

PE3 Action: Government Building Energy Audits

8 Points

10 Points

12 Points

16 Points



BRONZE PRIORITY



SILVER PRIORITY

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. Buildings contain heating, ventilation and air conditioning (HVAC) equipment, lighting, information technology equipment, appliances, motors, and pumping equipment. All of these consume energy and provide many opportunities for improved energy efficiency and cost savings. Especially for local governments that own older buildings, energy audits are an important step in identifying inefficiencies and developing plans for improvement. Reducing GHG emissions and using taxpayer money efficiently are key goals of the Climate Smart Communities (CSC) program.

B. How to implement this action

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) has developed a phased approach to auditing a building's energy use that consists of three auditing levels: A Level-1 audit is a preliminary assessment involving a walk-through and review of the facility's utility bills for the previous two or three years and other operating data. A Level-2 audit is an energy survey and analysis. A Level-3 audit (sometimes referred to as an investment-grade audit) provides detailed project cost and savings calculations for identified improvement projects.

The Level-2 audit includes the same preliminary assessment of a Level-1 audit, but then evaluates the building energy systems in detail to define a variety of potential energy-efficiency improvements. This evaluation should include the building envelope, lighting, HVAC equipment, domestic hot water, plug loads, and compressed air and process uses (for manufacturing, service, or processing facilities). Level-2 audits summarize existing conditions, recommend energy conservation measures (ECMs), and provide estimated cost and payback information for those measures. When implemented, these ECMs can help a local government realize significant energy and cost savings while also reducing its GHG emissions.

To obtain points under this CSC action, local governments must conduct ASHRAE Level-1, Level-2 or Level-3 audits of their buildings. Please note that [NYSERDA Clean Energy Communities \(CEC\) Energy Studies](#) qualify as Level-1 audits.

This action is focused on the critical first step of completing audits. Other CSC actions award credit for implementation of specific measures. A local government may choose to audit one building at a time or conduct an audit of several buildings.

To implement this action, the local government should take the following steps:

1. Research options for technical and financial assistance. Local utility companies might have an audit program. Consider NYSERDA's [FlexTech Program](#). Municipalities may qualify to use NYSERDA CEC grant funds for CEC Energy Studies which meet the requirements of this CSC action. In addition, the [New York Power Authority Customer Energy Solutions](#) team may offer support for building assessments.
2. Determine the scope of the audits. Consider focusing on the buildings that consume the most energy.
3. Identify a certified energy auditor.
4. Carry out the building energy audits.
5. Obtain a summary audit report, complete with ECM recommendations from the auditor for each building or set of buildings audited.

An energy audit may also be conducted as the first phase of an energy performance contract. An energy performance contract is a financing mechanism that uses the savings from energy efficiency upgrades to finance the cost of the

improvements. If a local government is considering pursuing a performance contract, credit for this CSC action could be achieved through the energy audits completed under that contract, provided the audits are the Level-1, Level-2 or Level-3 type.

C. Time frame, project costs, and resource needs

Building energy audits are often low-cost or free for local governments through resources provided by utilities or NYSERDA. The time frame involved will largely depend on the number of facilities owned by the local government and the method of funding the audits. Facilities staff should be available to guide the energy auditor through the building(s) and will likely be required to provide building information and utility bills to the auditor.

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

This CSC action is applicable to any local government that owns and operates buildings. Facilities managers or public works department staff would likely be responsible for implementing building energy audits.

E. How to obtain points for this action

Points are obtained for this action by conducting level-1, Level-2 or Level-3 audits at one or more local government buildings. The percentage of buildings audited can be calculated based on either the simple percentage of buildings, or the percentage of square footage of the total building portfolio.

	POSSIBLE POINTS
ASHRAE Level-1, 2, or 3 energy audit completed at 10% of buildings	8
ASHRAE Level-1, 2, or 3 energy audit completed for 25% of buildings	10
ASHRAE Level-1, 2, or 3 energy audit completed for 50% of buildings	12
ASHRAE Level-1, 2, or 3 energy audit completed for 75% of buildings	16

F. What to submit

Provide copies of the ASHRAE Level-1, Level-2, or Level-3 energy audit report for each building (or group of buildings) where an audit was performed. Be specific as to which type of audit was performed for which building. Audits must have been conducted within seven years prior to the application date. If several buildings were audited, local governments may submit a summary report as long as it provides the key findings and recommendations for each facility.

As background for calculating the percentage of buildings audited, submit a listing of all buildings owned by the local government. If the percentage is based on square footage, include the square footage of each building.

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 FlexTech Program](#)
- [NYSERDA Clean Energy Communities](#)
- [New York Power Authority Customer Energy Solutions](#)
- [US DOE Pacific Northwest National Laboratory A Guide to Energy Audits](#)
- [Database of State Incentives for Renewables & Efficiency](#)

H. Recertification requirements

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