



SunTalk # 1: From the New Mexico Solar Energy Association

Alternative Energy

It's nice to have choices, isn't it? When we shop for energy, we get to pick whatever we like – sort of – but we don't really have the choice of not choosing. Your life, along with everything else going on in the universe, is all about energy. Pretty fundamental stuff – energy is. Nothing happens without it, including you.

Scientists & engineers use a common word in a special way to describe what energy can do – “WORK”. Anything that happens, all the stuff that you do every day including blinking your eyes; washing the dishes; and yes, even that wild breakdancing – that's work. Einstein said it best – “Energy is the ability to do work.” And who is going to argue with **Einstein**?

Energy comes disguised in lots of different packages, kinda like breakfast cereal or cheerleaders. The type or form of energy we choose depends on what's available, what kind of work we're using the energy to do, and how we want to go about doing that work. For example, when you “decide” to do the dishes you have choices : you can carry the dirty dishes down to the river and scrub them with wet sand, you can wash them by hand in the sink, or you can stuff them in the dishwasher and push the button. The energy it takes to do the work of washing your dishes in the river or in the sink comes from you. The energy it takes to do the work of washing your dishes in the dish washer comes from the power company. It's your choice to do it yourself or to pay for a machine to do it for you.

In the good old days, people had choices about how to get work done too. Do it yourself, train a domesticated animal to help you do it, order one of your slaves to do it, or ask your maid or butler or other employee to do it. There were no Energy-Star washing machines or dishwashers back then, but who needed them?

We don't use horses and oxen to do much of our work these days, and slavery, thank goodness, was abolished in the United States a century and a half ago. But most of us do still pay for servants to help us do our work – servants in the form of machines. Alas, machines are just fancy paperweights unless they have a supply of energy, so we have to buy energy too – usually in the form of electricity or natural gas or petroleum. Since most of our electrical energy is generated by coal-burning power plants, what we're really talking about is choosing from energy sources that depend on fossil fuels.

Before the “industrial revolution” began – just over 250 years ago - fossil fuels were rarely used for anything – in fact, fossil fuels were considered to be a crazy source of alternative energy. Now we burn huge quantities of fossil fuels every day without even thinking about it – at least until the price goes up, or the delivery system breaks down, or their unpleasant and even dangerous side effects start creeping up on us.

For most of human history, solar energy in one disguise or another was THE mainstream energy source. We could choose any energy source we liked – as long as it was solar or its close relatives wind, biomass, and even hydro. Fossil fuels played no role at all. My, how things have changed! Our “modern” life-styles are truly wonderful, but they're almost completely dependent on the energy stored in fossil fuels. What happens when this fossil fuel “bubble” bursts, as it inevitably will? Are there any viable “alternative” energy sources? The good news is – Duh! Of course! We can return to the mainstream energy sources that have been powering the universe ever since the Big Bang. Talk about a proven track record! Sign me up!

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

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