

Performance Assurance Plan—Format

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Executive Summary

1. Project overview
2. Performance projected with key performance indicators (KPIs)
3. Maintaining performance

Training Plan

A training plan as agreed to in the contract including training schedule, video recording, and project notebook:

1. Classroom and installed equipment
 2. Observe functional testing of each energy conservation measure (ECM)
 3. Observe commissioning (Cx) of each ECM
 4. Baseline—an accurate baseline documenting existing conditions, systems, equipment and performance that will be modified by the project.
 5. Design—a design that is life cycle cost effective, buildable, maintainable, and will deliver the proposed performance
 - A. Description
 - B. Performance projected with KPIs
 - C. Controls, sequence of operations.
 6. Commissioning
 - A. Functional testing – once installed, each ECM will be tested according to the manufacturers' recommendations and compared to KPIs
 - B. Commissioning plan
 - C. Performance verification
 - D. Cx Report—the Cx protocol must be applied to all ECMs
 - E. Review Cx report.
 7. Operations and maintenance (O&M) requirements
 - A. Annual tune-ups
 - B. Troubleshooting.
 8. Performance period
 - A. Utility engagement annually or at intervals and responsibility levels described in contract
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- i. Wraparound 1-year warranty
 - ii. Recommissioning, performance verification, training, report
 - iii. O&M if included in contract.
- B. Agency responsibility
- iv. O&M
 - v. Annual rCx, performance verification, and reporting
 - vi. Repair and replacement as needed.

Baseline

An accurate and baseline documenting existing conditions, systems, equipment, and performance that will be modified by the project.

Design

1. Design that is life cycle cost-effective, buildable, maintainable, and will deliver the proposed performance
2. Performance projected with KPIs
3. Controls, sequence of operations, and other information essential to optimizing performance.

Installation

1. ECMs must meet the quality, characteristics, and functionality of the design and the manufacturers' recommended procedures as well as applicable code and agency requirements as described or referenced in the contract.
2. Equipment submittals, deliverables, and installations meets design specifications.
3. Commissioning plan and report
 - A. Cx protocol including activities checklist with performance target
 - B. Start-up performance verification based on measured data
 - C. Functional testing
 - D. Performance verification
 - E. Report findings, conclusions, and recommendations.
4. Acceptance.

Commissioning

1. Functional testing—once installed, each ECM will be tested according to the manufacturers' recommendations
2. Cx for all ECMs
 - A. Cx protocol

B. Performance verification

C. Cx Report.

Operations and Maintenance

1. Periodic maintenance
2. Recommissioning/annual tune-ups
3. Troubleshooting.

Performance Period

1. Year one
 - A. Wraparound 1-year warranty
 - B. Recommissioning, performance verification, training, report
 - C. O&M if included in contract.
2. Beyond year 1; utility engagement annually or at intervals and responsibility levels described in contract
 - A. Continued warranty, if included in contract
 - B. Recommissioning (rCx), performance verification, training, report
 - C. O&M if included in contract.
3. Agency responsibility
 - A. O&M
 - B. Annual rCx, performance verification, and reporting
 - C. Repair and replacement as needed or recommended.