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## **Solar and winter: All your questions answered from Dumas of Solect Energy Development**

February 05, 2015 - Owners Developers & Managers

If you're like most businesses in New England, you've probably got a lot of snow on your roof. With all the buzz about the benefits of solar, you might be wondering how solar works in the winter months. We get asked this question a lot: Does solar really make sense in northern states when short days, cold temperatures and snow plague us every year for a few months?

The short answer: YES. Here's a Q&A to help understand how winter months affect solar.

Q: How will a solar system generate electricity when it's covered with snow?

A: Unless the sun is reaching the panels, your system is not generating electricity. That's why you should make sure your production and ROI estimates are annual, not month to month. In winter, systems are naturally going to produce less electricity than in the spring, summer and fall - days are shorter and can be overcast and downright gloomy. Snow or ice storms can cover panels and block production. All of this should be factored into a system's overall production and ROI.

Q: Is it advisable to clear snow or ice from solar panels after a storm?

A: The benefit of clearing panels is minimal and dangerous. If the ground is slippery, the roof is slippery (and high off the ground). Solar panels are dark and snow tends to melt off at a faster rate than normal. If you have a pitched roof, be careful of snowfall over walkways and entrances. Snow guards are always a good idea in these cases. Additionally, using anything to clear the panels could cause damage that will impact productivity. Again, a thorough production estimate takes into account snow, rain and gloomy days during the winter. System production will catch up throughout the year when the sun shines and days are longer.

Q: Does snow and cold winter weather offer any benefit to my system?

A: Actually, yes. Believe it or not, cooler weather is better for productivity than ultra-hot weather is. High temperatures are hard on electronics in the summer, so the winter months provide more efficient energy production. In some cases, when snow is on the ground and the panels are clean, the snowy surface reflects sunlight and slightly boosts output. This mirror-type effect, called the albedo effect, also speeds the melt. It's the same reason skiers can get sunburned on sunny winter days.

In addition, melting snow is a natural panel cleaner, removing the layers of pollen, dust, bird droppings and leaf debris that accumulated during the previous seasons.

Q: Is my roof safe with the weight of the panels and the weight of the snow?

A: As part of the initial system design, the structural integrity of a roof will be evaluated by a certified

structural engineer to account for snow load before the project is permitted to proceed by the local building department

An experienced solar PV developer can help answer your questions about snow and solar, and help you determine the annual output for your system.

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