

Energy Performance Contracting for Texas: The Collaborative Process

Harold Huff
Prairie View A&M
Prairie View, Texas

Jerry Matthews, Director
Texas Building Energy Institute
Austin, Texas

Introduction

Public institutions in Texas are perennially challenged to finance infrastructure and energy improvements to their facilities. Many have taken advantage of programs and financing designed to make available funds at low interest rates (Texas LoanSTAR) or the Master Lease Purchase Program, a low cost financing option available through the Texas Public Finance Authority. One option for financing of energy improvements, energy performance contracting, has not been among the options available to most public entities.

Until the 1997 legislative session, most governmental entities in the State of Texas could not enter into long term contracts involving energy efficiency improvements. Governmental entities could renew contracts from year to year, but if they were successful in lowering energy costs appreciably, they stood the risk of having their utility budgets reduced because of the reduced consumption, making it more difficult to pay for the improvements out of a savings stream. This disincentive was addressed in the past legislative session with budget language that balances the savings and contract costs.

Institutions of higher education have an additional incentive to save on energy and operating costs. The Space Projection Funding Model now in use by The Higher Education Coordinating Board (THECB) and the Legislative Budget Board (LBB) funds physical plants based on a theoretical number of square feet required to perform their mission independent of actual costs. Reduced physical plant costs do not directly result in reduced funding, so a penny saved is a penny earned for higher education. The 75th legislature of Texas passed HB 3530, a bill enabling state agencies, institutions of higher education, and public schools to engage in energy performance contracts for terms of up to ten years. The "board of trustees of a school district," "the governing board of an institution of higher education," and "the governing body of a state

agency" were all authorized to "enter into a contract for energy conservation measures to reduce energy consumption or operating costs."

The legislation further required that for state agencies and universities, "The Texas Higher Education Coordinating Board, in consultation with the State Energy Conservation Office and the Texas Energy Coordination Council, establish guidelines and an approval process for contracts awarded" under the legislation. Final approval of projects for Higher Education rests with THECB. For State Agencies, final review and approval of the contract is required from the State Energy Conservation Office (SECO). Additionally, the SECO and the Texas Energy Coordination Council (TECC) are required to "review and comment on the selected proposal before a contract is awarded." The State Energy Conservation Office and the Texas Energy Coordination Council will provide state agencies a cost-benefit analysis of the proposals and analysis of the guaranteed savings projected by offerors and may charge a fee for this service. The same may be provided but is not required for Institutions of Higher Education.

Texas Energy Performance Contracting Guidelines Committee

Lack of standardized guidance makes comparison and evaluation of performance contracting proposals from competing vendors next to impossible. The Texas Legislature required standardized guidelines be developed to make the preparation, evaluation and approval of performance contracts more equitable for the client and the provider. The Higher Education Coordinating Board, SECO, and TECC formed the "Texas Energy Performance Contracting Guidelines Committee," whose membership of thirty was comprised of energy service companies, state agency and university energy managers, university professors, research center directors, representatives from the financial community, utilities, consulting engineers, representatives from the Texas Municipal League and the Texas Association of Counties, as well as

the responsible agencies directed to develop the guidelines. Even though local governments (municipalities and counties) are not addressed in HB3530 and are not required to develop or abide by the guidelines developed, they are empowered to enter into energy performance based contracts by HB 1243, quite similar in language and intent to HB 3530. The state agencies responsible for the development of state agency/university guidelines believed that guidelines would be useful to all entities contemplating the performance contracting mechanism for system energy improvements.

The first of almost twenty scheduled committee meetings was held October 3, 1997. Dr. Jerry Matthews, Director of the Texas Building Energy Institute, was the chair of the general committee. Subcommittees were formed to focus experience and expertise on the several issues regarding performance contracting.

Subcommittee Responsibilities

Request For Proposals and Request For Qualifications Subcommittee: Performance contracts are not generally contracts which are bid, but rather contracts which are awarded to the firm that can best achieve the results envisioned by the Owner. Two methods may be used for selecting providers of performance based projects. The Request for Qualifications (RFQ) method and the Request for Proposals (RFP) method. The subcommittee was charged with developing materials to assist the Owner in selecting a provider using RFQs or RFPs.

Energy Assessment Report and Energy Cost Reduction Measures (EAR, ECRM) Subcommittee: ECRMs are the source of the savings that performance based contracts are to achieve. The EAR is the technical and financial analysis document used to develop and describe the proposed ECRM projects included in the performance-based contract. The subcommittee was charged with developing the minimum requirements for engineering and financial evaluation of the proposed ECRMs. The subcommittee was also charged with developing a format for the EAR in order to aid in the evaluation of proposed projects.

Contracts & Financing Subcommittee

The contract is the foundation of any project. For state entities, uniform general contract conditions exist. The conditions are

tailored for each entity and project depending on project needs. The legislature has made specific contract requirements in HB3530. The subcommittee was charged with identifying the legislation contract and financial requirements and to develop materials that would help Owners and ESCOs meet and understand those requirements.

Measurement and Verification (M&V) Subcommittee

No guarantee of savings can be valid unless and until those savings are measured and reviewed to determine whether the savings have been achieved. The subcommittee was charged with developing minimum requirements and qualifications for M&V plans and M&V providers. It was also charged with developing minimum requirements and qualifications for periodic energy savings reports, and those who develop them.

Guidelines Promotion Subcommittee

The subcommittee recognized that state agencies and universities would be compelled to use the guidelines, because all contracts must be reviewed by SECO and TECC prior to contract approval. However, public schools and units of local government which are not obligated to have contracts reviewed, should be made aware of the guidelines and the opportunity to have contracts reviewed if they choose. Cost benefit analysis, project review, and review of periodic energy savings reports will also be offered to local government entities on a fee basis.

The final draft of each subcommittee was submitted to the general committee for review and comment. On February 13, 1998, notice was posted in the Texas Register that public comments on the draft guidelines were invited until March 13. Substantive comments were received from several ESCOs and consulting engineering firms, as well as responses from university administrators. SECO contracted with Prairie View A&M University to integrate all comments adopted by the responsible agencies involved.

Promulgated Guidelines

The responsible agencies, THECB, SECO and TECC, used the committee reports and the public comment along with internal comment and input from Prairie View A&M University to develop the guidelines described here.

The format of the guidelines has changed somewhat from the committee draft version. Sections are devoted to the Education and Government codes, which are changed by HB3530. Each identifies the particular requirements for the entity to which the code applies. The guidelines have also been divided into sections that are needed for project approval, and appendices that contain educational and advisory materials.

1) Approval Process

School Boards are the approval authority for Independent School Districts; however, education code 44.901 provides a number of state requirements districts must adhere to when entering into energy performance based contracts. Projects must comply with current local, state, and federal construction and environmental codes and regulations. Savings must be guaranteed and payment and performance bonds must be filed with the board. Contractual obligations in any year may not exceed the total costs savings during the term of the contract divided by the number of years in the contract term. Specific requirements must be followed when selecting a provider by means of RFQ or RFP. Although it is not required it is highly recommended that school districts adopt the guidelines for developing contracts, EARs, M&V, and periodic energy savings reports and reviews.

The Texas Higher Education Coordinating Board is the approval authority for institutions of higher education. Projects to be considered by THECB must be forwarded to THECB with a completed review from SECO and TECC at least sixty days prior to the Board's scheduled meeting. Projects must comply with current local, state, and federal construction and environmental codes and regulations. General contract conditions normally required by the state and the institution as well as the specific requirements of section 51.927 of the education code must be adhered to. Savings must be guaranteed.

In order to insure that the energy savings guarantee is valid, an energy savings bond must be supplied to the owner in an amount greater than or equal to the guaranteed savings for each year. The bond must be renewable annually for the full term of the contract, whether it has been held forfeit or not. If a third party provides

M&V then that provider must provide periodic energy savings reports to the owner to verify the actual savings achieved. If the ESCO or the Owner provides M&V for the project their periodic energy savings report must be sent to a third party reviewer who will then send the report and review to the owner to verify the actual savings.

Final contract review and approval from SECO is required for all state agencies entering into contracts under section 2166.406 of the government code. SECOs requirements for project approval are consistent with THECBs .

SECO and TECC have some general requirements for project review which must be satisfied to achieve a positive review. The project evaluation package must contain four complete copies of all required documents, fees, certifications and signatures. The most critical of the required documents are the contract, the energy assessment report, the measurement and verification plan, and the sample periodic energy savings report. The listed documents must be prepared according to the guidelines and the uniform general contract conditions as extended by the owner. They must be accurate, complete and correspond to one another technically and contractually.

2) Energy Assessment Report (EAR)

The fortunate precedent of SECOs LoanSTAR program, which has long established and familiar project calculation protocols for energy conservation measures, provided the EAR subcommittee substantive guidance in developing the format and requirements for the energy assessment report. The EAR guidelines include requirements for presenting a complete energy assessment, potential energy savings, and implementation costs with supporting documentation. The EAR constitutes the project's fundamental technical and financial analysis document. It will be used to develop the cost benefit analysis of the project as well as evaluating the technical feasibility of the proposed project. The ECRMs proposed in the EAR are the source of all project savings. The EAR guidelines show how details of the costs of the project must be presented. The baseline calculations of the energy assessment must be presented along with all assumptions made in developing that baseline. The ESCO in preparing the EAR is responsible for its content.

Errors in calculation of potential savings or misrepresentation of those savings could easily prevent the guaranteed savings from being achieved leading to forfeiture of the guarantee. The guidelines contain details of many requirements but are not all-inclusive. All current applicable codes and standards should be used and presented when developing the EAR. A Texas registered Professional Engineer must be in substantive control of the development of the EAR and must seal it.

3) Measurement and Verification (M&V)

Measurement and Verification of the savings stream is of paramount importance to performance contracts. One of the most challenging components of performance contracting is the issue of measuring and verifying savings. The subcommittee developed minimum requirements for the M&V plan and the periodic energy savings report developed by executing that plan. The subcommittee also developed minimum qualification requirements for those developing the M&V plan and the periodic energy savings report. A hotly debated issue was who should perform the M&V, the client, the ESCO, or a qualified third party. The guidelines recommend, but do not require, third party measurement and verification. ESCOs have a keen interest in knowing how their projects perform and typically prefer to provide M&V, whereas clients often express interest in their own personnel providing confirmation of savings. If the ESCO or client performs the ongoing M&V, periodic reports of savings must be submitted to a third party for review. The review of the periodic energy savings report is then sent to the Owner. The M&V guideline document also includes a number of M&V option descriptions developed for the International Performance Measurement and Verification Protocol (IPMVP). Options modeled on the IPMVP format have been developed for Operations and Maintenance savings and Renewable Energy savings. It is important to realize that all options are not appropriate for all circumstances. Some options are presented which are very limited in their applicability. The primary test of an options appropriateness is; Does this option provide substantial reliable evidence that the guaranteed savings actually occurred? Under this legislation another test is required; will the ESCO guarantee the savings as measured by this option?

4) Contract Requirements

All state agencies and universities have standard terms and conditions for contracts. The committee focused its recommendations on aspects of performance contracting not commonly found in standard construction contracts. The legislation requires savings be guaranteed insuring that energy savings in each year of the contract term equal or exceed the annual debt payment. All costs associated with performance based projects, including debt service, interest, operation and maintenance, etc. must be included in the project cost. The savings guarantee is the foundation of all performance contracts. The substance of the savings guarantee was a vigorously debated topic. The responsible agencies ultimately determined that no guarantee of savings can be valid unless and until those savings are measured and reviewed to determine whether the savings have been achieved. The items presented in the contract section should be taken as important but not sufficient in and of themselves to insure a clear and effective agreement. The agency's or institution's legal council should be extremely careful in developing these contracts. Full advantage should be taken of the required contract reviews by SECO and TECC in order to assure the agency or institution of the most secure possible agreement.

5) Request for Qualifications (RFQ)/Request for Proposals (RFP)

Projects of this type are often large and fairly complex in nature. A request for proposals requires relatively detailed project development which carries a considerable cost. It is not fair or productive to expect the level of work required for an RFP to be contributed by an ESCO with little assurance of winning the contract. The subcommittee therefore does not recommend the RFP process except for projects of very limited scope. Specific legal requirements for RFP or competitive bid proposals are referenced by the legislation. The RFQ process centers its efforts on determining the most qualified ESCO for the OWNERS needs. The scope of work is typically not defined prior to the RFQ by plans and specifications, these being the responsibility of the selected most appropriate and qualified firm. Because such contracts are not bid on the basis of price, the committee emphasized that clients should establish a rigorous review process for ensuring qualified and competitive proposals.

6) Financing Options and Evaluation Techniques

The contracts and finance committee developed a document on the budget effects of the legislation. State agencies are primarily affected by the following language:

(1) The legislature shall base an agency's appropriation for energy costs during a fiscal year on the sum of: (1) the agency's estimated energy costs for that fiscal year; and (2) if a contract under this section is in effect, the agency's estimated net savings resulting from the contract during the contract term, divided by the number of years in the contract term.

Institutions of higher education are primarily affected by the Space Projection Funding Model. Because all costs must be included for calculation of the Project Payback great care must be used to determine all of the costs associated with the project. Project Payback is defined as all costs divided by savings per year. This equation gives the number of years required for the savings to pay back the project costs. This is treated at several points in the guidelines. Other more normally used economic evaluations are presented in the subcommittee's finance document, but the project payback is the legislations metric.

Conclusion

Legislation in the 75th Texas legislature opened the opportunity for energy performance contracting to state and local government entities. To safeguard the economic interests of the state, to insure that projected savings are realized, and to standardize as much as practicable the process and product of performance contracting, the legislature required the development and promulgation of guidelines to be used by state agencies and higher education. The responsible agencies have so developed the required guidelines, and the opportunities for energy and operational savings await the interested client and the qualified energy service company.