Discussion Regarding
Solar Electric Systems Sited on Historic Buildings

Draft

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Focus on Energy does not necessarily recommend that the suggestions provided in this document be used. This document does not necessarily reflect the opinion of the Focus on Energy program.

We are interested in your comments and additions to this document. Please send them to Niels Wolter (nielsw@weccusa.org) so that this example may be improved.

Wisconsin Statute 66.0401 presents a challenge to communities wishing to restrict solar energy systems on historic buildings to preserve their historic and/or architectural appeal.

(From the Data Base of State Incentives for Renewable Energy (DSIRE) source)

(A)ny restrictions on platted land that prevent or unduly restrict the construction and operation of solar-energy systems… are voided and prohibited. By Wis. Stat. § 66.0401, the only valid restrictions that local officials can make are those that:

- *serve to preserve or protect public health or safety*
- *do not significantly increase the cost of the system or decrease it's efficiency*
- *allow for an alternative system of comparable cost and efficiency*

Or in other words
Wisconsin Statute § 66.0401 does not permit any authority to prevent or restrict the use of solar system on any surveyed land unless:

- The system is threat to public health and safety
- Locating the system elsewhere does not increase the systems cost or decrease its energy production
- A different system can be installed at a similar cost and with a similar energy output

Preserving the-look of a historic or architecturally significant building (or site) provides benefits to the public. Similarly onsite solar energy production provide benefits to the public. Which is a "greater" public benefit can be debated but perhaps not resolved.

Solar energy advocates will argue that a highly visible solar electric system has more public benefits than one hidden from view. Solar advocates would note that a visible system provides greater community education and public relation benefits, because it shows solar energy works here in this town and on this site.

However, solar energy systems should be sited to respect the building (or site) where they are located. This respect can be shown in numerous ways.

If the community prefers that the solar electric system as concealed as possible, than the community could recommend (not require) that the system:

1. Be located on suitable area that is out of the public's view
2. Be installed in the plane of the sloping roof and flush to the roof (photo 1)
3. Use solar electric modules that replace roofing, such as:
    a. Solar electric standing seam roofing (photo 2)
    b. Solar electric shingles (photo 3)
    c. Solar electric slate roofing (photo 4)
4. Be ground mounted (photo 5)

Photo 1. A 2.8 kilowatt (kW) solar electric system mounted flush to the roof of a historical building in Madison, Wisconsin. No other roof area was well suited to the solar electric system (photo credit: Niels Wolter, Focus on Energy).

Photo 2. Standing seam metal roofing with 3.5 kW of integrated solar electric modules on an older home in Edgar, Wisconsin (photo credit: Lake Michigan Wind and Sun).

Photo 3. Solar electric shingles (made by UniSolar) with a capacity of 1.6 kW on an older home in Madison, Wisconsin (photo credit: Niels Wolter, Focus on Energy).

Photo 4. 8.5 kW of SunSlates® on the roof of the University of Wisconsin's architecturally significant Arboretum Visitor Center addition. Slates could have been used to roof the area around the solar electric system, but to save on cost asphalt shingles were used (photo credit: UW Arboretum).

Photo 5. Two attractive ground mounted solar electric system, with a capacity of 2.1 kW each, located at Northeast Wisconsin Technical College. This system won and Mayor of Green Bay's Beautification award (photo credit: Lake Michigan Wind and Sun).

If the community likes the idea of solar energy then the system could be highlighted in an aesthetic manner, that brings more attention to both the solar system and the historic or architectural aspects of the building (site).

Solar systems should often be viewed not as a smudge on an important site but as an added attractive feature that brings positive attention and other benefits to the site.