
State of Wyoming



Wyoming Energy Conservation Improvement Program

For State Agencies, County & Municipal Governments,
Higher Education Facilities, Public School Districts,
Hospitals, and other Public Entities

PROGRAM MANUAL

PROGRAM DESCRIPTION AND PROCESS



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1.0 INTRODUCTION

The Wyoming Energy Conservation Improvement Program (WYECIP) is a program of the Wyoming Business Council State Energy Office (WBC) designed for use by any public or non-profit facility in Wyoming. The program is based upon utilizing Energy Performance Contracts (EPCs) to finance the implementation of energy efficiency and other capital improvements by public Facility Owners without up-front capital investment or specific appropriations.

With an EPC, the cost of implementing energy efficiency and capital improvements is funded by the energy and maintenance cost savings generated by the improvements when the implementation costs are financed over a period of time. Payment is accomplished by reallocating a portion of the money a facility is already paying in energy and maintenance costs. This approach has been used successfully by the Federal Government, States, higher education institutions, local governments, hospitals, and school districts nationwide.

An EPC combines engineering, design, construction, and financing with guaranteed savings. While the process may look similar to a design/build project, it can be considerably more complex. Energy Services Companies (ESCOs) specialize in the engineering, design, implementation, and performance requirements of EPCs. A major difference between the EPC approach and standard contracting methods is that the Facility Owner's relationship with the ESCo goes well beyond the normal construction and warranty period because the ESCo guarantees the energy savings for the length of the contract term as part of the Energy Performance Contract.

The WYECIP recognizes many Facility Owners have never done an EPC project and may only do one EPC in their careers. By providing technical assistance, a standardized process and model contract documents the WYECIP will streamline the process and reduce risk for Facility Owners to develop and implement EPC projects for improved energy efficiency.

This Program Manual has been developed for the WBC, Facility Owners in Wyoming, and ESCOs to provide details of the WYECIP and to set forth the guidelines and requirements of the program. It provides background on program development, discussions of key program elements, and detailed descriptions of the steps in the WYECIP process for identifying, developing, implementing, and providing Performance Period services for an Energy Performance Contract. Examples of the various WYECIP contracts and other documents for the program are contained in Appendix material. Care should be taken to ensure that the most recent versions of documents are used.

The Program Manual is also intended to supplement and provide additional detail on the activities, requirements, and obligations of the contracts associated with an EPC project. As such it is to be considered incorporated by reference in WYECIP contract documents and the information contained herein shall be part of the contract requirements.

2.0 DEFINITIONS

Throughout this program manual a number of terms and acronyms are commonly used. For the purposes of the Wyoming Energy Conservation Improvement Program, definitions of terms and acronyms used herein are as follows.

Energy Performance Contract (EPC):	The contracting vehicle, under the Wyoming Energy Conservation Improvement Program, that allows Facility Owners to accomplish energy projects without up-front capital costs or capital appropriations
Energy Services (ESCO):	The contractor, pre-qualified under the Wyoming Energy Conservation Improvement Program, responsible for audit, design, implementation, and measurement and verification of savings for individual projects
Facility Owner:	The entity responsible for an individual facility or group of facilities including operation, maintenance, financial, legal, and upper management personnel
Investment Grade Audit (IGA):	The detailed engineering investigation and report of a facility's current energy and water consuming equipment inventory, condition, operation, maintenance, and performance; energy baseline; potential energy and water efficiency upgrades; life cycle costs; and risks for future performance that provides the justification for the EPC project
Measurement and Verification (M&V):	The process by which the guaranteed annual savings are evaluated each year in accordance with the EPC M&V plan
Performance Period:	The period in the term of an EPC, also generally the financing term during which the savings guarantee must be achieved
Project Proposal:	The Energy Performance Contract Proposal prepared by the ESCo including the IGA Report and required Contract Attachments
Savings Guarantee:	Energy and maintenance savings guaranteed by the ESCo providing the basis for project financing and the M&V Plan
WBC:	The Wyoming Business Council, State Energy Office, responsible for providing support, contract documents, and program administration
WYECIP:	The Wyoming Energy Conservation Improvement Program designed to enable development and implementation of ESPC projects quickly at low risk for Facility Owners

3.0 PROGRAM OBJECTIVES

The State Energy Office at the Wyoming Business Council has a number of objectives for the Wyoming Energy Conservation Improvement Program (WYECIP) including:

- Build on the previous Institutional Conservation Program (ICP) efforts in Wyoming utilizing Energy Performance Contracting (EPC) as the vehicle to finance the implementation of projects.
- Provide a program to assist the Wyoming Governor's office in its commitment to the goal of 20% reduction in energy use established by the Western Governors Association.
- Expand beyond the original public school, hospital, and nursing home participants in the previous Institutional Conservation Program.
- Develop a program to make it easier and non-threatening to participate in Energy Performance Contracting that recognizes many Facility Owners have never done an EPC project and may only do one in their careers.
- Provide technical and contracting assistance to Facility Owners; provide oversight of project development, implementation, and measurement and verification of savings; and include availability of a third party mediator looking out for interests of all parties in the event conflicts arise. This approach will enable development and implementation of EPC projects quickly at low risk for Facility Owners.
- Create a standardized process for use by any public or non-profit entity statewide that is clear, concise, user-friendly and scalable to various size projects; provides clear direction and accountability for all participants in development implementation, and measurement and verification for EPC projects; defines roles and responsibilities; formalizes process steps, contract documents, measurement and verification requirements, and other documentation; and pre-qualifies selected Energy Services Companies (ESCOs) that agree to work within the program requirements.
- Develop qualifications and Request for Proposal documents and provide a diligent and rigorous process for selection of Energy Services Companies (ESCOs) to be pre-qualified under the program.
- Provide ESCo Contract and Facility Owner Contract documents for participation in the program and Investment Grade Audit and Project Development Contract and Energy Performance Contract documents for use by Facility Owners and ESCOs participating in the program.

4.0 PROGRAM DESCRIPTION

4.1 Background

From about April, 2005 through May, 2006 the State Energy Office at the Wyoming Business Council (WBC) administered an Institutional Conservation Program (ICP) designed to assist schools, hospitals and other institutions in the implementation of energy conservation measures. That program was open to public and private schools, including post-high school and trade schools, hospitals, and related health care facilities such as nursing homes and assisted living centers.

The ICP entailed a two-stage process. The first stage was the application for a grant for an energy audit by a qualified professional including a brief description of the anticipated project or a description of the problem to be remedied. A standard (Level 2) audit quantified energy uses and losses through a detailed review and analysis of equipment, systems and operational characteristics. This analysis included on-site measurement and testing to quantify energy use and efficiency of various systems and standard energy engineering calculations to analyze efficiencies and calculate energy and costs savings based on improvements and changes to each system.

The standard audit also included an economic analysis of recommended energy conservation measures. A standard energy audit was required before an application for a grant to implement measures could be submitted. The program paid for the standard energy audit conducted by a qualified professional subject to the prior approval of the Energy Office.

Once the energy audit was completed and approved, the second stage of the application consisted of a letter requesting the grant to implement recommended energy conservation measures. The Energy Office evaluated the request to determine which work is eligible for the grant award.

The institution could apply for a grant for 50% of the funding needed to implement energy conservation measures identified in an approved energy audit, up to a maximum award of \$500,000, unless a larger amount was specifically approved by the Energy Office. Energy conservation measures with a simple payback period of less than two years or greater than 10 years were not eligible for funding under this program, although measures with simple payback periods of over 10 years may have been evaluated and subsequently funded if the Energy Office determined that the measure's payback potential warranted inclusion. Measures implemented under this program could have been installed by an outside contractor or in-house personnel, subject to Energy Office approval.

The grant funds were to be disbursed on a reimbursable basis upon receipt of a documented invoice and the institution was required to submit semi-annual reports detailing measure operation, energy consumption, and savings attained for a period equal to the measure's identified payback period. The Energy Office reserved the right to inspect any project funded under this program at any time during construction, installation, or operation of any measure.

The ICP resulted in a substantial level of interest within the target facility groups and a considerable number of Level 2 audits were performed. Unfortunately, although several potential projects were identified in the audits phase, not enough funds were available in the ICP to implement comprehensive projects that included combinations of short- and long-term measures to maximize facility energy improvements.

4.2 Wyoming Energy Conservation Improvement Program Overview

The Wyoming Energy Conservation Improvement Program (WYECIP) is designed to build upon the previous Institutional Conservation Program (ICP), and expand the public entities served beyond the original public school, hospital, and nursing home participants. This program is based upon utilizing Energy Performance Contracting (EPC) as the vehicle to finance the implementation of projects. An EPC allows public Facility Owners to accomplish energy projects without up-front capital investment or specific appropriations. The Energy Performance Contracting concept is further discussed in Section 5 of this Program Manual.

In order to streamline the process and assist Facility Owners in improving energy efficiency by developing and implementing EPC projects quickly and reducing risk, the WYECIP provides a standardized process for use by any public or non-profit entity statewide that is designed to be user-friendly and scalable to various size projects. The WYECIP provides clear direction and accountability for all participants in development, implementation, and measurement and verification for EPC projects by defining roles and responsibilities; formalizing process steps; establishing maximum cost schedules; providing standard contract documents; describing measurement and verification requirements, and using selected ESCOs that are pre-qualified and agree to work within the program requirements.

4.3 Wyoming Energy Conservation Improvement Program Elements

The WYECIP includes a number of key elements that together comprise the entire program. This section provides a brief description of each program element and its requirements. Each major program element is discussed in further detail in its dedicated section of this program manual.

4.3.1 WBC State Energy Office Support

Support from the State Energy Office at the WBC is an integral part of the WYECIP. Once a Facility Owner executes a Facility Owner Contract with the WBC to use the WYECIP, the full resources of the program are available to support the Facility Owner for development and implementation of a project. Facility Owners are encouraged to engage the WBC as early in the process as possible to maximize the benefits of the program. Support from the WBC under the WYECIP includes:

- Helping Facility Owners identify potential projects
- Providing technical and contracting assistance

- Assisting with oversight of project development
- Monitoring implementation
- Reviewing measurement and verification of savings
- Mediating any conflicts that may arise as needed

4.3.2 Facility Owner Contract

Each state and local government or other entity wishing to receive the benefits of Energy Performance Contract support and assistance through the WYECIP will be required to sign a Facility Owner Contract with the WBC stating Facility Owner's commitment to adhere to the guidelines established by the WYECIP. This is to ensure that the Facility Owner's overall risk is minimized and the likelihood of a successful project is maximized. By executing this contract, Facility Owners agree to the requirements of the WYECIP and to use the WYECIP standardized process and contract documents.

4.3.3 Energy Services Company (ESCO) Pre-qualification

The WBC will engage in a rigorous process for pre-qualifying ESCOs to provide Energy Performance Contracting services in Wyoming to ensure that they meet the standards of the WYECIP and the Wyoming Business Council. This pre-qualification process should provide a high level of confidence for Facility Owners using the program and participating in the WYECIP process, that their performance contract project will be a success.

Pre-qualifying ESCOs for the WYECIP through the WBC allows individual Facility Owners the option of selecting a pre-qualified ESCo that has entered into an ESCo Contract with the WBC for the program without further competition. Beginning the process of project development without expending the time and resources generally required for a Request for Proposals and selection procedure will streamline the process.

The Facility Owner also has the option of conducting an abbreviated selection process between two or more pre-qualified ESCOs. It is anticipated that this would typically entail simply requesting information and/or interviewing candidate firms from the WYECIP list of pre-qualified ESCOs and making a selection based on the information obtained. An additional Request for Proposals process for selection of an ESCo conducted by individual Facility Owners is not allowable under the WYECIP.

ESCOs participating in the WYECIP will also be marketing their services and the WYECIP directly to Facility Owners. In cases where a Facility Owner and a pre-qualified ESCo have developed a relationship, and the Facility Owner executes a WYECIP Facility Owner Contract, it is anticipated that additional ESCo competition will not be required.

Only those ESCOs that have been pre-qualified and are signatory to an ESCo Contract are eligible for participation in the WYECIP. Facility Owners using the program must select from one of these ESCOs.

4.3.4 ESCo Contract

Following ESCo prequalification and selection to perform performance contracting services under WYECIP, each ESCo will execute an ESCo Contract with the WBC. The ESCo Contract will provide the specific program requirements and the process that will be followed by the ESCo.

In addition, the WYECIP will require each ESCo to agree on maximum project markups and fees for pre-defined categories, such as material, labor, and other purchased services and these maximums will be attached to and become part of the ESCo Contract. The benefit to both the ESCo and Facility Owners is that the markups and fees are understood. These markups and fees are the maximums allowed under the WYECIP; however lower markups and fees may be further negotiated depending upon the specifics of each individual project.

The ESCOs will also agree to open book pricing by signing the ESCo Contract. Open book pricing is full disclosure by the ESCo to the Facility Owner of all pricing and costing for materials, labor, and other out-of-house services received during the project development phase. This will allow the Facility Owner full access to ensure the ESCo's bids are reasonable and acceptable and that markups are being properly applied.

ESCOs that have been pre-qualified and are signatory to an ESCo Contract may market their services directly to Facility Owners, provided they do so under the requirements of the WYECIP ESCo Contract. If a potential project is identified by an ESCo in this manner, the Facility Owner must execute the Facility Owner Contract with the WBC early in the process to engage the technical and contracting support services provided by the WYECIP.

A copy of the ESCo Contract is included in Appendix 1B of this Program Manual.

4.3.5 WYECIP Investment Grade Audit and Project Development Contract

The purpose of the WYECIP Investment Grade Audit and Project Development Contract is to set specific expectations for both the ESCo and the Facility Owner and provide a detailed process for all parties to follow. The contract will also precisely define what the ESCo's deliverables to the Facility Owner will be. The Investment Grade Audit and Project Development process establishes the basis for the Energy Performance Contract to follow.

Under the WYECIP, the ESCo and Facility Owner will negotiate the fee for completing the investment grade audit based on facility size and the complexity of the potential project. This allows ESCOs and Facility Owners the opportunity

to agree on an acceptable fee on a project-by-project basis. The maximum project markups and fees as well as the requirement for open book pricing established in the WYECIP ESCo Contract shall apply for costs in the WYECIP Investment Grade Audit and Project Development Contract.

As part of the investment grade audit, the ESCo will be required to develop a preliminary monitoring and verification (M&V) plan for review. Monitoring and verification is the process by which the guaranteed annual savings are evaluated each year. The M&V plan embodies the mutually agreed-upon methods that the ESCo will use to determine savings persistence throughout the life of the Energy Performance Contract. In the audit report, a preliminary plan will provide an initial description of each potential efficiency measure and proposed M&V methods for review and discussion with the Facility Owner. The final mutually agreed-upon plan will be part of the final Energy Performance Contract.

4.3.6 WYECIP Energy Performance Contract (EPC)

The Energy Performance Contract (EPC) embodies all aspects of the performance contracting project. It is the document that will define not only the final agreed upon scope of work and all its associated costs, but also mutual responsibilities between the ESCo and the Facility Owner. In the EPC, details regarding the exact improvement measures, equipment and labor costs associated with them, and all guaranteed energy and maintenance cost savings will be provided. All final financing information will be attached for reference including ESCo payment schedules and lender financing terms and schedules.

A most important aspect of this contract is the final M&V plan, a plan mutually agreed upon between the Facility Owner and ESCo that defines exactly how the guaranteed savings will be verified for each year of the performance period. The performance period begins when the installation of all improvement measures has been completed and accepted by the Facility Owner.

The savings guarantee in the energy performance contract requires that for each year of the performance period, which is also generally the financing term, the stated energy and maintenance savings will be met. This guarantee must exceed or be equal to the annual payments the Facility Owner makes under the financial obligation to the Facility Owner's financing provider. If the annual savings are not met, the guarantee requires the ESCo to pay the Facility Owner directly the amount of the annual savings shortfall. In this way, the ESCo retains responsibility for the project's performance and the Facility Owner carries virtually no financial risk in its ability to make its annual payments in the event of a savings shortfall.

5.0 ENERGY PERFORMANCE CONTRACTING

5.1 Overview

The Wyoming Energy Conservation Improvement Program (WYECIP) is based upon utilizing Energy Performance Contracts (EPC) as the vehicle to finance the implementation of projects. With an EPC, the cost of energy efficiency and capital upgrade improvements implemented is funded (fully or partially) by the energy and maintenance cost savings they generate when the implementation costs are financed over a period of time.

This approach has been used successfully for many years by the Federal Government as well as by other states, higher education institutions, local governments, hospitals, and school districts nationwide.

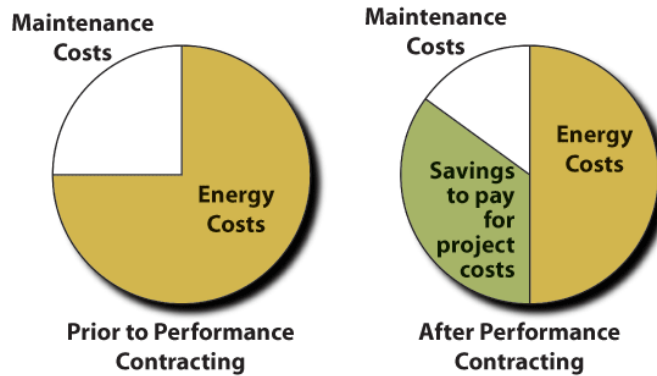
Energy Performance Contracts address many of the issues Facility Owners face such as:

- Increasing utility costs
- Competing needs for the budget
- Maintenance problems or backlog
- Comfort complaints
- Limited expertise on new technologies
- Need to replace equipment and modernize facilities
- Too many demands on staff time to launch new projects
- Insufficient capital to cover all improvement needs
- Efficient equipment “value engineered” out of capital projects

To address these and other issues an EPC can look similar to a design/build project however because it combines engineering, design, construction, and financing with guaranteed savings it can be considerably more complex. The WYECIP provides a number of services to support Facility Owners through the entire process. A major difference between this contracting approach and standard contracting methods is that the Facility Owner’ relationship with the ESCo goes well beyond the normal construction and warranty period because the ESCo guarantees the energy savings as part of the Energy Performance Contract.

5.2 Self-funded Projects

Because savings add up over time Energy Performance Contract projects are designed to be self-funding, providing a way to upgrade facilities without exhausting capital budgets. At its core, an Energy Performance Contract is a financing vehicle that allows facilities to make improvements today that will be paid for from future savings. This is accomplished by reallocating a portion of the money a facility is already paying in energy and maintenance costs as shown on the charts below.



The chart on the left represents the utility and maintenance costs the facility is budgeting currently and paying for today, before implementing improvements through an Energy Performance Contract. Once efficiency and operating improvements are accomplished the savings generated by the improvements, shown in the chart on the right, are available to pay for the project costs without increasing the operating budget or using capital funds. It is these savings upon which the guarantee and the project’s financing is based.

5.3 Financing

Financing for projects implemented under the WYECIP may be provided directly by the individual Facility Owner or through a third party financier under a separate agreement between the individual facility and a financing company. A standard Request for Proposals for Financial Services is provided by the WYECIP for use by the Facility Owner or ESCo. There are a number of firms that specialize in financing for EPC projects and the WYECIP also encourages the use of local banks.

NOTICE: USE OF FINANCING DEVICES FOR THE ACQUISITION OF EQUIPMENT IS SUBJECT TO THE CONSTITUTION AND LAWS OF WYOMING. THE FACILITY OWNER SHOULD TAKE ALL NECESSARY STEPS TO ENSURE ANY SUCH ACTION IS WITHIN ITS AUTHORITY PRIOR TO ENTERING INTO ANY AGREEMENTS.

Typical public sector financing for improvements with an EPC is accomplished through a multi-year Lease-Purchase Agreement, usually at municipal rates. The financing term is generally 12 to 15 years, and can be as long as 20 years under the WYECIP, as long as the expected lifetime of the equipment exceeds the financing term. The financing term becomes the term of the EPC and is known as the “Performance Period” of the contract.

The savings guarantee is a unique feature of an EPC and it provides the basis for financing the project. As part of its contract, the ESCo guarantees that the savings generated by the measures will be sufficient, on an annual basis, to cover the financing costs of the project, and any on-going additional annual costs, over the contract term.

The lease-purchase is generally a current obligation, subject to non-appropriations, and is annually renewable; therefore it does not impact the Facility Owner's debt ceiling.

5.4 Partnering with an ESCo

An energy project using an EPC is a partnership between the Facility Owner and an Energy Services Company (ESCo). The ESCo conducts a comprehensive Investment Grade Audit to identify and evaluate opportunities for improvements that will save energy and other costs for the facility. Based on the audit, the ESCo and the Facility Owner decide what energy efficiency measures best meet the Facility Owner's needs both technically and financially. The ESCo will also help the Facility Owner arrange for the project financing if needed.

Once the final project scope has been agreed upon, the ESCo proceeds to complete the design and construct the project, providing engineering and design, specification and purchase of equipment, and management of the construction phase.

As part of its contract, the ESCo will provide ongoing measurement and verification (M&V) of savings persistence, in accordance with the agreed upon M&V plan over the contract term. In addition, the ESCo can provide other long-term energy efficiency services.

5.5 Integration of other Capital Improvement Projects

It can often be advantageous for a Facility Owner to integrate other energy and water projects, or other projects to address identified capital needs which may or may not contain energy and water saving opportunities, with an EPC project. Since the ESCo essentially acts as a design/build general contractor when performing an EPC it is usually well within the ESCo's capabilities to bring other facilities projects in under the umbrella of an EPC. When this is done, the Facility Owner enjoys a single point of contact and responsibility, the ESCo, for coordination and execution of design, construction, and post-construction activities as well as capturing potential economics of scale.

5.6 Benefits

There are many benefits to an EPC including its comprehensive, whole-building approach designed to combine improvements that have short-term payback with those that have longer payback to achieve a simple aggregate payback that will maximize upgrades in a reasonable financing term. In addition, since the project financing is paid from savings in the current utility budget, no capital funds are required. Energy and maintenance savings are guaranteed by the ESCo to be equal to or exceed or the annual payments the Facility Owner makes under the financial obligation to the financing provider.

The EPC approach is also flexible enough that the Facility Owner can contribute capital dollars to a project to incorporate other improvements or to buy down the financing term. This provides the Facility Owner with the opportunity to combine multiple projects or phases into a single contract with an ESCo. In that way the Facility Owner has a single point of responsibility, the ESCo, for all of the work.

An EPC provides ESCo expertise to the project from development to completion and beyond in areas of energy efficiency, design, engineering, operation and maintenance of buildings, project cost assessment, financing, construction management, training for facility staff, and ongoing project monitoring and trouble-shooting to ensure sustained savings. In addition, the full resources of the WYECIP are available to support the Facility Owner for development and implementation of an EPC when a Facility Owner executes a Facility Owner Contract with the WBC.

5.7 WYECIP Energy Performance Contract Process

The process for developing and implementing an Energy Performance Contract project will be consistent with requirements established by the WYECIP as published in various sections of this program manual and with the contracts for each specific project. The process will generally include:

- Facility Owners and ESCos engage the WBC State Energy Office early in the process
- Facility Owners execute a Facility Owner Contract with the WBC to use the WYECIP and its resources
- WBC State Energy Office provides support for initial evaluation of a potential project, meetings between Facility Owners and ESCos, technical and contracting assistance, and oversight of project development
- WBC or ESCo performs an initial evaluation of project potential for discussion with the Facility Owner
- WBC State Energy Office provides third party review of the results of the ESCo's initial evaluation
- WBC State Energy Office prepares the WYECIP Investment Grade Audit and Project Development Contract for the project
- Facility Owner and ESCo execute the WYECIP Investment Grade Audit and Project Development Contract
- ESCo performs an investment grade audit, with ongoing discussions with the Facility Owner, and prepares a detailed proposal for the potential project
- WBC State Energy Office provides third party review of the investment grade audit and project proposal
- WBC State Energy Office prepares the WYECIP Energy Performance Contract for the project
- Facility Owner and ESCo execute the WYECIP Energy Performance Contract
- ESCo implements the project installing the Energy Conservation Measures (ECMs)
- WBC State Energy Office provides monitoring of the project implementation as needed
- ESCo completes and submits the Post-implementation Report in accordance with the project Measurement and Verification Plan requirements
- WBC State Energy Office provides third party review of the Post-implementation Report
- Facility Owner accepts the completed project meeting the implementation terms of the Energy Performance Contract
- ESCo performs Performance Period Measurement and Verification activities and provides reports in accordance with the Measurement and Verification Plan

- WBC State Energy Office provides third party review of Measurement and Verification Reports for verification of savings and compliance with the Energy Performance Contract
- Facility Owner provides WBC State Energy Office with annual reports on project cost, status, savings achieved and square footage impacted by the project for the term of the performance contract with the ESCo

5.8 Roles, Responsibilities, and Deliverables

5.8.1 Roles and Responsibilities

The WYECIP will be administered by the State Energy Office at the Wyoming Business Council. This office will have responsibility for ESCo prequalification and execution of ESCo Contracts, developing and updating WYECIP contract documents, and overall program oversight.

An Energy Performance Contract project requires a collaborative team effort including the individual facility or public entity involved, the ESCo, and the WBC State Energy Office.

The Facility Owner and the ESCo must have clear communications and understanding with regard to WYECIP requirements to ensure development and implementation of the project are consistent with the WYECIP and that project parameters are appropriate with the needs of the individual facility.

The WBC State Energy Office participates in meetings between the Facility Owner and ESCo as needed; reviews requirements, audits, proposals, contracts, and reports; and provides support to the Facility Owner for project development and implementation.

An Energy Performance Contract project entails responsibilities for individual team members that include but are not necessarily limited to:

5.8.1.1 Facility Owner

- Engage WBC State Energy Office and execute Facility Owner Contract
- Utilize ESCo signatory to the WYECIP ESCo Contract
- Execute contracts with ESCo
- Work with ESCo to develop/refine project parameters
- Review/Approve ESCo proposals, designs, and reports
- Ensure recommendations of WBC State Energy Office during reviews are addressed
- Provide Facility Owner project management
- Provide annual reporting to the WBC during the performance period

5.8.1.2 WBC State Energy Office

- Perform an initial evaluation of project potential (if an ESCo has not already done so) and discuss with the Facility Owner
- Attend meetings between Facility Owner and ESCo as needed
- Assist with review and refinement of project parameters
- Review audits, proposals, calculations, contracts, and reports
- Prepare WYECIP contract documents
- Provide monitoring of the project implementation
- Review Performance Period Measurement and Verification Reports

5.8.1.3 Energy Services Companies

- Perform an initial evaluation of project potential and discuss with the Facility Owner
- Engage WBC State Energy Office on projects identified through ESCo's direct marketing
- Adhere to the guidelines and requirements of the WYECIP and use the standard documents and processes
- Perform an investment grade audit and prepare a detailed proposal for the project in accordance with the WYECIP Investment Grade Audit and Project Development Contract
- Ensure recommendations of WBC State Energy Office during reviews are addressed
- Execute a WYECIP Energy Performance Contract with Facility Owner
- Construct the project and provide project management
- Complete and submit the Post-implementation Report
- Perform Performance Period measurement and verification activities and provide reports in accordance with the Energy Performance Contract Measurement and Verification Plan

5.8.2 Deliverables

Deliverables for a WYECIP project include, but are not necessarily limited to:

5.8.2.1 Facility Owner

- Executed Facility Owner Contract with WBC State Energy Office
- Executed contracts with ESCo
- Review/Approval of ESCo proposals, designs, and reports
- Project acceptance
- Annual reports to the WBC

5.8.2.2 WBC State Energy Office

- Initial evaluation of project potential if not done by ESCo
- Preparation of WYECIP contract documents

- Reports of review for audits, proposals, calculations, contracts, and reports

5.8.2.3 Energy Services Companies

- Initial evaluation of project potential
- Executed contracts with Facility Owner
- Investment grade audit and detailed proposal for the project
- Project construction
- Post-implementation Report
- Performance Period Measurement and Verification Reports

Table 5-1 on the next page summarizes the typical interactions, responsibilities and deliverables for a WYECIP project.

KEY: A = Approve; L = Lead; P = Participate; R = Review; S = Support

Task/Deliverable	WBC	Facility Owner	ESCo
Engage WBC for project support	A	L	P
Execute Facility Owner Contract	A	L	
Prepare WYECIP Audit and Project Development Contract for each project	L	P	P
Execute WYECIP Investment Grade Audit and Project Development Contract	S	L	L
Perform an investment grade audit and prepare detailed project proposal	P	P	L
Provide audit and proposal review	R	A	
Ensure recommendations of WBC State Energy Office during reviews are addressed		L	S
Prepare WYECIP Energy Performance Contract for each project	L	P	P
Execute Energy Performance Contract		L	L
Construct the project and provide project management		A	L
Provide monitoring of the project implementation	R	P	P
Perform Post-Implementation Measurement and Verification (M&V) activities per the M&V Plan		P	L
Complete and submit the Post-Implementation Report per the M&V Plan		P	L
Review Post-implementation Report	R	A	
Perform Performance Period (M&V) activities per the M&V Plan and provide reports		P	L
Review Performance Period Measurement and Verification reports	R	A	

Table 5-1 WYECIP Project Responsibilities

6.0 WBC STATE ENERGY OFFICE SUPPORT

6.1 Overview

Support from the State Energy Office at the WBC is an integral part of the WYECIP. Once a Facility Owner executes a Facility Owner Contract with the WBC to use the WYECIP, the full resources of the program are available to support the Facility Owner for development and implementation of a project. In general, support from the WBC under the WYECIP includes:

- Pre-qualifying Energy Services Companies (ESCOs) for participation in the WYECIP
- WYECIP Program Marketing
- Assisting the Facility Owner to identify potential Energy Performance Contract projects
- Attending meetings between Facility Owner and Energy Services Companies as needed
- Assisting with review and refinement of project parameters
- Providing technical and contracting assistance
- Preparing the WYECIP Contract documents
- Reviewing audits, proposals, calculations, contracts, and reports
- Assisting with oversight of project development
- Providing monitoring of the project implementation
- Reviewing measurement and verification of savings
- Mediating as needed any conflicts between Facility Owner and ESCo that may arise after execution of the WYECIP Standard Investment Grade Audit and Project Development or Energy Performance Contract

Facility Owners are encouraged to engage the WBC as early in the process as possible to maximize the benefits of the program.

6.2 Energy Services Company Pre-qualification

The Wyoming Business Council State Energy Office establishes the qualifications required for an ESCo to be selected for participation in the WYECIP. Through a rigorous process, the WBC will pre-qualify a number ESCOs for the program.

The purpose of pre-qualifying ESCOs to provide EPC services in Wyoming is to ensure that they meet the standards of the WYECIP and the Wyoming Business Council. These standards should provide a high level of confidence for Facility Owners that their performance contract project will be a success when they participate in the WYECIP process.

Facility Owners participating in the WYECIP will be provided with a list of the ESCOs that have been pre-qualified by the WBC and have executed ESCo Contracts. Only ESCOs from this list may be used for projects under the WYECIP. The WBC does not allocate projects among the pre-qualified ESCOs or select an ESCo for a particular project.

The WYECIP prequalification process is administered by the State Energy Office at the WBC. A copy of the WYECIP ESCo Contract is included in Appendix 1B.

6.3 Program Marketing

The WBC State Energy Office will actively promote the WYECIP with public or non-profit Facility Owners throughout Wyoming. These efforts will include presentations at individual facilities, participation in conferences held by various Facility Owner associations, and other forms of outreach. In addition, WYECIP personnel are available for meetings and presentations to local School Boards, City and County Government, Hospital Boards, Community Colleges, Universities, State Agencies, and non-profit organizations.

6.4 Initial Evaluation of Project Potential

One of the first steps for Facility Owners interested in using the WYECIP to upgrade facilities for energy efficiency is to determine if an Energy Performance Contract is the right approach for them. For those Facility Owners that have executed a WYECIP Facility Owner Contract with the WBC, the program will provide assistance in evaluating potential projects. The Facility Owner Contract is discussed in Section 7 of this Program Manual.

This will generally include a conducting a telephone interview to gain insight on the facility and the type of project being considered, performing an analysis of utility bills (usually the most recent twelve months) provided by the facility, meeting on-site with facility personnel and others as appropriate to discuss the WYECIP, surveying selected buildings and their energy-consuming equipment, and preparing an initial feasibility report. This report is a high-level look at the potential for a project and will discuss measures for further evaluation along with estimates of implementation costs and savings. The results of the utility bill analysis will also be included in the report. Additional information on the Project Identification and Initial Development Phase is found in Section 8.0 of this Program Manual.

It is important to note that ESCos participating in the WYECIP will also be marketing their services directly to Facility Owners and may prepare initial feasibility studies as part of that effort. ESCos are obligated by the WYECIP ESCo Contract to engage the WBC when a potential project is identified in order to facilitate execution of a WYECIP Facility Owner Contract.

Once the Facility Owner Contract is in place, the WBC will provide pre-project review of each proposed project. This review may include inspecting the facility, examining records, interviewing Facility Owner personnel, reviewing the ESCo's initial feasibility report, and meeting with the ESCo and Facility Owner for each project.

6.5 Investment Grade Audit and Project Development Phase

In this phase the WYECIP provides assistance to Facility Owners to fully develop goals for the project, set specific expectations for both the ESCo and the Facility Owner in the Investment Grade Audit process, define the audit deliverables, and facilitate the audit and project development process.

Areas where WYECIP support is provided include assisting Facility Owners with negotiating the fee for completing the investment grade technical energy audit, attending meetings between

Facility Owner and the ESCo as needed, helping with review and refinement of project parameters, and preparing the WYECIP Investment Grade Audit and Project Development Contract document.

Technical assistance includes, but may not be limited to, reviewing the Investment Grade Audit to assure the proposed project is technically and financially appropriate, reviewing all energy and cost calculations for reasonableness, assisting with developing the measurement and verification plan, and advising the Facility Owner on final acceptance of the Investment Grade Audit Report.

Upon acceptance of the Investment Grade Audit Report by the Facility Owner, the WYECIP provides assistance to negotiate the final scope and costs for implementing the project and prepares the WYECIP Energy Performance Contract document. Additional information on the Investment Grade Audit and Project Development Phase is found in Section 9 of this Program Manual.

6.6 Energy Performance Contract Implementation Phase

The WBC continues WYECIP support to Facility Owners during project implementation by monitoring construction to assure successful completion and consistency with the contract measures including attendance at project meetings as required. This monitoring will not include day-to-day project management.

Additional services include review of the post-implementation M&V report for savings potential and compliance with the contract, advising the Facility Owner on final acceptance of the installed measures, and assisting in the mediation of disputes that may arise from time to time between the Facility Owner and the ESCo. Further information on the Energy Performance Contract Implementation Phase is found in Section 10 of this Program Manual.

6.7 Energy Performance Contract Performance Phase

The WBC provides WYECIP support to the Facility Owner for the entire term of the Energy Performance Contract. During the Performance Phase this support includes reviewing measurement and verification reports for documentation of savings and compliance with contract requirements, and assisting in the mediation of disputes that may arise from time to time between the Owner and the ESCo. Further information on the Energy Performance Contract Implementation Phase is found in Section 11 of this Program Manual.

6.8 Program Funding

The WYECIP and support provided by the WBC to Facility Owners is currently provided at no cost to Facility Owners. It is anticipated that funding for the WYECIP will likely extend through the initial three years of the program. At that time additional funding sources may have to be identified or the WYECIP may become a fee-based program. Program funding covers the cost to the WBC for the program therefore there are no direct grants or funding to facilities for projects or ESCo services.

7.0 FACILITY OWNER CONTRACT

7.1 Overview

The Wyoming Energy Conservation Improvement Program (WYECIP) provides a reduced risk method for public and non-profit organizations to implement Energy Performance Contracts (EPCs) to reduce energy consumption. The standardized process encompassed in the WYECIP is designed to be user-friendly and to provide clear direction and accountability for all participants in development, implementation, and measurement and verification for EPC projects. The WYECIP streamlines the process and assists Facility Owners improve energy efficiency by:

- Defining roles and responsibilities
- Formalizing process steps
- Providing model contract documents
- Describing measurement and verification requirements
- Prequalifying ESCOs that agree to work within the program requirements

Further, the WYECIP provides consultation and independent support for project development and implementation to Facility Owners and is an advocate for their interests.

Each public or non-profit Facility Owner wishing to receive the benefits of performance contracting support and assistance through the WYECIP will be required to enter into a contract with the WBC. The purpose of this contract is to ensure that the Facility Owner's risk is minimized and the likelihood of project success is maximized.

The Facility Owner Contract establishes the relationship between a Facility Owner and the WBC for the Facility Owner's participation in the WYECIP and defines responsibilities for both the Facility Owner and the WBC with regard to the overall program. The Facility Owner Contract commits the Facility Owner to adhere to the guidelines established by the WYECIP, incorporating by reference the WYECIP Program Manual and Appendices, including the WYECIP Investment Grade Audit and Project Development Contract and the WYECIP Energy Performance Contract.

Once a Facility Owner executes the WYECIP Facility Owner Contract, the full resources of the program are available to support the Facility Owner in the development and implementation of a project. Facility Owners are encouraged to engage the WBC as early in the process as possible to maximize the benefits of the program.

A copy of the Facility Owner Contract is included in Appendix 1A.

7.2 Facility Owner Contract Scope

The purpose of the Facility Owner Contract is to provide the Facility Owner access to the services and support provided under WYECIP for development and implementation of EPC projects and to gain agreement from the Facility Owner to follow and adhere to the guidelines,

rules, and provisions of the program. It ensures the program's standard processes, procedures, and documentation will be used through the Facility Owner's commitment to the WYECIP and provides the resources and support of the program to the Facility Owner to assure a high likelihood of a successful EPC Project.

The WBC provides the resources and support of the WYECIP only to those Facility Owners that have executed the Facility Owner Contract. Upon contract execution the WBC will begin providing WYECIP services including assistance with evaluation of potential projects and the list of pre-qualified ESCos. Individual projects will require the use of contract documents, executed between the individual Facility Owner and an ESCo, that define the scope, roles, responsibilities, and deliverables associated with particular projects. Contract documents are provided through the WYECIP and participating Facility Owners are required to use these documents.

7.3 Contract Term

Each Facility Owner Contract executed by the WBC and individual Facility Owners will be for an initial two year term. Each EPC being developed under the WYECIP will be reviewed annually by the WBC during the initial term for progress, continued viability, and compliance with WYECIP guidelines, requirements, process, and documentation.

Following the initial two-year term, the Facility Owner Contract may be extended annually by mutual agreement of the WBC and the Facility Owner. It is intended that the Facility Owner Contract shall be continued through the end of the performance period of an EPC project to support the Facility Owner throughout the life of the project. Annual extensions shall also be subject to the provision for review of compliance with WYECIP guidelines, requirements, process, and documentation.

The Facility Owner Contract may be terminated, without cause, by either party upon thirty (30) days written notice. The WBC may terminate the Facility Owner Contract immediately for cause if the Facility Owner fails to perform in accordance with the terms and conditions of the Facility Owner Contract.

7.4 Considerations

No payment shall be made to either party by the other party as a result of executing a Facility Owner Contract. In consideration for participation in the WYECIP and the services and support rendered by the WBC State Energy Office under the Facility Owner Contract, the Facility Owner shall engage in a good faith effort to reduce its energy consumption through participation in WYECIP and shall adhere to its guidelines, requirements, and provisions.

7.5 Process Steps

A potential EPC project may be identified by a public or non-profit facility's own internal staff or by a WYECIP pre-qualified ESCo. In any case, the Facility Owner should engage the WBC as

soon as possible so a Contract can be executed. The process for the Contract will generally include:

- Facility Owner engages the WBC State Energy Office early in the process
- Facility Owner executes a Facility Owner Contract with the WBC to use the WYECIP and its resources
- WBC State Energy Office provides WYECIP support for project development, technical and contracting assistance, oversight of project implementation, and ongoing assistance through the entire contract period

7.6 Responsibilities

To maximize the benefits of an Energy Performance Contract project and minimize the risk to the individual facility or public entity the Facility Owner and the WBC State Energy Office must have clear communications and understanding with regard to WYECIP requirements to ensure development and implementation of the project are consistent with the WYECIP.

The Facility Owner Contract includes responsibilities for both the Facility Owner and the WBC State Energy Office that include, but are not necessarily limited to:

7.6.1 Facility Owner

- Executing Facility Owner Contract with the WBC State Energy Office
- Engaging the WBC State Energy Office for initial assessment of project potential or review of initial assessment performed by an ESCo
- Utilizing an ESCo that has been pre-qualified by the WYECIP and has executed the ESCo Contract with the WBC State Energy Office
- Assigning members to the facility project team including operations, maintenance, financial and upper management personnel
- Ensuring appropriate personnel attend project development meetings dependent upon the subject matter to be discussed
- Providing access and escort to buildings
- Providing information as needed for the feasibility study, the Investment Grade Audit, and other project development activities
- Working with the ESCo to develop/refine project parameters
- Reviewing/Approving ESCo proposals, designs, and reports
- Ensuring recommendations of the WBC State Energy Office during reviews are addressed
- Executing contracts with ESCo and making payments for ESCo services including payment to the ESCo for the Investment Grade Audit if a viable project is developed and Facility Owner declines to proceed further
- Making arrangements for project financing
- Providing Facility Owner project management
- Providing information as needed for Measurement and Verification activities

- Providing the WBC State Energy Office with annual reports on project cost, status, savings achieved, and square footage impacted by the project for the term of the performance contract with the ESCo
- Performing additional actions as required by the individual project requirements

7.6.2 WBC State Energy Office

- Helping Facility Owners identify potential EPC projects
- Attending meetings between Facility Owner and ESCo as needed
- Assisting with review and refinement of project parameters
- Providing technical and contracting assistance
- Preparing the WYECIP Contract documents
- Reviewing audits, proposals, calculations, contracts, and reports
- Assisting with oversight of project development
- Providing monitoring of the project implementation
- Reviewing Measurement and Verification of savings
- Mediating any conflicts that may arise as needed

8.0 PROJECT IDENTIFICATION and INITIAL DEVELOPMENT

8.1 Overview

The WYECIP provides a standardized process for Facility Owners who wish to improve the energy and operating efficiency of their buildings using an Energy Performance Contract (EPC). Once a commitment is made to enter into the EPC process, there is considerable involvement on the part of the Facility Owner, ESCo, and WBC in detailed project development. It is therefore important to evaluate any potential EPC opportunity at the outset for feasibility, consistency with the Facility Owner's goals, and appropriateness of using an EPC for the project.

There are two paths for beginning the initial development of EPC projects under the WYECIP. One results from awareness efforts by the WBC State Energy Office regarding the WYECIP throughout Wyoming and/or Facility Owners making contact with the WBC for energy efficiency assistance. The other will come from the pre-qualified ESCos marketing their services and the WYECIP. In either case, a Facility Owner Contract must be executed with the WBC to take advantage of the benefits of the WYECIP.

Both approaches will generally include an initial feasibility study of project potential and measures recommended for further evaluation. When a potential project is identified, a WYECIP Investment Grade Audit and Project Development Contract is executed by the Facility Owner and the ESCo for detailed analysis. This contract document will be prepared by the WBC for the Facility Owner based upon discussions and negotiations between the Facility Owner and the ESCo.

The following sections describe the identification and initial development process for those projects started from initial contact with the WBC or from ESCo marketing efforts. The flow chart provided in Figure 8-1 illustrates the process from initial contact through award of the WYECIP Investment Grade Audit and Project Development Contract.

8.2 Facility Owner Identified Projects

The WBC State Energy Office will actively promote the WYECIP with public or non-profit Facility Owners throughout Wyoming. These efforts will include presentations at individual facilities, participation in conferences held by various Facility Owner associations, and other forms of outreach. In addition, Facility Owners making contact with the WBC for assistance with energy efficiency will be introduced to the WYECIP and the potential benefits of EPC. In many cases Facility Owners may already have improvement projects in mind and strong consideration should be given to implementing these under the WYECIP. Another source of potential projects will likely be those facilities that had a Level 2 audit performed under the previous Institutional Conservation Program. These types of potential projects are referred to as "Facility Owner Identified Projects".

8.2.1 Facility Owner Contract

Facility Owners desiring to participate in the WYECIP will be asked to send a letter (generally via email) to the WBC State Energy Office expressing interest in the program and requesting a Facility Owner Contract. In response, the WBC will send out a contract for review and execution by the Facility Owner.

8.2.2 Project Screening and Utility Bill Analysis

Once the Facility Owner Contract is fully executed, WYECIP staff will conduct a telephone screening with the Facility Owner to gain insight into the background, needs, potential for a project, and if an EPC is the right approach. Facility Owners will be asked to provide copies of the last twelve (12) months of utility bills (electric, gas, propane, etc.) for analysis. This analysis requires that copies of the actual bills be provided rather than summaries such as spreadsheets or reports from utility tracking systems.

Upon receipt of the utility bills WYECIP staff will perform an analysis of the energy use at the facility as part of an initial feasibility study. Following this analysis, a site visit will be scheduled to meet directly with facility personnel and perform a walk-through survey of the energy consuming equipment. During this visit the facilities operating and maintenance budgets will be discussed as well as capital improvement plans and funding availability. Meetings with management, Board members, and others involved in decision-making will also be part of the site visit as appropriate.

8.2.3 Initial Feasibility Report

WYECIP staff will then evaluate potential efficiency measures and prepare an Initial Feasibility Report. The feasibility report presents a preliminary assessment of project potential with a review of existing conditions, potential Energy Conservation Measures (ECMs) recommended for further evaluation, budget estimates of implementation costs and energy savings, and the results of the utility bill analysis. Additionally, this report may contain measures the facility could implement on its own at low or no cost.

If at any time during the initial feasibility study process the Facility Owner and WYECIP determine that a project is not viable under an EPC, analysis and further development can be terminated. This is one of several decision points the Facility Owner has in the overall EPC process.

8.2.4 ESCo Selection

As discussed in other sections of this Program Manual, the WBC provides due diligence and a rigorous pre-qualification process for Energy Services Companies participating in the WYECIP. Facility Owners participating in the WYECIP will be provided with a list of ESCos that have been pre-qualified by the WBC and have executed ESCo Contracts. Only those ESCos that have been pre-qualified and are

signatory to an ESCo Contract are eligible for participation in the WYECIP. Facility Owners using the program must select from one of these ESCos.

Facility Owners working with the WYECIP have the option of selecting an ESCo that has been pre-qualified for the WYECIP through the WBC (and has executed an ESCo Contract with the WBC) or conducting an abbreviated selection process between two or more of the pre-qualified ESCos. It is anticipated that this process would simply entail requesting information and/or interviewing candidate firms from the WYECIP list of pre-qualified ESCo and making a selection based on the information obtained. An additional Request for Proposals process for selection of an ESCo conducted by individual Facility Owners is not allowable under the WYECIP.

The WYECIP does not allocate projects among the pre-qualified ESCos or select an ESCo for a particular project. WYECIP support to the Facility Owner includes assistance in preparing requests for information or interview questions for ESCos. WYECIP personnel will be neutral and unbiased for ESCo selection however; part of the support provided is to answer questions, offer clarifications on information provided by ESCos, and sit at the Facility Owner's side during interviews or any other interactions with ESCos related to selection.

8.2.5 Investment Grade Audit and Project Development Contract

Once an ESCo has been selected discussions are held to determine the scope of the Investment Grade Audit and the parameters for project development. The cost for the audit is also negotiated at this time. WYECIP support is provided for development of the Investment Grade Audit and Project Development Contract and the final contract will be prepared by the WBC using the WYECIP contract document.

The project will then move to the Investment Grade Audit and Project Development Phase which is discussed in detail in Section 9.0 of this program manual.

8.3 ESCo Identified Projects

ESCos that have been pre-qualified and are signatory to an ESCo Contract may market their services directly to Facility Owners, provided they do so under the requirements of the WYECIP ESCo Contract. As part of this effort they will work with individual Facility Owners to identify needs, goals, and opportunities for improvements. In these cases the potential project is known as an "ESCo Identified Project".

8.3.1 Facility Owner Contract

If a potential project is identified by an ESCo in this manner, the Facility Owner must execute the Facility Owner Contract with the WBC early in the process to engage the technical and contracting support services provided by the WYECIP. The WYECIP ESCo Contract obligates the ESCo to promote the WYECIP and facilitate Facility Owner contact with the WBC for executing a Facility Owner Contract.

Once the Facility Owner Contract is in place, the WBC may provide pre-project review of each proposed project. This review may include inspecting the facility, examining records, interviewing Facility Owner personnel, reviewing the ESCo's initial feasibility report, and meeting with the ESCo and Facility Owner for each project.

8.3.2 Initial Feasibility Report

The ESCo will then evaluate the project potential and prepare an Initial Feasibility Report. The feasibility report should present a preliminary assessment of project potential with a review of existing conditions, potential Energy Conservation Measures (ECMs) recommended for further evaluation, budget estimates of implementation costs and energy savings, and the results of utility bill analysis. The report should provide sufficient information to allow the Facility Owner to determine if the project is technically and financially viable enough to warrant proceeding to the Investment Grade Audit and Project Development Phase.

If at any time during the preliminary evaluation process the Facility Owner and ESCo determine that a project is not viable under an EPC, analysis and further development can be terminated.

8.3.3 ESCo Selection

In the case of an ESCo-identified project, where a Facility Owner and a pre-qualified ESCo have developed a relationship, and the Facility Owner executes a WYECIP Facility Owner Contract, it is anticipated that additional ESCo selection efforts will not be required.

8.3.4 Investment Grade Audit and Project Development Contract

Once the ESCo has completed its preliminary evaluation, and a viable project appears to exist, discussions are held to determine the scope of the Investment Grade Audit and the parameters for project development. The cost for the audit is also negotiated at this time. WYECIP support is provided for development of the Investment Grade Audit and Project Development Contract and the final contract will be prepared by the WBC using the standard WYECIP document.

The project will then move to the Investment Grade Audit and Project Development Phase which is discussed in detail in Section 9 of this program manual.

8.4 Roles, Responsibilities, and Deliverables

8.4.1 Roles and Responsibilities

This phase of a potential Energy Performance Contract project has responsibilities for individual team members that include, but are not necessarily limited to:

8.4.1.1 Facility Owner

- Execute a Facility Owner Contract with the WBC State Energy Office
- Engage the WBC State Energy Office for initial assessment of project potential or review of initial assessment performed by an ESCo
- Select an ESCo that has been pre-qualified by the WYECIP and has executed the ESCo Contract with the WBC State Energy Office
- Assign members to the facility project team including operations, maintenance, financial and upper management personnel
- Ensure appropriate personnel attend project development meetings dependent upon the subject matter to be discussed
- Provide access and escort to buildings
- Provide information as needed for the feasibility study, the Investment Grade Audit, and other project development activities
- Work with ESCo to develop/refine project parameters
- Execute the WYECIP Investment Grade Audit and Project Development Contract with ESCo

8.4.1.2 WBC State Energy Office

- Perform an initial evaluation of project potential (if an ESCo is not already involved) and prepare a report for the Facility Owner
- Attend meetings between Facility Owner and ESCo as needed
- Assist with review and refinement of project parameters
- Review preliminary report of project potential prepared by ESCo
- Provide technical and contracting assistance
- Prepare the WYECIP Investment Grade Audit and Project Development Contract documents

8.4.1.3 Energy Services Company

- Engage WBC State Energy Office on projects identified through ESCo's direct marketing
- Adhere to the guidelines and requirements of the WYECIP and use the standard documents and processes
- Perform an initial evaluation of project potential and prepare a report for the Facility Owner
- Execute a WYECIP Investment Grade Audit and Project Development Contract with Facility Owner

8.4.2 Deliverables**8.4.2.1 Facility Owner**

- Executed Facility Owner Contract with the WBC State Energy Office

- Executed WYECIP Investment Grade Audit and Project Development Contract with the ESCo

8.4.2.2 WBC State Energy Office

- Initial Energy Engineering Feasibility Report of project potential (if an ESCo is not already involved)
- Review of preliminary report of project potential prepared by ESCo
- WYECIP Investment Grade Audit and Project Development Contract documents

8.4.2.3 Energy Services Company

- Initial Feasibility Report on initial evaluation of project potential
- Executed WYECIP Investment Grade Audit and Project Development Contract with Facility Owner

WYECIP Program Flow Chart for EPC Projects

Initial Project Development Phase

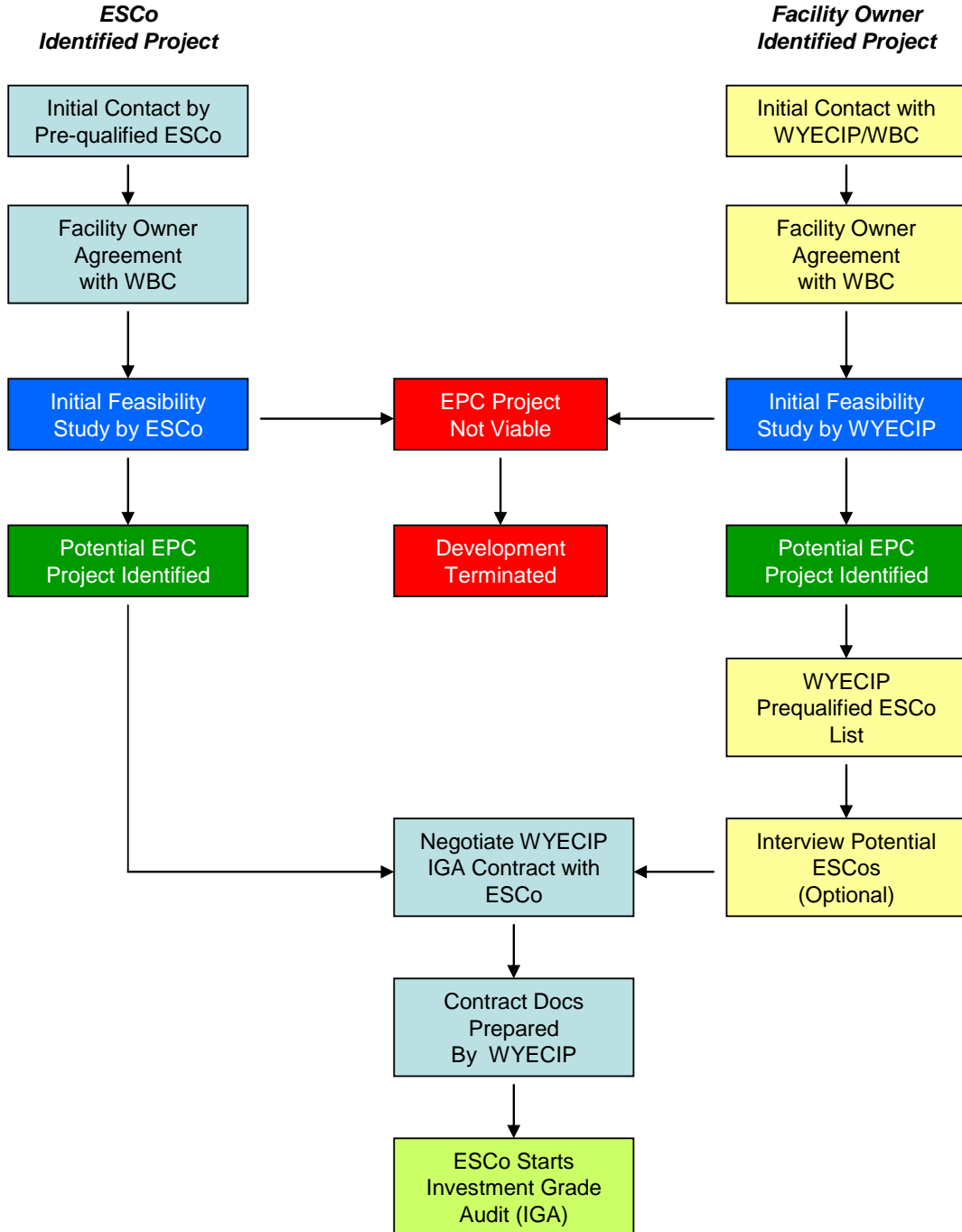


Figure 8-1

9.0 INVESTMENT GRADE AUDIT and PROJECT DEVELOPMENT PHASE

9.1 Overview

The Investment Grade Audit provides the basis for the entire Energy Performance Contract project, including the financing arrangement. In addition to a detailed investigation of the facility's current energy and water consuming equipment inventory, condition, operation, maintenance and performance, the Investment Grade Audit examines potential energy and water efficiency upgrades, develops implementation costs, and calculates energy and/or water savings. Life cycle costs, operation and maintenance requirements, and risks for future performance are also assessed.

One of the most important components of the Investment Grade Audit is development of the energy baseline for the facility. The energy savings, upon which the guarantee and ultimately project financing are developed, are calculated in relation to this baseline. It is critical that the Facility Owner and the ESCo work together to develop and agree upon the baseline to avoid the potential for future misunderstanding of savings measurement. The WYECIP provides support to Facility Owners for this process.

Similarly, the plan for measurement and verification of savings must be co-developed by the Facility Owner and the ESCo. The final agreed-upon plan becomes part of the Energy Performance Contract and establishes the methodology for determining savings persistence throughout the life of the contract. Again, the WYECIP provides assistance to Facility Owners with development of the Measurement and Verification Plan.

The process contained in the WYECIP Investment Grade Audit and Project Development Contract provides the framework for project development. It is designed to assure a high level of Facility Owner involvement and participation in project development with incremental decision points for both the Facility Owner and the ESCo as development moves forward. WYECIP support is provided throughout the process as described in this Section.

Completion of the Investment Grade Audit and Project Development Phase results in an Investment Grade Audit Report and Project Proposal prepared by the ESCo, representing a 30-35% design for the project.

Figure 9-1 at the end of this section illustrates the major steps in the Investment Grade Audit and Project Development Phase.

9.2 WYECIP Investment Grade Audit and Project Development Contract

The purpose of the WYECIP Investment Grade Audit and Project Development Contract is to set specific expectations for both the ESCo and the Facility Owner and provide a detailed process for all parties to follow. The contract will also precisely define what the ESCo's deliverables to

the Facility Owner will be. The Investment Grade Audit and Project Development process establishes the basis for the Energy Performance Contract to follow.

Under the WYECIP, the ESCo and Facility Owner will negotiate the fee for completing the investment grade audit based on facility size and the complexity of the potential project. This allows ESCos and Facility Owners the opportunity to agree on an acceptable fee on a project-by-project basis. The agreed-upon fee incorporates all of the activities associated with project development as described in the WYECIP Investment Grade Audit and Project Development Contract. The maximum project markups and fees as well as the requirement for open book pricing established in the WYECIP ESCo Contract shall apply for costs in the WYECIP Investment Grade Audit and Project Development Contract. The WYECIP Investment Grade Audit and Project Development Contract document itself contains the conditions and requirements for the contract under the program and, other than for the insertion of dates, etc. where indicated, should not be interpreted as being open to further negotiation.

As part of the Investment Grade Audit, the ESCo will be required to develop a preliminary Measurement and Verification (M&V) plan for review. Measurement and Verification is the process by which the guaranteed annual savings are evaluated each year. The M&V plan embodies the mutually agreed-upon methods that the ESCo will use to determine savings persistence throughout the life of the Energy Performance Contract. In the audit report, a preliminary plan will provide an initial description of each potential efficiency measure and proposed measure-specific M&V methods for review and discussion with the Facility Owner. The final mutually agreed-upon plan will be part of the final Energy Performance Contract.

The Investment Grade Audit and Project Development Contract document will be prepared by the WBC for execution by the Facility Owner and the ESCo using the WYECIP contract document. A copy of the WYECIP Investment Grade Audit and Project Development Contract is included in Appendix 1C.

9.3 Contract Attachments

The WYECIP Investment Grade Audit and Project Development Contract incorporates several Attachments representing key areas of project development. These documents are attached to and made a part of the Investment Grade Audit and Project Development Contract by reference. Brief descriptions of the various Attachments are contained in the following paragraphs. A copy of each Investment Grade Audit and Project Development Contract Attachment is included in the WYECIP Program Manual Appendices.

9.3.1 Attachment A: WYECIP Contract General Conditions

A standardized set of General Conditions has been developed for the WYECIP contracts. These conditions are incorporated in the WYECIP Investment Grade Audit and Project Development Contract as Attachment A. The General Conditions set forth here are a requirement for the contract and should not be interpreted as being open to further negotiation. In instances where Facility Owners have special terms and conditions related to their contracting process, it may be appropriate to include these in

an additional Attachment with its own unique designation. A copy of the WYECIP General Conditions is included in Appendix 1E.

9.3.2 Attachment B: List of Buildings Included in Contract

This Attachment lists the buildings to be included in the Investment Grade Audit. The total square footage of the buildings evaluated is the basis for calculating the cost of the Investment Grade Audit. A copy of this Attachment is included in Appendix 1F.

9.3.3 Attachment C: Cost & Pricing Elements

This Attachment contains the Markup and Fee Schedules negotiated between the Facility Owner and the ESCo for the purposes of the Investment Grade Audit and Project Development Phase. It includes the final cost for performing the Investment Grade Audit and proposed project markups and fees for pre-defined categories to be used in evaluating implementation costs for measures considered in the Investment Grade Audit. Costs, markups, and fees shall not exceed the amounts shown in this Attachment. Categories not included in the schedules are not allowable for use in the WYECIP. A copy of this Attachment is included in Appendix 1G.

The WBC has established maximum audit costs, markups, and fees for the WYECIP. The example Cost and Fee Schedule provided in Appendix 1G illustrates the maximums that may be applied in any Investment Grade Audit and Project Development Contract or Energy Performance Contract developed and executed under the WYECIP. ESCo audit costs, markups, and fees for individual Energy Performance Contract projects shall not exceed the maximums established by the WBC.

Facility Owners may choose to accept audit costs, markups, and fees proposed by the ESCo for individual projects without further negotiation, provided they do not exceed the maximums established, or directly negotiate with the ESCo for reductions as dictated by individual facility or project requirements. The ESCo may also propose lower audit costs, markups, and fees depending upon individual project considerations or their own internal business approach.

The mark-up and fee schedule used in the Investment Grade Audit and Project Development Phase may be subject to additional negotiation for the Energy Performance Contract.

9.3.4 Attachment D: Financing RFP Package

Financing for projects implemented under the WYECIP may be provided directly by the individual Facility Owner or through a third party financier under a separate agreement between the individual facility and a financing company. The ESCo will include the Facility Owners' recommended financial institutions if so requested for individual projects.

The ESCo may be required to solicit proposals for financing on behalf of the individual Facility Owner. To solicit proposals, the ESCo will use the RFP and supplemental information provided in Attachment D, the Financing RFP Package. A copy of this Attachment is included in Appendix 1H.

For legal purposes the first page in this Attachment contains a notice, in a text box, for Facility Owners with regard to financing. This text box should be removed from the document prior to issuing the RFP for Financial Services.

9.3.5 Attachment E: Risk Assessment Matrix (Preliminary)

There are a number of areas of potential risk in any performance contract and it is important for the Facility Owner and ESCo to discuss these risk factors and mutually agreed upon approaches for mitigation. To facilitate this, the WYECIP provides a Risk Assessment Matrix containing common risk factors to be considered. This matrix is incorporated in the Investment Grade Audit and Project Development Contract as an Attachment. A copy of the Attachment is included in Appendix 1J.

The ESCo shall complete and submit with its Project Proposal a preliminary Risk Assessment Matrix detailing its proposed approach or method to address each area of potential risk listed. The format of the Risk Assessment Matrix allows the Facility Owner then to insert comments regarding the ESCo's proposed approach. This provides the basis for discussion and agreement on strategies to be included in final form in the Energy Performance Contract.

9.3.6 Attachment F: Measurement and Verification Plan Guidelines

Energy performance contracts are based on guaranteed savings. Under the WYECIP, a savings guarantee is required for each year during the entire term of a performance contract. Therefore a critical piece of an EPC is the Measurement and Verification (M&V) plan that defines exactly how the guaranteed savings will be verified for each year of the performance period.

One of the primary purposes of M&V is to reduce risk to an acceptable level, which is a subjective judgment based on the Facility Owner's priorities and preferences. "Risk" in the M&V context refers to the uncertainty that expected savings will be realized. Assumption of risk implies acceptance of the potential monetary consequences.

In performance contracts, risks are allocated between the ESCo and the Facility Owner. Allocation of risk is accomplished through carefully developed M&V strategies that are mutually agreed upon.

The proposed M&V approach is developed during the Investment Grade Audit and Project Development Phase. Details of required plan elements are included in the

Investment Grade Audit and Project Development Contract and summarized in Section 9.6.6 of this Program Manual.

The final M&V plan is usually agreed upon during Energy Performance Contract negotiations but it is important that the Facility Owner and the ESCo agree upon general M&V approaches to be used prior to starting the Investment Grade Audit. The M&V method(s) chosen can have a dramatic affect on how the baseline is defined, determining what activities are conducted during the audit.

The WYECIP has developed a set of guidelines for Measurement and Verification in projects under the program. These are intended to be used by both the Facility Owner and the ESCo to understand approaches and create acceptable methods for each individual project. The WYECIP guidelines are attached to the Investment Grade Audit and Project Development Contract for reference. A copy of this Attachment is included in Appendix 1K.

9.3.7 Attachment G: Contract Schedules CS-1 through CS-5 (Proposed)

To standardize the presentation of project costs, savings, energy conservation measures, cash flow and payment information, the WYECIP utilizes several distinct Contract Schedules. The preliminary version of the Contract Schedules are completed and submitted as the pricing section of the ESCo's Project Proposal. Copies of these schedules are included in the Investment Grade Audit and Project Development Contract as Attachment G. Examples of the Contract Schedules are found in Appendix 1L of this Program Manual.

The final Contract Schedules, as modified or amended in negotiations with the Facility Owner for the Energy Performance Contract, will be Attachments to the Energy Performance Contract. The Contract Schedule forms are identical with the ESCo marking them "Proposed" or "Final", as appropriate, on each Schedule.

Brief descriptions of the required schedules follow below. Details of required information are included in the Investment Grade Audit and Project Development Contract and summarized in Section 9.6.10 of this Program Manual.

9.3.7.1 Schedule CS-1 Implementation Cost by Energy Conservation Measure

This Schedule proposes the Construction Period investment, the first year annual cost savings, and simple payback in years for each ECM.

9.3.7.2 Schedule CS-2 Proposed First Year Annual Cost Savings

This Schedule provides the estimated first year annual cost savings, and energy units and dollars in years for each ECM. This is the the total savings estimated, as developed in the Investment Grade Audit, and is not necessarily the Guranteed Savings which are shown on Schedule CS-4.

9.3.7.3 Schedule CS-3 Performance Period Cash Flow

This Schedule illustrates the proposed cash flow for the project. Development of this schedule will require the ESCo to coordinate information with the financial services provider.

9.3.7.4 Schedule CS-4 Guaranteed Annual Cost Savings and Annual Payments

This Schedule shows the ESCo's proposed annual cost savings, guaranteed annual energy savings, and the annual financing payments.

9.3.7.5 Schedule CS-5 Annual Termination Ceiling

This Schedule provides the termination ceiling, on an annual basis, for the financing agreement. Development of this schedule will require the ESCo to coordinate information with the financial services provider.

9.3.8 Attachment H: Notice of Acceptance of Investment Grade Audit Report

The Facility Owner will review the Final Investment Grade Audit Report and Project Proposal, and if acceptable, will issue a Notice of Acceptance of Investment Grade Audit Report in anticipation of the Facility Owner and ESCo entering into an Energy Performance Contract. The WYECIP format for this notice is included as Attachment H and a copy can be found in Appendix 1M of this Program Manual.

Acceptance of the Final Investment Grade Audit Report does not commit the Facility Owner to an Energy Performance Contract; negotiation and execution of the Energy Performance Contract document with the ESCo is still required.

9.4 Types of Energy Conservation Measures (ECMs)

The Investment Grade Audit and Project Development Contract requires the ESCo to consider technologies in a comprehensive approach including energy efficiency or renewable energy technology. To aid in WYECIP monitoring and tracking efforts a number of categories have been developed for the various types of measures. These category numbers and descriptions are contained in the Investment Grade Audit and Project Development Contract and shall be used by the ESCo when identifying measures in the Investment Grade Audit Report and Project Proposal.

9.5 Allowable Costs and Savings

The types of savings generated in individual projects will vary. The WYECIP provides the following guidelines for types of savings that may be considered. The Facility Owner will provide the ESCo with sufficient guidance to develop savings estimates. WYECIP support during this phase includes assistance in evaluating the types of savings appropriate for the facility. Any savings or other negotiable items related to maintenance and operation of the

facilities will be rigorously reviewed and will be limited to only those that can be thoroughly documented.

Allowable costs are typical for those found in construction projects. WYECIP support includes assistance in evaluating the types of costs proposed for compliance with WYECIP requirements.

9.5.1 Savings

The following are allowable savings factors approved for consideration:

- Energy and water savings
- Facility Owner material/commodity savings, including scheduled replacement of parts
- Outside labor cost savings, including maintenance contracts

9.5.2 Negotiable Items

The following may be negotiated:

- Facility Owner deferred maintenance cost
- Escalation rates for natural gas, electricity, water, material/commodity cost savings, and allowable labor savings. These are rates to be used in cash flow projections for project development purposes. Actual rates and a floor rate may be used in a subsequent Energy Performance Contract.
- Interest rates (all types of financing that are available and could be considered for this project)
- Outside incentive funds (utility incentives, grants, etc.)
- Customer equity cash contribution to the project

9.5.3 Costs

Construction Costs may include the following:

- Labor (and normal fringe benefits) paid by ESCo, **exclusive** of labor for design, construction management, monitoring and commissioning
- Equipment and materials incorporated into the project
- Construction equipment used in the construction phase, but which are not incorporated into the project
- Subcontract costs including any payments to third parties relating to subcontracted work on the site **exclusive** of costs for design, construction management, monitoring or commissioning
- Miscellaneous project costs include reasonable expenses for bonds, insurance, job trailers, portable toilets, job vehicles, software licensed to Facility Owner, and job site office space, but **excludes** costs (other than subcontractor costs) incurred by ESCo for office supplies and expenses including document reproduction, phone and fax usage; incidental job site expenses such as tools; general office supplies and expenses, including document reproduction, phone and fax usage; meals; travel and overnight accommodations

Markups and fees shall be as defined in WYECIP Investment Grade Audit and Project Development Contract Attachment C, Cost and Pricing Elements.

9.6 Investment Grade Audit Report and Project Proposal Requirements

The WYECIP requires that a number of key elements be part of the Investment Grade Audit Report and Project Proposal. A number of these are briefly described below.

9.6.1 Energy Performance Contract Term

The WYECIP allows an Energy Performance Contract Term of no longer than twenty (20) years and no greater than the cost-weighted average lifetime of the equipment. The Facility Owner and the ESCo should discuss and agree upon a goal for the contract term to be used in the Investment Grade Audit. As an alternative an ROI target (%) may be used.

9.6.2 Annual Savings Estimates

The utility and operational and maintenance cost savings for all measures must be estimated for each year during the contract period. Reporting average annual savings over the term of the contract is not acceptable.

9.6.3 Annual Guaranteed Energy and Cost Savings

The cost of an Energy Performance Contract project must be covered by the energy and related operation and maintenance cost savings incurred at the facility. The Facility Owner may provide additional capital contributions to fund incremental costs above the portion of the project that is funded by savings. Any such additional capital must be identified in the project financials.

The annual guarantee is required for the entire financing term. The guarantee is based on energy units and related cost savings attributable to all energy saving measures, and must equal or exceed all project costs each year during the contract period. The energy cost savings must be verified annually.

Annual project costs include debt service and payments to the ESCo for M&V fees, maintenance services, monitoring services, or other services as defined in the Energy Performance Contract.

9.6.4 Excess Savings

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

9.6.5 Construction Period Savings

Since the installation and operation of individual Energy Conservation Measures typically occurs at different times during the overall construction schedule, savings will begin to accrue on many ECMs prior to the end of the construction period.

These savings must be accounted for by the ESCo and illustrated in the Investment Grade Audit and Project Proposal as “Construction Period Savings”. Construction Period Savings may be retained by Facility Owner or used in the project financing approach. They shall not be used to overcome Savings Guarantee shortfalls during the Performance Period.

9.6.6 Measurement and Verification of Performance (M&V)

The ESCo must prepare and submit a site-specific Measurement & Verification (M&V) Plan with its Project Proposal. The M&V plan shall specify the M&V options(s) and method(s) that will be used for each energy and water conservation measure included in the Energy Performance Contract.

The M&V plan shall also include a schedule indicating M&V activities and post-implementation M&V reporting for each energy and water conservation measure. Typical M&V activities include, but are not limited to the following items.

9.6.6.1 Define pre-implementation baseline including:

- Equipment/Systems
- Baseline energy use
- System performance factors (e.g., lighting levels, temperature setpoints, time clock settings, etc.)
- Actions to determine baseline energy use, which may include site surveys, short term or long term metering, analysis of billing data, and/or engineering calculations

9.6.6.2 Define post installation conditions including:

- Equipment/Systems
- Post installation energy use
- Actions to determine post installation energy use which may include site surveys, short-term or long-term metering, analysis of billing data, and/or engineering calculations
- Factors beyond ESCo’s control that influence post-installation energy (e.g. building occupancy, plug load creep, etc.)

9.6.6.3 M&V submittals including:

- Pre-implementation baseline development
- Post installation report verifying that installed ECMs demonstrate the guaranteed annual energy, energy-related, and water cost savings specified in the Energy Performance Contract

- Annual Measurement and Verification Report to Facility Owner including data and calculations that demonstrate that continued performance achieves the guaranteed annual energy, energy-related, and water cost savings as required by the Energy Performance Contract

9.6.7 Project Financing

Financing for projects implemented under the WYECIP may be provided directly by the Facility Owner or through a third party financier under a separate agreement between the Facility Owner and a financing company. The ESCo agrees to include The Facility Owner's recommended financial institutions if so requested for the project.

The ESCo may be required to solicit bids for financing on behalf of the Facility Owner. To solicit bids, the ESCo shall use the RFP and supplemental information provided in Attachment D (Financing RFP Package).

9.6.8 Other Requirements

The ESCo will be responsible for providing all labor, material, etc. to install energy and water conservation projects and provide operations and maintenance as specified in the Energy Performance Contract. Details regarding the exact improvement measures, the equipment and labor costs associated with them, and all guaranteed energy and maintenance cost savings will be provided in the ESCo's Project Proposal. A separate financing agreement will be developed including payment schedules and lender financing terms and schedules.

In lieu of work proposed to be performed by the ESCo or a subcontractor recommended by the ESCo, the Facility Owner may specify that certain energy conservation measure components will be subject to requests to the ESCo for bids from one or more contractors acceptable to the Facility Owner. The ESCo will provide its specifications for bids for review and comment prior to their release to bidders. Upon request by the Facility Owner, the ESCo will provide the Facility Owner copies of all bid responses. The ESCo must consent to the bidder reasonably recommended by the Facility Owner and the ESCo will not unreasonably withhold such consent.

9.6.9 Report and Proposal Format Requirements

The Investment Grade Audit Report and Energy Performance Contract Project Proposal provides an engineering and economic basis for developing a potential Energy Performance Contract. The report shall be organized into the following sections:

- Overview of Proposed Project
- Energy and Water Savings Measures Proposed
- Proposed Measurement and Verification Approach
- Management Plan

- Price Proposal
- Appendix Material

Detailed requirements for ESCo's Investment Grade Audit and Energy Performance Contract Project Proposal are contained in the WYECIP Investment Grade Audit and Project Development Contract.

9.6.10 Price Proposal Requirements

The ESCo's Price Proposal shall consist of Contract Schedules 1 through 5 which shall be submitted by the ESCo with the Project Proposal upon completion of the Investment Grade Audit. At this point these schedules should be marked as "Proposed" where indicated on the Schedule. These schedules will form the basis for negotiation of the final Energy Performance Contract. Brief descriptions of the purpose of each of the Contract Schedules are contained in the following paragraphs.

9.6.10.1 Schedule CS-1 Implementation Cost by Energy Conservation Measure (ECM)

Schedule CS-1 presents the implementation period investment for each ECM included in the proposed Energy Performance Contract project. It reflects the equipment proposed for installation for each ECM indicated along with its implementation price and the calculation of the total estimated implementation price, or investment, for all proposed ECMs for the Energy Performance Contract project.

Additionally, this schedule presents the first year annual cost savings proposed from the Investment Grade Audit and a simple payback in years for each ECM indicated along with the calculation of the total first year annual cost savings for all proposed ECMs and aggregate simple payback for the Energy Performance Contract project. This information will correlate with the information provided in Schedule CS-2.

Both the ECM and category numbers shall be provided, in accordance with the numbering system described in the Investment Grade Audit and Project Development Contract document. The ECM numbers indicated in this Schedule shall be consistent throughout the ESCo's proposal, both technical and price.

The total bonded amount on CS-1 will be used to establish performance and payment bond requirements for the ECM implementation period, if applicable.

9.6.10.2 Schedule CS-2 Proposed First Year Annual Cost Savings

Schedule CS-2 presents a summary of the proposed estimated annual cost savings that will be achieved following the installation of the ECMs included in the Energy Performance Contract proposal. Both the ECM and category numbers shall be provided, in accordance with the numbering system described in the Investment Grade Audit and Project Development Contract document.

The annual cost savings requested for each ECM shall be broken down into energy and O&M cost savings. The energy savings shall be presented in the energy type consumed by the equipment as listed in the columns on Schedule CS-2. Subsequent demand and dollar savings shall be derived from the project site utility rates provided for the Investment Grade Audit.

The building square footage affected by the project shall be included in the Schedule (in 1000s SF) and total cost savings shall be converted to Btu's per square foot for a project summary.

The ESCo shall provide adequate supporting documentation for the estimated annual cost savings submitted in Schedule CS-2, to include whatever detail is pertinent to the specific project.

9.6.10.3 Schedule CS-3 Performance Period Cash Flow

Schedule CS-3 presents the ESCo's proposed project cash flow for a specific Energy Performance Contract project.

The schedule is divided into three sections. The Project Capitalization section contains the implementation price (which should correlate with Schedule CS-1), plus any financing procurement costs, less any pre-performance period payments, resulting in the total amount financed. The Term section illustrates the debt service stream on that investment. The Performance Period section pertains to the total expenses associated with the services the ESCo supplies to manage the project, and maintain and verify ECM performance during the performance period of the Energy Performance Contract project term.

The ESCo shall propose the estimated cash flows for each year of the proposed Energy Performance Contract project term. The pricing provided in this schedule shall be traceable to the information provided in Schedules CS-2 and CS-4.

As required by the Schedule, the ESCo shall specify the Applicable Financial Index used with its source and date, the financing term of

the project (in years), the index rate (derived for the project's term from the financial index), any added premium being applied to amortize the investment, and the resultant Project Interest Rate. The date the proposed Project Interest Rate is effective through is also required to be identified on the Schedule.

Additional columns should be inserted in the Schedule as needed to reflect the actual number of years in the Energy Performance Contract project term. Totals for each row over the term shall be calculated and shown in the far right column.

Development of this schedule will require the ESCo to coordinate information with the financial services provider.

9.6.10.4 Schedule CS-4 Proposed Guaranteed Annual Cost Savings and Annual Payments

Schedule CS-4 presents the ESCo's proposed annual cost savings, guaranteed annual energy savings, and annual financing payments. The values submitted on Schedule CS-4 are for 12-month periods, beginning after completion by the ESCo of the implementation period for all ECMs, and acceptance by the Facility Owner.

The annual cost savings proposed for each year of the proposed Energy Performance Contract performance period shall be based on the results of the Investment Grade Audit and correlate with the other Contract Schedules required for submission. The ESCo shall include the ESCo's guaranteed annual cost savings in column (B). The Investment Grade Audit findings, data, and calculations support Schedule CS-4.

The annual financing payments proposed shall be for each year of the proposed performance period after ECM implementation and acceptance by the Facility Owner.

Schedule CS-4 shall specify any applicable escalation rates that will be used for utilities during the Energy Performance Contract's period of performance. The estimated annual cost savings in column (A) of Schedule CS-4 shall be based on the specified rates for utilities and any applicable escalation.

Payments will be structured based upon the negotiated annual fixed payment schedule, as established in Schedule CS-4, column (C), and included in the Energy Performance Contract award. This represents the Energy Performance Contract cost and will be supported by the information submitted in the other Contract Schedules submitted with the Energy Performance Contract project proposal.

9.6.10.5 Schedule CS-5 Annual Termination Ceiling

Development of this schedule will require the ESCo to coordinate information with the financial services provider. The column headed “Total Cancellation Ceiling,” is a presentation of proposed, and later negotiated, annual cancellation ceilings to establish the maximum termination liability in the event of Contract cancellation or termination for other than an event of non-appropriation. Actual termination charges will be negotiated as part of any cancellation or termination settlement, per established State of Wyoming requirements. The column headed “Outstanding Capital Investment,” is a fixed subset of the Total Cancellation Ceiling. It constitutes the remaining unamortized principal on Total Amount Financed for each time period specified in the Schedule CS-5, plus any prepayment charges as negotiated and included in the pricing (including financing) of the project.

9.7 Process Steps

The WYECIP Investment Grade Audit and Project Development process is intended to be interactive and iterative with close cooperation between the ESCo and the Facility Owner, with the overall objective that the Investment Grade Audit Report and Project Proposal is co-developed between the ESCo and the Facility Owner. Several decision points for project viability and methods to proceed are incorporated. The minimum process requirements for the WYECIP are briefly described in the following sections. A detailed description of the process required is contained in the WYECIP Investment Grade Audit and Project Development Contract. ESCos may expand upon the process steps as needed for individual projects or to be consistent with their individual development approach. It is also required that WYECIP support be engaged throughout the process.

9.7.1 Project Development Kickoff Meeting

Success of any EPC project depends upon open communications and a partnership approach. The kickoff meeting sets the stage for the Investment Grade Audit and development of the Project Proposal. It provides the opportunity for all of the people who will be involved in the project to meet in a formal setting to determine interests, plans, problems, etc. related to the facility and its operation and to establish goals. This meeting should be very open and both the ESCo and the Facility Owner should be willing to freely discuss anything pertinent to the project.

The kickoff meeting should be structured with the goal of understanding and agreement on the audit and proposal development process for the project. Further, the parameters for a viable project will be developed. The ESCo will create the kickoff meeting agenda and submit it to the Facility Owner within a reasonable time before the meeting and will be responsible for the capture and publication of meeting notes to all parties.

Meeting attendees from the facility should include those who will be directly supporting the ESCo during the audit *and* management responsible for decision making. The ESCo should ensure that representatives from its audit, construction, proposal development, and if possible M&V teams are present. The WYECIP provides consultant support for the kickoff meeting.

9.7.1.1 Discussion Items

Items that should generally be covered during the kickoff meeting include:

- Introductions of Facility Owner and ESCo team members and their roles in the project
- Review of the WYECIP process, deliverables, and commitment points for this phase
- Facility Owner interests, problems, goals, and priorities; management support
- Buildings or sites to include
- Building environmental/performance requirements
- Long-term plans for the facility
- Demolition, new construction, studies, reports, or other information available
- Types of Energy Conservation Measures (ECMs) to consider
- Simple payback, contract term, total investment parameters
- ESCo discussion of plans for the Investment Grade Audit
- Investment Grade Audit and Project Proposal Development schedule/timeline with significant milestones
- Security and safety requirements
- Communications protocols: Establish leads and discuss responsibilities for ESCo and Facility Owner; frequency and method of communications
- Project development timeline
- Other issues as appropriate

While the actual final ECMs will not be known at the time of the project kickoff meeting, there are likely to be opportunities that both parties expect or want to be considered in the audit and proposal. If an Initial Feasibility Report has been prepared previously either by WYECIP or the ESCo, this meeting provides an opportunity to confirm appropriateness of the measures recommended in that report.

No project is complete or liability real until the final contract is signed but there are points in the process where risk is assumed or commitments are made. These points should be discussed and understood during the kickoff meeting. The impacts of changing attitudes and uncertain direction should be also discussed to develop an understanding of the importance of direct communication.

9.7.1.2 Project Development Timeline

A timeline expected for development of the project proposal into a signed contract should be created by the ESCo and discussed at the kickoff meeting. This timeline is critical for efficient proposal review, setting of expectations for measurement of project development progress, and keeping the Investment Grade Audit and development of the Project Proposal on track. Communication between the Facility Owner and ESCo on a regular, consistent basis is a key to success.

ESCo milestones on the timeline would be those items that the ESCo is committed to delivering either based on the WYECIP process or on internal systems used by the ESCo to keep the proposal development process moving forward.

Facility Owner milestones are those points in the investment grade audit and proposal development process where a general level of acceptability needs to be indicated to keep the entire process on schedule. These points may include, management support for project scope and size, facility technical manager acceptance of potential project direction, and planned review times for interim reports on development of the proposal.

9.7.2 Initial Assessment of Needs, Goals, and Opportunities

If the WYECIP or the ESCo has previously prepared an Initial Feasibility Report this step builds upon that report to provide a more in-depth assessment of the project's potential based upon the discussions during the kickoff meeting. The ESCo will collect data and background information on buildings, equipment and facilities operation and interview staff and occupants.

9.7.2.1 Facility Survey

If the ESCo has not already done so in preparing an Initial Feasibility Report, a survey of facilities will be performed to identify potential measures. In cases where initial feasibility work was done by WYECIP the ESCo should perform this survey to become familiar with the facility and confirm the recommendations in the WYECIP initial report.

If the Facility Owner has any previous studies or surveys these should be provided to the ESCo to allow consideration of the recommendations of others and to save time in gathering information.

The Facility Owner will need to allow the ESCo reasonable access to facility staff to ensure understanding of existing systems and opportunities. The ESCo agrees to work diligently to assess validity of information provided and to confirm or correct the information as needed.

9.7.2.2 Establish Base Year Consumption

The ESCo will analyze utility bills for at least the past 36 months and establish base year consumption for electricity, gas, steam, water, etc. in terms of energy units (kWh, kW, ccf, Therms, gallons, or other units used in bills) and in terms of dollars. The Facility Owner will need to provide copies of all utility bills for the ESCo to analyze. Any anomalous billings that could skew the base year representation and periods of time when equipment was broken or malfunctioning will be resolved through consultation with facility personnel and accounted for in calculating the base year.

Loading, usage and/or hours of operation for all major end uses of total facility consumption will be estimated and where loading or usage are highly uncertain (including variable loads such as cooling), the ESCo will use its best judgment, spot measurements or short-term monitoring.

Annual end-use estimated consumption will be reconciled with the annual base year consumption to within five percent for electricity (kWh), fuels and water. Electric peak demand (kW) for each end use will also be reconciled within five percent. This reconciliation will place reasonable limits on potential savings.

9.7.2.3 Preliminary Analysis of Potential Measures

Once data is gathered and analyzed as described above, the ESCo will prepare a preliminary analysis of potential measures. Measures should be considered in a comprehensive approach and all potential opportunities may be listed. The ESCo will then identify measures which appear likely to be cost effective and therefore warrant detailed analysis.

For each measure, the ESCo will prepare a preliminary estimate of energy or water cost savings including description of analysis methodology, supporting calculations and assumptions used to estimate savings. In addition, the ESCo will provide a preliminary estimate of implementation costs using the markups and fees defined in Attachment C, Cost and Pricing Elements.

This step in the process provides an incremental decision point for the investment Grade Audit. If during the analysis the ESCo and the Facility Owner conclude that an Energy Performance Contract is not viable within the parameters established by the Facility Owner, the Investment Grade Audit and further project development can be terminated.

9.7.3 Project Development Meeting to Discuss Preliminary Analysis

Upon completion of the initial assessment the ESCo and the Facility Owner will hold a project development meeting for the ESCo to present its preliminary analysis including assessment of energy use, savings potential, retrofit opportunities, and potential for developing an energy performance contract.

The projected economics for the EPC will also be discussed in regard to meeting Facility Owner's terms for completing the requirements of the audit report. The WYECIP will provide consultant support for this meeting.

This meeting is another incremental decision point where the ESCo and the Facility Owner agree on measures for further detailed evaluation and a method to proceed for developing the Draft Investment Grade Audit Report. To provide direction for detailed development of the project, discussion and agreement on key elements for preparing the Draft Investment Grade Audit Report should be included in this meeting as summarized in the paragraphs that follow.

Due to the considerable amount of issues that must be covered and the close interaction required, the ESCo and Facility Owner should consider scheduling focused workshops to cover specific elements of the investment grade audit and project proposal development. This format allows concentration on specific issues in each workshop. If this approach is used workshops are recommended for the following proposal elements:

- Energy Conservation Measures
- Energy Baseline and Adjustments to the Baseline
- Measurement and Verification
- Financial
- Construction
- Performance Period Services

9.7.3.1 Energy Conservation Measures (ECMs)

The ESCo will present a list of measures recommended for detailed analysis and inclusion in the Draft Investment Grade Audit Report. In addition measures considered in the preliminary analysis but not recommended for further study will be summarized. From this point considerable investment will be made in detailed development of the measures to be included. The Facility Owner and ESCo must discuss and agree on the ECMs to include in the Draft Investment Grade Audit Report.

9.7.3.2 Energy Baseline

The ESCo will describe the energy baseline proposed based on the preliminary analysis and the process used to develop the baseline. The proposed method for making future adjustments to the baseline for energy and water saving measures will also be discussed. The energy savings, upon which the guarantee and ultimately project financing are developed, are calculated in relation to this baseline. It is critical that the Facility Owner and the ESCo work together to develop and agree upon the baseline to avoid the potential for future misunderstanding of savings measurement.

9.7.3.3 Measurement and Verification Approach

The ESCo will present a preliminary proposed approach for measurement and verification of savings as related to the measures recommended. Discussion will include application of the options described in the WYECIP Measurement and Verification Plan Guidelines for each ECM. While details of the M&V Plan will be elaborated during detailed development of the measures, the Facility Owner and the ESCo should agree on the approach in order to provide direction to the ESCo.

9.7.3.4 Savings Guarantee

The ESCo will present its proposed approach to the savings guarantee. Any factors used by the company for establishing guaranteed savings of less than 100% of the estimated savings and the rationale for those factors should be discussed so they are fully understood by the Facility Owner.

The WYECIP requires the savings guarantee for each year throughout the entire contract term. Excess savings in any year cannot be carried over to make up for shortfalls in other years. Fees charged to individual projects for providing the performance guarantee (including third-party insurance expenses) are not allowable under the WYECIP.

9.7.3.5 Operations, Maintenance, and Repair Services

Options for operations, maintenance, and repair services on the installed measures and affected systems should be discussed in terms of potential scope for the ESCo's Project Proposal. The Facility Owner may prefer complete services provided by the ESCo, some level of sharing for these services, or no operations, maintenance, and repair services performed by the ESCo. Costs for the ESCo to perform these services will be included in the performance period cash flow and setting expectations in advance will make the Draft Investment Grade Audit Report more accurately reflect the final project.

9.7.3.6 Operations and Maintenance Savings

Savings from operations and maintenance efficiencies are a legitimate source of savings under the WYECIP and if these types of savings are to be included in the project economics, this item should be discussed so the ESCo includes only "true" cost savings in the project. Any savings related to maintenance and operation of the facilities will be rigorously reviewed and will be limited to only those that can be thoroughly documented.

9.7.3.7 Rebates and Other Financial Incentives

In some cases, energy or water providers offer rebates or other financial incentives for installation of energy or water saving equipment that can be

applied to the project to help fund the capital improvement. The ESCo will investigate availability of any rebates or financial incentives so the Facility Owner and ESCo can discuss how these funds can be applied to help the project financials.

9.7.3.8 Escalation Factors

Energy and operations and maintenance costs tend to increase over time and these increases may be reflected in the Energy Performance Contract. The Facility Owner and ESCo should discuss and agree on whether savings should escalate over time due to projected utility or O&M cost increases. The ESCo's performance phase costs may also be subject to periodic increases. If the ESCo intends to escalate any of these costs in the Project Proposal, preliminary escalation rates should be included in the Draft Investment Grade Audit Report.

9.7.3.9 Codes and Environmental Requirements

Codes or regulations in the project location may have cost or feasibility impacts on potential ECMs. These issues, along with any potential environmental concerns (e.g. asbestos, hazardous waste disposal) should be discussed by the ESCo and Facility Owner and an agreed-upon method to proceed developed for the Draft Investment Grade Audit Report. .

9.7.3.10 Simple Payback

Simple payback is the installed cost of an ECM divided by the cost savings it is expected to generate. This can be a comfort issue with the Facility Owner and the simple payback for ECMs calculated in the preliminary analysis should be discussed as a determining factor in the project. The WYECIP does not impose any set simple payback requirements however the intent of the program is for Facility Owners to maximize the energy savings and upgrades that can be accomplished.

While there can sometimes be a temptation to implement only those measures that have relatively quick simple payback resulting in lower costs and shorter contract term, this practice should be avoided by ESCos and Facility Owners. The WYECIP requires a comprehensive approach that allows measures with shorter simple paybacks to support measures with longer simple paybacks in the project's economics. This approach combines measures with a wide range of simple paybacks, considered as a package, for an aggregate project simple payback that is reasonable and results in a financing term within the maximum contract term allowed by the WYECIP.

9.7.3.11 Amount of Investment

The WYECIP does not limit the amount of project investment (implementation cost) for an EPC however, the Facility Owner may have internal guidelines or a

comfort level with regard to the total amount of investment in the project. The estimate of implementation costs developed in the preliminary analysis of potential measures should be discussed in order to ensure that the proposed project cost will be in a range that is acceptable to the Facility Owner. Arbitrary restrictions should be avoided as they will limit the project scope. Potential projects can be phased but typically only the largest sites should consider breaking their project into multiple phases and contracts.

9.7.3.12 Capital Contribution

In some cases, the Facility Owner also has available capital dollars to apply to the project to fund more capital improvements or to reduce the contract term. How these funds can be applied to help the project financially should be discussed.

9.7.3.13 Contract Length

The contract length can also be a comfort issue with the Facility Owner. The aggregate simple payback of the comprehensive ECM package, as well as available rates for financing, generally determine the contract length. An acceptable range for the length of the EPC must be discussed prior to proposal development to avoid delivery of an unacceptable proposal after several months of work. Arbitrary or unnecessary limitations should be avoided if possible because they will have the effect of decreasing the project scope if they are too restrictive. WYECIP allows a maximum contract term of 20 years for projects implemented under the program.

9.7.3.14 Financing

The type of financing for the projects should be discussed and agreed upon during this meeting, including whether the Facility Owner or the ESCo will pursue the financing arrangement. If the ESCo is identifying the financial resource the WYECIP Financing RFP Package shall be used.

9.7.3.15 Construction Schedule

The ESCo must provide a preliminary construction schedule with the Investment Grade Audit Report that shows the order in which the ESCo proposes to perform the work and the dates on which the ESCo contemplates starting and completing all major milestones. Utility services that must be discontinued temporarily to perform work must also be included on the construction schedule. Potential effects on this schedule due to the operation of the facility and impacts to the facility from the ESCos activities should be discussed with the Facility Owner so these can be accounted for in preparing the preliminary construction schedule.

9.7.4 Detailed Development of Energy Conservation Measures for Energy Performance Contract Proposal

Once the Facility Owner and the ESCo decide which potential energy conservation measures should be considered in detail, the ESCo proceeds with gathering additional audit information, detailed energy analysis, and preliminary design for the measures to be included in the Project Proposal.

The ESCo will use its best judgment regarding the employment of instrumentation and recording durations so as to achieve an accurate and faithful characterization of energy use. The methodology of ASHRAE, or other nationally-recognized authority that follows the engineering principle(s) identified for each retrofit measure, will be used for energy engineering.

The ESCo will also utilize assumptions, projections and baselines which best represent the true value of future energy or operational savings. 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 will be included.

When calculating implementation and performance period costs the ESCo will use costs provided prior to contract negotiations in all cost estimates. Markups and fees shall be as defined in Attachment C, Cost and Pricing Elements.

Development of a Measurement and Verification Plan for each measure will be part of detailed project development. In addition, the ESCo will prepare detailed financial information for the project as reflected in Contract Schedules CS1 through CS-5 including rebates, incentives, grants, etc. The ESCo may also identify potential financing arrangements depending upon the approach to financing the project.

9.7.5 Draft Investment Grade Audit Report and Energy Performance Contract Proposal

The Investment Grade Audit Report provides the engineering and economic basis for the Energy Performance Contract Project Proposal. The WYECIP requires the Investment Grade Audit Report and Project Proposal to first be completed in draft form to allow review by the Facility Owner and further discussion for agreement on content prior to its publication in final version by the ESCo. The WYECIP Investment Grade Audit and Project Development Contract contains details of the requirements for this report. An abbreviated outline of the required content is described in the following paragraphs.

9.7.5.1 Overview Section

This section will be an executive summary of the proposed project and will include a description of existing conditions at the facility; a table summarizing the recommended energy and water saving measures including implementation costs, annual savings and simple payback; a summary of annual energy and water use by fuel type and costs in the base year condition; an explanation of how savings will be calculated and adjusted due to weather, occupancy changes or other factors; preliminary analysis of energy performance contract terms and how the project will be financed ; a discussion of measures considered but not investigated in detail; and the ESCo's conclusions and recommendations.

9.7.5.2 Energy and Water Conservation Measures Section

This section will contain detailed information on development of the energy baseline, full written descriptions of each energy and water conservation measure, and savings calculations.

Discussion of development of the energy baseline will include a description and itemization of current billing rates, summary of all utility bills for all fuel types and water, definition of base year consumption and how it was established and a reconciliation of estimated end use consumption with the base year including discussion of any unusual findings.

The written description of energy or water conserving measures will sequentially number the measures using the WYECIP ECM category numbering system. For each proposed measure there will be a description of existing conditions, a detailed description of the measure, discussion of facility operations and maintenance procedures that will be affected by the measure's installation/implementation, the ESCo's plan for installing or implementing the recommendation, estimated energy or water savings, and discussion of the measures compatibility with existing systems. Annual energy and cost savings for each measure will be illustrated within each measure description utilizing the tables shown in the Investment Grade Audit and Project Development Contract.

This section should also include a discussion of impacts that facility would incur after contract ends, if any, such as operation and maintenance impacts, staffing impacts, budget impacts, etc.

Savings calculations will consist of base year energy use and cost, post-retrofit energy use and cost, and annual savings estimates including analysis methodology. The cost savings for all energy saving measures must be estimated for each year during the contract period and must be achieved each year. Reporting average annual savings over the term of the contract is not acceptable. The ESCo will also provide an explanation of how savings interaction between ECMs is accounted for in the calculations and how savings duplication or interaction

between ECMs is avoided. Detailed calculations and description of any operation and maintenance savings to be considered will also be included.

9.7.5.3 Management Plan Section

Here the ESCo will provide detailed information on its approach to managing the implementation of the EPC project. Management, coordination, use of subcontractors, and engagement of the Wyoming Business Council, State Energy Office and Facility Owner in project implementation and post-construction activities will be described. This discussion will include the following subsections:

- **Organization:** The ESCo's organization plan for implementing and managing the project shall include an organization chart indicating individuals assigned to the project, the responsibilities of each individual shown and the lines of authority within the overall organization. The chart will indicate what portions of the project, if any, are to be sub-contracted.
- **Subcontractors:** Any work that is proposed to be completed by a subcontractor and the ESCo's approach to selection and management of subcontractors shall be described. Any subcontractors the ESCo has already selected will be identified and organizational charts for subcontractors will be provided.
- **Construction Management:** The ESCo will discuss its approach to construction management including how the ESCo will work with facility management and maintenance personnel in order to coordinate construction and avoid conflicts with the facility's operation and use. Flexibility and/or any limitations regarding other possible Facility Owner activities such as management of additional energy and water projects and integration of other identified capital needs with other projects which may or may not contain energy and water saving opportunities should be included.
- **Schedule:** A Preliminary Installation Schedule will be provided to show the order in which the ESCo proposes to perform the work and the dates on which the ESCo contemplates starting and completing all major milestones (including acquiring materials, equipment, permits). The schedule will be in the form of a progress chart.
- **Utility Service Interruptions:** Any planned interruptions of utility services to perform work will be described including the planned length of the interruption, its time (date, day of week, time of day, etc.), and a justification. Planned interruptions of utility services will also be indicated on the project installation schedule.
- **Operation and Maintenance of ECMs:** The ESCo will show the organizational structure and describe the approach for performance of the proposed ECM operations, maintenance and repair and replacement requirements. This discussion will identify the organization(s) (Facility Owner or ESCo/sub-contractor) responsible for operations and maintenance of ESCo-installed equipment, detail how responsibilities are shared, and identify any reporting requirements of the Facility Owner or the ESCo

during the performance period. Responsibilities and risks of operations are also briefly defined in the Risk Assessment Matrix.

- **Training:** A detailed description of how training for each measure will be provided for Facility Owner personnel. Training should be customized to reflect the level of operations and maintenance responsibility to be assumed by Facility Owner personnel.

The ESCo shall also submit with its proposal a Risk Assessment Matrix detailing its proposed approach or method to address each area of potential risk listed. The format and content of this is set out in the Risk Assessment Matrix Attachment to the Investment Grade Audit and Project Development Contract.

9.7.5.4 Other Required Elements

The Draft Investment Grade Audit Report and Project Proposal must also include the following:

- Estimates of the average useful service life of equipment proposed.
- A description of the proposed savings guarantee. The WYECIP requires the savings guarantee for each year throughout the entire contract term. Excess savings in any year cannot be carried over to make up for shortfalls in other years. Fees charged to individual projects for providing the performance guarantee (including third-party insurance expenses) are not allowable under the WYECIP.
- A preliminary commissioning plan for equipment/systems to be installed.
- A preliminary Measurement and Verification Plan that follows the International Performance Measurement and Verification Protocol (IPMVP) and is measure-specific, explaining how savings from each measure is to be measured and verified. The Preliminary M&V plan will follow the WYECIP Measurement and Verification Plan Guidelines.
- Calculations of carbon emissions reductions from the measures proposed.

9.7.5.5 Price Proposal Section

The ESCo's price proposal will include a detailed scope of the construction work needed and all anticipated costs associated with installation and implementation including:

- Engineering/design costs
- ESCo/vendor estimates for labor, materials, equipment; include special provisions, overtime, etc., as needed to accomplish the work with minimum disruption to the operations of the facilities
- Permit costs
- Performance/payment bond costs
- Construction management fees
- Commissioning costs
- Other costs/fees
- Company overhead/profit

- Environmental costs or benefits (disposal, avoided emissions, handling of hazardous materials, etc.)

Markups and costs used in the cost estimates shall not exceed those disclosed and negotiated as shown in the Cost and Pricing Elements Attachment to the Investment Grade Audit and Project Development Contract.

Any potential utility rebates or other incentives that may apply to the project and the proposed financing structure should also be described in this section.

The WYECIP Contract Schedules provide a concise means for presenting all of the information required with regard to the measures to be installed, implementation costs, annual savings, etc. These Schedules must be completed for the final version of the Investment Grade Audit Report and Project Proposal and the WYECIP recommends a draft form be used for the Price Proposal section of the Draft Investment Grade Audit Report and Project Proposal.

9.7.5.6 Appendix Material

Appendix material to be provided with the Draft Investment Grade Audit Report and Project Proposal will include a description of data collection methodology used by the ESCo in the Investment Grade Audit, supporting calculations and assumptions used for developing savings estimates for each proposed measure, specifications and manufacturer cut sheets for major mechanical components, detailed lighting and water fixture counts, and subcontractor cost proposals.

9.7.6 Project Development Meeting to discuss Draft Investment Grade Audit Report and Energy Performance Contract Project Proposal

Once the Draft Investment Grade Audit Report and Project Proposal is submitted, the Facility Owner and the ESCo will meet to review the recommendations, savings calculations and impact of the measures on the operations of the facility. The ESCo will describe how the projected economics of the EPC meet the Facility Owner's terms for completing the Investment Grade Audit and developing an Energy Performance Contract. The willingness and capability of the Facility Owner to make capital contributions to the project to improve the economics of the overall project should also be discussed at this time.

The overall objective of this meeting is to develop mutual agreement on energy and water savings measures to be included, energy baseline, implementation plan, savings guarantee, measurement and verification approach, and project financials so the draft document can be finalized into a Project Proposal that is compatible with the Facility Owner's investment and infrastructure improvement goals.

9.7.7 Final Investment Grade Audit Report and Energy Performance Contract Project Proposal

The ESCo will update and finalize the Investment Grade Audit Report and Project Proposal based upon the results of the review of the draft document with Facility Owner. This will include incorporating the energy and water savings measures, baseline, implementation plan, savings guarantee, measurement and verification approach, project financials, capital contributions by Facility Owner and other items mutually agreed upon into the final Project Proposal that will be presented to the Facility Owner.

The Final Investment Grade Audit Report and Project Proposal shall include final iterations of all of the elements described previously for the Investment Grade Audit Report and Project Proposal. Contract Schedules 1 through 5 will be completed and designated “Proposed” for inclusion in the Project Proposal. Additionally proposed Energy Performance Contract Attachments I through U will be submitted as part of the Project Proposal. These Contract Schedules and Attachments are subject to negotiation for the Energy Performance Contract and final versions will be included in that document.

9.7.8 Facility Owner Review and Acceptance of the Final Investment Grade Audit Report and Energy Performance Contract Project Proposal

The Facility Owner, with WYECIP support, will carefully review the Final Investment Grade Audit Report and Project Proposal. If acceptable, the Facility Owner will issue a Notice of Acceptance of Investment Grade Audit Report in anticipation of Facility Owner and ESCo negotiating and entering into an Energy Performance Contract to design, install, and provide measurement and verification of the energy and water saving measures proposed.

The project will then move to the final negotiations for the Energy Performance Contract and the Implementation Phase as discussed in detail in Section 10 of this program manual. The Energy Performance Contract document will be prepared by the WBC for execution by the Facility Owner and the ESCo using the WYECIP contract document.

9.8 Roles, Responsibilities, and Deliverables

9.8.1 Roles and Responsibilities

This phase of a potential EPC project requires close cooperation between the Facility Owner and the ESCo. WYECIP support is provided throughout this phase. Responsibilities for individual team members include, but are not necessarily limited to:

9.8.1.1 Facility Owner

- Execute the WYECIP Investment Grade Audit and Project Development Contract with the ESCo
- Assign members to the Facility Owner project team including operations, maintenance, financial and upper management personnel
- Ensure appropriate personnel attend project development meetings dependent upon the subject matter to be discussed
- Provide access and escort to buildings
- Provide information as needed for the Investment Grade Audit and other project development activities
- Work with ESCo to develop/refine project parameters
- Review ESCo proposals, designs, and reports
- Ensure recommendations of the WBC State Energy Office during reviews are addressed
- Make arrangements for project financing
- Issue Facility Owner's Notice of Acceptance of Investment Grade Audit Report
- Make payments for ESCo services for the Investment Grade Audit if a viable project is developed and Facility Owner declines to proceed further

9.8.1.2 WBC State Energy Office

- Prepare the WYECIP Investment Grade Audit and Project Development Contract documents
- Attend meetings between Facility Owner and ESCo as needed
- Assist with review and refinement of project parameters
- Provide technical assistance
- Assist with oversight of project development
- Review ECMs proposed, calculations, measurement and verification plan proposed
- Review ESCo's Investment Grade Audit Report and Project Proposal

9.8.1.3 Energy Services Company

- Execute a WYECIP Investment Grade Audit and Project Development Contract with Facility Owner
- Adhere to the guidelines and requirements of the WYECIP and use the standard documents and processes
- Work with Facility Owner to develop/refine project parameters
- Perform the Investment Grade Audit and prepare a detailed proposal for the project in accordance with the WYECIP Program Manual and Investment Grade Audit and Project Development Contract
- Ensure recommendations of WBC State Energy Office during reviews are addressed

- Assist the Facility Owner with arrangements for project financing as needed
- Provide all required information to the WBC for preparation of WYECIP Standard Energy Performance Contract.

9.8.2 Deliverables

9.8.2.1 Facility Owner

- Executed WYECIP Investment Grade Audit and Project Development Contract with Facility Owner
- Facility Owner's Notice of Acceptance of Investment Grade Audit Report

9.8.2.2 WBC State Energy Office

- WYECIP Investment Grade Audit and Project Development Contract documents
- Review of ECMs proposed, calculations, measurement and verification plan proposed
- Review of ESCo's Investment Grade Audit Report and Project Proposal

9.8.2.3 Energy Services Company

- Executed WYECIP Investment Grade Audit and Project Development Contract with Facility Owner
- Investment Grade Audit Report and Project Proposal in accordance with the WYECIP Investment Grade Audit and Project Development Contract

**WYECIP Program Flow Chart for EPC Projects
Investment Grade Audit and Project Development Phase**

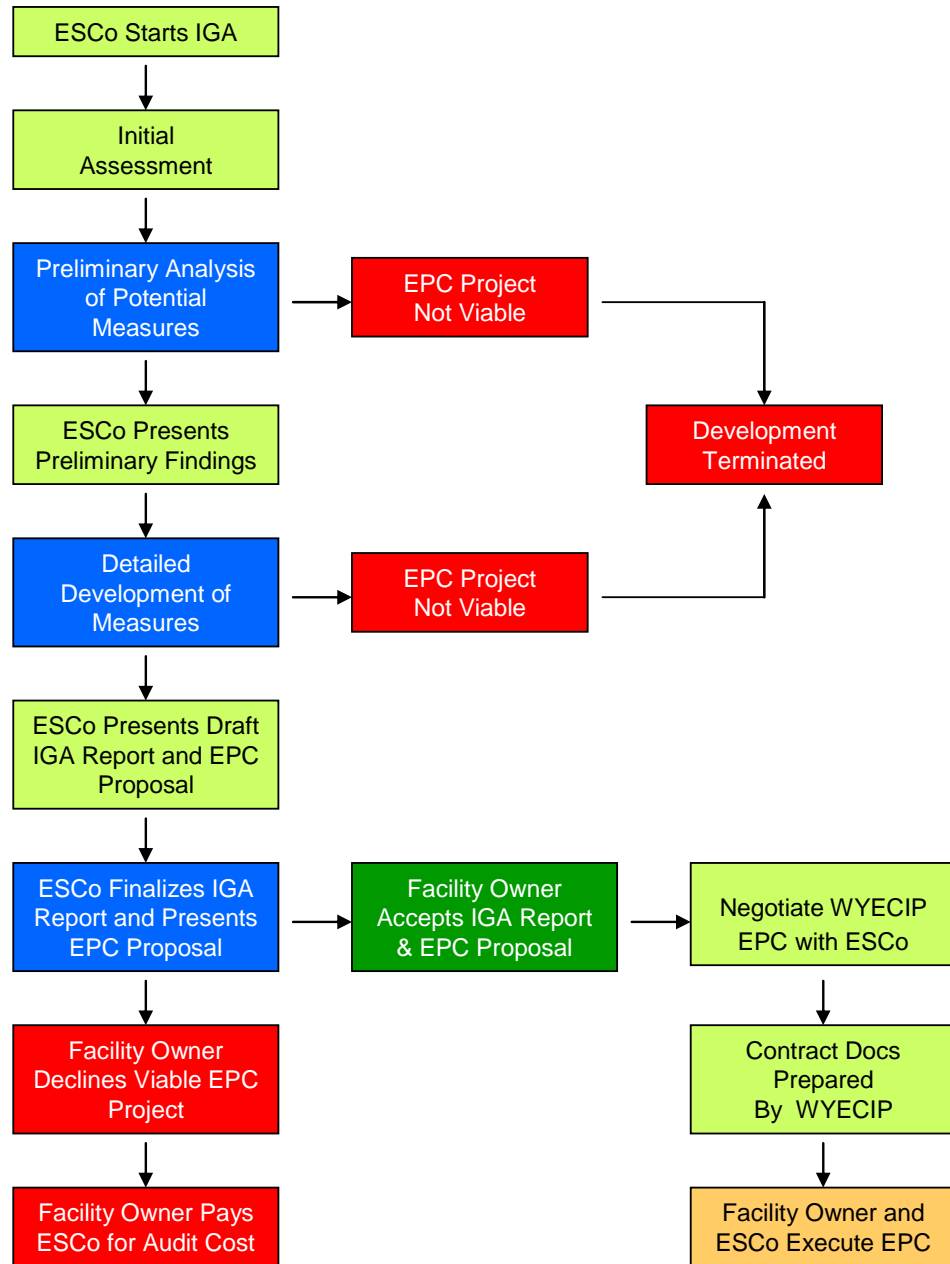


Figure 9-1

10.0 ENERGY PERFORMANCE CONTRACT IMPLEMENTATION PHASE

10.1 Overview

Upon acceptance of the Investment Grade Audit Report and presentation of the Project Proposal by the ESCo the Facility Owner and ESCo will negotiate and execute an Energy Performance Contract to implement the Energy Conservation Measures and provide for Performance Period services. This section covers the Implementation Phase for the Energy Performance Contract.

During this phase the ESCo completes the detailed design on the measures to be installed, constructs the project, provides commissioning on the installed equipment and systems, provides training for the Facility Owner, and submits a Post-Implementation Measurement and Verification Report.

When the requirements of the contract for implementation of the measures have been completed and the Facility Owner accepts the project it will then move to the Energy Performance Contract Performance Phase which is discussed in detail in Section 11 of this program manual.

Figure 10-1 at the end of this section illustrates the major steps in the Energy Performance Contract Implementation Phase.

10.2 WYECIP Energy Performance Contract

The Energy Performance Contract embodies all aspects of the performance contracting project. It is the document that defines the final agreed to scope of work and all its associated costs and the mutual responsibilities of the ESCo and the Facility Owner. Details regarding the exact improvement measures, the equipment and labor costs associated with them, and all guaranteed energy and maintenance cost savings are provided in the contract. All final financing information is also included for reference including ESCo payment schedules and lender financing terms and schedules.

On completion of final negotiations between the Facility Owner and ESCo, the Energy Performance Contract document will be prepared by the WBC for execution by the Facility Owner and the ESCo using the WYECIP contract document. A copy of the WYECIP Energy Performance Contract is included in Appendix 1D.

10.3 Contract Attachments

The WYECIP Energy Performance Contract incorporates several Attachments that define key elements of the contract and specific areas of the project scope. A number of these Attachments are prepared by the ESCo as part of its project and proposal development for approval and acceptance by the Facility Owner. These documents are attached to and made a part of the Investment Grade Audit and Project Development Contract by reference. Brief descriptions of

the various Attachments to the Energy Performance Contract are contained in the following paragraphs.

Attachments B, C, E, F, and G represent final versions of the documents prepared by the ESCo during the Investment Grade Audit and presented in the Project Proposal. Attachments I through U are prepared by the ESCo for inclusion in the Energy Performance Contract. WYECIP recognizes that individual ESCos have their own formats for presenting the required information and does not provide a standardized format for these attachments at this time. WYECIP support includes review of the Attachments provided by the ESCo for completeness and compliance with program requirements.

10.3.1 Attachment A: WYECIP Contract General Conditions

A standardized set of General Conditions has been developed for the WYECIP contracts. These conditions are incorporated in the Energy Performance Contract as Attachment A. The General Conditions set forth here are a requirement for the contract and should not be interpreted as being open to further negotiation. A copy of the WYECIP General Conditions is included in Appendix 1E of this Program Manual.

In instances where Facility Owners have special terms and conditions related to their contracting process, it may be appropriate to include these in an additional Attachment with its own unique designation.

10.3.2 Attachment B: List of Buildings Included in Contract

This Attachment contains the final list of the buildings to be included in implementation of the Energy Performance Contract. This Attachment is prepared by the ESCo based on the final Investment Grade Audit, including any modifications or amendments mutually agreed upon in negotiations for this Energy Performance Contract with the Facility Owner. A copy of Attachment B is included in Appendix 1F of this Program Manual.

10.3.3 Attachment C: Cost & Pricing Elements (Final)

This Attachment is prepared by the ESCo to reflect the final Markup and Fee Schedules negotiated with Facility Owner for the Energy Performance Contract. It includes the markups and fees for pre-defined categories to be used in the implementation and performance periods of the contract. ESCo markups and fees shall not exceed the amounts shown in this Attachment. Categories not included in the schedules are not allowable for use in the WYECIP. A copy of this Attachment is included in Appendix 1G of this Program Manual.

The WBC has established maximum audit costs, markups, and fees for the WYECIP. The example Cost and Fee Schedule provided in Appendix 1G illustrates the maximums that may be applied in any Investment Grade Audit and Project Development Contract or Energy Performance Contract developed and executed under the WYECIP. ESCo audit costs, markups, and fees for individual Energy Performance

Contract projects shall not exceed the maximums established by the WBC. The WYECIP requirement for Open Book Pricing is also incorporated into the Energy Performance Contract.

10.3.4 Attachment D: Financing Agreement Documents

Financing for projects implemented under the WYECIP may be provided directly by the individual Facility Owner or through a third party financier under a separate agreement between the individual facility and a financing company. The financing agreement documents are included in the Energy Performance Contract for reference via this attachment. WYECIP does not provide a standardized format for this attachment.

10.3.5 Attachment E: Risk Assessment Matrix (Final)

The ESCo completes and submits with its Project Proposal a Risk Assessment Matrix detailing its proposed approach or method to address each area of potential risk listed. The ESCo and the Facility Owner must discuss and agree upon strategies to mitigate these risks prior to executing the Energy Performance Contract.

The final Risk Assessment Matrix is prepared by the ESCo and contains approaches or methods to address each area of potential risk listed as agreed to with the Facility Owner. The format for the final version of the Risk Assessment Matrix is the same one used in the Investment Grade Audit and Project Development Contract as shown in Appendix 1J of this Program Manual.

10.3.6 Attachment F: Measurement and Verification Plan (Final)

The final project-specific M&V plan is developed during negotiations for the Energy Performance Contract, based upon the methodologies proposed in the Investment Grade Audit Report. The final M&V Plan then becomes part of the contractual obligations for the ESCo and the Facility Owner for the duration of the Energy Performance Contract. The M&V plan is the single most important item in an energy savings guarantee and is incorporated in the Energy Performance Contract as Attachment F.

Due to the variability of project-specific M&V Plans WYECIP does not provide a standardized format for this attachment. However, the final Measurement and Verification Plan prepared by the ESCo must include the activities described in the WYECIP Guidelines and applicable section of the Investment Grade Audit and Project Development Contract. It will contain a detailed description of the measurement and calculation procedures used to verify and compute the savings performance of each Energy Conservation Measure as negotiated with the Facility Owner. Annual costs for Measurement and Verification are included in Contract Schedule CS-3, Performance Period Cash Flow (Attachment G) as described in the Investment Grade Audit and Project Development Contract.

10.3.7 Attachment G: Contract Schedules CS-1 through CS-5 (Final)

This Attachment contains the final Contract Schedules as modified or amended in negotiations for this contract with the Facility Owner. These Schedules are discussed in detail in Section 9 of this Program Manual and represent the following for the project:

- *Schedule CS-1 Implementation Cost by Energy Conservation Measure* details the Construction Period investment (total project implementation cost) as negotiated with the Facility Owner, the first year annual cost savings, and simple payback in years for each ECM.
- *Schedule CS-2 First Year Annual Cost Savings* presents a summary of the estimated annual cost savings that will be achieved following the installation of the ECMs included in the Energy Performance Contract.
- *Schedule CS-3 Performance Period Cash Flow* illustrates the cash flow for the project. Development of this schedule will require the ESCo to coordinate information with the financial services provider.
- *Schedule CS-4 Guaranteed Annual Cost Savings and Annual Payments* shows the ESCo's estimated annual cost savings, guaranteed annual energy savings, and the annual financing payments. The guaranteed savings must exceed or be equal to the annual payments.
- *Schedule CS-5 Annual Termination Ceiling* provides the termination ceiling, on an annual basis, for the financing agreement. Development of this schedule will require the ESCo to coordinate information with the financial services provider.

10.3.8 Attachment H: Notice of Acceptance of Investment Grade Audit Report

When the Investment Grade Audit Report was accepted, the Facility Owner issued a Notice of Acceptance of that report to the ESCo. A copy of the Facility Owner's Notice of Acceptance of the Investment Grade Audit Report is attached to the Energy Performance Contract for reference.

10.3.9 Attachment I: Description of Facility and Pre-existing Equipment Inventory

This Attachment, prepared by the ESCo, is based on the final Investment Grade Audit Report and contains basic information about the condition of the premises at the time of contract execution including facility square footage, building construction, use, occupancy, hours of operation etc., and any special conditions that may exist. The inventory identifies what equipment was in place and how it was configured at the time of contract execution.

10.3.10 Attachment J: Schedule of Energy Conservation Measures (ECMs) to be installed by Contractor

This schedule furnished by the ESCo is based on the final negotiations for this Contract with the Facility Owner. It specifies all of the new ECMs to be installed including manufacturer, quantity, and location. The information must be provided in sufficient detail by building or area of building so that the Facility Owner can verify the number of units installed under the contract. Detailed specifications of major pieces of equipment such as boilers, chillers, motors, etc. must also be provided. A detailed points list of any energy management control system shall be provided along with the major control strategies being implemented. This schedule should also describe any modifications that may have to be made to existing equipment, if applicable.

10.3.11 Attachment K: Energy Savings Guarantee

This Attachment, prepared by the ESCo fully describes all provisions and conditions of the energy saving guarantee provided by the ESCo per the final negotiations for this Contract with the Facility Owner. The guarantee will be defined in units of energy to be saved and dollar savings for each year of the contract term. The annual total for each year must be correlated to Contract Schedules CS-2 and CS-4. If there are several buildings involved in the project, this schedule should contain projections for each facility, even though they may all be covered under a single guarantee.

10.3.12 Attachment L: Baseline Energy Consumption

This Attachment, prepared by the ESCo, documents the baseline conditions defined and agreed upon by the Facility Owner and the ESCo. The methodology and all supporting documentation used to calculate the baseline must be detailed by the ESCo in this Attachment including unit consumption and current utility rates for each fuel type. This Attachment shall also include baseline documentation regarding other cost savings such as material savings and cost savings associated with the elimination of outside maintenance contracts.

10.3.13 Attachment M: Savings Measurement & Calculation Formulae and Methodology for Adjusting Baseline

This Attachment is prepared by the ESCo to describe the agreed upon method to compare the amount of energy actually consumed during a specific time period to the Baseline. All methods of measuring savings including engineered calculations, metering, equipment run times, pre- and post-installation measurements, etc. will be explicitly described for all ECMs installed.

A clear methodology for converting energy savings into energy cost savings shall be provided and utility rates to be used for the baseline and actual energy costs must be defined. All methodologies used to account for any adjustments to the baseline will also be clearly defined in this Attachment.

10.3.14 Attachment N: Standards of Comfort

This Attachment documents the agreed upon Standards of Comfort used in the design of ECMs for the project. The energy and water conservation measures installed by the ESCo will provide the standards of heating, cooling, ventilation, hot water supply, lighting quality and levels, etc. described in this Attachment to comply with the Standards of Comfort required by Facility Owner. During the term of this Contract, the ESCo and the Facility Owner will maintain and operate the measures, according to Attachment F, Attachment R and Attachment S, in a manner that will provide the standards of comfort and levels of operation as described in Attachment N.

10.3.15 Attachment O: Construction and Installation Schedule

The ESCo must provide a final version of the project schedule as approved by Facility Owner which is included in the contract as Attachment O. Construction and equipment installation shall proceed in accordance with this schedule. The schedule shows the order in which the ESCo proposes to perform the work and the dates on which the ESCo intends to start and complete all major milestones (including acquiring materials, equipment, permits). The schedule must be in the form of a progress chart of suitable scale to indicate the amount of work scheduled for completion by any given date during the installation period.

10.3.16 Attachment P: Contractor Payment Schedule and Schedule of Values

This Attachment is prepared by the ESCo to show the anticipated payment schedule and Schedule of Values to be used for ESCo billing and Facility Owner payments as the construction and installation of the project progresses.

10.3.17 Attachment Q: System Start-up and Commissioning and Operating Parameters of Installed Energy Conservation Measures (ECMs)

This Attachment contains the ESCo's plan for start-up and commissioning of ECMs installed under this Contract and the design operating parameters for those ECMs.

10.3.18 Attachment R: Contractor's Maintenance Responsibilities

The ESCo's responsibilities for any ongoing maintenance on the installed ECMs, as negotiated with the Facility Owner, are detailed in this Attachment prepared by the ESCo. Annual costs for ESCo-provided maintenance will be included in Contract Schedule CS-3 Performance Period Cash Flow (Attachment G).

10.3.19 Attachment S: Facility Owner's Maintenance Responsibilities

The Facility Owner's negotiated responsibilities for ongoing maintenance on the installed ECMs are detailed in this Attachment prepared by the ESCo.

10.3.20 Attachment T: Facility Maintenance Checklist

The ESCo will provide a checklist of maintenance items for which the Facility Owner is responsible under Attachment S above to be used to measure and record the Facility Owner's performance of maintenance responsibilities.

10.3.21 Attachment U: Contractor's Training Responsibilities

The ESCo's responsibilities for training of the Facility Owner's personnel on the installed ECMs, as negotiated with the Facility Owner, are detailed in this attachment. Annual costs for ongoing ESCo-provided training, if any, shall be included in Contract Schedule CS-3 Performance Period Cash Flow.

10.4 Contract Exhibits

In addition to the Attachments described in the preceding section the WYECIP Energy Performance Contract provides for the inclusion of a number of Exhibits to illustrate specific items that are also required. These would typically be in a format determined by the Facility Owner and include the following:

- Facility Owner Form of Performance Bond
- Facility Owner Form of Labor and Material Payment Bond
- Form of Notice of Acceptance of Installed Energy Conservation Measures (ECMs) by Facility Owner

10.5 Contract Appendix Material

The following are also to be included by reference in the WYECIP Energy Performance Contract as Appendix Material:

- **Appendix A:** A copy of the ESCo's Investment Grade Audit Report and Project Proposal
- **Appendix B:** A copy of the Investment Grade Audit and Project Development Contract executed between the Facility Owner and the ESCo.

10.6 Process Steps

10.6.1 Contract Negotiation and Execution

The Facility Owner will negotiate and execute an Energy Performance Contract with the ESCo to implement the Energy Conservation Measures and provide for Performance Period services after completion of the Investment Grade Audit and presentation of the Project Proposal by the ESCo.

Final Negotiations for the Energy Performance Contract will be based on the Project Proposal submitted by the ESCo. If the WYECIP Investment Grade Audit and Project Development Contract process has been closely followed this should be a relatively

short exercise. The scope of the project will have been well defined through the audit and reviews of the draft and final Investment Grade Audit and Project Development Report.

Final negotiations allow the opportunity to fine-tune the project's scope, M&V Plan, performance period services, cost, and other issues as appropriate prior to executing the Energy Performance Contract. The WYECIP Energy Performance Contract document itself contains the conditions and requirements for the contract under the program and, other than for the insertion of dates, etc. where indicated, should not be interpreted as being open to further negotiation.

The WYECIP provides support for review of the Contract Attachments, advice to the Facility Owner on negotiations, and preparation of the final contract document for execution by the Facility Owner and the ESCo.

10.6.2 ECM Implementation (Construction)

Upon execution of the Energy Performance Contract the Implementation Period begins. During this period, the ESCo completes final project design, performs construction activities to install the Energy Conservation Measures (ECMs) provided for in the Contract, provides commissioning on the installed ECMs, and prepares and submits the Post-Implementation Report.

During this period the ESCo will provide the installation and all related services identified on the Attachments to the Contract including supervision, direction, and responsibility for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the work. The Energy Performance Contract provides details on the requirements for this phase.

The ESCo is required to prepare and submit a Design and Construction Package to the Facility Owner for review and approval prior to starting ECM installation. The Design and Construction Package must be certified by a licensed Professional Engineer to assure compliance with applicable building codes and the Facility Owner's design standards. The ESCo is responsible for the technical adequacy of its work. Acceptance of the Design and Construction Package by the Facility Owner does not relieve the ESCo from responsibility for adequacy of its design and installation work.

10.6.3 ECM Start-up and Commissioning

The ESCo assures the Facility Owner through the ECM Commissioning that performance of the ECMs achieves facility performance requirements as set out in the Contract. ECM Commissioning is accomplished through a process of verification and documentation, from the post-award design phase through Acceptance of Installed ECMs.

The ESCo will provide a Commissioning Plan with the design and construction package that finalizes the Commissioning Approach and addresses each ECM with

specific steps that will be taken during the commissioning process. Prior to Facility Owner acceptance, the ESCo will submit a Commissioning Report documenting the affect of the installed ECMs upon facility performance requirements in accordance with the Commissioning Plan and reasonably satisfactory documentary evidence that the ECMs installed are the measures specified in Attachment J.

10.6.4 As-Builts and O&M Manuals

After completion of installation of ECMs, the ESCo will provide durable, reproducible record drawings in electronic (CAD) format from the “as-built drawings” of all existing and modified conditions associated with the project, conforming to typical engineering standards. These will include applicable architectural, mechanical, electrical, structural, and control drawings. The as-builts as well as operating and maintenance manuals must be delivered to the Facility Owner prior to acceptance of the project. The ESCo will also provide the Facility Owner with any as-built drawings or operating and maintenance manuals received from subcontractors.

10.6.5 Training

The ESCo will provide the training program described in ESCo's Training Responsibilities (Attachment U) for Facility Owner personnel for each ECM in the project. This training will provide instruction on operation, troubleshooting, maintenance, and repair of ECMs and will have both a classroom phase and a practical application phase and will be conducted at Facility Owner's site in facilities provided by Facility Owner. The course material will also include the operation and maintenance plans and manuals. Adequate training for the Facility Owner to properly operate the installed ECMs must be completed prior to acceptance of the ECM installation.

The ESCo is also required to provide ongoing training whenever needed with respect to updated or altered equipment, including upgraded software, in accordance with Contractor’s Training Responsibilities (Attachment U).

10.6.6 Post-Implementation M&V Activities and Report

Upon completion of construction the ESCo will prepare and submit a Post-Implementation Report to the Facility Owner verifying that installed ECMs demonstrate the potential to achieve the guaranteed annual energy, energy-related, and water cost savings specified in the Contract. Approval by the Facility Owner of this Post-Implementation Report constitutes the Facility Owner’s acceptance of the ESCo’s energy savings performance guarantee. The requirements and format for the Post-Implementation Report are described in Section 10.7 below.

10.6.7 Facility Owner Acceptance of Installed Measures

The ESCo arranges for inspection of construction work and construction oversight by the Facility Owner to verify that the energy efficiency equipment and/or system modifications are properly supplied as designed and specified, and installed in

accordance with the approved installation plan, all applicable codes and standards, meet the Contract specifications, and in a manner that will provide the intended long-term function, energy savings, and performance of the equipment.

Facility Owner acceptance shall not occur until approval by the Facility Owner of the ESCo's Post-Implementation Report and ECM Commissioning Report is completed. The approval of the ECM Commissioning Report and the Measurement and Verification plan's Post-Implementation Report by Facility Owner also constitutes acceptance of the ESCo's achievement of facility performance requirements.

The Facility Owner will accept the project installation in writing upon satisfactory completion of the any test period and receipt of all other required deliverables.

10.7 Post-Implementation Report Requirements

The format for the Post-Implementation Report will follow a standard outline as described below. The WYECIP provides support to the Facility Owner for review of the ESCo's Post-Implementation Report for completeness and compliance with program requirements.

10.7.1 Executive Summary

The first section of the report provides a summary of information at the project level in the following areas:

- An overview of the project background including contract date, dates for construction, actual or expected acceptance date, performance period dates, summary of ECMs implemented, and any changes in the project's scope between the Project Proposal and as-built conditions.
- The proposed and expected energy and cost savings for Year 1 of the performance period comparing expected savings for first performance year to first year guaranteed cost savings. This should include a statement by the ESCo whether the savings guarantee is expected to be met for the first year and, if not, a detailed explanation of the reasons for the expected shortfall and the ESCo's proposed approach to correction. This information should be summarized in tables labeled "Proposed Annual Savings" and "Expected First Performance Year Savings" similar to the format of Contract Schedule CS-2 First Year Annual Cost Savings. Expected savings are a prediction for the first year based on post-installation M&V activities. Verified savings for the first year of the Performance Period will be documented in an annual report. The proposed savings for each ECM are included in Schedule CS-2 of the Energy Performance Contract.
- The energy and water rates used to calculate cost savings, any performance period rate adjustment factors for energy, water, and O&M cost savings, and actual energy and water rates at site for same period

- A summary of any energy and/or cost savings adjustments required since the Project Proposal, including any Energy Performance Contract modifications, and as-built conditions along with any impacts from the changes based on post-installation M&V results.
- A summary of construction period savings, if applicable, and an overview of how the construction period savings are calculated.
- Calculations of carbon emissions reductions from the measures installed.
- The status of any rebates if applicable, and a summary of the source of any third-party rebates or incentives provided on this project.

10.7.2 ECM M&V Activities and Expected First Year Savings

This section of the report will provide detailed information for each ECM installed on the project to include the items discussed below:

- A summary of the scope of work, location, and how cost savings are generated including a description of the source of all savings including energy, water, O&M, and other (if applicable).
- An overview of M&V activities for the ECM including the intent of the M&V plan, what is being verified, and the M&V option used.
- An overview of savings calculation methods for the ECM and a general description of the analysis methods used for savings calculations.
- Details of any changes in the ECM's scope between the Project Proposal and as-built conditions including any energy and cost savings impact from those changes based on post-installation M&V results. This information shall be summarized in a table labeled "Energy & Cost Saving Impact from Changes to Contract" similar to the format of Contract Schedule CS-2 First Year Annual Cost Savings. Rows in the table will reflect Proposed Savings (from the Contract Schedule), Expected Savings (based on M&V activities), and Variance (difference between Proposed and Expected).
- A description of construction period savings (if applicable) including the date the ECM was installed and operational, reference to acceptance documentation, and calculations for construction period savings.
- A discussion of how the Post-Implementation M&V activities were conducted for the ECM in accordance with the M&V Plan. This discussion shall include the measurement equipment used; calibration documentation; dates and times of data collection or inspections, personnel involved and documentation of Facility Owner witnessing; and adherence to the sampling plan if applicable. All post-installation measured values, periods of monitoring and durations, frequency of measurements,

and description of data format headings, units, etc. will also be included. An appendix and electronic format may be used as necessary.

- A description of how performance criteria have been met including details of any performance deficiencies that need to be addressed by the ESCo or the Facility Owner and the impact of performance deficiencies on generation of savings.
- A detailed description of expected savings calculations including analysis methodology used; any data manipulation or analysis that was conducted prior to applying savings calculations; all assumptions and sources of data, including all stipulated values used in calculations; equations and technical details of all calculations made; and description of data format headings, units, etc. An appendix and electronic format may be used as necessary.
- Details of any baseline or savings adjustments made.
- Details of energy and water rates used to calculate cost savings including performance period energy and water rate adjustment factors, if used. Actual energy and water rates at site for same period shall also be reported.
- Details of expected savings for each energy conservation measure for the first year will be summarized in table format similar to the format of Contract Schedule CS-2 First Year Annual Cost Savings. Rows in the table will reflect Baseline Use, Post-Implementation Use, and Savings which will be the difference between Baseline and Post-Implementation.
- If applicable, details of O&M and other savings including source of O&M or other savings, description of verification activities, and performance period O&M or other cost savings adjustment factors.

10.8 Roles, Responsibilities, and Deliverables

10.8.1 Roles and Responsibilities

This phase of an Energy Performance Contract project requires close cooperation between the Facility Owner and the ESCo throughout the construction period. WYECIP support is provided to help the Facility Owner monitor project implementation and for review of the Post-Implementation Report. Responsibilities for individual team members include, but are not necessarily limited to:

10.8.1.1 Facility Owner

- Negotiate and execute the WYECIP Energy Performance Contract with the ESCo
- Assign members to the Facility Owner project implementation team

- Ensure appropriate personnel attend project construction meetings dependent upon the subject matter to be discussed
- Provide access and escort to buildings
- Review/Approve ESCo proposals, designs, and reports
- Ensure recommendations of WBC State Energy Office during reviews are addressed
- Provide Facility Owner project management
- Provide information as needed for measurement and verification activities
- Issue Facility Owner's acceptance of project when all of the construction phase requirements have been met.
- Make payments for ESCo services

10.8.1.2 WBC State Energy Office

- Assist with review of the Contract Attachments and provide advice to the Facility Owner on negotiations
- Prepare the WYECIP Energy Performance Contract document
- Attend construction meetings as needed
- Provide technical assistance
- Assist with oversight of project implementation
- Provide support to the Facility Owner for review of the ESCo's Post-Implementation Report
- Assist with mediating as needed any conflicts that may arise

10.8.1.3 Energy Services Company

- Prepare Contract Attachments
- Negotiate and execute the WYECIP Energy Performance Contract with the Facility Owner
- Adhere to the guidelines and requirements of the WYECIP and use the standard documents and processes
- Provide all required information to the WBC for preparation of WYECIP Energy Performance Contract
- Ensure recommendations of WBC State Energy Office during reviews are addressed
- Construct the project and provide project management
- Complete and submit the Post-implementation Report

10.8.2 Deliverables

10.8.2.1 Facility Owner

- Executed WYECIP EPC with the ESCo
- Facility Owner's acceptance of project

10.8.2.2 WBC State Energy Office

- WYECIP EPC documents
- Review of ECMs proposed, calculations, measurement and verification plan proposed

- Review of ESCo's Post-Implementation Report

10.8.2.3 Energy Services Company

- Preparation of Contract Attachments
- Executed WYECIP EPC with Facility Owner
- Construction of the project in accordance with the EPC
- ECM Commissioning Report
- Post-Implementation Report

WYECIP Program Flow Chart for EPC Projects Energy Performance Contract Implementation Phase

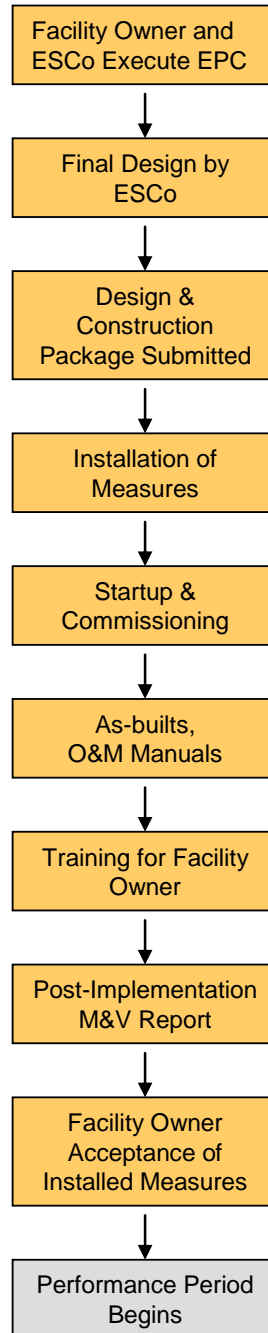


Figure 10-1

11.0 ENERGY PERFORMANCE CONTRACT PERFORMANCE PHASE

11.1 Overview

When the requirements of the contract for implementation of the Energy Conservation Measures (ECMs) in the Energy Performance Contract Implementation Phase have been completed and the Facility Owner accepts the project, it will then move to the Energy Performance Contract Performance Phase.

During this phase the ESCo performs Performance Period services described in the Contract including Measurement and Verification (M&V) activities per the M&V Plan and preparing the annual report; providing the savings guarantee; performing any warranty service that may arise on installed ECMs; performing operations, maintenance and repair services as defined in the Contract Attachments; and may be providing on-going training for the Facility Owner and other services.

A very important element of the Energy Performance Contract is the final Measurement and Verification Plan which is mutually agreed upon between the Facility Owner and ESCo. The M&V Plan defines exactly how the guaranteed savings will be verified for each year of the performance period. The savings guarantee in the energy performance contract requires that for each year of the performance period, which is also generally the financing term, the stated energy and maintenance savings will be met.

Throughout the term of the Contract the Facility Owner pays the ESCo an annual fee according to Contract Schedule CS-3 Performance Period Cash Flow (Attachment G) for measuring and verifying the energy and cost savings and performing any other agreed upon performance period services. Annual guaranteed energy and cost savings achieved shall be sufficient to cover all fees to be paid to ESCo shown on Contract Schedule CS-3.

This section covers the Performance Phase for the Energy Performance Contract. Figure 11-1 at the end of this section illustrates the major activities in this phase of the Energy Performance Contract.

11.2 Key Activities

11.2.1 Savings Guarantee

The savings guarantee will be described in detail in Attachment K, Energy Savings Guarantee, and must exceed or be equal to the annual payments the Facility Owner makes under the financial obligation to the Facility Owner's financing provider. The annual guaranteed energy and cost savings achieved shall also be sufficient to cover all fees to be paid to ESCo shown on Contract Schedule CS-3. If the annual savings are not met, the guarantee requires the ESCo to pay the Facility Owner directly the amount of the annual savings shortfall. In this way, the ESCo retains responsibility for the

project's performance and the Facility Owner carries virtually no financial risk in its ability to make its annual payments in the event of a savings shortfall.

11.2.2 Measurement and Verification of Savings

The Energy Performance Contract includes a site-specific Measurement & Verification (M&V) Plan (Attachment F) that specifies the M&V requirements and procedures that apply to the Contract based on various factors such as type of ECMs, projected value of energy savings, certainty/uncertainty of savings being achieved, and the intended risk allocation between Facility Owner and the ESCo.

The M&V plan specifies the M&V options and methods that will be used for each ECM included in the Contract. M&V options and methods for each ECM must comply with the latest version of the International Protocol for Measurement and Verification of Performance (IPMVP) guidelines for M&V in effect at the time of Contract award and the WYECIP Guidelines for Measurement and Verification.

The ESCo conducts annual M&V activities in accordance with the M&V Plan to verify operation of the installed equipment or systems and calculate the current year's energy savings. The ESCo prepares and submits an Annual Measurement and Verification Report to the Facility Owner including data and calculations that demonstrate that continued ECM performance achieves the guaranteed annual energy, energy-related, and water cost savings as required by the Contract. The requirements and format for the Annual M&V Report are described in Section 11.3 below.

The WYECIP provides independent third party review of the ESCo's measurement and verification reports and provides advice to the Facility Owner on completeness in measuring and verifying savings and compliance with program requirements.

11.2.3 Warranty on Installed Equipment and Services

The ESCo warrants that all equipment sold and installed as part of the Contract is new, unless otherwise agreed, will be materially free from defects in materials or workmanship, will be installed properly in a good and workmanlike manner, and will function properly for a period of one (1) year after Installation. The ESCo will assign to the Facility Owner all available manufacturers' warranties relating to the ECM installation and to deliver such written warranties to the Facility Owner. All warranties, to the extent transferable, will be transferable and extend to the Facility Owner. The warranties shall specify that only new, not reconditioned, parts may be used and installed when repair is necessitated by malfunction.

The ESCo further warrants that all services performed under this contract will, at the time of acceptance, be free from defects in workmanship and conform to the requirements of the Contract. The Facility Owner will give written notice of any defect or nonconformance to the ESCo within 30 days from the date the defect or nonconformance is detected by the Facility Owner. The ESCo shall then correct or re-perform any defective or nonconforming services

After the warranty period, the ESCo generally will not have any responsibility for performing maintenance, repairs, or making manufacturer warranty claims relating to the ECM installation, except as provided in Attachment R, Contractor's Maintenance Responsibilities.

11.2.4 Operations, Maintenance, and Repair Services

The level of services to be provided by the ESCo, excluding warranty services, during the Performance Period will be negotiated and agreed to between the ESCo and the Facility Owner. Services to be performed by the ESCo and the Facility Owner must be fully described in Contract Attachments R and S respectively. For ESCo services of this type that are provided, the Facility Owner pays the ESCo an annual fee according to Contract Schedule CS-3 Performance Period Cash Flow (Attachment G) for performing any other agreed upon performance period services.

Note that the WYECIP does not allow a requirement that the Facility Owner must purchase an on-going service agreement from the ESCo, other than for the required M&V of savings.

11.2.5 On-going Training for Facility Owner

For individual Energy Performance Contracts the ESCo and the Facility Owner may negotiate and agree upon a program of on-going training for Facility Owner personnel in addition to that provided under the requirements of the Energy Performance Contract implementation Phase. All such programs will be described and defined in Contract Attachment U, Contractor's Training Responsibilities.

The Facility Owner will pay the ESCo an annual fee for training, if applicable, according to Attachment G, Contract Schedule CS-3 Performance Period Cash Flow for ongoing training during the Contract Term as described in Attachment U.

11.3 Annual Measurement & Verification Report Requirements

The format for the Annual Measurement and Verification Report will follow a standard outline as described below. The WYECIP provides support to the Facility Owner for review of the ESCo's Annual Measurement and Verification Report for completeness and compliance with program requirements.

11.3.1 Executive Summary

The first section of the report provides a summary of information at the project level in the following areas:

- An overview of the project background including contract date, dates for construction, acceptance date, performance period dates, summary of ECMs implemented and how savings are generated, and any changes in the project's scope

between the Project Proposal and as-built conditions as recorded in the Post-Implementation Report.

- A comparison of the verified savings for the year of the performance period for which the report applies to the guaranteed cost savings for that year. This will include a statement by the ESCo whether the savings guarantee has been met for the year and, if not, a detailed explanation of the reasons for the expected shortfall and the ESCo's proposed approach to correction. This information should be summarized in tables labeled "Proposed Annual Savings" and "Verified Savings Performance Year (#)" similar to the format of Contract Schedule CS-2 First Year Annual Cost Savings. A summary of any energy or cost savings adjustments is also required. The proposed savings for each ECM are included in Schedule CS-2 of the Energy Performance Contract.
- The energy and water rates used to calculate cost savings for this year, any performance period rate adjustment factors for energy, water, and O&M cost savings if used, and actual energy and water rates at site for same period.
- Calculations of carbon emissions reductions from the measures installed.
- A summary of any operating deficiencies or enhancements, along with any maintenance and repair deficiencies, noting impacts on the generation of savings and detailing any deficiencies that need to be addressed by the ESCo or the Facility Owner.

11.3.2 ECM M&V Details and Savings

This section of the report will provide detailed information for each ECM installed on the project to include the items discussed below:

- A summary of the scope of work, location, and how cost savings are generated including a description of the source of all savings including energy, water, O&M, and other (if applicable).
- A discussion of any changes in scope or results recorded in the Post-Installation M&V Report.
- An overview of M&V activities for the ECM including the intent of the M&V plan, what is being verified, and the M&V option used.
- An overview of savings calculation methods for the ECM and a general description of the analysis methods used for savings calculations.
- A discussion of how the M&V activities in this report period were conducted for the ECM in accordance with the M&V Plan. This discussion shall include the measurement equipment used; calibration documentation; dates and times of data collection or inspections, personnel involved and documentation of Facility Owner

witnessing; and adherence to the sampling plan if applicable. All measured values, periods of monitoring and durations, frequency of measurements, and description of data format headings, units, etc. will also be included. An appendix and electronic format may be used as necessary.

- A description of how performance criteria have been met including details of any performance deficiencies that need to be addressed by the ESCo or the Facility Owner and the impact of performance deficiencies on generation of savings.
- A detailed description of verified savings calculations including analysis methodology used; any data manipulation or analysis that was conducted prior to applying savings calculations; all assumptions and sources of data, including all stipulated values used in calculations; equations and technical details of all calculations made; and description of data format headings, units, etc. An appendix and electronic format may be used as necessary.
- Details of any baseline or savings adjustments made.
- Details of energy and water rates used to calculate cost savings including performance period energy and water rate adjustment factors, if used. Actual energy and water rates at site for same period may also be reported.
- Details of verified savings for this energy conservation measure for the year will be summarized in table format similar to the format of Contract Schedule CS-2 First Year Annual Cost Savings. Rows in the table will reflect Baseline Use, Performance Year (#) Use, and Savings which will be the difference between Baseline and Post-Implementation.
- If applicable, details of O&M and other savings including source of O&M or other savings, description of verification activities, and performance period O&M or other cost savings adjustment factors.
- A discussion of operating, maintenance and repair requirements including the organization responsible for the requirements, details for shared responsibilities, key operating procedures and verification activities, verification of scheduled maintenance items completed by the ESCo and the Facility Owner, and a summary of repair activities during the period. Any operating, maintenance and repair deficiencies that need to be addressed by the Facility Owner or the ESCo should be discussed in detail with the impact of these deficiencies on generation of savings noted.

11.4 Roles, Responsibilities, and Deliverables

11.4.1 Roles and Responsibilities

This phase of an Energy Performance Contract project requires continued cooperation between the Facility Owner and the ESCo throughout the performance period. WYECIP support is provided to help the Facility Owner monitor activities and for review of the Annual Measurement and Verification Reports. Responsibilities for individual team members include, but are not necessarily limited to:

11.4.1.1 Facility Owner

- Provide access and escort to buildings
- Provide Facility Owner operation, maintenance, and repair on installed ECMs as required by the contract documents
- Provide information as needed for measurement and verification activities
- Review/Approve ESCo reports
- Ensure recommendations of WBC State Energy Office during reviews are addressed
- Make payments for ESCo services
- Provide the WBC State Energy Office with annual reports on project cost, status, savings achieved, and square footage impacted by the project for the term of the performance contract with the ESCo

11.4.1.2 WBC State Energy Office

- Provide technical assistance
- Assist with oversight of performance period activities
- Provide support to the Facility Owner for review of the ESCo's Annual Measurement and Verification Reports
- Assist with mediating any conflicts that may arise as needed

11.4.1.3 Energy Services Company

- Adhere to the guidelines and requirements of the WYECIP
- Provide ESCo operation, maintenance, and repair on installed ECMs as required by the contract documents
- Conduct Measurement and Verification activities
- Complete and submit the Annual Measurement and Verification Reports
- Ensure recommendations of WBC State Energy Office during reviews are addressed
- Assist the Facility Owner with preparing the annual reports to the WBC State Energy Office on project cost, status, savings achieved, and square footage impacted by the project for the term of the performance contract

11.4.2 Deliverables

11.4.2.1 Facility Owner

- Facility Owner operation, maintenance, and repair on installed ECMs as required by the contract documents
- Annual reports on project cost, status, savings achieved, and square footage impacted by the project to the WBC State Energy Office

11.4.2.2 WBC State Energy Office

- Review of ESCo's Annual Measurement and Verification Reports

11.4.2.3 Energy Services Company

- ESCo operation, maintenance, and repair on installed ECMs as required by the contract documents
- Annual Measurement and Verification Reports
- Training per contract requirements

WYECIP Program Flow Chart for EPC Projects

Energy Performance Contract Performance Phase

