

ATTACHMENT J-10

ANNUAL MEASUREMENT AND VERIFICATION REPORT OUTLINE

Contract # (include as appropriate):

Post-Acceptance Performance Period Dates Covered: _____ to _____

Contract year #: _____

J-10.1 EXECUTIVE SUMMARY

J-10.1.1 Project Background - Provide an overview of project background, including:

- A.** Contract # (as appropriate)
- B.** Dates and descriptions of relevant contract modifications
- C.** Post-acceptance performance period dates covered
- D.** Project acceptance date (actual or expected)

J-10.1.2 Brief Project and ECM Descriptions - Provide an overview including what was done and how savings are generated.

J-10.1.3 Summary of proposed and verified energy and cost savings. Compare verified savings for Performance Year # to Guaranteed Cost Savings for Year #. State whether guarantee is fulfilled for year. If not, provide detailed explanation.

- A.** Define post-acceptance performance period.
- B.** Include J-10.1.3 C, Table 1 - Proposed Annual Savings Overview.

C. Table 1 - Proposed Annual Savings Overview

[Include all applicable fuels/commodities for project, e.g., electric energy, electric demand, natural gas, fuel oil, coal, water, etc.]

ECM	Total energy savings (MBtu/yr)	Electric energy savings (kWh/yr)	Electric demand savings (kW/yr)*	Natural gas savings (MBtu/yr)**	Water savings (gallons/yr)	Other energy savings (MBtu/yr)	Total energy and water cost savings, Year # (\$/yr)	Other energy-related O&M cost savings, Year # (\$/yr)	Total cost savings, Year # (\$/yr)
Total Savings									

Notes

MBtu = 10⁶ Btu.

*Annual electric demand savings (kW/yr) is the sum of the monthly demand savings.

**If energy is reported in units other than MBtu, provide a conversion factor to MBtu for link to cost schedules (e.g., 0.003413 MBtu/kWh).

Note: The proposed savings for each ECM are included in Schedule TO-4 of the contract.

Guaranteed cost savings for project are defined in Schedule TO-1 (final) of the contract.

D. Table 2 - Verified Savings for Performance Year #

[Include all applicable fuels/commodities for project, e.g., electric energy, electric demand, natural gas, fuel oil, coal, water, etc.]

ECM	Total energy savings (MBtu/yr)	Electric energy savings (kWh/yr)	Electric demand savings (kW/yr)*	Natural gas savings (MBtu/yr)**	Water savings (gallons/yr)	Other energy savings (MBtu/yr)	Total energy and water cost savings, Year # (\$/yr)	Other energy-related O&M cost savings, Year # (\$/yr)	Total cost savings, Year # (\$/yr)
Total savings									

Notes

MBtu = 10⁶ Btu.

*Annual electric demand savings (kW/yr) is the sum of the monthly demand savings.

**If energy is reported in units other than MBtu, provide a conversion factor to MBtu for link to cost schedules (e.g., 0.003413 MBtu/kWh).

J-10.1.4 Savings Adjustments - Provide summary of any energy and/or cost savings adjustments required.

J-10.1.5 Performance and O&M Issues

- A. Note impact of operating deficiencies or enhancements on generation of savings.
- B. Note impact of maintenance deficiencies on generation of savings.
- C. Detail any deficiencies needed to be addressed by contractor or agency.

J-10.1.6 Energy, Water, and O&M Rate Data

- A. Detail energy and water rates used to calculate cost savings for this period.
- B. Provide post-acceptance performance period rate adjustment factors for energy, water and O&M, if used.
- C. Report actual energy and water rates at site for same period (optional).

J-10.1.7 Verified Savings To Date - Include Table 3.

Table 3. Verified Savings for Post-Acceptance Performance Period to Date

[Include all applicable fuels/commodities for project, e.g., electric energy, electric demand, natural gas, fuel oil, coal, water, etc.]

Year #	Total energy savings (MBtu/yr)	Electric energy savings (kWh/yr)	Electric demand savings (kW/yr)*	Natural gas savings (MBtu/yr)**	Water savings (gallons/yr)	Other energy savings (MBtu/yr)	Total energy and water cost savings, Year # (\$/yr)	Other energy-related O&M cost savings, Year # (\$/yr)	Total cost savings, Year # (\$/yr)	Guaranteed cost savings for year
Total savings										
Notes MBtu = 10 ⁶ Btu. *Annual electric demand savings (kW/yr) is the sum of the monthly demand savings. **If energy is reported in units other than MBtu, provide a conversion factor to MBtu for link to cost schedules (e.g., 0.003413 MBtu/kWh).										

J-10.2 DETAILS FOR EACH ECM

Develop section for each ECM.

J-10.2.1 Overview of ECM, M&V Plan, and Savings Calculation for ECM

- A. Summarize the scope of work, location, and how cost savings are generated. Describe source of all savings including energy, water, O&M, and other sources (if applicable).

- B. Provide an overview of M&V Activities for ECM. Explain the intent of M&V plan, including what is being verified.
- C. Provide an overview of savings calculation methods for ECM. Provide a general description of analysis methods used for savings calculations.

J-10.2.2 M&V Activities Conducted This Period - Detail measurements, monitoring and inspections conducted this reporting period in accordance with M&V plan (include all that apply for each one):

- A. Measurement equipment used.
- B. Equipment calibration documentation.
- C. Dates/times of data collection or inspections, names of personnel, and documentation of Government witnessing.
- D. Details to confirm adherence to sampling plan.
- E. Include all measured values for this period. Include periods of monitoring and durations and frequency of measurements. (Use appendix and electronic format as necessary). Include description of data format (headings, units, etc.).
- F. Describe how performance criteria have been met.
- G. Detail any performance deficiencies that need to be addressed by ESCO or agency.
- H. Note impact of performance deficiencies or enhancements on generation of savings.

J-10.2.3 Verified Savings Calculations and Methodology

- A. Provide detailed description of analysis methodology used. Describe any data manipulation or analysis that was conducted prior to applying savings calculations.
- B. Detail all assumptions and sources of data, including all stipulated values used in calculations.
- C. Include equations and technical details of all calculations made. (Use appendix and electronic format as necessary.) Include description of data format (headings, units, etc.).
- D. Details of any baseline or savings adjustments made.
- E. Detail energy and water rates used to calculate cost savings.
 - 1. Provide post-acceptance performance period energy and water rate adjustment factors, if used.
 - 2. Report actual energy and water rates at site for same period (optional).
- F. Detail verified savings for this energy conservation measure for performance year. Include Table 4.

J-10.2.4 Details of O&M Savings (if applicable)

- A. Describe source of savings.
- B. Describe verification activities.
- C. Provide post-acceptance performance period O&M cost savings adjustment factors, if applicable.

J-10.2.5 Details of other savings (if applicable)

- A. Describe source of savings.
- B. Describe verification activities.
- C. Provide post-acceptance performance period adjustment factors, if applicable.

D. Table 4 - Verified Annual Savings For ECM for Performance Year #

[Include all applicable fuels/commodities for project, e.g., electric energy, electric demand, natural gas, fuel oil, coal, water, etc.]

Total energy use (MBtu/yr)	Electric energy use (kWh/yr)	Electric energy cost, Year # (\$/yr)	Electric demand * (kW/yr)	Electric demand cost, Year # (\$/yr)	Natural gas (MBtu/yr)**	Natural gas cost, Year # (\$/yr)	Water use (gallons/yr)	Water cost, Year # (\$/yr)	Other energy use (MBtu/yr)	Other energy cost, Year # (\$/yr)	Other energy-related O&M costs, Year # (\$/yr)	Total costs, Year # (\$/yr)
Baseline use												
Performance Year # use												
Savings												

Notes

MBtu = 10⁶ Btu.

*Annual electric demand savings (kW/yr) is the sum of the monthly demand savings.

**If energy is reported in units other than MBtu, provide a conversion factor to MBtu for link to cost schedules (e.g., 0.003413 MBtu/kWh).

J-10.2.6 O&M Activities

A. Operating requirements

1. State organization(s) responsible for equipment operations. If appropriate, detail how responsibilities are shared.
2. Detail any deficiencies needed to be addressed by contractor or Government.
3. Note impact of operating deficiencies or enhancements on generation of savings.

B. Preventive Maintenance requirements - State organization(s) responsible for performing maintenance. If appropriate, detail how responsibilities are shared.

C. Verification of scheduled maintenance items completed by ESCO or agency

1. Detail any deficiencies needed to be addressed by contractor or agency.
2. Note impact of maintenance deficiencies on generation of savings.

D. Repair and replacement requirements

1. State organization(s) responsible for performing maintenance. If appropriate, detail how responsibilities are shared.
2. Summary of activities conducted this period by contractor or agency.
3. Detail any deficiencies needed to be addressed by contractor or agency.
4. Note impact of maintenance deficiencies on generation of savings.