarios should be worked through and compared before owners decide to "save money" by doing their own maintenance. Using computer-based maintenance management may offset the ESCO risk sufficiently to make owner maintenance an economically viable option.

No matter what procedure is used to achieve a quality maintenance program, a solid computer-based maintenance management system (CMMS), can be an extremely valuable tool.

3. *The Project Manager.* It is impossible to overstate the key role a good Project Manager plays in achieving energy savings and in fostering a strong sense of project partnership. From the start, he or she should help with the risk assessment, help determine customer needs, document needed O&M staff training and personnel augmentation, merge ESCO and owner staff into one team, and become the link between the ESCO and owner management.

Savings Verification

When money changes hands based on the level of savings achieved, all parties should be comfortable with how the achieved savings are verified and attributed to the work performed by the ESCO. This issue has become the "hot button" in the industry and is in great danger of being over-played. Under the financiers' general guidance, the ESCO and owner should jointly decide on the level of verification and attribution necessary. It is basically a case of cost vs. accuracy, and it is possible to reach the point of diminishing returns rather quickly. With measurement and verification it's easy for the tail to start wagging the dog... with the verification burden becoming so great that a measure is no longer economically viable.

The financier wants some sense that the project benefits are measurable and they are measured through accepted protocols. Too often verification procedures are basically passive, a negative drain on the cash flow, and investors are not interested in funding a gold plated M&V approach that offers little or no return on investment.

In the final analysis, a bankable project is one you, as an individual, would want to invest in if someone else were doing it. An eco-

nomically viable, bankable project, when all is said and done, is simply one which demonstrates good business sense.

THE OWNER'S PERSPECTIVE

The first step for an owner in achieving the most effective financing is to get an ESCO that can deliver a bankable project. The ESCO's track record and its bank relationships can tell the owner a lot about that.

Roughly 95 percent of the performance contracts in the United States are currently structured for guaranteed savings with the owner typically accepting the debt thorough third party financing (TPF). TPF is especially attractive if the owner qualifies for tax exempt financing. Since the debt will be on the customer's books, owners have some important choices to make regarding that financing.

1. For a *tax-exempt* organization, the project costs can be reduced by thousands of dollars if tax-exempt financing is used. Notice the words used were "tax exempt;" not "if you don't pay sales tax." *Tax-exempt* is clearly defined by the Internal Revenue Code, in 103a, as an organization that can levy taxes, raise a police force and/or condemn property. A school district in Maryland, for example, is not tax-exempt; however, it may be possible for that district to ride on a county's tax exempt status.

2. Leases come predominantly in two forms: operating leases and capital leases.

   If debt ceilings or greater indebtedness is a problem, an operating lease, which is off balance sheet, can be attractive. But the qualifications for an operating lease are pretty narrow; so a certified public accountant needs to be consulted prior to the agreement.

   The majority of energy equipment leases are capital leases. If a lease meets any of the following criteria, it is considered a capital lease:

   - the lease term meets or exceeds 75 percent of the equipment's economic life;
   - the purchase option is less than fair market value;

- ownership of the equipment is transferred to the customer (lessee) by the end of the lease term; or
- the present value of the lease payments is equal to 90 percent or more of the fair market value of the equipment.

Conversely, if a leasing arrangement meets any of the above criteria, it cannot be an operating lease.

Leases work very effectively with guaranteed savings programs. Articles in the popular press too often imply that guarantees are available only with shared savings. Not so. Shared savings is only one type of performance contract. Any performance contract can be structured to use lease financing. In a guaranteed savings program the debt service obligation rests with the owner, but it is backed by the ESCO's guarantee that the savings will cover this obligation. The ESCO's surety may reduce interest rates as well.

3. When the financing is carried by the ESCO, it usually uses a shared savings approach. Shared savings is defined as a performance contract where the percentage split in the energy cost savings is predetermined and the ESCO typically carries equipment ownership until the end of the contract. Shared savings is typically not the best option for the ESCO or the owner. The customer will pay more for the money and less of the investment goes into equipment and services. Since the deal rests on sharing cost savings, it bets on the future price of energy. Risky business, so the money costs more. The ESCO carries both the credit risk and the performance risk; so they get more money to cover those risks.

   On the other hand, what happens if the owner, under shared savings, is obligated to pay 80 percent of the savings for five years and energy prices go up, or the savings are greater than expected? This is a major pitfall in shared savings, for the owner is paying far more than expected for the equipment. If shared savings must be used, the owner needs to have the foresight to put a ceiling on the total amount to be paid.

   Financial houses may like this financing since the interest for them is higher, but generally it is not in the ESCO's, or the owner's, best interest. ESCOs, who survived the shared savings era of the late 1970s and early 1980s, are quick to point out another major

drawback of this approach: the ESCO gets too much money tied up in financing the project. Soon the ESCO becomes too highly leveraged to take on any more debt.

Energy project financiers have stepped in with their capital to free up the ESCOs to do more projects. Using a single purpose entity (SPE) to carry the financing can help. With established M&V protocols, shared savings has become a little more attractive, particularly to owners who need off balance sheet financing.

The Buy-in; The Buy-down

As a final cornerstone to this financing business, owners should not overlook the value of taking an equity position in the project. It is a way to get non-energy related projects incorporated, and/or reduce ESCO and financier risks. A little owner equity can be a powerful leveraging force and make a bigger project possible.

The bottom line for owners seeking to finance energy efficiency is: ask your banker. Find out what the men and women with the money need. Then use their guidance to develop a project. The financier's due diligence, in the end, is the ESCO's and the owner's best guarantee that they have a doable project. In today's U.S. market, if an energy efficiency project can't get financed, the first step is to rethink the project.

ABOUT THE AUTHORS

Shirley Hansen is increasingly active in the international ESCO world, having now worked in 22 countries in the past six years. But she finds time to keep tabs on ESCO activities in the U.S. and is particularly intrigued by the "rereg" scene and its impact on ESCOs. Shirley is executive vice president of Kiona International while she keeps her ties to Hansen Associates as CEO. Both firms specialize in all facts of performance contracting.

Jeannie C. Weisman, President, Hansen Associates Inc., has experience and background that match well with the expanding role of performance-based contracting, not only as a valuable tool in the achievement of energy efficient, but as a way to accomplish efficiencies in many other activities.

Jeannie was a "pioneer" of performance contracting. As manager of the Institutional Conservation Program for the Governor's Office of Energy Resources for the state of Georgia, she became an early advocate

for the use of performance contracting as a route to energy efficiency in state and local facilities. Recognizing the advantages of leveraging limited public resources through the innovative process she became nationally recognized for her work in Georgia. Speaking and writing about the programs she managed helped to establish performance contracting as a valuable tool available to institutions in need of energy efficiency help but short of budget.

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