**Investment Grade Audit and**

Insert user logo

**Project Proposal**

 **Attachment A: Scope of Work**

# Attachment A: Scope of Work

**NOTE**: It is tempting to develop a prescribed scope of work for the ESCO, detailing exactly what projects the ESCO should undertake in your facilities. This is not recommended, however, because it is very valuable to use the ESCO’s technical expertise to help identify and assess the opportunities that are most cost-effective or most valuable for your facilities instead of pre-determining the scope.

The purpose of the Investment Grade Audit is to develop a scope of work to be implemented by the ESCO, establish guaranteed savings, develop an agreed-upon plan to measure and verify the guaranteed savings, and ensure that the agreed-upon project meets statute requirements.

If any of the following services detailed below are not required for a given project, the ESCO and the Owner may agree to modify the Scope of Work.

1. **Overview of Process and Decision Points**

This will be an interactive approach in working with Owner, following these steps:

* 1. **Assessment of Needs and Opportunities - Overview**

Core Tasks (see detailed task list in next section)

* Collect General Facility Information (data and background information on buildings, equipment, energy use and costs, and facilities operation)
* Inventory Existing Systems and Equipment (physical inspection and facility interviews to log information on major energy and water-using equipment)
* Establish baseline and/or base year consumption and reconcile with end-use consumption estimates

Submittals, Approvals, Decision Points:

* Meet with Owner to establish interests, plans, problems, etc. related to facilities and operation of facilities.
* Meet with Owner to present preliminary findings and establish agreement on measures to analyze.

Uses

* This information is the basis for contract shedules in the energy savings performance contract document (**Schedule B: Baseline)**
	1. **Preliminary Analysis of Measures - Overview**

Core Tasks (see detailed task list in next section)

* Identify potential measures
* Assess potential measures
* Present Findings

Submittals, Approvals, Decision Points:

* Submit the 30% level audit
* Submit the Audit Workplan Approval Matrix
* Meet with Owner to present preliminary findings
* Establish agreement on measures to further analyze

Uses

* This is the preliminary work for the Investment Grade Audit Report which is the deliverable under this contract and will be used as an exhibit,  **Investment Grade Audit Report**, in the Energy Savings Performance Contract.
* This establishes the remaining work for the ESCO to develop the 90% level Investment Grade Audit
	1. **Further Analysis - Investment Grade Audit - Overview**

Core Tasks (see detailed task list in next section)

* Develop the Investment Grade Audit Report (follow prescribed format)
* Savings Analysis
* Cost Estimates
* Develop a preliminary Measurement and Verification Plan
* Develop a preliminary Commissioning Plan
* Develop a preliminary Operations and Maintenance Plan

Submittals, Approvals, Decision Points:

* Submit the 90% level Investment Grade Audit
* Submit the Audit Workplan Matrix for approval
* Meet with Owner to present results

Uses

* The Measurement and Verification Plan is the basis for **Schedule E** in the Energy Savings Performance Contract.
* The Commissioning Plan is the basis for **Schedule T: Commissioning Plan** in the Energy Savings Performance Contract.
* The Operations and Maintenance Plan is the basis for **Schedule C: Savings Measurement and Verification Plan** in the Energy Savings Performance Contract.
	1. **Energy Savings Performance Contract Proposal - Overview**

Core Tasks (see detailed task list in next section)

* Develop an Energy Savings Performance Contract proposal
* Review project proposal with Owner
* Prepare final Investment Grade Audit Report

Submittals, Approvals, Decision Points:

* Meet with Owner to present results
* Negotiate final terms
* Deliver the final Investment Grade Audit Report
* Deliver the final Project Proposal

Uses

* The Investment Grade Audit Report will be used as an exhibit, **Investment Grade Audit Report**, in the Energy Savings Performance Contract.
* The Project Proposal is the basis for the Proforma which will be used in **Schedule H: Final Project Cost and Project Cash Flow Analysis** of the Energy Savings Performance Contract.
1. **Requirements**
	1. **Pre-Approved Markup Costs**

The markup costs are presented in **Cost and Pricing (Attachment D)**. These rates are within the maximum rates ESCO proposed in response to the RFP and will be used in the Investment Grade Audit and subsequent Energy Savings Performance Contract.

* 1. **Energy Savings Performance Contract Term**

The Energy Savings Performance Contract shall have a term no greater than [\_\_\_\_] years and no greater than the average lifetime of the equipment. Owner and ESCO should agree on the Term within 30 days of the 30% review meeting.

[**NOTE**: Refer to legislation where the maximum financing term may be set. A generally recognized maximum is 25 years, as used by the federal Owner. A typical term is 15-20 years and is governed by state statutes, financing availability, longevity of installed measures, and ability for savings to allow a cash-flow to pay for the desired scope of projects. It is recommended not to shorten the financing term as this reduces the project potential. ]

* 1. **Allowable Cost and Savings Factors**

Allowable cost and savings factors approved for consideration:

* Energy and water savings
* Rate change savings
* Operating savings
* Material/commodity savings, including scheduled replacement of parts (only for years that these cost savings are applicable)
* Outside labor cost savings, such as maintenance contracts
* Outside incentive funds (utility incentives, grants, etc.)
* Any savings related to maintenance and operation of the facilities will be limited to those that can be thoroughly documented.

Payment sources that may also be considered and negotiated:

* In-house labor costs
* Deferred maintenance cost
* Offset of future capital cost
* Health or productivity benefits
* Owner cash outlay
	1. **Annual Guaranteed Energy and Cost Savings.**

The annual guarantee is required for the entire financing term (or Owner has the option to terminate the guarantee at any time after \_\_\_ years of the contract term) provided the annual guaranteed unit savings and cost savings were achieved each prior year, the Owner agrees, and state statutes support this. The guarantee is based on consumption and cost savings attributable to all energy, water and operating savings measures, and must equal or exceed all project costs each year during the guarantee period. Annual project costs include debt service, ESCO fees, maintenance services, measurement and verification services, and other services.

* 1. **Independent Third Party Review Paid from Savings**

ESCO may reserve [\_\_\_\_\_\_] % of annually guaranteed savings for Owner to hire an independent third-party ESCO industry expert with M&V experience to review the ESCO's measurement and verification reports and advise Owner of compliance in measuring and verifying savings.

* 1. **Excess Savings**

Annual cost savings beyond the guaranteed minimum savings will be retained by Owner, and will not be allocated to shortfalls in other years.

* 1. **Annual Savings**

The annual savings for all measures must be given for each year during the contract period.

* 1. **Escalation Rates**

Escalation rates should be applied independently to each payment source: gas, water, operating savings, etc. These rates will be agreed upon at the start of the audit and used in cash flow projections for project development purposes.

[**NOTE**: Use federal Owner guidelines on utility escalation rates to ensure reasonableness, and/or consider using local utility projections.]

* 1. **Interest Rates**

Interest rates (typically municipal tax-exempt rates for public Owners) will be agreed-upon at the onset of the audit. A proxy interest rate will be used until a 30-day period before transaction closing.

* 1. **Objectives**

The Investment Grade Audit shall demonstrate compliance with energy efficiency standards, objectives, goals or directives that apply to Owner’s facilities.

* 1. **Data Collection and Reporting by ESCO - Using eProject Builder (ePB)**

ESCO shall collect and report project data, on behalf of Institution and with approval by Institution, as identified in **Energy Savings Performance Contract – Schedule D:**  **Data Collection and Reporting – Using eProject Builder** and as amended on the LBNL website (<http://eprojectbuilder.lbl.gov>) and at the specified times.

eProject Builder ("ePB") is a web-based tool managed on behalf of the Department of Energy by The University of California/Lawrence Berkeley National Laboratory (LBNL). ePB enables ESCO and their contracting agencies or other entities to:

(1) upload and track project-level information;

(2) generate basic project reporting materials (e.g. task order schedules) that may be mandated by local, state, and/or federal agency requirements; and

(3) benchmark proposed Energy Savings Performance Contract (ESPC) projects against historical project data.

Based on information provided by the ESCO, the parties agree that the data required to be delivered to LBNL under this clause has commercial value whose disclosure would cause competitive harm to the commercial value or use of the data. LBNL intends to withhold such data from disclosure under 10 C.F.R. 1004.3(e)(2). The use of this data is governed by the provisions of this contract. Unless compelled by a court of competent jurisdiction, there may be no release of this data to the public without the written consent of the Recipient and DOE. Aggregate data that does not identify project-specific metric information may be released as set forth in the contract. Other information required to be delivered under this contract, but not covered under this Commercially Valuable ESPC Project Data clause, shall be delivered in accordance with this contract.

1. **Detailed Task List**

The following scope will be conducted in intervals with review points at the 30%, and 90% levels of completion. An Audit Workplan Approval Matrix (**Attachment A: Sample Audit Workplan Approval Matrix**) will be used in the presentations to facilities and management teams for decision-making and approval. This includes estimated cost, savings, simple payback and expected M&V Methodology for each individual measure, while emphasizing the performance of all measures as a whole.

* 1. **Assessment of Needs and Opportunities – Detailed Task List**

**Collect General Facility Information**

Owner agrees to work diligently to furnish ESCO, upon request, accurate and complete data and information, as available. Owner will allow ESCO reasonable access to facility staff to ensure understanding of existing systems and opportunities. Owner may conduct the task to collect utility information from utilities in order to reduce ESCO time and expense.

The ESCO shall collect data and background information from Owner concerning facility operation and energy and water use, including any changes to operation, energy and water use anticipated within the next 5 years. ESCO agrees to work diligently to assess validity of information provided and to confirm or correct the information as needed. Where information is not available from Owner, ESCO will make a diligent effort to collect such information through the facility inspection, staff interviews, and utility companies.

Collect the following information for the past 36-month period:

General Facility Information

* Building list with square footage and age (including age of major remodels or additions)
* Construction data of buildings and major additions including building envelope, window specifications/performance and roof/wall assembly.
* General use of facility

Utility Information

* Utility company invoices

Equipment and Facility Information

* Equipment Descriptions: Descriptions of all major energy and water consuming or energy and water saving equipment
* Facility Descriptions: Description of any structural or building use changes
* Past Changes: Record of any improvements or modifications related to energy, water or operational efficiencies that have been installed during the past three years
* Future Plans: Description of current or future plans regarding building or equipment modifications
* Drawings and Specifications: Drawings, as available (may include mechanical, plumbing, electrical, building automation and temperature controls, structural, architectural, modifications and remodels). Original construction submittals and factory data (specifications, pump curves, etc.), as available

Operations Information

* Occupancy schedules
* Usage information
* Description of current energy management procedures
* Description of current operational practices
* Operating engineer logs, maintenance work orders, etc., as available
* Records of maintenance expenditures on energy or water-using equipment, including service contracts

Energy Assessments

* Prior energy audits or studies, if any
* A completed Data Collection Form for DOE Energy Asset Score for each building
* ESCO shall request of Owner that its existing ENERGY STAR Portfolio Manager accounts for buildings within the scope be shared.

**Inventory Existing Systems and Equipment**

 Compile an inventory based on a physical inspection of the major electrical and mechanical systems at the Facility, including:

* Cooling systems and related equipment
* Heating and heat distribution systems
* Automatic temperature control systems and equipment
* Air distribution systems and equipment
* Outdoor ventilation systems and equipment
* Kitchen and associated dining room equipment, if applicable
* Exhaust systems and equipment
* Hot water systems
* Electric motors 5 HP and above, transmission and drive systems
* Interior and exterior lighting
* Laundry equipment, if applicable
* Water consumption end uses, such as restroom fixtures, water fountains, irrigation, etc.
* Other major energy using systems, if applicable

 Address the following considerations:

* The loads, proper sizing, efficiencies or hours of operation for each system; (Where measurement costs, facility operating or climatic conditions necessitate, engineering estimates may be used, but for large fluctuating loads with high potential savings, appropriate measurements are required unless waived by the Customer).
* Current operating condition for each system;
* Remaining useful life of each system;
* Feasible replacement systems
* Hazardous materials and other environmental concerns

 Use data loggers and conduct interviews with facility operation and maintenance staff regarding systems operation, occupancy patterns and problems with comfort levels or equipment reliability.

**Establish Baseline**

Estimate Loads

* Estimate loads, usage and/or hours of operation for all major end uses of total facility consumption including: lighting, heating, cooling, motors (fans and pumps), plug loads, kitchen equipment, water, and other major energy and water using equipment.
* Where loading or usage are highly uncertain (including variable loads such as cooling), ESCO will use its best judgment, spot measurements or short-term monitoring. ESCO should not assume that equipment run hours equal the operating hours of the building(s) or facility staff estimates.

Estimate Baseline Usage

* Examine utility bills for the past 36 months for electricity, gas, steam, water, etc.
* Establish base year and/or baseline consumption
* Present base year and/or baseline consumption in terms of energy or water units (kWh, kW, ccf, Therms, gallons, or other units used in bills), in terms of dollars, and in terms of dollars per square foot.
* Describe the process used to determine the base year and/or baseline consumption and demand (averaging, selecting most representative contiguous 12 months, or sampling).
* Consult with facility personnel to account for any anomalous schedule or operating conditions on billings or equipment conditions that could skew the base year and/or baseline representation.
* ESCO will account for periods of time when equipment was broken or malfunctioning in calculating the base year or baseline definition period.

Reconcile Estimates

* Reconcile annual end-use estimated consumption and demand with the annual base year consumption. The purpose of this is to place reasonable limits on potential savings.
* Reconcile the annual end use estimated consumption with the annual Base Year consumption to within 5% for electricity (kWh), fossil fuels and water.
* Reconcile the contribution to electric peak demand for each end use within 5% of the annual Base Year peak.
* The “miscellaneous” category shall not be more than 5%.
* This reconciliation will place reasonable “real-world” limits on potential savings.

Baseline Adjustments

* Propose adjustments to the baseline for energy and water saving measures that will be implemented in the future.
* Baseline adjustments may be made only with advance approval by the Owner.
	1. **Preliminary Analysis of Measures – Detailed Task List**

**Identify Potential Measures**

Interviews: Interview the facility manager and a sampling of maintenance staff, subcontractors and occupants of each building regarding:

* Facility operation, including energy management and operating procedures
* Equipment maintenance problems
* Comfort problems and requirements
* Equipment reliability
* Projected equipment needs
* Occupancy and use schedules for the facility and specific equipment.
* Facility improvements – past, planned and desired
* Other project sustainability goals, metrics or standards (i.e. LEED, ENERGY STAR, Living Building Challenge, Net Zero Energy, Passive House, EISA 2007, etc.)

Surveys: Survey major energy and water-using equipment, including:

* lighting (indoor and outdoor)
* heating and heat distribution systems
* cooling systems and related equipment
* automatic temperature control systems and equipment
* air distribution systems and equipment
* outdoor ventilation systems and equipment
* exhaust systems and equipment
* hot water systems
* electric motors
* transmission and drive systems
* special systems (kitchen/dining equipment, etc.)
* renewable energy systems
* Other energy using systems
* water consuming systems (restroom fixtures, water fountains, irrigation systems, etc.)
* plug loads
* server room equipment

Perform "late-night" surveys outside of normal business hours or on weekends to confirm building system and occupancy schedules, if deemed necessary.

**Assess potential measures:**

Consider the following for each system:

* Comfort and maintenance problems
* Energy use, loads, proper sizing, efficiencies and hours of operation
* How the measures work together (i.e. lighting upgrades can introduce less heat which requires less space cooling)
* Current operating condition
* Remaining useful life
* Feasibility of system replacement and replacement costs
* Hazardous materials and other environmental concerns
* Owner’s future plans for equipment replacement or building renovations
* Facility operation and maintenance procedures that could be affected
* Capability to monitor equipment or system performance and verify savings

List Measures: Develop a preliminary list of potential energy and water saving measures.

* List all potential opportunities, whether cost-effective or not.
* Consider technologies in a comprehensive approach including, but not limited to: lighting systems, heating/ventilating/air conditioning equipment and distribution systems, controls systems, building envelope, motors, kitchen equipment, pools, renewable energy systems, other special equipment, irrigation systems, and water saving devices.
* Identify measures which appear likely to be cost effective and therefore warrant detailed analysis

Evaluate Measures:

* Estimate the cost, savings and life expectancy of each proposed measure.
* Conduct a preliminary analysis of potential measures using life cycle cost analysis and examining the value of non-energy benefits of specific measures

Assess Deep Retrofit Opportunities

* Survey performance and quality of passive energy elements such as envelope performance (window, wall, roof, floor, slab), points of infiltration, daylighting/blinds.
* Apply the process outlined in **Attachment J: Deep Energy Retrofit Planning** if applicable to determine if a building is ‘ripe’ for a deep retrofit.

Utilize ENERGY STAR Tools

ESCO shall provide a Portfolio Manager rating and energy performance target score estimate. For each eligible building, ESCO shall provide a pre-retrofit Energy Performance Rating using EPA ENERGY STAR’s Portfolio Manager, the weather normalized energy intensity in kBtu/SF, and an estimated post-retrofit Energy Performance Rating. If the building type is not eligible for rating in Portfolio Manager, then the normalized source EUI will suffice. ESCO shall provide a completed Cash Flow Opportunity Calculator (CFO Calculator) for the project, with variables inserted that represent the most likely options available to the customer. This will enable the ESCO and the customer to have an agreed-upon format for discussing project financing options and the potential costs of project delays. The CFO Calculator will be provided in both hard copy and electronic format, so that the agency can run its own analyses on financing options in the agreed format. ESCO will submit a completed Cash Flow Opportunity spreadsheet using the Cash Flow Opportunity Calculator (CFO Calculator) for the total project which shall include all facilities to be improved.

**Present Findings**

* Submit the list to Owner based on the agreed upon schedule.
* Meet with Owner to present preliminary findings prior to thorough analysis.
* Describe how the projected project economics meet the Owner’s terms for completing the Investment Grade Audit and Proposal Contract. Discuss assessment of energy use, savings potential, project opportunities, and potential for developing an Energy Savings Performance Contract. The Owner shall have the option to reject calculations of savings, potential savings allowed, or project recommendations.
* Develop a list of recommended measures for further analysis.

The result of this meeting is that ESCO and Owner are to come to agreement on the Audit Workplan (**Attachment E: Sample Audit Workplan Approval Matrix**) for the measures that merit further analysis.

A form will be used to document agreement from discussions, meetings and reviews (**Attachment F: Review Comments**).

* 1. **Further Analysis for Investment Grade Audit – Detailed Task List**

Further estimate the cost, savings and life expectancy of each proposed measure.

**Savings Analysis**

* Follow the methodology of ASHRAE or other nationally-recognized authority following the engineering principle(s) identified for each retrofit option
* Utilize assumptions, projections and baselines which best represent the true value of future energy or operational savings. Include accurate marginal costs for each unit of savings at the time the audit is performed, documentation of material and labor cost savings, adjustments to the baseline to reflect current conditions at the facility, calculations which account for the interactive effects of the recommended measures.
* Use best judgment regarding the employment of instrumentation and recording durations so as to achieve an accurate and faithful characterization of energy use
* Provide analysis methodology, supporting calculations and assumptions used to estimate savings.
* Manual calculations should disclose essential data, assumptions, formulas, etc. so that a reviewer could replicate the calculations based on the data provided
* For savings estimates using computer simulations, Company shall provide access to the program and all inputs and assumptions used, if requested by the Customer.
* Provide detailed calculations for any rate savings proposals
* Provide detailed supporting calculations for any proposed maintenance savings
* Estimate any environmental costs or benefits of the proposed ECMs (e.g. disposal costs, avoided emissions, water conservation, etc.)
* Specify Facility operations and maintenance procedures which will be affected by the installation/implementation of the proposed ECMs;

**Cost Estimates**

Provide detailed estimates of costs associated with the installation, implementation and commissioning of each of the ECMs proposed in the Audit including breakouts for labor, materials, and equipment.

In addition, project cost data must be provided in the format included in **Attachment B: ESCO Cost Proposal and Cash Flow Analysis**.

Provide estimates of monthly costs associated with sustaining the project performance including breakouts for maintenance fees, monitoring fees, and training fees.

Include cost to provide services and complete application for Energy Star Label, LEED-EB certification for Existing Buildings, or other certification. Also include cost for EPA’s Tools for Schools or other such program related to improved air quality.

**Measurement and Verification Plan**

* Provide a preliminary savings measurement and verification plan for each proposed ECM
* Develop a measurement and verification plan for each measure, prioritizing IPMVP options C (or D) for whole building analysis.
* Follow additional guidelines for analysis and report preparation given below

**Commissioning Plan**

* Provide a preliminary commissioning plan for the proposed ECMs

**Operations and Maintenance Plan**

* Develop a preliminary Operations and Maintenance Plan
	1. **Investment Grade Audit Report and Project Proposal – Detailed Task List**

The report provides an engineering and economic basis for negotiating a potential Energy Savings Performance Contract between the Owner and the ESCO. The report shall be completed within [\_\_\_\_] calendar days of the date of execution of this Contract.

**Investment Grade Audit Report**

Further analyze measures and account for measure interactions

The Investment Grade Audit report includes:

Overview

* Contact information
* Executive Summary
* Description of the facility, measures evaluated, analysis methodology, results
* Summary table presenting the cost and savings estimates for each measure and for the project as a whole.
* Summary table of recommended energy and water saving measures, including total and itemization for each measure of total design and construction cost, annual maintenance costs, the first year cost avoidance (in dollars and energy units), simple payback and equipment service life
* Any cost savings due to changes to utility rates or commodity costs due to changes in metering, commodity procurement, etc.
* Summary of annual energy and water use and costs by fuel type and costs of existing or base year condition
* Calculation of energy and cost savings expected if all recommended measures are implemented, and total percentage savings of total facility energy cost.
* Description of the existing facility, mechanical and electrical systems
* Summary description of measures, including estimated costs and savings for each as detailed above
* Available rebates and incentives
* Summary of recommended owner related actions (i.e. internal occupant energy reduction programs or competitions, plug load reduction measures, procurement recommendations-laptops not desktops, etc.)
* Discussion of measures considered but not investigated in detail
* Summary of the value beyond energy cost savings (i.e. employee retention and recruiting benefits, employee productivity benefits, etc.). Qualitative at a minimum, quantitative would be best.
* Conclusions and recommendations

Baseline and/or base year energy use

* Description and itemization of current billing rates, including schedules and riders.
* Summary of all utility bills for all fuel types and water
* Identification and definition of base year consumption and description of how established
* Provide detail on baseline adjustments, if any, as approved by the Owner.
* Reconciliation of estimated end use consumption (i.e. lighting, cooling, heating, fans, plug loads, etc.) with base year (include discussion of any unusual findings)

Description of each operational, energy and water saving measure

Written description

* Existing conditions
* Description of equipment to be installed and how it will function
* Detailed descriptions for each measure including analysis method, supporting calculations (submitted in appendices), results, proposed equipment and implementation issues, including a discussion of facility operations and maintenance procedures that will be affected by installation/implementation.
* Plan for installing or implementing the recommendation.
* Discussion of the conclusions, observations and caveats regarding cost and savings calculations.

Savings calculations

* Base year energy use and cost
* Post-retrofit energy use and cost
* Savings calculations including analysis methodology, supporting calculations and assumptions used.
* Annual savings calculations. The cost savings for all energy saving measures must be estimated for each year during the contract period. Savings must be able to be achieved each year (cannot report average annual savings over the term of the contract).
* Savings calculations must be limited to savings allowed by the Owner as described above.
* Percent cost-avoidance projected
* Description and calculations for any proposed rate changes
* Explanation of how savings interactions between retrofit options is accounted for in calculations.
* Operation and maintenance savings, including detailed calculations and description. Ensure that maintenance savings are only applied in the applicable years and only during the lifetime of the particular equipment.
* If computer simulation is used, include a short description and state key input data and software used. If requested by Owner, access will be provided to the program and all assumptions and inputs used, and/or printouts shall be provided of all input files and important output files and included in the Investment Grade Audit with documentation that explains how the final savings figures are derived from the simulation program output printouts
* If manual calculations are employed, formulas, assumptions and key data shall be stated.
* Conclusions, observations, caveats

Cost estimate

* A detailed narrative of the construction work needed, suitable for cost estimating. Level of detail to be provided should be consistent with Audit Workplan. Include all anticipated costs associated with installation and implementation. Provide specifications for major mechanical components as well as detailed lighting and water fixture counts.
* Engineering/design costs
* ESCO/vendor estimates for labor, materials, and equipment; include special provisions, overtime, etc., as needed to accomplish the work with minimum disruption to the operations of the facilities.
* Permit costs
* Construction management fees
* Environmental costs or benefits (disposal, avoided emissions, handling of hazardous materials, etc.)
* Note that all markups and fees stated in this Contract shall be used in the cost estimates, unless otherwise documented and justified due to change in scope or size of project or other unforeseen circumstances.
* Conclusions, observations, caveats
* Other cost categories as defined above under “markups” in Section 3b above.

Other

* Estimate of average useful service life of equipment
* Preliminary commissioning plan (as outlined in **Energy Savings Performance Contract – Schedules**)
* Preliminary measurement and verification plan, following the current version of the International Performance Measurement and Verification Protocol (IPMVP), explaining how savings from each measure is to be measured and verified (description of Option A, B, C, or D will be implemented for the measure). The Preliminary M&V plan shall follow the format provided in **Attachment C: Guidelines for Preliminary Monitoring and Verification Plan** and should be consistent with the methodology agreed to in the Audit Workplan(**Attachment E: Sample Audit Workplan Approval Matrix**)**.**
* Discussion of impacts that facility would incur after contract ends. Consider operation and maintenance impacts, staffing impacts, budget impacts, etc., and identify who is responsible for maintenance.
* Compatibility with existing systems. NOTE: Include the name of the existing controls system, if new controls systems will have to be compatible with an existing brand of controls. Also note if a sole-source vendor is established for controls systems.
* Complete appendices that document the data used to prepare the analyses. Describe how data were collected.
	1. **Energy Savings Performance Contract Project Proposal**

**Project Proposal**

Prepare an Energy Savings Performance Contract Proposal (Schedules and Exhibits to be attached to the Energy Savings Performance Contract).

In anticipation of ESCO and Owner entering into an Energy Savings Performance Contract to design, install, and monitor the energy and water saving measures proposed in the Investment Grade Audit Report, prepare the Schedules and Exhibits to be incorporated in an Energy Savings Performance Contract, to include:

* Specific recommended measures from the preliminary compilation for installation and implementation at the Facility.
* Project Price - the total amount Owner will pay for the project and ESCO’s services. The price must be consistent with cost estimates established in **Attachment D: Cost and Pricing for Investment Grade Audit**. Costs may include but are not limited to: engineering, designing, packaging, procuring, installing (from Investment Grade Audit Report results); performance/payment bond costs; construction management fees; commissioning costs; maintenance fees; monitoring fees; training fees; legal services; overhead and profit; other markups.
* Include a List of Services that will be provided as related to each cost.
* Expected term of the Energy Savings Performance Contract.
* Description of how the project will be financed including competitive bidding, available interest rates and financing terms, based on interest rates likely available to Owner at this time, and based on available lock options, and associated premiums, from prospective lending institutions.
* Measurement and verification methods must be consistent with the latest version of the *International Performance Monitoring and Verification Protocol* and **Attachment C: Guidelines for Preparing Measurement and Verification Plan**.Measurement and Verification shall be conducted on each measure unless otherwise specified.
* Explanation of how the savings will be calculated and adjusted. Adjustments made to the energy baseline shall only be made for any of the following changes in conditions affecting the facility:
* utility rates;
* number of days in the utility billing cycle;
* floor area of the facility;
* operational schedule of the facility;
* facility temperature;
* weather, if change is significant;
* amount of equipment or lighting used in the facility, if change is significant;
* space type(s) in the facility, if change is significant; and
* material change(s) in or to the facility.
* Analysis of annual cash flow for Owner during the contract term. This includes the annual fee for the ESCO to conduct measurement and verification services. Such services shall be subject to negotiation each year. Use the tables presented in **Attachment D: Cost and Pricing**.

**Review**

Meet with Owner to:

* Review the recommendations, savings calculations and impact of the measures on the operations of the facility. Describe how the projected project economics meet the Owner’s terms for completing the Investment Grade Audit and Performance Contract Proposal. Discuss the willingness and capability of Owner to make capital contributions to the project to improve the economics of the overall project.
* Revise Audit as agreed by Owner and ESCO.