

Operations and Maintenance Reporting Tool

Overview:

The operations and maintenance (O&M) program is a component of the energy management plan. The O&M program shall be developed in accordance with Section 6 and Normative Annex L of the Clean Buildings Performance Standard (CBPS). Covered buildings must have this program implemented prior to submitting for compliance.

The O&M Reporting Tool contains a checklist of program reporting requirements that must be submitted along with a completed O&M program to comply with the CBPS. By completing this form, the *building owner* and *qualified person* attest that the O&M program has been implemented in accordance with the CBPS. ***This document is for reporting purposes only and does not take the place of a complete O&M program as required by the CBPS.***

Please reference the [Clean Buildings Performance Standard integrated](#) document for all requirements pertaining to the standard. For more information, visit the official Clean Buildings website at www.commerce.wa.gov/buildings or email questions to buildings@commerce.wa.gov.

Instructions:

Complete this form and submit it through the Clean Buildings Portal as an attachment with the compliance application, in addition to uploading the complete operations and maintenance program. You can access the portal by visiting www.commerce.wa.gov/buildings.

To complete the list below, indicate via the checkbox that your building's O&M program has been developed in accordance with the following sections of the Clean Buildings Performance Standard:

Commerce Building ID:

6.2 Operations and Maintenance Program

A formal operations and maintenance (O&M) program has been established and implemented in order for the building energy-using systems to achieve their intended energy efficiency throughout their service life. This program documents the O&M objectives, establishes the criteria for evaluation, and commits the building operator and maintenance personnel to basic goals of performance (such as minimizing equipment failures, ensuring ongoing efficient operation, and performing identified maintenance requirements).

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6.3 Operation and Maintenance Implementation:

The operations and maintenance (O&M) program has been implemented in accordance with Normative Annex L of the Clean Building Performance Standard (CBPS).

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6.4 Operations and Maintenance Tasks:

6.4.1 Maintenance for all equipment, components and systems has been established in accordance with applicable manufacturers' requirements and also includes tasks that minimize failures and maintain energy consumption efficiency, such as those found in Informative Annex D for the following building systems where applicable:

- Building envelope
- Domestic hot water
- Heating, ventilation, and air conditioning
- Refrigeration
- Lighting
- Controls
- Electric Power Distribution and on-site power generation

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6.4.2 Safe and reasonable access is provided to all equipment covered by the O&M program for inspection, maintenance, and repairs.

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6.4.3 O&M requirements are reevaluated when *building* use changes or renovations/alterations are made that affect the facility's operations.

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6.5 Tenant Improvements:

The *energy manager (EM)* has considered a formal process to ensure that any tenant improvements involving a change in space use or the relocation of partitions (including partial height partitions) do not change the annual *net energy* use except to the extent that the annual *net energy* use change (increase or decrease) is consistent with any change in the *building's energy target*.

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6.6 Equipment and Component Replacement:

6.6.1 Establish policies so that when HVAC, domestic water heating, refrigeration equipment and appliances are replaced, the replacement equipment meets the most stringent energy efficiency requirements in the federal equipment standards, *state equipment standards*, and the *applicable building code*.

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6.6.2.1 Establish policies so that when lighting equipment is replaced, the replacement equipment meets the most stringent energy efficiency requirements in the federal equipment standards, *state equipment standards*, and in the *applicable building code*. Implementation of more efficient equipment is evaluated and included as specified for the *capital management plan*, Section 5.1.2.10.

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6.6 Equipment and Component Replacement:

6.6.2.2 Replacement lighting equipment does not increase the existing installed lighting power demand unless it meets the **exception to 6.6.2.2***.

***Exception to 6.6.2.2:** The existing installed lighting power may proportionally increase when the current light levels are below those recommended in the Illuminating Engineering Society (IES) *Lighting Handbook* 4 or latest addition of the *Washington State Energy Code* (WSEC).

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L2: Operations and Maintenance Program:

Each *building* system has an O&M program that, at a minimum, preserves the condition of the system and its elements in a manner that enables the system to provide the intended thermal and visual comfort, energy efficiency, and helps to achieve the intended indoor environmental quality required for the *building*.

At a minimum, the O&M program contains an inventory of equipment, systems, and controls to be inspected and *maintained* and a maintenance plan describing the goals, objectives, and execution of the systems maintenance program.

L2.1 Inventory of Items to be Inspected and Maintained: Components of *building* systems that impact the *building's* performance have been inventoried and used to establish unacceptable system condition indicators, inspection frequencies, and maintenance tasks. This list should include, at minimum, building systems covered in Section 6.4.1 above.

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L2.2 Maintenance Plan Development: The maintenance plan was written and developed specifically to meet the size, design, scope, and complexity of the systems serving our facility. The plan describes required tasks, identifies the parties responsible for performing these tasks, specifies the authorizing party, documents completion of required tasks, and subsequently monitors the results. The plan includes all of the following information:

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L2.2.1 Performance Objectives. Performance objectives identified for this facility incorporate thermal and visual comfort, energy efficiency, and indoor environmental quality metrics. Performance objectives are based on design intent and operational criteria specific to particular systems. The source of the performance objectives has been documented.

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L2.2.2 Condition Indicators: Indicators of unacceptable system and equipment conditions have been established. These indicators are measurements or observations of conditions that could lead to failure or performance degradation.

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L2.2.3 Inspection and Maintenance Tasks: Inspection and maintenance tasks for inventoried equipment, systems, and controls have been established. Inspections include the physical assessment of system components and may include measurement of operating parameters and data provided by sensors or a *building* management system (BMS). Maintenance tasks include adjustment, service, or replacement of inventoried equipment and systems. Control systems settings, including but not limited to set points, schedules, and sequence of operations, are inspected and *maintained*.

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L2: Operations and Maintenance Program:

L2.2.4 Inspection and Maintenance Task Frequencies: Frequency of inspection and maintenance tasks for inventoried equipment, systems, and controls have been established. If unacceptable condition indicators or unacceptable performance is found during two (2) consecutive inspections, the owner or owner's designated representative investigates and analyzes possible causes.

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L2.2.5 Documentation: A minimum inspection and maintenance documentation package has been created and consists of the following items:

1. Listings of *building* systems and system components with associated performance criteria pertinent to the facility.
2. Inspection and maintenance tasks and the method of tracking (automated or manual).
3. Identification of *building* systems or components operating beyond their *useful life*.
4. Sufficient record detail and verification (written or electronic) to demonstrate implementation of the maintenance plan.
5. The inspection and maintenance document directory shall be readily accessible, well organized and clearly identified. Emergency information shall be immediately available and shall include emergency staff and/or agency notification procedures.

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L2.3 Maintenance Plan Authorization and Execution:

Inspection and maintenance tasks are performed on an established frequency or upon a documented observance of unacceptable condition. Whether authorized by written or verbal instructions, execution of the task is documented and archived for future reference.

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L2.4 Revision of the Maintenance Program:

The O&M program is reviewed, and revisions considered, in any of the following situations:

1. Modifications to the *building* that impact *building* system performance objectives have occurred.
2. The *building* function or its use has changed in a way that impacts *building* system performance objectives.
3. *Building* system component changes have occurred.
4. One or more systems are found to be incapable of achieving their performance objectives.
5. Upon documented recommendation from the maintenance provider.

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