



## PE3 Action: Building Energy Management System

1 Points

2 Points

3 Points

4 Points

5 Points

### A. Why is this action important?

Energy use in buildings is often the largest source of energy consumption and greenhouse gas (GHG) emissions within government operations. Energy efficiency can be achieved, in part, with proper selection of energy-efficient equipment and lighting. However, efficiency can be further optimized when systems are properly synchronized and managed, particularly through the utilization of a centralized energy management system. Building Energy Management Systems (BEMS)—sometimes called Building Automation Systems—are used to monitor, measure, and control energy use in buildings. Individual buildings can have their own BEMS to manage the lighting and heating, ventilation, and air conditioning (HVAC). Alternately, multiple buildings can be controlled by a central BEMS that manages the lighting and HVAC across several buildings. BEMS can also be used to provide metering, submetering, and monitoring functions to gather and manage energy use.

### B. How to implement this action

Conduct a needs assessment of the local government buildings where a BEMS might be beneficial. Evaluate the available options and consult [NYSERDA's Real Time Energy Management Program](#) for advice on which products and vendors are the best fit for local needs. BEMS range significantly in what they offer and how they function but ideally use sensors, direct digital controls, setbacks, resets, and other functions to optimize the efficiency of energy-consuming equipment in buildings. Ideally, the system will have controls allowing facility managers to adjust temperatures in various buildings remotely for maximum control.

### C. Time frame, project costs, and resource needs

BEMS vary significantly in price, particularly when considering the number of buildings and equipment types to be managed. BEMS are sometimes installed under an energy performance contract. If done separately outside of such a contract, the facilities manager for the local government should work closely with procurement staff to research available systems, companies, installation, and ongoing management costs.

### D. Which local governments implement this action? Which departments within the local government are most likely to have responsibility for this?

This action is applicable to any local government, though the benefits of such systems increase with the size of the local government's building portfolio and the amount of square footage covered by the system. Facilities managers or the building division within a public works department would likely be responsible for implementation.

### E. How to obtain points for this action

Climate Smart Communities (CSC) points are obtained for this action by installing a BEMS in one or more government buildings. Tiered points are based on the proportion of the total square footage of buildings covered by the BEMS. Systems used for controlling both HVAC *and* lighting are awarded more points than those that only control one (HVAC or lighting), as per the tiers described below.

POSSIBLE  
POINTS

Install a BEMS for controlling lighting or HVAC in 10% of buildings or for controlling for both in 5% of buildings (by square footage) 1

Install a BEMS for controlling lighting or HVAC in 20% of buildings or for controlling for both in 10% of buildings (by square footage) 2

Install a BEMS for controlling lighting or HVAC in 60% of buildings or for controlling for both in 30% of buildings (by square footage) 3

Install a BEMS for controlling lighting or HVAC in 100% of buildings or for controlling for both in 50% of buildings (by square footage) 4

Install a BEMS for controlling both lighting and HVAC in 70% of buildings (by square footage) 5

## F. What to submit

Provide reports from the BEMS illustrating that it has been actively in use within the year prior to the application date. Indicate the total square footage of buildings owned by the local government and the percentage of square footage covered by the BEMS. Indicate whether the BEMS covers both lighting and HVAC or just one of those two systems.

All CSC action documentation is available for public viewing after an action is approved. Action submittals should not include any information or documents that are not intended to be viewed by the public.

## G. Links to additional resources or best practices

- [NYSERDA Real Time Energy Management Program](#)
- [US DOE Energy Management Case Studies](#)

## H. Recertification requirements

The recertification requirements are the same as the initial certification requirements.