### Post-Installation Report Outline

*All content called for in this outline is required (if applicable) except items noted as optional.*

**Contract # / Delivery Order # / Task #:** (include as appropriate)

**Performance Period Dates Covered:** \_\_\_\_\_\_\_\_\_\_\_ to\_\_\_\_\_\_\_\_\_\_\_\_\_

###### Executive Summary

* 1. Project Background

Provide an overview of project background, including:

#### Date of contract execution and primary parties to the contract

* Dates of relevant modifications
* Performance period dates covered
* Project acceptance date (actual or expected)
	1. Brief Project and CSM Descriptions
* Provide an overview what was done and how savings are generated.
* Note any changes in project scope between the Final Proposal (including any relevant modifications) and as-built conditions.
	1. Proposed and Expected Energy and Cost Savings for Year 1 of the Performance Period
* Compare expected savings for first performance year to first year Guaranteed Cost Savings.
* State whether guarantee is expected to be fulfilled for first year. If not, provide detailed explanation.
* Summarize information in Table 1 and Table 2.

Note: Expected savings are prediction for first year based on post-installation M&V activities. Verified savings for first year of performance period will be documented in the annual report. The proposed savings for each CSM are included in Schedule A of the Contract.

**Table 1. Proposed Annual Savings Overview**

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

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cost-saving Measure(CSM) | Total energy savings (MBtu/ year) | Electric energy savings (kWh/ year) | Electric demand savings (kW/ year)\* | Natural gas savings (MBtu/year)\*\* | Water savings (gallons/year) | Other energy savings (MBtu/ year)\*\* | Total energy and water cost savings, Year 1 ($/year) | Energy-related O&M cost savings, Year 1 ($/year) | Total cost savings, Year 1 ($/year) |
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| Total Savings |  |  |  |  |  |  |  |  |  |
| First Year Guaranteed Cost Savings: $ |

Notes:

MBtu=106 Btu.

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

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

**Table 2. Expected Savings for First Performance Year**

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

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cost-saving Measure(CSM) | Total energy savings (MBtu/ year) | Electric energy savings (kWh/ year) | Electric demand savings (kW/ year)\* | Natural gas savings (MBtu/ year)\*\* | Water savings (gallons/ year) | Other energy savings (MBtu/ year)\*\* | Total energy and water cost savings, Year [#] ($/year) | Energy-related O&M cost savings, Year [#] ($/year) | Total cost savings, Year [#] ($/year) |
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|  |  |  |  |  |  |  |  |  |  |
| Total Savings |  |  |  |  |  |  |  |  |  |
| First Year Guaranteed Cost Savings: $ |

Notes:

MBtu=106 Btu.

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

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

* 1. Energy, Water and O&M Rate Data
* Detail energy and water rates used to calculate cost savings for this period.
* Provide performance period rate adjustment factors for energy, water and O&M cost savings, if used.
* Report actual energy and water rates at site for same period (optional).
	1. Savings Adjustments
* Provide summary of any energy and/or cost savings adjustments required between final proposal (including any relevant Contract modifications) and as-built conditions.
* Describe the changes between the final proposal (including any relevant Contract modifications) and as-built conditions based on post-installation M&V results.
	1. Construction Period Savings
* Provide a summary of construction period savings, if applicable.
* Provide overview of how construction period savings are calculated.
	1. Status of Rebates
* Include if applicable.
* Provide a summary of the source of any third-party rebates or incentives provided on this project.
* Provide status of any third-party rebates or incentives.

###### CSM [name / #] M&V Activities and Expected First Year Savings

Develop section for each CSM.

* 1. Overview of CSM, M&V Plan, and Savings Calculation for CSM
* Summarize the scope of work, location, and how cost savings are generated.
* Describe source of all savings including energy, water, O&M, and other (if applicable).
* State M&V guideline and option used (A, B, C or D).
* Provide an overview of M&V activities for CSM.
* Explain the intent of M&V plan, including what is being verified.
* Provide an overview of savings calculation methods for CSM.
	+ Provide a general description of analysis methods used for savings calculations.
	1. Installation Verification
* Detail any changes between final proposal (including any relevant Contract modifications) and as-built conditions).
* Provide details of energy and cost savings differences resulting from changes between final proposal (including any relevant Contract modifications) and as-built conditions based on post-installation M&V results. Summarize information in Table 3.
* Describe construction period savings (if applicable). Include date CSM was in effect and reference acceptance documentation.
* Detail savings calculations for construction period savings.
	1.

**Table 3. Differences in energy and cost savings from changes between final proposal and as-built conditions for CSM**

**CSM: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Total energy savings (MBtu/ year) | Electric energy savings (kWh/ year) | Electric energy cost savings, Year 1 ($/year) | Electric demand savings (kW/ year)\* | Electric demand cost savings, Year 1 ($/year) | Natural gas savings (MBtu/ year)\*\* | Natural gas cost savings, Year 1 ($/year) | Water savings (gallons/year) | Water cost savings, Year 1 ($/year) | Other energy savings (MBtu/ year) | Other energy cost savings, Year 1 ($/year) | Energy-related O&M costs savings, Year 1 ($/year) | Total cost savings, Year 1 ($/year) |
| Proposed  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Expected  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Variance |  |  |  |  |  |  |  |  |  |  |  |  |  |

Notes:

MBtu = 106 Btu.

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

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

Note: Expected savings are prediction for first year based on post-installation M&V activities. Verified savings for first year of performance period will be documented in annual M&V report.

* 1. Post-Installation M&V Activities Conducted

Detail measurements, monitoring, and inspections conducted in accordance with M&V plan:

* Measurement equipment used
* Equipment calibration documentation
* Dates/times of data collection or inspections, names of personnel, and documentation of Entity witnessing
* Details to confirm adherence to sampling plan
* Include all post-installation measured values. 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.).
* Describe how performance criteria have been met.
* Detail any performance deficiencies that need to be addressed by ESP or Entity.
* Note effect of performance deficiencies or enhancements on generation of savings.
	1. Expected Savings Calculations and Methods
* Provide detailed description of analysis methods used.
* Describe any data manipulation or analysis that was conducted prior to applying savings calculations.
* Detail all assumptions and sources of data, including all stipulated values used in calculation.
* Include equations and technical details of all calculations made. (use appendix and electronic format as necessary.) Include description of data format (headings, units, etc.
* Details of any baseline or savings adjustments made.
* Detail of energy and water rates used to calculate cost savings.
* Provide performance period energy and water rate adjustment factors, if used.
* Report actual energy and water rates at site for same period (optional).
* Detail expected savings for this cost-saving measure for first year.
* Summarize information in Table 4.
	1. Details of O&M and Other Savings (if applicable)
* Describe source of savings, if applicable.
* Describe verification activities.
* Provide performance period O&M cost savings adjustment factors, if applicable.
* Describe source of other savings, if applicable.
* Describe verification activities.
* Provide performance period adjustment factors, if applicable.

Note: Expected savings are prediction for first year based on post-installation M&V activities. Verified savings for first year of performance period will be documented in the annual report. The proposed savings for each CSM are included in Schedule A of the Contract.

**Table 4. Expected Year 1 Savings for CSM**

**CSM: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Total energy use (MBtu/ year) | Electric energy use (kWh/ year) | Electric energy cost ($/year) | Electric demand (kW/ year)\* | Electric demand cost ($/year) | Natural gas (MBtu/ year)\*\* | Natural gas cost ($/year) | Water use (gallons/year) | Water cost ($/year) | Other energy use (MBtu/ year) | Other energy cost ($/year) | Energy-related O&M costs ($/year) | Total costs ($/year) |
| Baseline  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Post-installation use |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Savings |  |  |  |  |  |  |  |  |  |  |  |  |  |

Notes:

MBtu = 106 Btu.

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

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