

Performance Work Statement for Bronx VAMC ESPC ECM Projects Construction Management and Commissioning Oversight

Part 1. General Information

A. Title of Project

Bronx VAMC Energy Savings Performance Contract (ESPC) Energy Conservation Measure (ECM) Projects Construction Management and Commissioning Oversight (CM/Cx -O) Support for the Department of Veterans Affairs (VA)

B. Purpose and Background

B-1. Background

The Department of Veterans Affairs (VA) awarded an Energy Savings Performance Contract (ESPC) that includes ECM projects for the VISN 2 Bronx VAMC. Descriptions of ECM task orders (to be performed by ESPC contractor, AMERESCO) are shown in Appendix-B, and shall be required for CM/Cx-O:

An Investment Grade Audit (IGA) was prepared by Ameresco and accepted by VA in Jan, 2018. Following the IGA will be a design-build process. Design will follow scope of work detailed in the IGA. CM/Cx-O is required for both design and construction phases. Awarded cost for the combined ECMs (construction only) was approximately \$59 million.

ECM List included in this CM/Cx-O contract	Award Cost
ECM-2: Chiller plant improvements	\$5.344 M
ECM-3: BAS/EMS control system	\$23.022 M
ECM-4: HVAC	\$18.595 M
ECM-5: Lighting Improvements	\$7.431 M
ECM-7: Steam Distribution System Improvements	\$2.906 M
ECM-8: Electric Motors and Drives	\$1.238 M
Total	\$59.219 M

These ECM projects will help the VA meet energy and sustainability related mandates for Federal facilities, energy security and independence, and the VA's goal of reducing its energy intensity.

B-2 Purpose

The purpose of this contract is to procure a broad range of services associated with CM/Cx-O for the ECM projects at the facility. Tasks could be day to day on-site construction

management (including design and submittal reviews), providing technical assistances, and basic factory acceptance to the full range of commissioning support.

B-3 Objectives

The objective of this TO is to ensure that the ECM projects are managed and commissioned properly by the Energy Savings Performance Contractor (ESCO):

1. Meet agency and facility needs and requirements;
2. Are developed in a cost-effective and timely manner; and
3. Meet the VA Specification section 01 91 00 (General Commissioning Requirements) <http://www.cfm.va.gov/TIL/spec.asp#01>

PART 2. WORK REQUIREMENTS

A. TECHNICAL REQUIREMENTS:

A.1. GENERAL:

The general PWS will consist of tasks associated with CM/Cx-O for the ECM projects detailed in the IGA at the Bronx VAMC. The ESPC ECM projects were awarded and are in the design and planning phase. ESCO has CM/Cx responsibility. The CM/Cx-O work will include one on-site Construction Manager taking care of day to day oversight work for the project, and technical assistance from CM/Cx-O firm for design reviews, occasional site inspections, and a series of reviews for project documentations and commissioning reports, physical inspections, and task-level technical analysis and reporting.

A.1.1. The CM oversight support shall be required to provide management, technical, and administrative resources to assist in achieving the following goals:

A.1.1.1. That design complies with scope of IGA.

A.1.1.2. That the Contractor complies with the contract requirements.

A.1.1.3. That the construction work will be performed in conformity with applicable requirements.

A.1.1.4. The construction will be completed as early as practical, but not later than the scheduled contract completion date.

A.1.2. CM oversight support agrees to perform stated services in a manner solely consistent with the interests of the Government. The CM oversight FIRM is responsible for:

A.1.2.1. Development of a Project Management Plan meeting VA requirements

A.1.2.2. Monitor the performance of the ESPC contractor, and maintaining and tracking the project schedule.

- A.1.2.3. Review the completed design for defects, errors, and omissions with professional diligence.
- A.1.2.4. Complete or assist the VA with administrative tasks including submittal and other documentation review, record keeping, progress payment validation, and change order processing.
- A.1.2.5. Provide Cx-O and completing post-construction supports

Section 01 91 00 GENERAL COMMISSIONING REQUIREMENTS of Solicitation no. VA-701-11-RP-0255 BRIDGING DOCUMENTS shall form the basis of the construction phase commissioning process and procedures. The Commissioning Agent shall add, modify, and refine the commissioning procedures, as approved by the Department of Veterans Affairs (VA), to suit field conditions and actual manufacturer's equipment, incorporate test data and procedure results, and provide detailed scheduling for all commissioning tasks. The Design/Build Contractor and the Sub-Contractors have significant responsibilities related to participation in and execution of the commissioning process and this is described in greater detail in Section 01 91 00 GENERAL COMMISSIONING REQUIREMENTS and as specified in the Division 21, Division 22, Division 23, Division 26, Division 27, Division 28, Division 33 and Division 40. (see VA Technical Information Library: <https://www.cfm.va.gov/til/>)

ESCO will commission the following systems:

A. Fire Suppression (Division 21)

- 1. Fire Protection System: controller, wet-pipe fire suppression, dry system air compressors and motors.

B. Plumbing (Division 22)

- 1. Process equipment: combustion burners/fans/motors).

C. HVAC (Division 23)

- 1. Air Handling Systems (Fans, motors, Variable Speed Drives, cooling coils and control valves, heating coils and control valves, filters, dampers, safeties such as smoke detectors or freezestats and damper end switches, controls, gages, and vibration isolation).
- 2. Dual Duct Mixing Boxes in the air distribution system.
- 3. Heating Hot Water Systems (Boilers, controls, instrumentation and gages, flues, heating water pumps and motors, Variable Speed Drives, mixing valves).
- 4. Chilled water distribution systems (chillers, controls, pumps, motors, Variable Speed Drives, and Valves)
- 5. Exhaust Fans (Fan, motor, Variable Speed Drives, controls and safeties).
- 6. Steam System (Boilers, controls, gages and instrumentation, safety relief valves, combustion burners/fans/motors, fuel delivery pumps and motors, flues).
- 7. Direct Digital Control System (BACnet or similar Local Area Network (LAN), Operator Work Station hardware and software, building controller hardware and software, terminal unit controller hardware and software, all sequences of operation, system accuracy and response time).

D. Electrical (Division 26)

- 1. Utility Service Entrance Switchgear (Fuses and circuit breaker settings, metering, mimic diagram, gages, and controls).
- 2. Paralleling Switchboards (Automatic transfer switches, instrumentation, metering and gages, and controls).
- 3. Normal Power Distribution Systems (Grounding tests, coordination study review, major circuit breaker settings, meters and gages, and controls).

4. Emergency Power Distribution Systems (Automatic transfer on loss of normal power, grounding tests, coordination study review, major circuit breaker settings, meters and gages, and controls).
 5. Lighting Controls (Control system hardware and software, scene settings, zone settings, occupancy sensor interface, and unoccupied cycle control).
- E. Electronic Safety and Security (Division 28)
1. Fire Detection and Alarm (Master panel and software, addressable units – i.e. pull stations, flow detectors, hear detectors, etc., controls and alarm functions, horns/bells/door releases and other output devices, and fire command center functions – stairwell communications, stairwell pressurization fan start, mechanical systems shutdowns). VAMC controls this system.
- F. Utilities & Switchgear (Division 33)
- G. Process piping, equipment and controls (Division 40)

CONSTRUCTION MANAGEMENT OVERSIGHT SERVICES:
A.2. DESIGN PHASE ASSISTANCE SERVICES:

A.2.1. Design Review Services:

A.2.1.1 The CM/Cx-O FIRM shall assist VA in the review of the design submissions, ensuring technically correct and in compliance with the scope as described and accepted in the IGA and VA design guides and specifications

A.2.2. Construction/Inspection Phase Services:

A.2.1.1. The CM/Cx-O FIRM shall reasonably inspect the work performed by the contractor and its subcontractors in order to verify conformity with the requirements of the contract. The CM/Cx-O FIRM shall verify that workmanship, materials, and equipment delivered to the jobsite for installation or installed by the contractor meet or exceed the requirements of the project. This includes, but not by way of limitation: the contract, contract modifications, approved submittals, shop drawings or standards or codes which may be referred to or incorporated by reference in the contract. The CM/Cx-O FIRM shall be responsible for the following activities:

- A. Inspects the work on a daily basis;
- B. Completes daily reports to record the work inspected;
- C. Recommends to the VA, the rejection of materials or workmanship not conforming to the contract requirements;
- D. Promptly report in writing to the VA any observed variances from the ESPC contract requirements.
- E. Notifies the VA if the contractor fails to promptly remove, correct, or replace rejected construction work.
- F. Maintains the project's inspection records. Prepare reports for all inspections, identifying items that have been satisfactorily inspected and those requiring action.

- G. Maintains an active list of construction and design deficiencies and omissions, indicating corrective status.
- H. Prepares and maintains a marked-up set of drawings to verify the Design-Build contractor's official "As-Built" drawings set.
- I. Review contract drawings, Specifications, and approved submittals in preparation for upcoming inspections.

A.2.3. Submittals:

A.2.2.1 The CM/Cx-O FIRM shall review, provide recommendations on, and track all submittals. The submittal process applies to:

- A. Contractor Requests for Information (RFI);
- B. Contractor Requests for Deviation
- C. Shop drawings and fabricator drawings;
- D. Descriptive literature;
- E. Test reports;
- F. Product or material samples;
- G. Certifications;
- H. Warranties;
- I. Operations and maintenance manuals.

A.2.2.2 The CM/Cx-O FIRM shall monitor and track submittals, review and provide recommendations on all submittals required by the ESPC documents to VA.

A.2.2.3 The CM/Cx-O FIRM shall be responsible for reviewing all submittals and providing recommendations to the VA, verify the necessity of Architect-Engineer (A/E) involvement and if A/E input on submittals is required, and note problems on the submittals/RFIs and drawings to the VA.

A.2.2.4 The CM/Cx-O FIRM shall review the submittal schedule as developed by the contractor for reasonableness and provide recommendations to VA.

A.2.2.5 The CM/Cx-O FIRM shall be responsible for coordinating the submittals from their receipt to their return to the VA, and monitor the time of submission and the processing of shop drawings, samples, and other separate contractor submittals. If submittals are not being received in a timely manner, the CM/Cx-O FIRM shall ascertain the reason(s) therefore and recommend such action(s) to the VA to eliminate delays. The CM/Cx-O FIRM shall notify the VA promptly of any delays of the contractor in processing submittals, and ensure that all submittals are submitted and approved by VA in sufficient time to preclude delaying overall project completion.

A.2.4. Contract Modifications/Change Orders:

- A.2.3.1 The CM/Cx-O FIRM shall provide assistance in case there will be changes to the ESPC via VA personnel including the development of cost estimates. The CM/Cx-O FIRM shall not take any action that commits Government funds, and more specifically, shall avoid any instruction(s) to the contractor that could be interpreted as authorizing modifications to the contract. All modifications to the contract must be processed as formal contract modifications. VA change requests must be approved by the VA.
- A.2.3.2 The CM/Cx-O FIRM shall track contract modifications. The system must encompass potential contract modifications, contract modifications in progress, and completed contract modifications.
- A.2.3.3 Upon receipt of any change suggested by the ESCO, the CM/Cx-O FIRM shall review the merit thereof and recommend acceptance or rejection to the VA.
- A.2.3.4 The CM/Cx-O FIRM shall review all proposals from the contractor. Prepare a technical recommendation memorandum. Assist VA in negotiating a mutually agreeable settlement, subject to final approval by the VA.
- A.2.3.5 The CM FIRM shall determine if a change will extend or shorten the specified completion date. Provide a CPM schedule analysis reflecting the impact on construction schedules. Include appropriate time extensions for all contract modifications.
- A.2.3.6 For a contract modification on which agreement has not been reached on the amount of equitable adjustment prior to commencing work (NTE change orders), the CM/Cx-O FIRM shall observe the contractor's performance and make detailed records of equipment, material and labor utilized, the impact on changed and unchanged work, and any other data or information pertinent to a determination of the amount of equitable adjustment of contract price and time of performance and provide it to the VA.
- A.2.3.7 The CM/Cx-O FIRM shall maintain a separate schedule showing cost and status of all contract modifications, including date requested, date received, date Technical Analysis was prepared, date negotiated, date issued and modification number. Submit progress reports every month on the status of all un-priced change orders to the VA.

A.2.5. Meetings and Conferences:

The CM/Cx-O FIRM shall schedule and participate in weekly jobsite meetings with the ESCO to discuss procedures, progress, problems, coordination, scheduling, and other appropriate matters.

A.2.6. Daily Construction Reports:

A.2.6.1 The daily construction report provides a record of jobsite conditions, weather, communication, and all events which occur at the jobsite or elsewhere which affect or may be expected to affect project progress. The CM/Cx-O FIRM shall keep accurate and detailed written records of project progress during all stages of construction. The daily construction reports shall be available to the VA at all times and shall be turned over to the VA on a weekly basis for final review and approval. The daily construction report shall consist of the following (at a minimum):

- A. Shall be prepared on VA Form 10-6131 or equivalent;
- B. The contractor's daily report describing the construction activities of the day along with manpower and equipment usage, including that of subcontractor(s). If any changed work was done on an open price basis, the ESCO is to submit an extra daily work report.
- C. The testing firm's daily report of all testing performed and testing results received during the day.
- D. Other documentation prepared during the day such as noncompliance notices, safety notices, correspondence signed, contract modification proposal requests, etc.

A.2.7. As-Builts:

A.2.6.1 The CM/Cx-O FIRM shall verify accuracy and completeness of "As-Builts" Maintain at the jobsite a current marked up set of working drawing prints and Specifications, indicating thereon all changes and deviations from the original construction contract documents. Upon completion of construction, deliver the marked up set of documents and drawings to the VA. The CM/Cx-O FIRM shall review the final "As-Built" drawings submitted by the ESCO for accuracy and shall submit recommendation of acceptance or rejection to the VA.

A.2.8. Final Inspection:

A.2.7.1 The CM/Cx-O FIRM shall recommend to the VA whether or not the project is ready for final inspection. If the contractor's request for final inspection is denied, provide a written explanation to the VA, delineating prerequisites that are not satisfied.

A.2.7.2 If the project is ready for final inspection, the CM/Cx-O FIRM shall assist the VA in conducting a final inspection, and assist the VA in the development of a list of defects and omissions and combine with outstanding issues identified in previous inspections.

A.2.7.3 After physical construction completes, CM/Cx-O FIRM will assist in commissioning, testing, as-built preparation, and all normal CM efforts needed for contract close-out (see section A.3 for Cx Oversight scope)

A.2.8 Operation and Maintenance Training Requirements:

As CM/Cx-O FIRM shall review and provide comments relative to Operation and Maintenance training as follows:

A.2.8.1 Training Preparation Conference: Before operation and maintenance training, the CM/Cx-O Contractor will convene a training preparation conference to include VA's COR, VA's Operations and Maintenance personnel, and the ESCO. The purpose of this conference will be to discuss and plan for Training and Demonstration of VA Operations and Maintenance personnel.

A.2.8.2. Training Module Submittals: The ESCO shall submit the Training Module information to the VA and the CM/Cx-O Contractor, and the CM/Cx-O Contractor shall review and provide comments on the Submittal.

A.3. COMMISSIONING OVERSIGHT SERVICES:

A.3.1 CM/Cx-O FIRM's Scope of Work and Responsibilities:

- A. Provide design review comments to COR.
- B. Organize and review the commissioning activities.
- C. Review the commissioning plan. See Section A-1 of this PWS for further information.
- D. Review and comment on selected submittals from the Contractor for general conformance with the Construction Documents. Review and comment on the ability to test and operate the system and/or equipment, including providing gages, controls and other components required to operate, maintain, and test the system. Review and comment on performance expectations of systems and equipment and interfaces between systems relating to the Construction Documents.
- E. Conduct an initial construction phase coordination meeting for the purpose of reviewing the commissioning activities and establishing tentative schedules for operation and maintenance submittals; operation and maintenance training sessions; Pre-Functional Checklists, Systems Functional Performance Testing; and project completion. Conduct historical review of documents (RFI, Submittals and Change Orders)
- F. Convene commissioning team meetings for the purpose of coordination, communication, and conflict resolution; discuss status of the commissioning processes. Responsibilities include arranging for facilities, preparing agenda and attendance lists, and notifying participants. The Commissioning Agent shall prepare and distribute minutes to commissioning team members and attendees within five workdays of the commissioning meeting.
- G. Observe construction and report progress, observations and issues. Observe systems and equipment installed for adequate accessibility for maintenance and component replacement or repair, and for general conformance with the Construction Documents.
- H. Coordinate Systems Functional Performance Testing schedule with the ESPC Contractor.
- I. Witness selected systems startups.
- J. Verify selected Pre-Functional Checklists completed and submitted by the Contractor.

- K. Witness and document Systems Functional Performance Testing.
- L. Review test data, inspection reports, and certificates and include them in the systems manual and commissioning report.
- M. Review and comment on operation and maintenance (O&M) documentation and systems manual outline for compliance with the Contract Documents.
- N. Review operation and maintenance training program developed by the Contractor. Verify training plans provide qualified instructors to conduct operation and maintenance training.
- O. Prepare commissioning Oversight Reports.

A.3.2. Commissioning Documentation provided by ESCO:

Commissioning documentation to be provided by the ESCO shall include (CM/Cx-O contractor shall review and provide comments to COR):

- A. Commissioning Agent's Certification(s): Commissioning Agent shall submit evidence of valid and current certification(s), as required in Specification 01.91.00, Section 1.1(G), to the Contracting Officer.
- B. Commissioning Plan: A document, prepared by Commissioning Agent, that outlines the schedule, allocation of resources, and documentation requirements of the commissioning process, and shall include, but is not limited, to the following:
 1. Plan for delivery and review of submittals, systems manuals, and other documents and reports. Identification of the relationship of these documents to other functions and a detailed description of submittals that are required to support the commissioning processes. Submittal dates shall include the latest date approved submittals must be received without adversely affecting commissioning plan.
 2. Description of the organization, layout, and content of commissioning documentation (including systems manual) and a detailed description of documents to be provided along with identification of responsible parties.
 3. Identification of systems and equipment to be commissioned.
 4. Schedule of Commissioning Coordination meetings.
 5. Identification of items that must be completed before the next operation can proceed.
 6. Description of responsibilities of commissioning team members.
 7. Description of observations to be made.
 8. Description of requirements for operation and maintenance training.
 9. Schedule for commissioning activities with dates coordinated with overall construction schedule.
 10. Process and schedule for documenting changes on a continuous basis to appear in Project Record Documents.
 11. Process and schedule for completing prestart and startup checklists for systems, subsystems, and equipment to be verified and tested.
 12. Preliminary Systems Functional Performance Test procedures.
- C. Systems Functional Performance Test Procedures: The Commissioning Agent will review Systems Functional Performance Test Procedures provided by contractor, for each system to be commissioned, including subsystems, or equipment and interfaces or interlocks with other systems. Systems Functional Performance Test Procedures will include a separate entry, with space for comments, for each item to be tested. Preliminary Systems Functional Performance Test Procedures will be provided to the VA, Architect/Engineer, and Commissioning Agent for review and comment. The Systems Performance Test Procedure will include test procedures for each mode of operation and

provide space to indicate whether the mode under test responded as required. Each System Functional Performance Test procedure, regardless of system, subsystem, or equipment being tested, shall include, but not be limited to, the following:

1. Name and identification code of tested system
 2. Test number
 3. Time and date of test
 4. Indication of whether the record is for a first test or retest following correction of a problem or issue
 5. Dated signatures of the person performing test and of the witness, if applicable.
 6. Individuals present for test.
 7. Observations and Issues.
 8. Issue number, if any, generated as the result of test.
- D. Pre-Functional Checklists: The Commissioning Agent will review Pre-Functional Checklists. Pre-Functional Checklists shall be completed and signed by the Contractor, verifying that systems, subsystems, equipment, and associated controls are ready for testing. The Commissioning Agent will spot check Pre-Functional Checklists to verify accuracy and readiness for testing. Inaccurate or incomplete Pre-Functional Checklists shall be returned to the Contractor for correction and resubmission.
- E. Test and Inspection Reports: The Commissioning Agent will record test data, observations, and measurements on Systems Functional Performance Test Procedure. The report will also include recommendation for system acceptance or non-acceptance. Photographs, forms, and other means appropriate for the application shall be included with data. Commissioning Agent Will compile test and inspection reports and test and inspection certificates and include them in systems manual and commissioning report.
- F. Corrective Action Documents: The Commissioning Agent will document corrective action taken for systems and equipment that fail tests. The documentation will include any required modifications to systems and equipment and/or revisions to test procedures, if any. The Commissioning Agent will witness and document any retesting of systems and/or equipment requiring corrective action and document retest results.
- G. Commissioning Issues Log: The Commissioning Agent will prepare and maintain Commissioning Issues Log that describes Commissioning Issues and Commissioning Observations that are identified during the Commissioning process. These observations and issues include, but are not limited to, those that are at variance with the Contract Documents. The Commissioning Issues Log will identify and track issues as they are encountered, the party responsible for resolution, progress toward resolution, and document how the issue was resolved. The Master Commissioning Issues Log will also track the status of unresolved issues.
1. Creating a Commissioning Issues Log Entry:
 - a. Identify the issue with unique numeric or alphanumeric identifier by which the issue may be tracked.
 - b. Assign a descriptive title for the issue.
 - c. Identify date and time of the issue.
 - d. Identify test number of test being performed at the time of the observation, if applicable, for cross reference.
 - e. Identify system, subsystem, and equipment to which the issue applies.
 - f. Identify location of system, subsystem, and equipment.

- g. Include information that may be helpful in diagnosing or evaluating the issue.
- h. Note recommended corrective action.
- i. Identify commissioning team member responsible for corrective action.
- j. Identify expected date of correction.
- k. Identify person that identified the issue.

2. Documenting Issue Resolution:

- a. Log date correction is completed or the issue is resolved.
- b. Describe corrective action or resolution taken. Include description of diagnostic steps taken to determine root cause of the issue, if any.
- c. Identify changes to the Contract Documents that may require action.
- d. State that correction was completed and system, subsystem, and equipment are ready for retest, if applicable.
- e. Identify person(s) who corrected or resolved the issue.
- f. Identify person(s) verifying the issue resolution.

H. Final Commissioning Report: The Commissioning Agent will document results of the commissioning process, including unresolved issues, and performance of systems, subsystems, and equipment. The Commissioning Report will indicate whether systems, subsystems, and equipment have been properly installed and are performing according to the Contract Documents. This report will be used by the Department of Veterans Affairs when determining that systems will be accepted. This report will be used to evaluate systems, subsystems, and equipment and will serve as a future reference document during VA occupancy and operation. It shall describe components and performance that exceed requirements of the Contract Documents and those that do not meet requirements of the Contract Documents. The commissioning report will include, but is not limited to, the following:

- 1. Lists and explanations of substitutions; compromises; variances with the Contract Documents; record of conditions; and, if appropriate, recommendations for resolution. Design Narrative documentation maintained by the Commissioning Agent.
- 2. Commissioning plan.
- 3. Pre-Functional Checklists completed by the Contractor, with annotation of the Commissioning Agent review and spot check.
- 4. Systems Functional Performance Test Procedures, with annotation of test results and test completion.
- 5. Commissioning Issues Log.
- 6. Listing of deferred and off season test(s) not performed, including the schedule for their completion.

I. Addendum to Final Commissioning Report: The Commissioning Agent will prepare an Addendum to the Final Commissioning Report near the end of the Warranty Period. The Addendum will indicate whether systems, subsystems, and equipment are complete and continue to perform according to the Contract Documents. The Addendum to the Final Commissioning Report shall include, but is not limited to, the following:

- 1. Documentation of deferred and off season test(s) results.
- 2. Completed Systems Functional Performance Test Procedures for off season test(s).
- 3. Documentation that unresolved system performance issues have been resolved.
- 4. Updated Commissioning Issues Log, including status of unresolved issues.
- 5. Identification of potential Warranty Claims to be corrected by the Contractor.

- J. Systems Manual: The Commissioning Agent will gather required information and compile the Systems Manual. The Systems Manual will include, but is not limited to, the following:
 - 1. Design Narrative, including system narratives, schematics, single-line diagrams, flow diagrams, equipment schedules, and changes made throughout the Project.
 - 2. Reference to Final Commissioning Plan.
 - 3. Reference to Final Commissioning Report.
 - 4. Approved Operation and Maintenance Data as submitted by the Contractor
- K. Assemble the final commissioning documentation, including the Final Commissioning Report and Addendum to the Final Commissioning Report.

A.3.3. Submittals:

The following submittals will be reviewed by CM/Cx-O firm:

- A. Preliminary Commissioning Plan Submittal: The Commissioning Agent has prepared a Preliminary Commissioning Plan based on the final Construction Documents. The Preliminary Commissioning Plan is included as an Appendix to this specification section. The Preliminary Commissioning Plan is provided for information only. It contains preliminary information about the following commissioning activities:
 - 1. The Commissioning Team: A list of commissioning team members by organization.
 - 2. Systems to be commissioned: A detailed list of systems to be commissioned for the project. This list also provides preliminary information on systems/equipment submittals to be reviewed by the Commissioning Agent; preliminary information on Pre-Functional Checklists that are to be completed; preliminary information on Systems Performance Testing, including information on testing sample size (where authorized by the VA).
 - 3. Commissioning Team Roles and Responsibilities: Preliminary roles and responsibilities for each Commissioning Team member.
 - 4. Commissioning Documents: A preliminary list of commissioning-related documents, include identification of the parties responsible for preparation, review, approval, and action on each document.
 - 5. Commissioning Activities Schedule: Identification of Commissioning Activities, including Systems Functional Testing, the expected duration and predecessors for the activity.
 - 6. Pre-Functional Checklists: Preliminary Pre-Functional Checklists for equipment, components, subsystems, and systems to be commissioned. These Preliminary Pre-Functional Checklists provide guidance on the level of detailed information the Contractor shall include on the final submission.
 - 7. Systems Functional Performance Test Procedures: Preliminary step-by-step System Functional Performance Test Procedures to be used during Systems Functional Performance Testing. These Preliminary Systems Functional Performance procedures provide information on the level of testing rigor, and the level of Contractor support required during performance of system's testing.
- B. Final Commissioning Plan Submittal: Based on the Final Construction Documents and the Contractor's project team, the Commissioning Agent will prepare the Final Commissioning Plan as described in this section. The Commissioning Agent will submit

three hard copies and three sets of electronic files of Final Commissioning Plan. The Contractor shall review the Commissioning Plan and provide any comments to the VA. The Commissioning Agent will incorporate review comments into the Final Commissioning Plan as directed by the VA.

- C. Systems Functional Performance Test Procedure: The Commissioning Agent will review preliminary Systems Functional Performance Test Procedures prepared by the Contractor. The Commissioning Agent shall return review comments to the VA Resident Engineer (this is his chain of communication) and the Contractor. The VA will also return review comments to the Contractor. The Contractor will incorporate review comments into the Final Systems Functional Test Procedures to be used in Systems Functional Performance Testing.
- D. Pre-Functional Checklists: The Contractor will submit Pre-Functional Checklists to be completed by the Contractor for review by the Commissioning Agent.
- E. Test and Inspection Reports: The Commissioning Agent will submit test and inspection reports to the VA with copies to the Contractor and the Architect/Engineer.
- F. Corrective Action Documents: The Commissioning Agent will submit corrective action documents to the VA Resident Engineer with copies to the Contractor and Architect.
- G. Preliminary Commissioning Report Submittal: The Commissioning Agent will submit three electronic copies of the preliminary commissioning report. One electronic copy, with review comments, will be returned to the Commissioning Agent for preparation of the final submittal.
- H. Final Commissioning Report Submittal: The Commissioning Agent will submit four sets of electronically formatted information of the final commissioning report to the VA. The final submittal will incorporate comments as directed by the VA.
- I. Data for Commissioning:
 - 1. The Commissioning Agent will request in writing from the Contractor specific information needed about each piece of commissioned equipment or system to fulfill requirements of the Commissioning Plan.
 - 2. The Commissioning Agent may request further documentation as is necessary for the commissioning process or to support other VA data collection requirements, including Construction Operations Building Information Exchange (COBIE), Building Information Modeling (BIM), etc.

A.3.4. Commissioning Process:

CM/Cx-O contractor shall oversee the commissioning process as follows:

- A. The Commissioning oversight contractor will be responsible for the oversight of the commissioning process.
- B. Within 30 calendar days of contract award, the CM/Cx-O Contractor shall designate a specific individual as the Commissioning Oversight Manager (COM) to oversee the commissioning effort on behalf of the Contractor. The COM shall be the single point of

contact and communications for all commissioning oversight related services by the Contractor.

A.3.5. Startup, Initial Checkout, and Pre-Functional Checklists:

CM/Cx-O contractor shall monitor the following related to startup, initial checkout, and pre-functional checklists as follows:

- A. The Commissioning Agent will review completed Pre-Functional Checklists and field-verify the accuracy of the completed checklist using sampling techniques.
- B. The Commissioning Agent will observe the startup procedures for selected pieces of primary equipment.
- C. VAMC staff in the Energy Center control and operate the existing equipment and piping systems. They will operate these valves and not the Contractor.

A.3.6. Deficiencies, Nonconformance and Approval in Checklists and Startup:

CM/Cx-O contractor shall review and submit comments to the VA regarding deficiencies, nonconformance and approval of checklists and startup as follows:

- A. Coordinating with the Contractor shall clearly list any outstanding items of the initial startup and Pre-Functional Checklist procedures that were not completed successfully, at the bottom of the procedures form or on an attached sheet. The procedures form and any outstanding deficiencies shall be provided to the VA and the ESCO Commissioning Agent within two calendar days of completion.
- B. The CM/Cx-O contractor will review the report and submit comments to the VA, and will work with the ESCO to correct and verify deficiencies or uncompleted items. The CM/Cx-O contractor will involve the VA and others as necessary. The ESCO shall correct all areas that are noncompliant or incomplete in the checklists in a timely manner, and shall notify the VA and CM/Cx-O contractor as soon as outstanding items have been corrected. The ESCO shall submit an updated startup report and a Statement of Correction on the original noncompliance report. When satisfactorily completed, the CM/Cx-O contractor will recommend approval of the checklists and startup of each system to the VA.

A.3.7. Documentation, Nonconformance and Approval of Tests:

CM/Cx-O contractor shall witness and document the following related to systems functional performance testing:

- A. Documentation: The CM/Cx-O contractor will witness, and document the results of all Systems Functional Performance Tests using the specific procedural forms developed by the ESCO Commissioning Agent for that purpose. Prior to testing, the ESCO Commissioning Agent will provide these forms to the VA and the CM/Cx-O contractor for review and approval. The CM/Cx-O contractor shall include the filled out forms with the O&M manual data.
- B. Nonconformance: The CM/Cx-O contractor will record the results of the Systems Functional Performance Tests on the procedure or test form. All items of nonconformance issues will be noted and reported to the VA on Commissioning Oversight Reports and/or the Commissioning Master Issues Log.

1. Corrections of minor items of noncompliance identified may be made during the tests. In such cases, the item of noncompliance and resolution shall be documented on the Systems Functional Test Procedure.
2. Every effort shall be made to expedite the systems functional Performance Testing process and minimize unnecessary delays, while not compromising the integrity of the procedures. However, the ESPC Commissioning Agent shall not be pressured into overlooking noncompliant work or loosening acceptance criteria to satisfy scheduling or cost issues, unless there is an overriding reason to do so by direction from the VA.
3. As the Systems Functional Performance Tests progresses and an item of noncompliance is identified, the CM/Cx-O contractor shall discuss the issue with the COR.
4. When there is no dispute on an item of noncompliance, and the ESCO accepts responsibility to correct it:
 - a) The CM/Cx-O contractor will document the item of noncompliance and the Contractor's response and/or intentions. The Systems Functional Performance Test then continues or proceeds to another test or sequence. After the day's work is complete, the Commissioning Agent will submit a Commissioning Field Report to the VA. The CM/Cx-O contractor will also note items of noncompliance and the Contractor's response in the Master Commissioning Issues Log. The ESCO shall correct the item of noncompliance and report completion to the VA and the CM/Cx-O contractor.
 - b) The need for retesting will be determined by the CM/Cx-O contractor. If retesting is required, the CM/Cx-O contractor , ESCO Commissioning Agent and the Contractor shall reschedule the test and the test shall be repeated.
5. If there is a dispute about item of noncompliance, regarding whether it is an item of noncompliance, or who is responsible:
 - a) The item of noncompliance shall be documented on the test form with the ESCO's response.
 - b) Resolutions shall be made at the lowest management level possible. Other parties are brought into the discussions as needed. Final interpretive and acceptance authority is with the Department of Veterans Affairs.
 - c) The CM/Cx-O contractor will document the resolution process.
 - d) Once the interpretation and resolution have been decided, the ESCO shall correct the item of noncompliance, report it to the CM/Cx-O contractor. The requirement for retesting will be determined by the ESCO Commissioning Agent. If retesting is required, the ESCO Commissioning Agent and the ESCO shall reschedule the test. Retesting shall be repeated until satisfactory performance is achieved

A.3.8. Deferred Testing:

During deferred testing, ESPC contractor shall provide the following scope of services (CM/Cx-O contractor shall oversee the testing):

- A. Unforeseen Deferred Systems Functional Performance Tests: If any Systems Functional Performance Test cannot be completed due to the building structure, required occupancy condition or other conditions, execution of the Systems Functional Performance Testing

may be delayed upon approval of the VA. These Systems Functional Performance Tests shall be conducted in the same manner as the seasonal tests as soon as possible. Services of the CM/Cx-O contractor to conduct these unforeseen Deferred Systems Functional Performance Tests shall be negotiated between the VA and the ESCO.

- B. Deferred Seasonal Testing: Deferred Seasonal Systems Functional Performance Tests are those that must be deferred until weather conditions are closer to the systems design parameters. The CM/Cx-O contractor will review systems parameters and recommend which Systems Functional Performance Tests should be deferred until weather conditions more closely match systems parameters. The CM/Cx-O contractor shall review and comment on the proposed schedule for Deferred Seasonal Testing. The VA will review and approve the schedule for Deferred Seasonal Testing. Deferred Seasonal Systems Functional Performances Tests shall be witnessed and documented by the CM/Cx-O contractor. Deferred Seasonal Systems Functional Performance Tests shall be executed by the ESCO in accordance with these specifications.

PART 3. CONTRACT TERMS

3.1 Performance Period

The period of performance for this contract is 3 years or 1,095 calendar days from the date of award.

3.2 Type of Contract

This will be a Firm Fixed Priced contract. VA is expecting one CM on-site person and assistance from mechanical (HVAC and controls), electrical and structural engineers when necessary during the performance period.

3.3 Place of Performance

The primary place of performance for on-site CM person will be at the Bronx VAMC, and other supporting staffs will be at the CM/Cx-O contractor's facilities. Some activities (including attending design review meetings, on-site meetings, inspections, etc) may require work to be performed at the Bronx VAMC. Any work at the Government site shall not take place on Federal holidays or weekends unless directed by the Contracting Officer (CO).

3.4 Contract Award Meeting

The contractor shall not commence performance on the tasks until the CO has conducted a kick-off meeting or has advised the contractor that a kick-off meeting is waived.

3.5 Specific Mandatory Tasks and Associated Deliverables

For this contract, the deliverables described below are typical requirements.

3.5.1 Task 1: Project Plan and Reporting

The contractor shall provide the COR with assistance in planning, initiating, managing, executing and closing out this effort.

Sub-task 1.1: Kickoff-meeting

The contractor shall schedule a kickoff meeting conference call within 7 calendar days of the date of award. The contractor will present the Project Management Plan (PMP) during the kickoff meeting.

Deliverables (base):

May include but are not limited to:

Deliverable 1: Kick-off meeting summary

3.5.2 Task 2: Design Reviews

All the listed ECM projects will be supported with design reviews, design meeting and documentation.

Sub-task 2.1: Design Review

The contractor shall collect and review all available design project documentation and provide written recommendations on any identified problems and concerns critical to the design and/or construction phases.

The contractor shall provide a design review report for the project. This report will be used for subsequent commissioning tasks.

Deliverables:

May include but are not limited to:

Deliverable 2: Design Review Report for ECM projects (at 60% and 90%)

3.5.3 Task 3 – Oversight for Inspection, Testing and As-builts

The contractor shall oversee an on-site physical and operational inspection for the listed ECM project at the 50%, 75%, and final-construction (100%). Concurrently the contractor shall evaluate the documentation.

Sub-task 3.1 – Interim Construction Review

When the construction is 50% and 75% complete the contractor shall conduct a physical inspection of the project, oversee start up and standard operational testing. The testing will be conducted on all equipment, the measurement and verification systems and the control systems. The ECM contractor and VA staff may be present during the inspection.

The contractor will identify any issues that prevent the system from achieving compliance with applicable VA and industry standards. Additionally, whenever observed, the contractor will address existing facility issues of code compliances and/or other deficiencies that would adversely affect the system project.

The contractor will work with the ESCO and the VA staff to address any issues. The contractor shall review the available as-built design documentation and provide a report documenting any issues and recommendations. The contractor shall meet with ESCO and the VA staff to review findings and answer any questions about inspection, testing and documentation review.

Sub-task 3.2 – Final Construction Review

When the construction is 100% complete the contractor shall conduct a physical inspection of the project, oversee start up and standard operational testing. The testing will be conducted on all equipment, the measurement and verification systems and the control systems. The ECM contractor and VA staff may be present during the inspection.

The contractor will identify any issues that prevent the system from achieving compliance with applicable VA and industry standards. Additionally, whenever observed, the contractor will address existing facility issues of code compliances and/or other deficiencies that would adversely affect the system project.

The contractor will work with the ESCO and the VA staff to address any issues. The contractor shall review the available as-built design documentation and provide a report documenting any issues and recommendations. The contractor shall meet with ESCO and the VA staff to review findings and answer any questions about inspection, testing and documentation review.

Deliverables:

May include but are not limited to:

Deliverable 3: Interim Construction Review Report / Commissioning Oversight Report

Deliverable 4: Final Construction Review Report / Commissioning Oversight Report

3.6 Schedule for Deliverables

See Attachment A, Schedule of Deliverables.

1. Unless otherwise specified in the contract, all draft copies and final copies shall be in electronic format.
2. If for any reason the scheduled time for a deliverable cannot be met, the contractor is required to explain why (include the original deliverable due date) in writing to the CO, including a firm commitment of when the work shall be completed. This notice to the CO

shall cite the reasons for the delay, and the impact on the overall project. The CO will then review the facts and issue a response in accordance with applicable regulations.

3.7 Changes to Performance Work Statement

Any changes to this PWS shall be authorized and approved only through written correspondence from the CO. Costs incurred by the contractor through the actions of parties other than the CO shall be borne by the contractor.

3.8 Travel

As required by this contract, the contractor may be required to travel to the VAMC. Travel and per diem shall be reimbursed in accordance with Federal Travel Regulations. Each contractor invoice must include copies of all receipts that support the travel costs claimed in the invoice. No General and Administrative (G&A) fees or costs, and no other fees or costs shall be added to travel expenses. Local travel within a 50-mile radius from the Contractor's facility is considered the cost of doing business and will not be reimbursed. This includes travel, subsistence, and associated labor charges for travel time. Travel performed for personal convenience and daily travel to and from work at the contractor's facility will not be reimbursed. Travel, subsistence, and associated labor charges for travel time for travel beyond a 50-mile radius of the Contractor's facility are authorized on a case-by-case basis and must be pre-approved by the COR at least 15 calendar days in advance for the requested travel

Attachment A: Schedule of Deliverables

Unless otherwise requested, all memos, reports and project documentation will be transmitted to the COR and EM via email or similar electronic means. All deliverables must be in digital format unless otherwise approved in writing by the Contracting Officer. Each deliverable must be clearly marked with the contract number, order number, the line item number and title.

The project task deliverables schedules are summarized in Table 2 below:

Task	Deliverable	Completion Date
Task 1	Deliverable 1: Kick-off meeting summary	Kick-off meeting + 7 calendar days
Task 2	Deliverable 2: Design Review Report	Design Submission + 14 calendar days
Task 3	Deliverable 3: Interim Construction Review Report / Commissioning Oversight Report	Site Visit + 14 calendar days
Task 3	Deliverable 4: Final Construction Review Report / Commissioning Oversight Report	Site Visit + 14 calendar days