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## Does solar energy "work" in New England?

October 27, 2011 - Green Buildings

I believe solar can "work" in Southern California or Arizona but can it really "work" in New England? I've heard this question many times and the answer is a resounding YES!

It's obvious that southern states have more sunny days during the year than northern states. In fact there's a term to measure this quantitatively - "insolation" - a measure of solar radiation energy received on a given surface area in a given time. In the case of solar photovoltaics (PV) it is commonly referenced as hours per day. For instance, Boston has an average yearly insolation of about 3.84 hours per day while LA has 5.82 and Phoenix has 6.58, according to the US Department of Energy's National Renewable Energy Laboratory (NREL). As you might think, solar PV systems located in areas that have more insolation produce more electricity.

So how can solar "work" in the Northeast?

Insolation is only one part of the equation. The other two key parts are:

- 1) the cost of electricity from the current supplier; and
- 2) the state and federal financial incentive programs.

Believe it or not, Germany, a country with an average insolation less than Massachusetts, is the number one country in the world for solar development - due to a combination of insolation and government subsidies. Massachusetts is gaining national attention for its RPS Solar Carve-Out Program and Rhode Island is quickly joining the ranks with its pending Distributed Generation Contracts legislation. Electricity costs in the New England area are among the highest in country. A combination of insolation to produce electricity, savings from high electric rates, and state and federal financial programs make the total cost of owning a solar PV system work very nicely in New England.

Some of these programs have deadlines so the time to look into solar in Mass. or RI is now...especially since the Federal 1603 Treasury Grant Program, which converts the 30% investment tax credit into a 30% cash grant, expires at the end of this year! There are ways to have it "grandfathered" which your solar developer can facilitate and ultimately show you how solar "works" in New England.

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