



SunTalk # 3: From the New Mexico Solar Energy Association

Solar Panels

What do you think about when you hear someone say “solar panel”? To most people “solar panels” are those flat rectangular modules you put on your roof that generate electricity when the sun shines. And that’s right - but what about the rest of the story?

Until about 10 years ago, the solar panels that generate electricity – called **photovoltaic** panels – were too expensive for most people to afford. If someone owned “solar panels”, or “solar collectors”, they were almost always used to heat water or air – “**solar thermal**” panels we call them. These days, photovoltaic panels are much cheaper than they used to be, so we’re starting to see more of them. Solar thermal collectors and photovoltaic panels work great, especially here in the sunny southwest, but take a look around your neighborhood – solar panels of any kind are still the exception, not the rule.

But the truth is that we’re surrounded by things that run on pure sunshine – that can’t possibly live without it – but that don’t look at all like solar panels.

You see millions of solar energy collectors every day. You see amazingly creative structures that have been built to support and point those solar collectors toward the sun. You probably have several, if not several dozen, of these beautiful structures in your neighborhood. We call them trees – and the solar collectors they support are called leaves.

You may have even more solar collectors growing in your yard. In the summer time you water them, you fertilize them – you even mow them every week. Yes, grass.

Did you know that cows eat solar collectors? Well, now you do. It takes a lot of energy to be a cow – to do all the work that cows do – to manufacture milk and leather and hamburger and moos. All that energy comes from grass, and grass gets all its energy from the sun.

You and I can’t get any energy from eating grass, because we can’t digest it – but cows can. That hamburger is really a recycled grass-burger. A cow turned part of the grass it ate into hamburger, and part into manure. Both are full of energy. Did you ever think about it that way?

But most of what you eat comes directly from plants – sugar, grains, fruit, green chile, broccoli – yum. Plants capture energy directly from sunshine, and use that energy to do the work that plants do – in this case, manufacturing food. Any 4th-grader can tell you what that process is called – “**photosynthesis**”, a word that scientists invented to mean “put it together using light”. We animals can’t do that, so we have to eat our energy – solar energy that plants have collected and stored.

Take a moment to take a look around. All the living things you see – plants, dogs, people, rattlesnakes, lawyers – are solar powered. No sun - no plants. No plants - no food (and, by the way, no oxygen). No food & no oxygen - no animals. It would be pretty quiet around your house!

So ladies, the next time you have a chance – hug a tree! Thank a plant for making life as we know it possible. Guys, when you get around to it - hug a cactus! As the ladies know very well, it’s always harder for guys to get the point.

And if you’re wise beyond your years, you might even give a respectful nod to the sun, next time you see it.

This sun-talk came to you from the New Mexico Solar Energy Association.

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