

## By James Dumas - Solar (PV) in Mass.

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Once you get the beyond the feeling that putting in a solar PV system in Mass. is "too good to be true" there are some practical considerations which must be considered. For instance:

**Shade:** If your roof has trees or other structures causing a shading effect over areas where solar PV panels might be placed, it needs to be address. Shade and solar PV panels don't mix. There are some technical solutions which can be employed to address these issues but the best solution is to remove the shade if at all possible.

**Building Orientation & Panel Layout:** Since the sun travels from East to West across the South, solar PV panels are typically fitted on roofs / land parcels in a "southerly" fashion. The better the building / land orientation to the South, the better the panel layout and larger the system production. Design layouts will also take into consideration access to rooftop units or around special roofing/land configurations.

**Roofs:**

- \* **Usable Space:** It's the usable space that matters - setback, RTU's , shading must be taken into account to determine the correct system size.
- \* **Support Structure:** A structural engineer will be involved to approve placing the system on the roof - taking into account load factors and building codes.
- \* **Surface Integrity:** Solar PV systems will last 25 years - as long on new roofs! So new roof surfaces (15 years) are typically good candidates. Mid life roofs will need a closer look.

**Interconnecting to the Grid / Usage:** Solar PV systems must be connected to the Grid and the amount of electrical usage that will stay locally needs to be taken into consideration when determining the optimal system size and other technical aspects of this "interconnection." The process is a bit particular and warrants professional guidance.

So why is it "too good to be true" anyway - a perfect combination of

- \* **Incentives**
  - o Federal - 30% of system price as a grant - expires at the end of 2011
  - o State - new "solar carve out program" - Solar Renewable Energy Credits (SRECs)
- \* **Pricing** - a downward trend in panel pricing over the last few years
- \* **Public Awareness**

If you own a property in Mass. its worth considering solar electricity as a practical approach to saving on energy costs.

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