

# City of Saratoga Springs Alternative Energy Systems Historic District Guidelines

In recent years, alternative energy technologies, such as solar and wind systems and outdoor wood furnaces, have become increasingly more efficient and affordable. In historic districts, the key challenge is finding a way to accommodate these emerging energy systems while still preserving the historic integrity of the buildings and District.

# GENERAL GUIDELINES

- Before installation of a new alternative energy system, owners should first consider maximizing the energy efficiency of their existing historic building and its systems. It may be far less expensive to reduce heating, cooling and lighting costs than to introduce a new energy system.
- Alternative energy systems should be installed in a manner that limits negative visual impacts to the building and from the public right-of-way.
- Installation of any energy system should not damage or remove historic materials or cause irreversible changes to historic features. The energy system should be able to be removed in the future without damage to the historic structure.
- Installation of any energy system should not change the historic roof configuration, dormers, chimneys, or other features.
- Before installing a system on a primary building, consider other viable installation options such as mounting on an accessory structure, a contemporary addition or, possibly, ground-mounting to limit the negative visual impact to the building and from the public right-of-way.
- Historic roofing materials should not be removed during the installation of wind and solar energy systems.
- Non-functioning alternative energy systems should be immediately repaired or removed.

### **ROOF-MOUNTED SYSTEMS**

- Locating solar panels on the roof of the primary facade may have the greatest adverse effect on the property's character defining features. Other installation and location options should be thoroughly explored.
- Solar panels should be considered as part of the overall building design. Shape and proportions of the solar array should match the shape and proportions of the roof.
- Utilization of low-profile solar panels is recommended. Solar shingle laminates, glazing, or similar materials should not replace original or historic materials.
- Solar panels should be positioned behind existing architectural features such as parapets, dormers, and chimneys to limit their visibility.
- Where possible, panels should be installed flat and should not alter the roof slope. Minimum panel angle is encouraged, once achieving at least 85% efficiency, so as to limit negative visual impact. Solar panels should run parallel to the original roof line and not rise above the roof line.
- On flat roof structures, solar panels should be set back from the roof edge to minimize visibility. Pitch and elevation should be adjusted to reduce visibility from public right-of-way.
- All exterior metal surfaces and mechanical equipment should be unobtrusive as possible and should be finished to blend with surrounding roofing materials and colors.

# Façade-mounted Systems

- The use of solar energy systems in historic windows, walls, siding, and shutters should be avoided.
- Solar energy systems in non-historic windows, walls, siding, or shutters should be installed with limited visibility from the public right-of-way.
- Façade energy systems, such as trombe wall and solar energy siding, should not be placed on historic facades. Installation on new construction or new additions to historic buildings may be more appropriate.

1

## ACCESSORY STRUCTURES

• Accessory structure, such as solar greenhouses or outdoor wood furnaces, should be located to the rear or side yard to limit visibility from the public right-of-way.

#### **GROUND-MOUNTED SYSTEMS**

- Freestanding or detached on-site solar panels should be installed in locations that minimize visibility from the public right of way. These systems should be screened from the public right-of-way with earth berms, fencing, vegetation or other suitable methods found and in scale with the setting and district.
- Placement and design of ground-mounted systems should not adversely impact the historic character of the site nor destroy historic landscape materials.

## ZONING COMPLIANCE

All alternative energy system installations must conform to the site, building and area requirements of the City of Saratoga Springs Zoning Ordinance which can be found at <u>www.saratoga-springs.org</u>.

#### **CONSIDERATION FOR WIND ENERGY**

According to the US Department of Energy, National Renewable Laboratory Wind Power Classification Map, the Saratoga Springs area has the lowest (#1) rated for annual wind power estimates. Therefore, wind energy generation in this area may not be a cost- effective means of energy conservation.

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1