CRITICAL ISSUES IN DEVELOPING AND UNDERTAKING AN ENERGY PERFORMANCE CONTRACT PROJECT

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Most Energy Performance Contract (EPC) projects include five major development phases: (1) setting the stage, (2) procurement, (3) investment grade audit/investment proposal, (4) implementation, and (5) measurement and verification. Each institution has its own culture, legal and jurisdictional context, and may be required to follow public EPC procurement processes defined by state or local law. Some existing reference guides / resources (found in the 'Additional Resources' section of this toolkit) cover the EPC project development process in great detail, while this guide outlines some things to consider before undertaking an EPC project.

FIGURE 1: TYPICAL PROJECT DEVELOPMENT PHASES

1. Stage Setting
    - Set project goals and develop consensus.
    - Conduct informal, educational meetings with Energy Service Companies (ESCOs.)
    - Ensure compliance with procurement procedure policies and, if a public institution, legal, regulatory, and performance contacting statutes.
    - Begin discussions with internal staff, and potentially external financial experts, regarding financing options.
2. Procurement
    - Draft procurement documents (Request for Qualifications (RFQ) or Request for Proposals (RFP)).
    - Approve and release procurement documents.
    - ESCOs submit proposals by specified due date.
    - Review and evaluate ESCO bid submissions.
    - Interview ESCOs, check references (this may be done after the RFP process).
    - Select winning ESCO(s), notify all ESCO(s) of final decision.
    - If necessary, initiate an RFP process to select the finalist(s).
3. Investment Grade Audit/Investment Proposal
    - Review campus' goals and constraints with the selected ESCO(s).
    - Define Scope of Work for the Investment Grade Audit/Investment Proposal.
    - Sign Project Development Agreement (PDA) with selected ESCO(s).
    - ESCO undertakes audit.
    - Review and discuss recommendations.
4. Implementation
    - Negotiate and sign EPC.
    - Implement project.
5. Measurement and Verification (and Beyond)
    - Client or client's representative to oversee and verify ESCO's measurement and verification (M&V) conclusions.
    - Manage the risk of the degradation of resource savings.

ISSUE ONE: SETTING THE STAGE

Before deciding to undertake an energy performance contract, a university should assess the opportunity for an EPC at its campus. EPCs work best when a facility has opportunities for substantial reductions in resource use and related operational costs. Potential total reductions in utility costs over a specified period must be sufficient to cover the costs of contracting with an ESCO. The buildings and supporting utility infrastructure selected for an EPC should have a relatively high resource use profile, either on a dollar per square foot basis, per capita basis, or total facility consumption basis. Indicators of the energy savings potential include the efficiency and age of existing mechanical, lighting, water equipment, and distribution systems, and recent upgrades or replacements of major systems including Heating, Ventilation, and Air Conditioning (HVAC) and lighting.

For a list of questions that should be considered in any facility energy efficiency evaluation, see the 'Concept Stage Questionnaire' in the 'Sample Documents' section of this toolkit.

Like many complex projects, the work done before an EPC retrofit is initiated is critical for the long-term success of the project. The institution must define goals and restrictions for a retrofit, and dedicate resources to champion and shepherd the project.

ENERGY BENCHMARKING

Energy use benchmarking is a process that either compares the energy use of a building or group of buildings with other similar structures or looks at how energy use varies from a baseline. It is a critical step in a building retrofit project because it informs organizations about how and where they use energy and the factors that drive its use. Simply put, you can't manage what you don't measure.

The benchmarking process allows managers to:

- Identify best savings opportunities.
- Define goals and metrics.
- Set the retrofit project scope.
- Engage partners who will participate in the project.
- Verify and evaluate energy savings resulting from retrofit projects.

Facilitates continuous improvement by providing a means to evaluate performance over time. Benchmarking energy performance helps energy managers identify best practices that can be replicated across a portfolio of buildings, provides reference points for measuring and rewarding good facility manager performance, and allows an organization to prioritize poorly performing facilities for immediate improvement.

See Appendix A for information about the Energy Star Portfolio Manager tool.

ESTABLISH PROJECT TEAM

EPC projects require diverse expertise and successful projects require commitment from the institution to dedicate resources and personnel to support the project. The first step is to establish a project team to evaluate the opportunity for an EPC. This team will be crucial in managing the project from cradle to grave, building consensus, defining project goals, and ensuring that the project is delivering the expected results. This team should be led by a project manager, and include decision makers from finance, procurement, engineering, facilities, and legal staff.

DEVELOP CONSENSUS FOR EPC PROCESS

Evaluating whether an EPC is the best option for a resource efficiency project requires the input of engineering and facilities staff, procurement officers, legal counsel, financial officers, and building users. Stakeholders may not be familiar with EPCs and therefore may be skeptical. Questions will arise about its cost effectiveness, and its financial and operational risks.

Here are some points to emphasize and actions to take in order to ensure an informed decision among stakeholders and respond to their concerns.

ENGINEERING AND FACILITIES STAFF:

- Involve them at the very beginning of organizational discussions about the desire to improve facility performance and the possibility of using an EPC so they have time to learn about EPCs.
- Discuss how interference and disruptions with daily work will be minimized.
- Discuss ways that the project may make their jobs easier by allowing for more time to be spent on preventive maintenance and less time "putting out fires."
- Discuss staff training opportunities on new equipment and systems that will be provided in conjunction with the project.

PROCUREMENT OFFICERS:

- Describe how using a turnkey solution provider simplifies the relationship management issues.
- Describe the benefits of transparent pricing clauses in all project documents (from initial RFQ through to the EPC implementation contract).

IN-HOUSE COUNSEL:

- For public colleges and universities, ensure that guidance is provided to procurement officers and legal staff on the proper interpretation and application of state level EPC enabling legislation.
- Inform legal staff that there may be a need to hire outside counsel with EPC experience because of some of the unique aspects of EPC projects.
- Involve legal staff early in the project formulation process, as their input into procurement and contractual documents will be crucial for protecting the interests of the institution.
- Describe how the legal issues surrounding EPC may be simpler to manage than for major bid/spec projects in some respects, as there is only one accountable party (i.e., Energy Services Company).
- Describe the benefits of having the ESCO assume project performance risk.

FINANCIAL OFFICERS:

- Describe how EPC projects mitigate risks and provide greater certainty of the incoming cash flows (in the form of utility bill savings) and outgoing cash flows (in the form of project financing debt service).
- Educate them about the opportunity cost of delaying to wait for cheaper, available financing. A day of delay equates to another day of paying higher than necessary energy bills.

- Use the U.S. Environmental Protection Agency's Energy Star's Cash Flow Opportunity Calculator, a free online tool that compares the costs of waiting for cheaper financing with the foregone savings that result from the delay.[1]
- Explore available financing structures for EPC projects. Refer to the finance chapter for a high level discussion of commonly used structures, or consider hiring a financing consultant with experience in the retrofit/EPC business.
- Refer to the finance chapter for a detailed discussion to address the concern of how an EPC impacts the school's balance sheet and credit rating.

BUILDING USERS:

- Inform building occupants of project scope.
- Seek input on comfort issues from representatives of occupant groups (e.g. students, faculty, and staff).
- Discuss possible interactive and educational opportunities for students that might arise from project development and implementation.
- If the local and institutional procurement regulations permit,[2] consider inviting ESCOs (in separate meetings) to the campus to meet the project management team and other stakeholders to learn more about retrofitting and EPCs including issues such as guarantee, measurement and verification, and financing options.

LOCAL COMMUNITY:

- Energy efficiency investments create local, non-exportable jobs (primarily for construction-related project implementation activities, but also for technical design, engineering, and equipment installation work).
- Lower utility bills free up money that the institution can spend locally that would have otherwise been exported to a utility company.

DETERMINE GOALS AND CONSTRAINTS FOR THE PROJECT

Whether for one building or a whole campus, a successful EPC project will achieve concrete goals that the client (the institution) defines early in the process and negotiates during project development. These goals will be detailed in the procurement documents and in the project contracts. Thus, it is critical for the institution to define, agree on, and set forth its specific project goals.

Generally, the reasons for pursuing energy efficiency retrofits are based on local or global environmental stewardship and/or stewardship of the institution's fiscal health and operational efficiency. It is important to translate these mission-oriented motivators into concrete, specified goals that the ESCO can address. For example "reduce carbon footprint" might be the motivator, while "reduce electricity usage by 25%" is the specific target.

Schools may find it helpful to spell out motivations for undertaking the project and break them down into more concrete goals.

1 For a description and link to download the U.S. EPA's Cash Flow Opportunity Calculator, see: http://www.energystar.gov/index.cfm?c=assess_value.financial_tools

2 It is important to inform the ESCO(s) that the meetings at this stage are strictly for the edification of building owner staff, and are not a part of the ESCO interview/qualifying process.

FIGURE 2: SOME EXAMPLE MOTIVATORS, PROJECT GOALS, AND TARGETS

1. ENVIRONMENTAL STEWARDSHIP
   - GOAL: "Green the campus."
   - TARGETS: X% reduction in GHG emissions; Achieve LEED Certification levels at certain buildings; Commit to procuring X% of energy from renewable sources by Y date, etc.
2. FINANCIAL CONSIDERATIONS
   - GOAL: Improve near term cash flow.
   - TARGET: Reduce energy spend as % of operating budget by X amount.
3. OPERATIONAL IMPROVEMENTS
   - GOAL: Improve occupant health, comfort and safety.
   - TARGETS: Achieve LEED certification; improve indoor air quality/circulation by reducing indoor CO2 levels by X% or improving outdoor air circulation by Y%.
   - GOAL: Make campus operations more efficient.
   - TARGETS: Train facilities staff; address specific areas of deferred maintenance.
4. ACADEMIC/SOCIAL MISSION
   - GOAL: Improve town/gown relations.
   - TARGET: If local statutes allow, consider procuring a renewable energy system in cooperation with local community and agree to sell % of power to local community.
   - GOAL: Help the town transition to the new green work force.
   - TARGET: Green collar job training.
   - GOAL: Prepare students for the new "green economy."
   - TARGET: Student involvement in implementation of retrofit.

In addition to defining motivations, goals, and targets for the project, the school should spell out the financial and operational constraints that will define the scope of a project to ensure that the ESCO's work will remain in the bounds of what the school is able to undertake. Possible examples of constraints include the following:

FINANCIAL CONSTRAINTS:

- Maximum tolerable project cost.
- Availability of internal sources of capital or limits on the amount of possible borrowing.
- Maximum tolerable simple or true payback period.
- Required or desired return on investment or internal rate of return.

OPERATIONAL CONSTRAINTS:

- Need to house students in dormitories during construction.
- Need for classrooms or other facilities to be in use during construction.
- Expected expansions or other changes to school's existing infrastructure during construction.
- Limitations on the availability of facilities staff.

DETERMINE WHETHER OUTSIDE CONSULTING SERVICES ARE REQUIRED TO GUIDE THE INSTITUTION THROUGH THE PROJECT DEVELOPMENT PROCESS

Schools may consider hiring a consultant with expertise in EPCs. EPC consultants can provide assistance in creating procurement documents, reviewing ESCO proposals and technical documents, and reviewing and negotiating contracts on behalf of the client. An EPC consultant can support the internal project team and identify and mitigate project risks. The cost of an external consultant should be considered and weighed with the "cost" of internal resources, cost of waiting, and cost of project failure. Some typical consulting services for a retrofit project include:

ENGINEERING ASSISTANCE TASKS:

- Assemble and analyze energy/utility data (utilizing Energy Star's Portfolio Manager).
- Assist with the ESCO procurement and selection process, such as determining (and then communicating in the procurement documents) the client's operational and financial goals and constraints.
- Ensure a thorough scope of work for the IGA (the IGA is discussed in detail later in this chapter) and evaluate the IGA's results and recommended energy baseline, Facility Improvement Measures (FIMSs), M&V options, and project costs.
- Review technical aspects of contractual documents.
- Oversee and/or verify the M&V tasks and conclusions performed by the ESCO during the performance guarantee period.

FINANCE/DEAL STRUCTURING ASSISTANCE TASKS:

- Assess which financing options are possible for the client for project financing and describing the pros and cons of each option.
- Define project investment criteria (goals and constraints).
- Investment proposal review and analysis.

LEGAL ADVICE:

- Ensure that local, state, and where applicable, federal legal and regulatory procurement rules are followed (for public entity clients).
- Review tender documents to ensure that the client's interests are protected.
- Review contractual documents to ensure that client's and ESCO's rights, responsibilities, and obligations are clear and the interests of the client fully articulated and protected.
- Represent the client's interests in any guarantee period-related disputes, particularly in the case of disputes over the outcomes of the periodic M&V analyses.

CONSIDER FINANCING OPTIONS EARLY

Typically, in EPC procurement, the financing agreement between the building owner and third party lender is developed after the project development agreement has been executed, the investment proposal completed, and the project size and scope have been defined and agreed to in the energy services agreement. Most ESCOs have in-house financial experts who are designated by the ESCO's project manager to help the building owner find the most appropriate capital solution for its proposed project. These experts will usually initiate discussions with

building owners at this stage of the project. Often the ESCO, with the building owner's approval, will organize the release of an RFP for financial services for the project. In other cases, direct, informal discussions with third party lenders will lead to the arrangement of project finance.

While formal negotiations or procurement processes regarding project financing usually do not commence until later stages of the ESCO procurement and contracting process, schools should consider their basic financial goals, opportunities, and constraints before issuing any procurement documents, so that they can help set their own project parameters and plan for finance negotiations. The project team might also consider having discussions with potential EPC project financing providers such as private banks (especially those with whom the campus already has a good credit history) and local and state financing authorities, where applicable.

An institution should consider the following questions before starting the project development:

- What mechanisms for evaluating the financial viability or success of the project, such as payback period in years, Internal Rate of Return, Return on Investment, immediate or near- or long-term improvement in cash flows, are appropriate?
- What are the opportunities and constraints on financing options, such as legal or internal limits on payback period, limited room or desire to burden the campus' balance sheet with additional debt, limited cash-on-hand or desire to use available cash-on-hand? What are the options for securing tax exempt financing?
- Does the institution have money available to finance a project without using external sources of capital?
- Does the institution have funds available from a recent capital raising campaign that could be allocated to this project, especially if such funds are returned over time from energy savings?
- What other projects are competing for the use of available funds? What programs might be deprived (at least for as long as it takes to recover the funds used for an EPC project from energy savings) of receiving more funding if the institution uses existing resources to finance an EPC?
- Is the institution planning a bond issuance in the near future, which could be used to cover or augment the cost of this project?
- How much time will it take to go through the capital markets to raise capital for this project? What is the opportunity cost in lost energy savings for this length of time? What would the up-front costs be for taking this approach?
- Is the institution nearing its debt capacity limit?
- Is the institution more concerned about cost of capital, performance risk, or balance sheet treatment?
- What is the maximum overall project size the institution would like to undertake (in dollars)?
- What is the maximum payback period the institution is willing to accept? How might this impact the financing mechanisms the institution can consider?
- What utility, local, state and/or federal government incentive programs or services can the institution use to improve the economics of this project?

PROGRAMMATIC FINANCING

For large schools, multi-campus community college districts, or statewide systems looking to arrange financing for multiple EPC projects to be implemented in phases, the development of a programmatic financing structure (e.g. revolving loan fund capitalized through capital funds, large bond issuance, or master lease agreement) may help streamline the financing process for each project. If institutions are interested in programmatic financing, they may wish to engage in detailed conversations with lending institutions or their endowment managers (if the fund is to be established in-house) before ESCO procurement begins.

ISSUE TWO: GETTING BEST PRACTICES INTO A PROCUREMENT PROCESS

The procurement of an ESCO's services is in many ways the most important step in the EPC project development process. It is the process by which the institution will select a partner for a long-term relationship that may last a decade or more. It is important that the procurement documents clearly identify the goals, constraints, and client's preferred terms and conditions for the project, and that the procurement process is used as an opportunity to thoroughly vet and qualify potential partners. Detailed review of all ESCO proposals and responses is imperative and, as discussed earlier, the client may wish to use the services of a third party consultant for further verification if they do not have in-house expertise.

Before proceeding with project procurement, a school must first check whether it must adhere to state mandated EPC procurement rules and statutes. Public institutions may be required to follow a specific process; in many states, specific terms and conditions for contracting and project parameters – such as open book pricing or payback period - will be mandated by law (see the 'State EPC Programs' section in this toolkit). In addition, in some states, ESCOs have been pre-approved, which may allow an institution to bypass the RFQ process. Private institutions may have more flexibility in how to manage their procurement process.

While mandates regarding procurement processes will differ across state lines and institutional preferences may exist for a specific process regardless of statutory requirements, the recommendations listed below and the template documents offered in the 'Sample Documents' section of this toolkit are a useful guide for institutions embarking upon ESCO procurement and which are interested in utilizing the Clinton Climate Initiative (CCI)'s Best Practices for performance contracting.

FIGURE 3: BROAD DEFINITIONS OF PROCUREMENT OPTIONS

INFORMAL NEGOTIATIONS

Institutions that already have a positive track record with an ESCO or other service provider may wish to skip any procurement process and jump to negotiating a contract, if local procurement laws permit. This may be true for institutions that have a good working relationship with a controls vendor, HVAC equipment supplier, engineering services provider, or utility company that also has an ESCO. Some building owners can make an informed decision among several ESCOs simply through interviews, rather than through a formal RFQ process that includes reference checks, rigorous analysis of different firms' project experience, financial capacities, management approach, standard policies and procedures, and references.

RFQ

A Request for Qualifications process results in the acceptance of one or more firms that meets the RFQ issuer's minimum standards for a desired professional service. Respondents to a RFQ are compared and scored based upon their response to various requests for information about previous projects, range of services, strength of their financial condition, and their standard business and engineering practices. Being accepted as a qualified respondent does not entitle the firm to any work with the issuer. The RFQ may be written either to require that an RFP process follows, or that qualifying firms may be hired for work without an RFP.

RFP

A Request for Proposals process typically results in the selection of one or more firms that will enter into contract negotiations for project development with the RFP issuer. The RFP process often, but not always, follows an RFQ process in which the number of possible candidates is reduced to a select group of "pre-qualified" ESCOs who then compete in the RFP process. While the RFQ is focused on a bidder's qualifications, the RFP is focused on the ability of bidders to perform on a specific and defined project. Typically, ESCOs are asked in an RFP to visit the institution and conduct a preliminary energy assessment of one or more buildings. The ESCO then assembles a high-level proposal for an EPC retrofit project.

CHECKLIST FOR THE RFQ AND RFP:

The 'Sample Documents' section of this toolkit contains a template RFQ for higher education institutions, which is designed to assist schools in developing their evaluation process and ensure that the school can benefit from the best practice terms and conditions that CCI has negotiated. Institutions can use this template RFQ as an actual procurement document by modifying it to fit their needs, or as a guideline for designing their own.

FIGURE 4: RECOMMENDED FEATURES OF A RFQ:

- Brief description of project/opportunity.
- Specify scoring methodology that will be used to compare responses.
- Request references from previous ESCO projects.
- Request information about ESCO practice on performance guarantee, measurement and verification, project management, subcontracting, etc.
- Request bidder responses to include project financing options secured by the ESCO, including experience with utility, federal, state and local government incentive programs, if applicable.
- Schedule time for on-campus interviews with prospective ESCO partners, if needed.
- Collect contact information for the ESCOs to which the RFQ will be distributed, as well as clearinghouses for general and energy services-specific tenders.

FACILITIES INFORMATION

This can be in a narrative describing the facilities and opportunities for retrofit, but should answer as many of the questions in the document as possible.

PROJECT DETAILS

A narrative about the key motivating factors and results expected from the project. Some questions to address in this section may include:

- What are the greatest facility, infrastructure, operational, and financial needs of the institution?
- Are these needs energy-related?
- Are there other needs that the bidder should be aware of?

Having defined the school's goals and constraints for the project, freely articulate these items in the project details section of the RFQ so that ESCOs can tailor their responses to the school's needs. As mentioned earlier, some of these goals may include:

- Reduce energy and operating costs.
- Upgrade old and inefficient equipment and/or systems.
- Retro-commissioning of existing equipment and/or systems.
- Improve comfort conditions.
- Enhance personnel development and training.
- Improve utilization of technology.
- Develop a long-term plan for preventive maintenance.
- Reduce carbon footprint.
- Achieve Leadership in Energy and Environmental Design (LEED,) Energy Star or other certification.

It's also a good idea to list the sort of retrofits that the school is interested in exploring. Table 1 highlights some of the possible facility improvement measures (FIMs) that should be considered.

TABLE 1

FACILITY IMPROVEMENT MEASURES – PARTIAL LISTING

- Lighting efficiency improvements
- Lighting controls
- Daylight harvesting/natural lighting
- Energy management controls
- Re-commissioning
- Variable speed pumping
- Variable speed air flow
- High efficiency HVAC equipment
- Chilled water reset
- Free cooling (chiller)
- Virtual central plant
- Ground/water source heat pump
- High efficiency motors
- Thermal energy storage
- Air/water side economizers
- Boiler reset
- Boiler economizer
- Runaround loop heat recovery
- Window film
- Solar screen/window shading
- Green roofs
- Insulation: wall, attic
- Water fixture efficiency
- Laundry water reuse
- Artificial turf
- Vending machine controllers
- Rainwater harvesting
- Gray-water utilization
- Renewable energy options
- Boiler oxygen trim
- Boiler blowdown heat recovery
- Steam to hot water
- Enthalpy wheel heat recovery

SETTING CONTRACTUAL EXPECTATIONS

Explicit reference should be made to the school's desired contracting terms and conditions. CCI recommends including those terms and conditions highlighted in the 'CCI's Energy Efficiency Building Retrofit Program' section of this toolkit.

CONTENT OF ESCO RESPONSE

This section describes the critical information that the client seeks from RFQ respondents. This should match the selection criteria listed above. Again, any subset of the areas listed or additional information related to qualifications that the institution defines may be requested.

PROCUREMENT AND PROJECT DEVELOPMENT PROCESS

The client should provide a clear description of the project procurement process and the project development process through contract signing in order to help the ESCOs prepare their responses and set the expectations about the project.

SELECTION PROCESS

The institution may use any subset of the criteria listed or additional criteria to short-list respondents. A scoring methodology that weights the importance of different criteria can be offered to show how much weight the building owner will give to various qualifications.[3]

3 Chapter 3 of the Commonwealth of Pennsylvania Guaranteed Energy Savings Manual (GESA) contains an excellent discussion on the process for evaluating ESCO responses.
http://www.portal.state.pa.us/portal/server.pt/gateway/PTARGS_0_2_8527_1300_244922_43/http%3B/pubcontent.state.pa.us/publishedcontent/publish/cop_general_government_operations/dgs/community_content/pa_gesa_manual_october_2008_final.pdf

QUALIFICATIONS
Qualifications questions may include:

- Technical qualifications
- Personnel experience
- Customer references
- Previous project track records
- Project development and management approach
- Experience with local incentives and programs
- Computation of energy baseline
- Savings and performance guarantees approach
- Range of services
- Financial soundness
- Other (corporate citizenship, creation of green collar jobs, incorporation of internship/ apprenticeship program into the project, etc.)

ISSUE 3: CONTRACTS

PROJECT DEVELOPMENT AGREEMENT (PDA) - ALSO KNOWN AS LETTER OF INTENT (LOI)

There are two separate contracts in a typical EPC project. Once a client selects ESCO(s), the client and ESCO(s) negotiate the Project Development Agreement (PDA).[4] The purpose of a PDA is to set the terms, conditions, and scope for the Investment Grade Audit (IGA) that the ESCO will perform to determine the buildings' current resource use, and the retrofit project's eventual scope, cost, resource savings, and M&V procedures. The form and content of the PDA will vary depending upon the legal jurisdiction of the building owner, and each ESCOs approach for each project. However, it is important to remember that this agreement is a contract that includes binding commitments for both parties.

Once the PDA is signed, the ESCO(s) will conduct the IGA and determine the potential for resource savings, establish a baseline of resource use against which to measure post-project implementation changes, and provide an investment proposal including the recommended FIMs, project cost, and savings.

RECOMMENDED CHECKLIST FOR THE PDA
When negotiating and reviewing a PDA, some key concepts to understand, define, and explicitly request include:

- *Owner-defined investment criteria:* The client and the ESCO must discuss the basic financial and operational goals and constraints and the desired contractual terms and conditions for the project. Even though the building owner may have already spelled out its investment criteria and CCI's best practice terms and conditions in its procurement documents, these project parameters should be spelled out in the legally binding contract PDA. The school should confirm that project criteria and requirements are accurate and reasonably attainable and that financing will likely be available if the project meets the owner's criteria.
- If the owner is not able to proceed with the recommended project after the IGA is carried out because of an inability to secure financing, the owner will be liable for the negotiated

4 The Project Development Agreement (PDA) is also often referred to as a Letter of Intent (LOI). Some refer to the PDA as the IGA, though as explained, the IGA (Investment Grade Audit) is only a portion of what the PDA provides the client.

"walk-away fee." The owner should consult with legal counsel to review contracts if additional expertise is required. (See the 'Additional Resources' section of this toolkit for a link to a sample Investment Grade Audit Contract in the BOMA International EPC toolkit.)

- *Project Details:* Specific list of buildings, systems, utility infrastructure, and retrofit opportunities to be audited and for which resource performance improvement recommendations will be provided. Any operational restrictions (construction timing restrictions, etc.) and local issues (permitting, etc.) will affect the price and timeline of the project. Define any bidding requirements, such as competitive bidding and other requirements, and the technologies or building components should be included in or excluded from the project scoping.
- *School Deliverables:* The owner and operator must agree to provide certain information (to the extent the owner or operator has the needed information) and adequate access to the facility for the ESCO.
- *Schedule*: The school and the ESCO should agree on a firm schedule for completion of the audit, investment proposal, and execution of the client's responsibilities (such as delivering past utility bills to the ESCO).
- *Details of "Walk-away Fee:"* In many PDAs, there is a walk-away fee or audit cost that the school must pay if it must walk away from the project under certain conditions. Thus, it is critical to define:
    - Fee Amount – This can be expressed as a fixed cost[5] or as a percentage of total project cost.
    - Payment Terms and Conditions – The school should pay the fee only if the ESCO finds a project that meets the defined criteria and the school decides not to proceed with project implementation. The client may need to pay the walk-away-fee depending on the scenario:
        - Client pays walk-away-fee: The proposed project meets all client investment criteria, yet the client decides not to proceed with project implementation. The client pays the walk-away fee as defined in the PDA.
        - Cost of fee is wrapped into the total EPC cost: The client moves forward with project implementation. The ESCO recovers the costs incurred in executing the PDA by folding the costs into the project.
        - No payment by client: The PDA deliverables do not meet the client's investment criteria or terms of the agreement.
- *Inclusion of CCI Terms and Conditions* – When the school would like and is able to incorporate CCI EPC Best Practices (as defined in the 'Introduction to EPC and CCI's Energy Efficiency Retrofit Program' section of this toolkit), the PDA should include the exact definition of how the ESCO will adhere to requested terms and conditions such as transparent pricing, incorporating CCI Purchasing Alliance products, gain sharing, etc.
    - A firm investment proposal with a fixed gross maximum project cost (not +/- any amount) and a fixed minimum savings (not +/- any amount) expressed both in units of energy consumption and in dollars based on assumed utility rates that is guaranteed by the ESCO.

5 PDA execution costs often (with some exception) range from $0.10 to $0.15 cents per square foot of building space, but the cost varies depending upon the size of the project and the complexity of systems. For example, it will cost much less per square foot to audit a lighting system than a central plant.

- Under the CCI terms and conditions, owners are entitled to transparency in pricing as negotiated with the ESCO.
- Inclusion of CCI Purchasing Alliance products and pricing: CCI projects have access to advantageous prices on over 1,000 energy efficient products. Owners should request that the ESCO incorporate these products where beneficial and appropriate.

FIGURE 5: BY THE END OF THE INVESTMENT GRADE AUDIT PROCESS, THE FOLLOWING ITEMS SHOULD BE DEFINED.

The form and content of the Investment Grade Audit/Investment proposal may be defined by the negotiated PDA and/or public EPC regulations for public universities.

Complete description of the proposed EPC project, including:

- *Guaranteed maximum price (GMP).*
- *Projected total energy use savings, translation of the savings to monetary savings based on current utility rate structures, proposed annual utility price escalations, and existing in-place energy contracts.*

Breakdown of project costs:

- *For each proposed FIM: cost information with detail sufficient to satisfy the building owner, annual cost savings, annual maintenance cost impacts, simple payback, expected life and environmental impacts. Costs and savings should be fixed, definite numbers in the IGA Report, not estimates.*
- *Proposed FIMs with associated Scope of Work and pricing for the implementation phase. Individual FIM price with a breakdown of cost-structure.*
- *Breakout of all project "soft" costs (e.g. project management fees).*

Details of savings:

- *Simple payback of each FIM and of the total project, with a detailed cash flow projection.*
- *Clear definition of pricing methodology at all stages of the EPC project, from proposal through implementation.*
- *If requested, data showing projected:*
  - *Lifecycle cost analysis of each FIM.*
  - *GHG reductions.*
  - *Value of Renewable Energy Credits.*
  - *Value of carbon offsets.*

Description of current conditions:

- *Full analysis and definition of base year consumption for each fuel type.*
- *Full description of the analysis methods, calculations, data inputs, and all technical and economic assumptions. This analysis serves as the basis for the project design and anticipated performance.*
- *Operating conditions and descriptions of current equipment.*
- *Baseline calculations for current resource consumption and usage patterns.*

Financing suggestions:

- *Inclusive of projected financing costs if the ESCO will be providing project financing and thus incurring directly those financing costs, or*
- *Exclusive of financing costs if the client will be securing the financing and taking the financing onto its own balance sheet.*

Suggested M&V procedures

ISSUE 4: THE ENERGY PERFORMANCE CONTRACT

After the facility owner accepts the investment proposal and financing sources are identified and secured, it is time to draft and sign the Energy Performance Contract. EPCs are complex legal documents that will define a project's scope, and ESCO's and building owner's obligations in order to ensure timely execution of construction, methodologies for calculating energy use savings, terms and conditions of the performance guarantee, measurement and verification process, and a host of other legal issues.

As negotiations with the ESCO begin, schools should always refer to any state EPC legislation or guidelines regarding the EPC terms, and may want to consider soliciting technical and legal advice from a company with a background in executing and reviewing these documents. Often, the ESCO will have a boilerplate contract, but schools should be prepared to negotiate on the contract's finer points to ensure their interests are protected and the full value of their investment will be realized.

For the purposes of the more general discussion, below is a list of "Top Ten Business Issues in Energy Performance Contracts" written by Jonathan Furr of the law firm Holland & Knight LLP, originally prepared for the development of the Building Owners and Managers Association (BOMA) toolkit[6]. This paper highlights some of the critical factors to consider when drafting an EPC. In addition, schools may benefit from further, in depth discussions on performance guarantees and M&V best practices available in later chapters of this toolkit.

TOP TEN BUSINESS ISSUES IN ENERGY PERFORMANCE CONTRACTS

Written by: Jonathan Furr, Holland & Knight LLP

1. DEFINING THE "PROJECT"

As in any agreement for capital improvements, the scope of the project needs to be clearly defined. In an Energy Performance Contract (EPC), each of the energy conservation measures (ECMs[7]) and the ESCO's obligations related to the installation of the measures must be detailed in an exhibit to the EPC. This Exhibit must also detail any of the ESCO's related obligations, such as helping the owner to achieve an Energy Star rating or LEED-EB certification for the building.

2. PAYMENTS AND FINANCING

The owner's approach to financing an EPC will have ripple effects throughout the contract. An owner with available funds on hand may choose to avoid financing costs and pay for the ECMs over the course of the installation period. The second approach is to finance the project through a lease-purchase, where annual lease payments are made during the guarantee term. If payments are made during the course of the installation period, the EPC needs to define the process for payments, including the schedule for payments (e.g., upon achievement of certain milestones, pursuant to a schedule of values, etc.), the process for approving the work related to an invoice, lien waivers, withholding of payments, and retainage. Depending on the business arrangement, the EPC may provide for final payment for each ECM upon completion of that ECM (as opposed to final payment for the entire project upon completion of all work). Under a lease-purchase arrangement, the terms of the EPC need to be closely coordinated with the terms of the contract documents providing for the financing of the project.

6 The BOMA toolkit can be found here: http://www.boma.org/Resources/BEPC/Pages/default.aspx

7 Also referred to as facility improvement measures (FIMs).

3. THE SCHEDULE AND PROCESS FOR DETERMINING COMPLETION OF THE ECMS

The EPC needs to include a construction schedule relating to the entire project and for each ECM. If the completion of the ECMs by a specified date is critical to the owner's business operations (for example, the ECMs need to be completed prior to occupancy by a new tenant), the owner should also consider including a liquidated damages provision protecting against late completion. In addition, the owner should consider specifying an outside fixed date by which the performance guarantee will commence, even if the ECMs have not been completed, to ensure the ESCO has a sufficient contractual motivation to complete the ECMs on schedule.

The EPC also needs to clearly define the ESCO's obligations for achieving substantial completion and final acceptance. Many ECMs will require commissioning to verify that the systems are installed, calibrated and perform according to the owner's project requirements, basis of design, and construction documents. If appropriate, commissioning should be a prerequisite for achieving substantial completion, and the contract documents should identify the commissioning agent or a process for selecting a commissioning agent. In addition, the EPC should ensure that the determination of substantial completion is a joint decision by the owner and ESCO.

4. DETERMINING THE ANNUAL SAVINGS AMOUNT

As a starting point, the performance guarantee needs to identify: (a) resource use in a baseline year at the facility; (b) a specified level of guaranteed savings in energy units for each year of the guarantee period; and (c) a currency equivalency (or utility escalation factor) used to determine the ESCO's guarantee payment obligation if the guaranteed level of savings are not achieved. Often, the guaranteed levels will be expressed as an annual amount, guaranteed for each year of the performance guarantee term.

Energy cost savings are aggregated across the various categories of energy use addressed in the contract (and sometimes "stipulated" categories of savings as discussed in Issue 6). For example, the guarantee may be achieved through a combination of savings in categories such as electricity, gas, and water consumption. For each category of energy use reduction, the EPC will specify rates that will be used for the calculations of energy cost reductions throughout the entire guarantee term, which are then multiplied by the units of energy savings for each of the categories.

Because the rates used in the guarantee calculations are specified in the contract, performance guarantees are not impacted by rate changes. Throughout the guarantee term, the owner will continue to pay for its energy use at current rates charged by the utilities. However, if the ESCO fails to achieve the guaranteed savings, the ESCO's performance guarantee payment will be calculated using the rates specified in the contract. Conversely, the actual savings realized by the owner may be higher than the savings determined under the contract calculations as the result of rate increases. The contact may include a specified annual increase in the rates used to calculate the performance guarantee obligation.[8]

5. THE TREATMENT OF EXCESS SAVINGS

The EPC should also address the treatment of savings in excess of the annual guaranteed amount. In some EPCs, savings from one year can be used to offset shortfalls in subsequent years. A "carry-over" provision could leave the owner without recourse if the guaranteed savings are not achieved in a particular year.[9]

8 The critical issues to consider related to the performance guarantee and the determination of annual savings amounts is discussed in greater detail in The 'Performance Guarantee' section of this toolkit.

9 For a more detailed discussion and examples of such carry-over provisions, see the 'Performance Guarantee' section of this toolkit.

6. MEASURED VERSUS STIPULATED SAVINGS CATEGORIES

The performance guarantee will often include both "measured" and "stipulated" categories of savings. Measured categories of savings are those determined through calculations of actual reductions in energy use, measured using the meters and processes specified in the EPC. Stipulated categories of savings may include items, such as lighting changes, that the ESCO would guarantee, but that the owner feels is not worth the added expense of M&V to measure. However, some ESCOs may seek to stipulate reduced maintenance costs or avoided capital expenses. The desired ratio of measured to stipulated savings is an important factor for an owner to consider in designing a RFP and evaluating ESCO proposals. Because the realization of stipulated savings is assumed and is therefore not subject to actual performance, an owner may not realize the full value of the stipulated savings in its annual utility and operating costs. In addition, certain savings that cannot be measured or guaranteed by the ESCO, such as reduced maintenance or avoided capital expense, might be taken into account when setting a minimum investment hurdle rate for the project, but may not be reliable enough to make part of the project's cost/benefit analysis, and will likely not be subject to the performance guarantee.[10]

7. DEFINING THE FORMULAS AND PROCESSES FOR ENERGY SAVINGS CALCULATIONS

The procedures and formulas for all steps in the energy savings calculation process must be clearly defined in the EPC. The owner should ensure a project team member has the technical expertise to verify that all of the formulas reflect the agreed-upon business terms. The owner is also strongly advised to include within the EPC examples of the calculations using hypothetical data, so there is no ambiguity surrounding how the formulas apply to actual numbers.[11]

Under the EPC, the owner will be obligated to provide the ESCO with pertinent utility bills, and the ESCO will prepare a calculation of energy savings. However, the EPC should also include a clear process for owner review and concurrence with the calculations, and for dispute resolution if the parties disagree. The EPC should include a provision for prompt payment by the ESCO following any calculation that demonstrates a failure to achieve the guaranteed savings amount.

8. ADDRESSING MODIFICATIONS TO THE BUILDING AND ITS OCCUPANCY

Over the life of the performance guarantee term, the owner may take any number of actions that impact the building's energy use. An addition may be built, areas may be renovated, the owner may seek to occupy the building for longer hours, or the owner may initiate its own ECMs independent of those provided by the ESCO. The formulas included in the EPC will include a provision to account for these "causes for adjustment" in the energy savings calculations. The owner should avoid broad language in the "causes for adjustment" provision that allow the ESCO to unilaterally modify the calculations for unspecified "other" causes, and ensure that the ESCO must account for all possible causes for adjustment promptly after the ESCO becomes aware of a possible cause.

9. OPERATIONAL MAINTENANCE SERVICES AFTER INSTALLATION

The EPC needs to clearly define the owner's ongoing maintenance obligations following the installation of the ECMs. The owner should not accept vague descriptions of its maintenance obligations using terms such as "industry accepted standards." Also, the owner should clarify at the earliest possible stage any services the ESCO requires as a condition of its guarantee. Typically, the

10 The 'Monitoring & Verification' section of this toolkit offers further discussion on best practices for M&V, and explains some of the costs and benefits to using different approaches (e.g. "whole building" vs. "system level"; and stipulated vs. measured savings).

11 A more detailed discussion of the typical process employed for calculating energy use and energy cost savings for an EPC project is offered in the 'Performance Guarantee' section of this toolkit.

ESCO will require that it perform ongoing measurement and verification services for an amount stipulated in the contract. The ESCO may also require that it have the right to audit operations and maintenance performed by the owner. An ESCO should not insist on performing operations and maintenance themselves as a condition of the guarantee.

10. Protective "Standard" Contractual Terms

The owner should ensure that all of the "standard" terms included in any contract involving design and construction activities sufficiently protect the owner's business expectations, and account for the unique aspects of energy performance contracting. For example:

A. *Term:* The "term" of the contract needs to clearly extend through the guarantee term. Various obligations will relate only to the "Installation Period" (i.e., the period extending through the final completion date of the ECMs), while other obligations will need to apply to both the installation and guarantee periods.
B. *Safety/Coordination with Other Building Occupants:* ECMs will typically be implemented while the building remains occupied, and the contract needs to ensure the installation of the ECMs does not disrupt operations.
C. *Warranty:* The ESCO's warranty for the work in an EPC may extend for a longer period than a "typical" construction contract.
D. *Dispute Resolution:* The contract needs to address "standard" contractual disputes, and may have a separate, streamlined provision addressing disputes relating to the completion of the ECMs and the energy performance calculations.
E. *Default and Termination:* All events of default and remedies need to be clearly specified. The owner should have the right to terminate only a portion of the work (for example, relating only to one ECM) and complete the work using other contractors.
F. *Consequential Damages Limitation:* Most ESCOs will seek the inclusion of a consequential damages limitation in the contract.
G. *Performance Security/Insurance:* The contract should require a payment and performance bond or letter of credit and insurance adequate to protect the owner's interests.
H. *Intellectual Property Rights:* The owner needs to ensure it obtains sufficient intellectual property rights in the drawings and specifications prepared by the ESCO and its subcontractors to complete the work if the ESCO's services are terminated, and to perform ongoing maintenance and repair activities.
I. *Environmental Remediation:* The contract needs to clearly address the handling of any regulated environmental materials at the site, such as asbestos containing material.
J. *Assignability:* The owner needs to ensure it can assign the EPC to a new owner or related corporate entity without invalidating the performance guarantee.

ISSUE FIVE: MEASUREMENT AND VERIFICATION AND BEYOND[12]

CLIENT OR CLIENT'S REPRESENTATIVE TO OVERSEE/VERIFY ESCO'S M&V CONCLUSIONS

Part of any EPC project is the post-implementation measurement and verification of the resource savings. Often referred to as simply M&V, this task occurs over the course of the guarantee period. The schedule for conducting M&V and issuing regular reports to the building owner should be clearly established in the EPC contract, although some clients may have concerns that the ESCO is the party to measure and verify its own work. In some cases, clients hire a third party to review and confirm the ESCO's M&V reports. One may refer to this practice as "trust but verify."

MANAGING THE RISK OF THE DEGRADATION OF RESOURCE SAVINGS

One of a building owner's greatest risks during the implementation phase and beyond the EPC guarantee term is that newly installed systems will fail to meet energy savings expectations. This risk is often referred to as the risk of "savings degradation." For projects without a performance guarantee, the consequences of savings degradation fall solely upon the building owner. Even in projects in which an ESCO is guaranteeing ongoing reductions in energy use below a baseline, savings degradation can potentially lead to difficult and time-consuming negotiations over reconciliation with ESCOs. Moreover, after an EPC contract's term expires, the full consequences of savings degradation shifts to the building owner.

Energy savings degradation can have two culprits: inadequate operations and maintenance (O&M) or equipment malfunction/failure. Staff training to ensure optimal equipment use, and ongoing commissioning to inspect the functionality of systems are recommended to help mitigate savings degradation risk.

STAFF TRAINING

Facility staff can either make or break the success of an EPC, based on their experience; knowledge and understanding of existing and new systems and components; resources provided by management to keep systems and components operating at peak conditions; and motivation (such as performance-based bonuses related to resource consumption) to keep systems and components operating at peak conditions. To reduce the risk of savings degradation, owners may seek ESCO-provided training for facility staff and include training of facility staff on the effective utilization and maintenance of upgrades to existing and new equipment as a part of the EPC. An ESCO may compel such staff training – provided through the ESCO or via a third party procured separately by the client – as condition of providing the performance guarantee. A good source for identifying qualified third party providers is the International Facility Managers Association (IFMA) or the Association of Physical Plant Administrators of Universities and Colleges (APPA). For campus-based healthcare facilities, training is available through the American Society for Healthcare Engineering (ASHE).

12 For a detailed discussion on M&V, see the 'Monitoring and Verification' section of this toolkit, or the Lawrence Berkeley National Lab's M&V resources: http://ateam.lbl.gov/mv/

CONTINUOUS COMMISSIONING[13]

Implementing and committing to a continuous commissioning schedule is the surest means of mitigating the risk of energy savings degradation. The goal of continuous commissioning is to eliminate the risk of a much improved and now effectively performing building returning to a business as usual method of operating. Initial commissioning should be part of the ESCO's scope of work in a responsible EPC, but beyond the term of the EPC, sustaining energy savings is an issue of utmost importance for all facilities managers and other client stakeholders. Therefore, it is essential that owners strategically plan and adequately budget for on-going investments after an EPC project's completion.

13 For more resources on continuous commissioning, see FEMP Guide to Continuous Commissioning: http://eber.ed.ornl.gov/commercialproducts/contcx.html
Texas A&M System Energy Labs (the Engineering Agency of the State of Texas): Guide to Continuous Commissioning: http://esl.eslwin.tamu.edu/continuous-commissioning-.html

APPENDIX A: DEPARTMENT OF ENERGY'S ENERGY START PORTFOLIO MANAGER BENCHMARKING TOOL

Leslie Cook, EPA's Energy Star program, provided the following information on Portfolio Manager.

PORTFOLIO MANAGER

Efficient management of resources requires effective data management. Portfolio Manager, EPA's free, secure, online software tool, tracks key energy and water consumption, environmental impacts, and energy cost information portfolio-wide. With managed information, the institution can take control of its energy and water consumption and the associated environmental impacts. For example, an institution can:

- Track multiple energy and water meters for each facility, analyze and target sub-par performance in outlier meters.
- Benchmark facilities relative to their past performance.
- View weather-normalized percent improvement in energy performance.
- Benchmark facilities relative to similar facilities in similar climate zones.
- Measure and track greenhouse gas emissions associated with building energy use.
- Monitor energy and water use and cost savings.

WHAT YOU NEED TO USE PORTFOLIO MANAGER

The software tool requires that the user specify the type of building, operating characteristics (such as floor area and hours of operation), location (to determine climate zone), and energy bill data. The user supplements the monthly billing data for all energy sources continuously as new bills come in. The data may be entered manually, and automated benchmarking tools are available to simplify the data-collection process for companies with large portfolios of buildings. (Note that beginning on January 1, 2009, California law requires its investor-owned utilities to download – at the building owner's request – all utility bill data into the Portfolio Manager database.)

RATE THE BUILDINGS' ENERGY PERFORMANCE

For many facilities including residential halls, office buildings, and hospitals, energy performance can be rated on a scale of 1–100, a score that is relative to similar buildings in similar climates nationwide. EPA's energy performance rating system, based on source energy[14], accounts for the impact of weather variations as well as key physical and operating characteristics of each building. There must be at least one full year of energy data entered into Portfolio Manager for eligible buildings to receive the 1-100 rating. Buildings rating 75 or greater may qualify for EPA recognition for top performance with the ENERGY STAR label. Benchmarking with Portfolio Manger is also part of the LEED for Existing Buildings: Operations & Maintenance rating system.

For those buildings that are not eligible to receive a rating, EPA has created a table of reference energy performance targets. These are based on average energy use calculated across different types of buildings. These energy performance targets are not normalized for climate nor adjusted for activities that may affect energy use. All targets are expressed in energy use intensity and are derived from the Commercial Buildings Energy Consumption Survey. These national averages have been incorporated into Portfolio Manager to show how a building without a rating compares to the national average right in the tool before and after upgrade projects.

14 Source energy represents the total amount of raw fuel that is required to operate the building. It incorporates all transmission, delivery, and production losses, thereby enabling a complete assessment of energy efficiency in a building. http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_benchmark_comm_bldgs#diff

SET INVESTMENT PRIORITIES

Portfolio Manager provides a platform to track energy and water use trends as compared with the costs of these resources. This is a valuable tool for understanding the relative costs associated with a given level of performance, helping evaluate energy and water efficiency investment opportunities for a building, and identifying the best opportunities across the entire portfolio.

The built-in financial tool within Portfolio Manager compares cost savings across buildings in a portfolio while also calculating cost savings for a specific project. Being able to quickly and clearly obtain figures showing cumulative investments in facility upgrades and projected savings from those investments eases decision making for best practice management at across the campus.

VERIFY AND TRACK

This tool verifies and tracks building performance over time, and generates a Statement of Energy Performance (SEP) and Energy Performance Report for each building, summarizing important energy information and building characteristics to:

- Compare key performance indicators to a user-defined baseline.
- Measure trends in green house gas emissions.
- Apply for the ENERGY STAR label.
- Satisfy LEED EB O&M requirements.
- Support mortgage, sale, and/or lease transactions.
- Document performance in EPC projects (e.g., under Option C in the IPMVP).
- Communicate about the buildings' energy performance and water use.

PORTFOLIO MANAGER IN ENERGY PERFORMANCE CONTRACTS

Portfolio Manager is typically used in the early stages of project development and in the long-term Monitoring and Verification (M&V) of project results, as follows:

CONFIRMING EXISTING CONDITIONS

Ideally, the building owner will utilize some energy performance benchmarking tool prior to engaging with any ESCOs in the procurement process. With a building's or portfolio's energy performance rating in hand, the owner can use that information to set realistic goals for the retrofit project, which can be articulated in the procurement documents. In addition, qualified consultants or in-house energy management staff can combine Portfolio Manager results with building walk-throughs and interviews with facility management personnel to develop a detailed energy plan.

Alternatively, the owner may require the bidding ESCOs during the procurement/RFP phase to conduct the benchmarking exercise. When both the facility owner and the ESCOs are trying to determine if there is a viable performance contract project at the facility, an ESCO can deliver a Portfolio Manager rating score as part of its Preliminary Technical Proposal. This rating helps the ESCOs and the facility owner understand the magnitude of the energy savings opportunity.

PRIORITIZING OR STRATEGICALLY COMBINING BUILDING RETROFIT OPPORTUNITIES WITHIN A PORTFOLIO

If an ESCO delivers a Portfolio Manager rating score on a number of buildings, the facility owner and the ESCO can readily prioritize the buildings in terms of their energy savings potential. A building with a relatively high score can be moved down the priority list while buildings with low scores can receive immediate attention. Alternatively, a "good" building with some energy savings potential paired with a "bad" building with significant savings potential can yield a project with favorable economics whereas the "good" building on its own (or many "good" buildings on their own) can make for a difficult-to-justify project.

TRACKING BUILDING AND PORTFOLIO IMPROVEMENT

Portfolio Manager tracks the long-term performance of buildings where EPC projects have been implemented. It does not substitute for a more comprehensive M&V plan, but rather complements it with an easy-to-understand rating. A college or university that wants to demonstrate its progress toward meeting energy and carbon emission reduction goals can use Portfolio Manager.