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Home Energy Saver Calculates Bang For the Buck

Why does everyone like putting solar panels on their roofs when so many other things are so much more cost-effective?

By [Lloyd Alter](#)
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Since Planet Green started, we have been stressing the point that when it comes to energy efficiency, there is an order to things, and some things give a bigger bang for the buck than others. After all, our goal is to reduce our carbon footprint as much as possible, not redecorate our roofs with solar panels. Yet that is what gets all the exposure and investment.

We used the [Rocky Mountain Institute's Cool Citizens Guide](#) as our guide, but it is old now (1992) and the numbers are seriously out of date. But it was and is a great guide to the low hanging fruit.

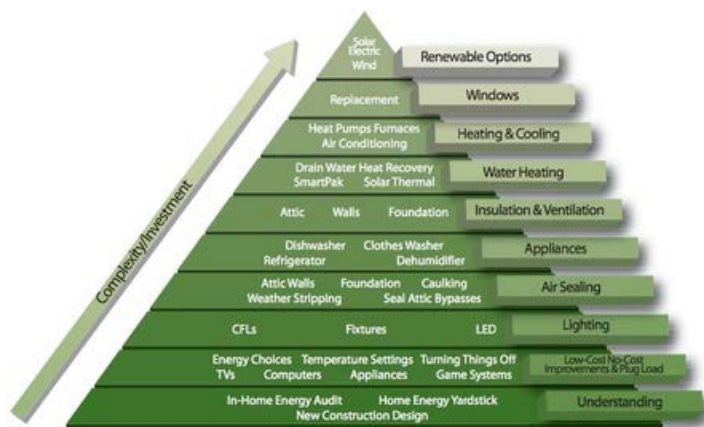
Then we recently discovered the Minnesota Power [Pyramid of Conservation](#). A good guide of what to do first, but not particularly interactive. I wrote:



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Billions of dollars are being, if not wasted, at least not effectively used as the salesmen come around trying to sell windows and solar panels. Everyone wants the sexy stuff and governments are subsidizing it with tax credits, but as we said earlier, the people handing out tax credits should insist that you don't get money for fancy photovoltaics unless you do the cheap low hanging fruit first.

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But it appears that you can now get a bang-for-the buck analysis using the Department of Energy [Home Energy Saver](#). It calculates the length of time required to pay back an investment in energy saving. It confirms what we have been saying all along, that you should do the easy stuff first and before you do the window replacements and solar arrays. Allison Vales at [Energy Vanguard](#) summarized the five step procedure you should follow before you invest in the photovoltaics:

1. Energy efficiency. Before you install any type of solar thermal (e.g., solar water heating) or solar electric (e.g., photovoltaics), make sure that the building you're installing it on is as efficient as possible. That's because the cost per kilowatt-hour or Btu saved is a lot less than the cost of generating new kilowatt-hours or Btus. Spray foam, cellulose insulation, and compact fluorescent light bulbs are a lot cheaper than solar panels.
2. Energy efficiency. If you install solar first, you're spending extra to pay for the energy that's being wasted.
3. Energy efficiency. See #1 and #2.
4. Solar thermal. It's easier and cheaper to turn solar energy into useable heat than to turn it into electricity.
5. Solar electric. Once you've done the above steps, you can start thinking about photovoltaics. Now the electricity you generate will actually be put to good use.

There is an order to these things. Instead of investing in what looks cool and gives street cred, invest in what works the best.

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