

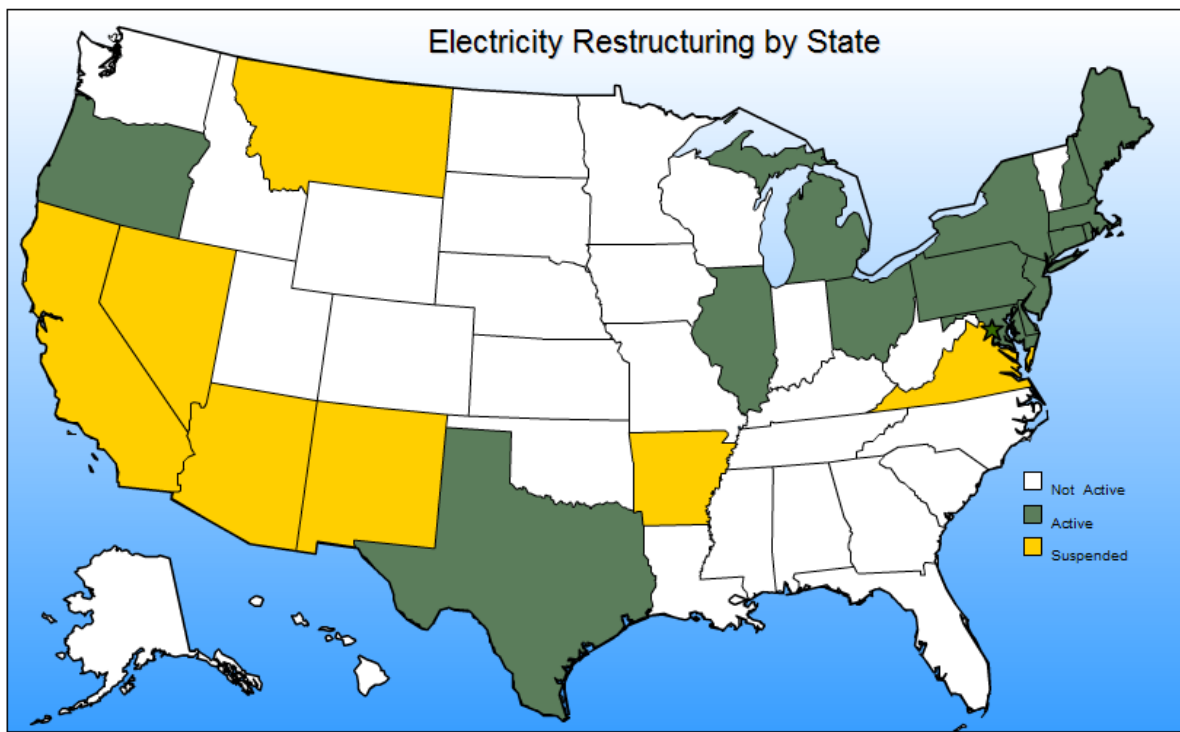
Nonpolluting, Renewable Electricity for Your Home



As of January 1, 2011, I began to buy renewable electricity for my home. The electricity comes from windmills on the mountains near Bear Creek, PA. What does “renewable electricity” mean, and how can I know that the electricity comes from those windmills? Why did I do this?

From the beginning of electricity availability in the U.S., a single power company operated both the generating and distribution functions in their area of business. The government regulated the monopoly company in each area. In my hometown of Fayette, AL, we had Alabama Power Co. The regulated monopoly system began to change in 1996.

Since nobody wants to have multiple sets of power lines running around our



country (one set is messy enough) the distribution function can't easily or efficiently be competitive. On the other hand, many generating companies can feed electricity into this common distribution system. Dividing the monopoly electric power business into two parts--generation and distribution--is what was done to allow competition for the generation part.

The change has been done slowly in small parts of the U.S. to allow generating companies to adjust.

The map above shows the deregulation status of each state as of September, 2010. My state of current residence, Pennsylvania, is mostly deregulated as of January, 2011.

Choosing Your Electricity Generator

When the electric system in your area is deregulated, you don't have to do anything. If you don't, then your local power company will continue to provide the distribution system and generate your power. Whether you remain a customer for their generation or not, they are obligated to keep your power coming reliably. In most locales, they are also responsible for billing you, no matter whom you choose as your generator.

If you want to change your generation supplier, you follow the procedure set up for your region. In most cases, you contact the generator of your choice

and set up an account with them. You probably will not receive two bills each month, although in some cases you might be billed separately for generation and distribution. Most likely, the local power company sends you a single bill as always, and they forward the generating portion of your payment to your chosen supplier.

Why Would You Want to Switch Generators?

In some cases, you can save money by switching suppliers. In the Philadelphia area the prices from one of the competing companies is 25% less than the local power company. For me, out here in the woods, there isn't much competition.

But I have another really good reason to switch: I want my country to stop importing oil and gas and sending much of my monthly payments overseas to not-very-nice dictatorships. I don't want to think that American soldiers are dying to protect these sources. And, I don't want to keep on warming up the only planet we have until it becomes not very liveable.

I chose to buy the generation of my electricity from a company that uses no oil, gas, or coal. All my electricity comes from windmills on a mountaintop about twenty miles to the west of my home or from the coastline near Atlantic City. The picture at the top of this article shows one of “my” windmills.

How Do I Know That My Electricity Comes From These Windmills?

As mentioned above, I have only one electric distributor, *Metropolitan Edison*. I don't know that the specific electrons that flow into my house came from “my” windmills. It doesn't matter. My generating company injects the electricity that they generate into high-voltage lines in Bear Creek or in New Jersey. The power that they inject is indistinguishably mixed with all the other power generated in *The Eastern Interconnect*, a connected mesh of power lines extending from Maine to New Mexico. Inside the mesh of lines, the power flows to where it is needed. Each user simply draws out what he needs.

It's the monthly billing that accomplishes the separation. I'm billed for what I use, and the money flows directly back to the company that owns and operates “my” windmills.

How to Support Renewable Energy

If your locale has been deregulated, you just sign up for a generator that taps into wind, solar or geothermal energy. Even if your area is not deregulated, you can buy renewable energy indirectly.

My windmill company has contracted with the company that owns the power distribution lines near their windmills to accept their power. Since windmills generate only when the winds blows (fairly continuously on the mountaintops), they generate lots of power sometimes and less at other times. Their contract specifies that the distribution company will smooth out those variations by accepting power from other generators. This matching of electric load to electric generation is one of their jobs. But nevertheless, the windmill company's output is metered just as my consumption is metered. At the end of the month, they are paid for what they produced.

But there's another pot of money that makes it worthwhile to produce renewable energy: *Renewable Energy Credits*. How is that money handled?

Renewable Energy Credits

Around the world, many governments, and in the U.S. some states have passed laws requiring users of oil, gas, and coal to buy a credit for each unit of fossil fuel consumed to offset the cost to society of their pollution. Companies that generate renewable, nonpolluting energy are allowed to sell a credit for each unit of energy they generate.

So I not only pay for my share of the electricity that flows into my home, but I also pay for enough Renewable Energy Credits to cover my consumption. That money plus the actual generation charge goes to my windmill company.

Why Pay the Extra Cost?

Given the few generation options available to me, I am paying about 25% more for wind-generated energy than I would pay for the conventional mix of coal, oil, and nuclear electricity because of the Renewable Energy Credits. (Another wind-energy company has entered the competition for my business as of January 17, 2011. Their rate is only 8% more than the default rate, so I may change to them soon. Their terms require a one-year contract, so I'm waiting another month or so to see if still more suppliers sign on.)

I chose to pay this extra cost because I believe that the economic future of our country depends critically on making the switch from oil, gas, and coal to renewable sources. Our most serious competitor for world economic domination is China. They are moving to renewable energy at a rate several times faster than the U.S. is doing. Renewable energy generation facilities are expensive to build, but once they are online, they can run for decades with no expenses other than routine maintenance. No fuel expense. Sunshine is and will always be free. Wind is and will always be free. Geothermal energy is and will always be free.

If we continue to run our country on increasingly expensive and increasingly scarce fossil fuels, we cannot by any imaginable means compete against a country that has “free” power. It's just that simple. No matter what your political ideas, no matter what traditions and ideologies you believe in, we **have to have** a competitive source of energy to maintain a comfortable standard of living in our country.

I also believe the overwhelming volumes of scientific data that prove mankind's activities are releasing enough carbon dioxide into the atmosphere to warm the earth so that it becomes much less liveable. Strong hurricanes (Katrina), record hot summers (Russia, 2010), record rainfalls (Nashville, 2010, Australia and Brazil, Dec. 2010, Santa Barbara, CA, Oct. 2010, and many others), and an increasing number of other extreme weather events are one of the indicators of what we are doing to the earth's climate. Averaged over the year and across the globe, 2010 was the hottest year since we started keeping records.

Can You Buy Renewable Electricity?

Yes. If your locale is deregulated and a renewable energy generation company has signed up to compete for your business, you sign up with them directly.

No matter where you live, you can buy Renewable Energy Credits. Even if you continue to use your local power company as your generating choice or if you have no choice at all where you live, buying Renewable Energy Credits has the same effect as if you bought directly from the renewable energy supplier. The supplier will receive payment for whatever he produces from whatever power distribution company he uses. That payment plus your purchase of his generation credits will pay for his operation and provide the good ole free-enterprise system's incentive to enlarge his business, put up more windmills or solar panels and hasten the day when our country has “free power” to add to our cherished freedoms.

Please do it today for the future of America.

But Is There Really Enough Renewable Power to Replace Oil, Gas, and Coal?

Yes, yes, yes.

In a 2006 study, scientists and engineers at MIT published *The Future of Geothermal Energy*. In that report, they estimated how much geothermal energy resides in the heat deep below the U.S.

“Even if only 2% of the resource were to be developed, the thermal energy recovered would be 260,000 EJ. This amount is roughly 2,600 times the annual consumption of primary energy in the United States in 2006.”

Almost unbelievable, but true. We have thousands of times as much energy as we use today just under our feet.

A stretch of the Arizona, California, or New Mexico deserts measuring 131 mi. by 131 mi. gets sun energy every day equal to all the electricity we use today.

The wind power available in the U.S. is also vastly more than all the energy we consume today.

When you hear claims that renewable energy is not possible, or will be incredibly expensive, you are listening to the propaganda from the oil and gas companies and their friends. Even though we have just started to develop wind energy, I am buying it for only 25% more than conventional fossil-fuel electricity. When fuel costs rise a bit more, it will be cheaper.

We are endowed with a wealth of renewable, forever-free energy. All we have to do is harness it. Our grandchildren can live the sort of comfortable, exciting, energy-enabled lives we have enjoyed *if* we get busy and make the switch. In the words of the tune from *Damn Yankees*, “There's nothin' to it but to do it.”

Get started today.

Where Do I Sign Up?

If you live where deregulation has already begun, your local power company or your state will provide web sites to help you switch. If not, then sign up for Renewable Energy Credits to cover your monthly electricity use.

My windmill company is found at

<http://www.communityenergyinc.com/individuals/map-product-locator/credit-card-purchase-features>

Renewable Energy Credits are sold by many companies. You can be sure that your payments will actually end up in the pockets of the producers and be sure that they run a truly renewable operation by finding one of the generators here:

http://www.green-e.org/base/re_products

For some locales you'll find many choices. Back in my Alabama hometown, there's only one: the TVA. If you sign up with them, you'll buy 58% wind, 1% solar, 41% biomass.