

Chapter 9: Renewable Energy

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9.1 Energy Efficiency and Renewable Energy Systems

The goal of all energy efficiency improvements is to reduce energy consumption and lower greenhouse gas production. Before deciding on which retrofits to implement, the owner should obtain an energy audit from a certified energy efficiency contractor. An energy audit will determine where a house is losing energy (i.e., heat in winter, air conditioning in summer), and provide a prioritized list of recommended retrofits that will yield the most energy savings. These retrofits can include installing additional attic insulation, stopping air infiltration through exterior walls, repairing leaky window sashes, installing storm windows, and upgrading existing heating and cooling equipment to more energy-efficient models.

The recommendations provided in an energy audit should be followed before any energy generating technologies are pursued.



More about weatherization

The National Park Service has devoted a section of its website to weatherization, which can be found at:

<http://www.nps.gov/tps/how-to-preserve/briefs/3-improve-energy-efficiency.htm>

The installation of equipment or systems that (1) reduce energy use and/or (2) generate energy on site for a property in the Historic District is generally encouraged. The Commission requires that the historic character of the property be retained and preserved. The removal of historic materials or alteration of the features, spaces or landscapes that characterize a property shall be avoided. Installation of any renewable energy system or ancillary equipment should avoid or minimize visibility from the public way.

Sound energy improvement measures must take into consideration not only potential energy savings, but also the protection of the historic property's materials and features. This guidance is provided in accordance with the [Secretary of the Interior's Standards for Rehabilitation](#) to ensure that the architectural integrity of the historic property is preserved. Achieving a successful retrofit project must balance the goals of energy efficiency with the

least impact to the historic building. Planning must entail a holistic approach that considers the entire building envelope, its systems and components, its site and environment, and a careful evaluation of the effects of the measures undertaken.

9.2 Solar Hot Water and Solar Photovoltaic Collectors

A. What Is Allowed



Once an owner has completed the retrofits recommended by an energy auditor, solar hot water and photovoltaics can be considered, as long as their installation is consistent with the goals of the Historic District, which is to preserve and protect historic materials, architectural features and streetscapes. Roof-mounted systems shall consist of low-profile solar collectors at the same angle as the adjacent roof, in a color that complements the existing roof color. The collectors shall be located away from the

primary façade on secondary roofs or other appropriate locations. To the maximum extent feasible, the collectors shall not project above the ridge line or otherwise be visible from the public way. A solar array may not obscure significant features or change the perception of the overall character of the roof form and the property in general. If placing an array on a flat roof, the panels can be installed flat or at an angle, but in either case they should be placed so that they are not seen from a primary public way. Any leeway to these requirements may be granted on a case-by-case basis.

Ground-mounted solar arrays should be located away from the house and should not be visible from the public way or adjacent neighbors. Screening may be necessary to minimize visibility, similar to the way that mechanical systems are screened, which can be achieved through plantings and structural means. The overall size of a system, the height of the array and visibility from the public way will be carefully reviewed by the Commission.

Solar system installations must be reversible and not result in damage to the historic character or fabric of the building or the Historic District.

In the case of contributing buildings, the Commission will not approve the removal of historic roofing materials, altering the historic roof configuration (including chimneys, dormers, parapets, trim or other features), or allow any other installation or maintenance procedures that will cause irreversible changes or damage to historic features or materials.

9.3 Wind Turbines

At the present time wind turbines are not allowed in the Historic District. If future improvements in technology warrant reconsideration, the Commission will adopt appropriate Guidelines.