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# Assuring ESPC Performance

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# Objectives

- Review Agency roles and responsibilities during the Post-Acceptance Performance Period of an Energy Savings Performance Contract
- Review available guidance on Performance Period activities from DOE's Federal Energy Management Program (FEMP)

# ESPCs Require Up Front Negotiation

- An Energy Savings Performance Contract (ESPC) is a long-term contract between a Federal Agency and an Energy Services Company (ESCO) to install conservation measures and provide guaranteed cost savings
- Very detailed development process: selecting conservation measures, arranging financing, construction, commissioning, etc.

# But The Real Work Begins After Acceptance

- All parties have agreed up front to their roles and responsibilities – effectiveness of contract depends on how well they carry them out
- Post-acceptance performance period is where the rubber hits the road: the key to project success
- Let's take a look at what these roles and responsibilities are (next slide)

# ESCO's Performance Period Tasks

- Operate and maintain equipment or monitor site's O&M of equipment, depending on contract terms
- Annually (or more often) inspect equipment, perform measurements, and make calculations to determine ECM savings
- Communicate any problems/concerns to the Agency and/or site personnel
- Prepare a Measurement and Verification (M&V) report and deliver it to the site

# Agency's Performance Period Tasks

- Operate and maintain equipment (depending on contract terms)
- Witness ESCO's M&V activities
- Review ESCO's M&V report
- Communicate any problems/concerns to the ESCO
- Make payment to ESCO (to the degree savings guarantees are met)

# Audits of ESPC Have Identified Similar Problems in Many Agencies

- Uncertainty over responsibilities in the long term due to staff turnover
- Lack of effective witnessing
- Lack of thorough review of M&V
- Non-operational ECMs for which the site is still making payments to the ESCO
- Lack of effective O&M of equipment (by site)

# M&V In The Performance Period

# M&V Is Performed On An Annual (Or Sometimes More Frequent) Cycle

- ESCO visits site to inspect equipment, make measurements
- ESCO produces M&V Report and delivers it to the agency/site

# Site/Agency Have Two Important Roles In This Annual Process

- Witnessing of ESCO's M&V activities to ensure compliance with M&V plan
- Review of annual M&V report to ensure compliance with M&V plan

# What is Witnessing of M&V?

- Proactive agency participation in ESCO conduct of M&V
- Becomes integral step in existing Report Review process; clarifies responsibilities
- Facilitation of successful M&V
- Agency observation & understanding of M&V procedures/tests/calculations and concurrence with their results

# Why Witness?

- Mutual understanding and ownership of crucial step in agency/ESCO partnership
- Facilitate successful M&V inspection
- Personal confirmation that performance is as expected
- Important step in proactive agency management of ESPC
- Address future audit concerns

# **FEMP Witnessing Guidelines:**

## **3 key phases**

### **1. Pre-M&V Steps**

- Clarify responsibility and authority
- Facilitate successful M&V
- Understand M&V plan and procedures
- Expand existing checklist to document witnessing

### **2. M&V Inspection, Report Development Steps**

- Meet & agree on procedures and requirements
- Escort, facilitate and ensure access and communication
- Witness, understand and record

### **3. Post-M&V Steps**

- Follow up as necessary to complete
- Review M&V report
- File Report Review with acceptance

# FEMP Guidance on Witnessing

- Guide to Government Witnessing and Review of Post-Installation and Annual M&V Activities, February 2007 ( [www1.eere.energy.gov/femp/pdfs/agency\\_witness\\_accept.pdf](http://www1.eere.energy.gov/femp/pdfs/agency_witness_accept.pdf) )

# Review Of Annual M&V Reports

# M&V Report Review Ensures That

- M&V plan was followed
- Field-measured values were carried over to report
- Stipulated parameters are per contract
- Calculations are correct and performed according to plan
- Correct energy rates used to calculate cost savings
- Report is complete and provides all required information

# FEMP Guidance Document On M&V Report Review

- Current version is Reviewing Post-Installation and Annual Reports for Federal ESPC Projects, February, 2007 ( [www1.eere.energy.gov/femp/docs/reviewing\\_annual\\_pi\\_reports.doc](http://www1.eere.energy.gov/femp/docs/reviewing_annual_pi_reports.doc) )

## **FEMP Document Provides Template And Checklists Designed To Answer The Following:**

- Was content of report complete?
- Were savings guarantees met?
- Were correct utility and escalation rates used?
- Were all activities required by the M&V Plan followed?

# FEMP Recommends A Six Step Process

- Prepare custom report and checklists from template
- Review project documentation
- Complete checklists
- Finalize report
- Provide written review to Contracting Officer
- Ensure action taken on key issues (follow-up)

# Additional Questions To Be Answered During Review

- Were variations between the estimated and the reported savings explained?
  - If not, why not?
  - What corrective actions will or should be taken
  - By whom?
- Did the report provide useful feedback on the performance of each measure?
- Did the report verify the potential of the ECMs to save in future?

# Operations and Maintenance Of Installed Equipment

# O&M Of Installed Equipment Is Another Key ESPC Performance Period Activity

- Effective O&M is one of the most cost-effective methods for ensuring reliability, safety, and energy efficiency
- Inadequate maintenance of energy-using systems is a major cause of energy waste

# Definition of O&M

- Operations and Maintenance are the decisions and actions regarding the control and upkeep of property and equipment
  - Actions focused on scheduling, procedures, and work/systems control and optimization
  - Performance of routine, preventive, predictive, scheduled and unscheduled actions aimed at preventing equipment failure or decline with the goal of increasing efficiency, reliability, and safety

# Operations and Maintenance of Installed Equipment in ESPC

- ESCO is always responsible for ensuring that equipment performs “as advertised” and delivers guaranteed savings
- At the agency’s discretion, the ESCO or the site may be tasked to perform O&M on installed equipment
- If site performs O&M, ESCO must
  - Provide training and standards of quality
  - Notify site of any discrepancies

# Risk And Responsibility Matrix Is The Basis For Allocation Of O&M Responsibility

- Attachment to Final Proposal
- Describes ESCO's proposed approach to sharing financial, operational and performance risk

# If Government Performs O&M, The Contract Will Contain

- Provisions for ESCO to monitor Government performance of O&M
- Specific O&M record keeping / reporting requirements by government
- Procedures for ESCO review / verification of O&M records

# The Contract May Also Define

- Criteria for ESCO to take over operations
- Criteria for ESCO to take over maintenance prior to equipment failure
- How ESCO is to be paid for performing Government's activities

# Additional Provisions If Site Performs O&M

- ESCO prepares O&M Manuals that will become the basis for proper O&M of installed equipment
- ESCO responsible for providing training to facility staff on operating and maintaining the equipment

# Key Is To Be Aware Of Responsibilities Of Each Party

- Ensure that O&M responsibility allocation is clearly understood for each ECM
- If site performs O&M it should
  - Comply with ESCO's O&M manual
  - Maintain O&M records per contract requirement
  - Ensure that personnel receive training and have access to O&M manual

# FEMP Guidance on O&M

- *Planning and Reporting for Operations & Maintenance in Federal Energy Savings Performance Contracts*, February, 2007  
([http://www1.eere.energy.gov/femp/pdfs/planning\\_om\\_espcs.pdf](http://www1.eere.energy.gov/femp/pdfs/planning_om_espcs.pdf))
- *O&M Best Practices: A Guide to Achieving Operational Efficiency* July, 2004  
([http://www1.eere.energy.gov/femp/pdfs/omguide\\_complete.pdf](http://www1.eere.energy.gov/femp/pdfs/omguide_complete.pdf))

# FEMP Is Expanding Its Role In The ESPC Performance Period

- Annual phone contact with Contracting Officers at ESPC sites
  - Ensure awareness of roles and responsibilities
  - Ensure awareness of schedule for ESCO M&V site visit
  - Offer training, provide any new or update guidance documents from FEMP

# This will include periodic site visits

- Field review of ESPC Task Orders on a three-year schedule
  - Personal visit with Contracting Officer and technical staff
  - Inspection of installed equipment
  - Refresher training on Post Acceptance Performance Period responsibilities

# Bottom Line

- Effective management of the Post Acceptance Performance Period is key to ESPC success
- Agencies must be aware of their responsibilities and carry them out effectively
- FEMP provides guidance in all areas related to the performance period (as well as assistance with technical and contracting issues, should you need it)
- FEMP is also initiating Life of Contract program to ensure long-term quality of ESPC

# Key Contacts for ESPC Life of Contract

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