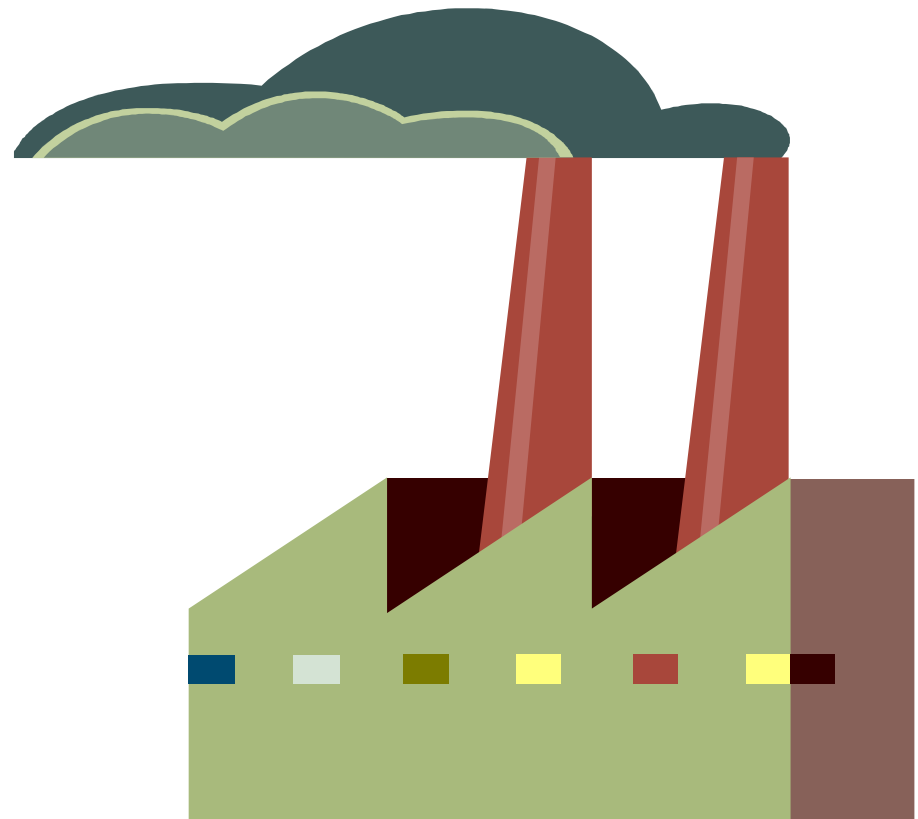


Where does electricity come from?



Electricity is made in a coal-fired power plant, using turbines that are turned by the energy of ...

Steam!

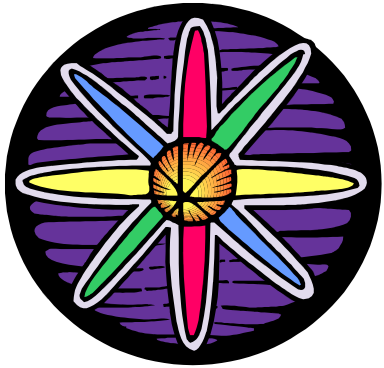


Electricity is made in a powerhouse. There turbines are turned by the weight of the water behind the dam. The water is put there by...

Rain!



<http://a0700202.uscgaux.info/lakes.html>



Electricity is
made at nuclear
power plant by
unlocking the
power of the...

Atom!



A wind turbine makes electricity whenever its blades are turning. The energy that turns the blades comes from ...

Wind!



This solar panel
makes
electricity
directly from the
energy of the...

Sun!



<http://www.newenglandbreeze.com/ithaca.shtml>

This hand generator makes electricity when you crank it. Its energy source is ...

You!



http://www.sargentwelch.com/product.asp_Q_pn_E_WL2410_EA_A_Electric+Generator,+Genecon+Hand_E_

Predict...

which electricity source is the...

- most **Powerful**?
- most **Polluting**?
- lowest **Priced**?
- most **Popular**?

most
Powerful

How many **people**
would have to **crank** a generator
for an hour
to make as much electricity
as **one ounce of coal** makes?



32!

most Polluting

Coal is a major source of...

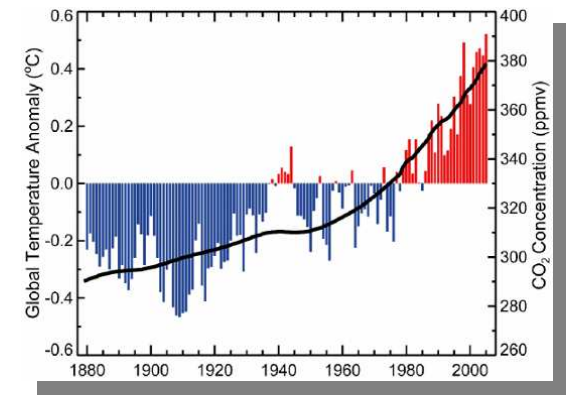
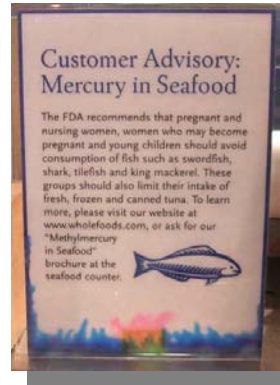
Mercury pollution in fish...

Acid rain that weakens trees...

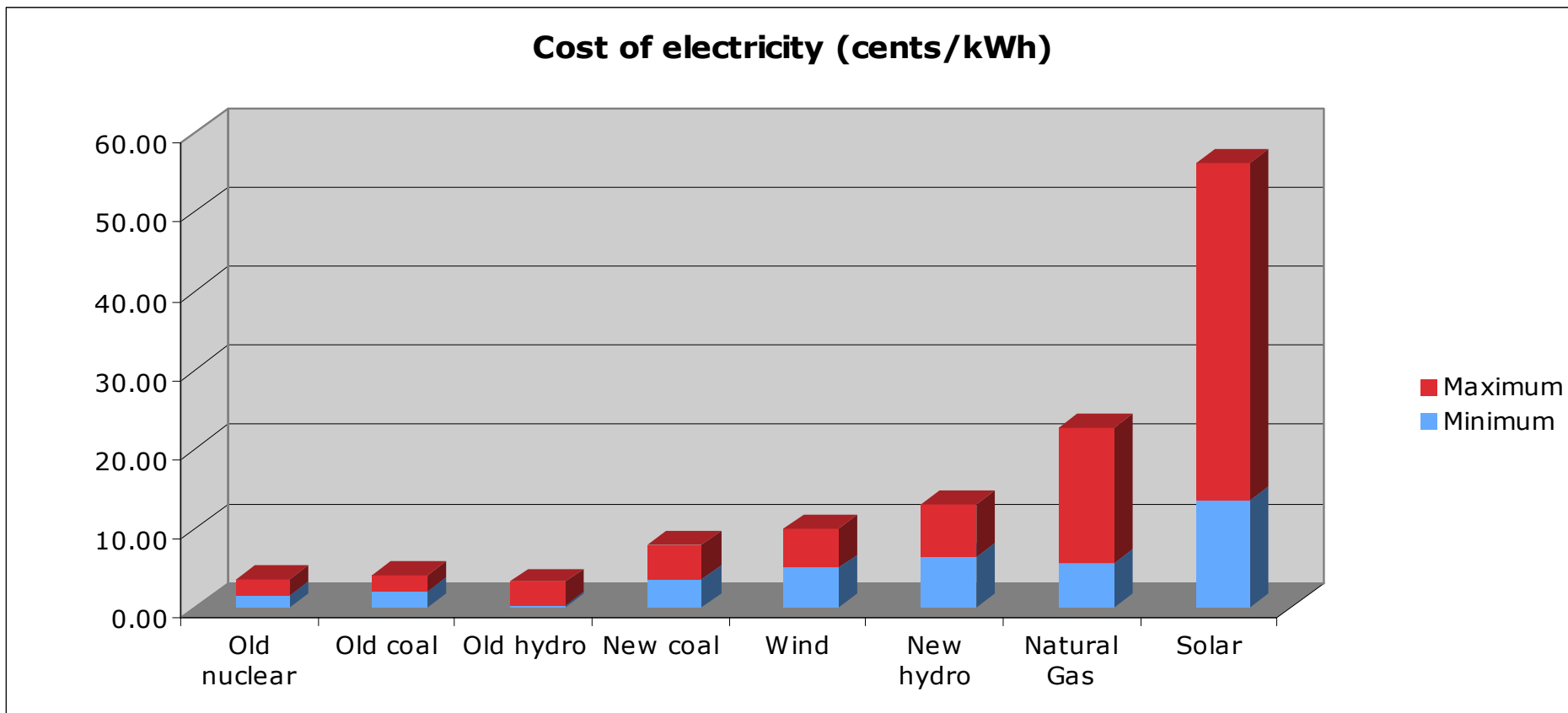
Smog that triggers asthma attacks...

Carbon dioxide that causes climate change...

Mountaintop removal when coal is mined.



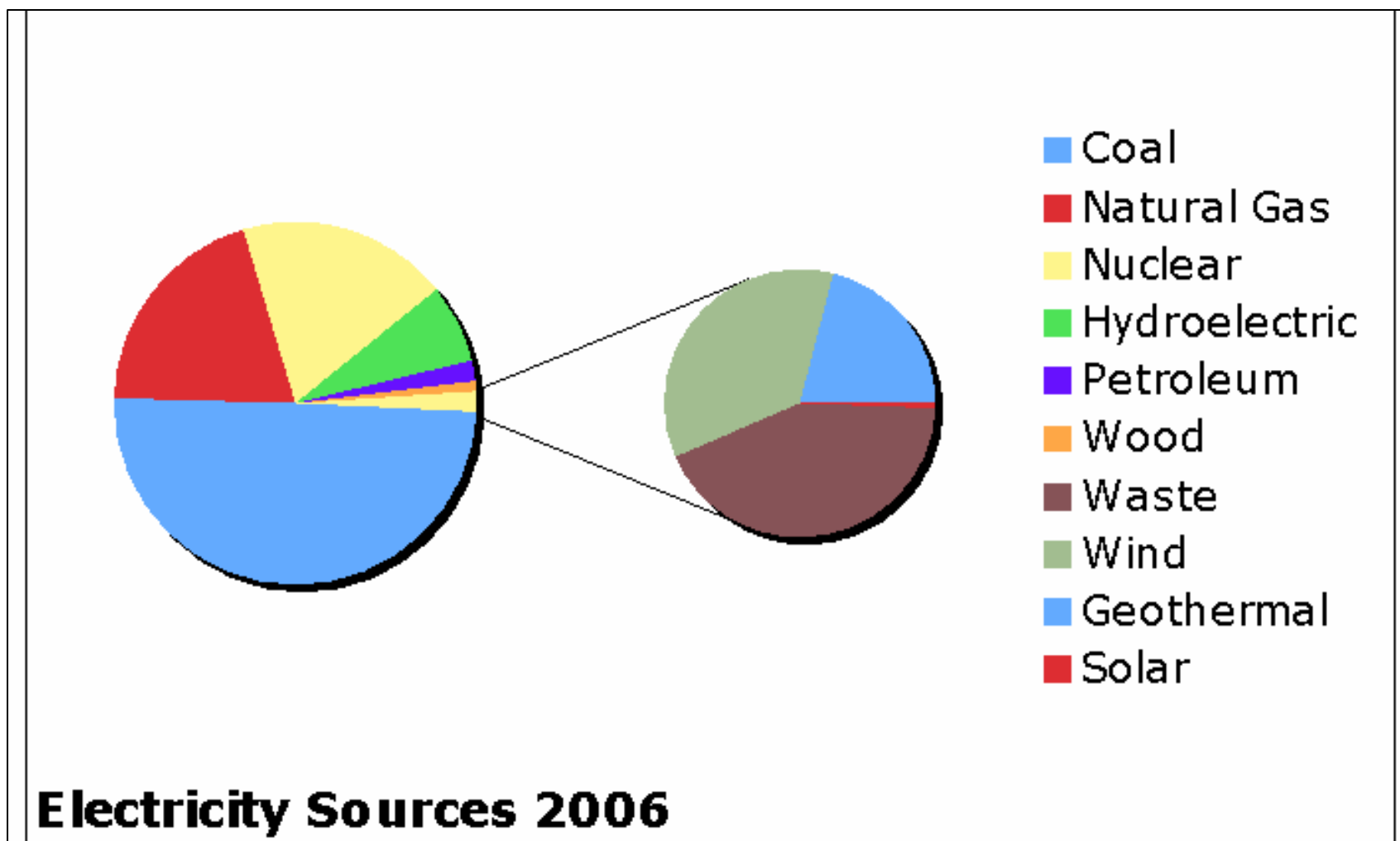
lowest Priced



Data from <http://www.tva.gov/environment/air/ontheair/renewable.htm>

most Popular

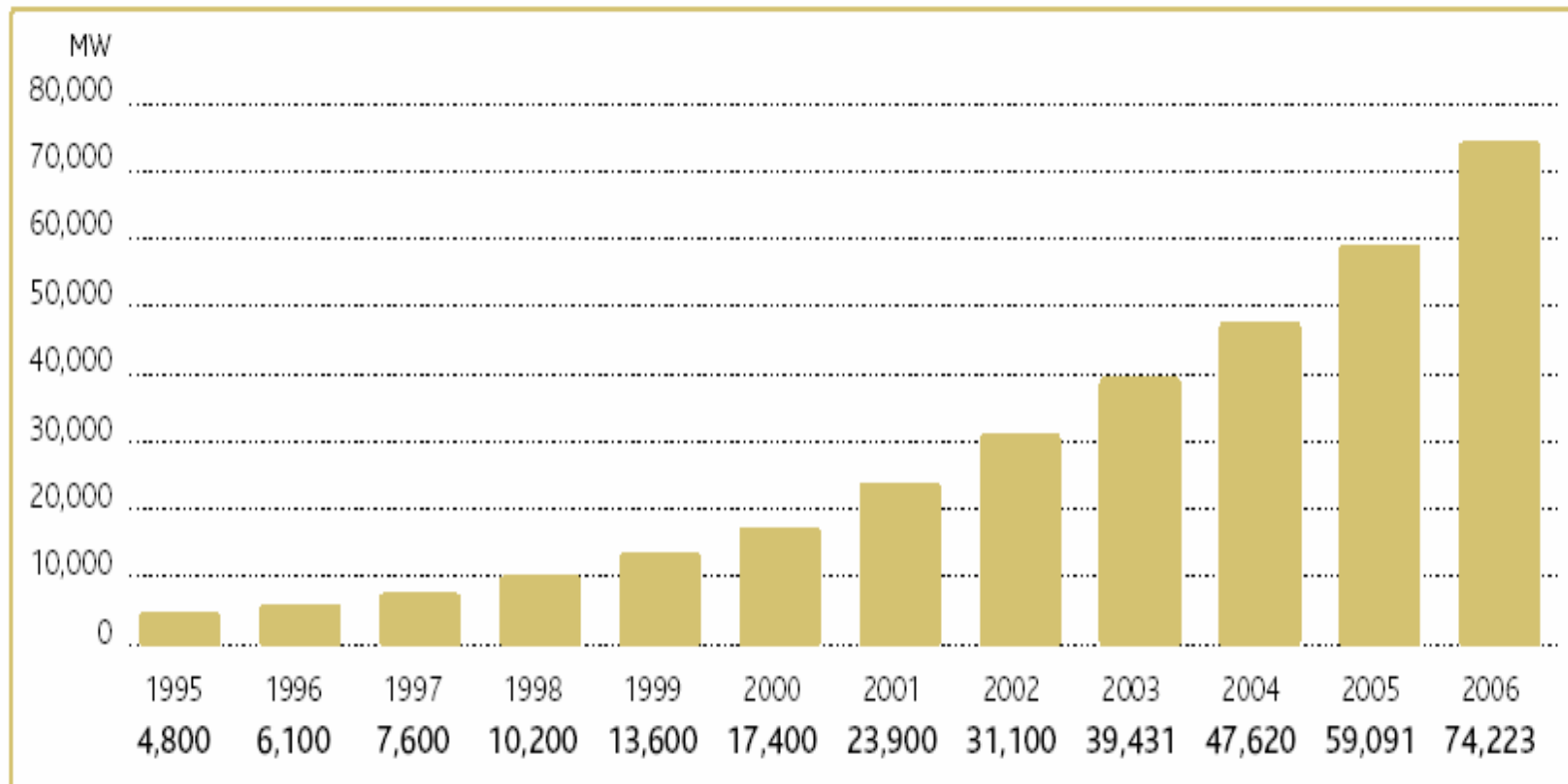
(for now... but in the future?)



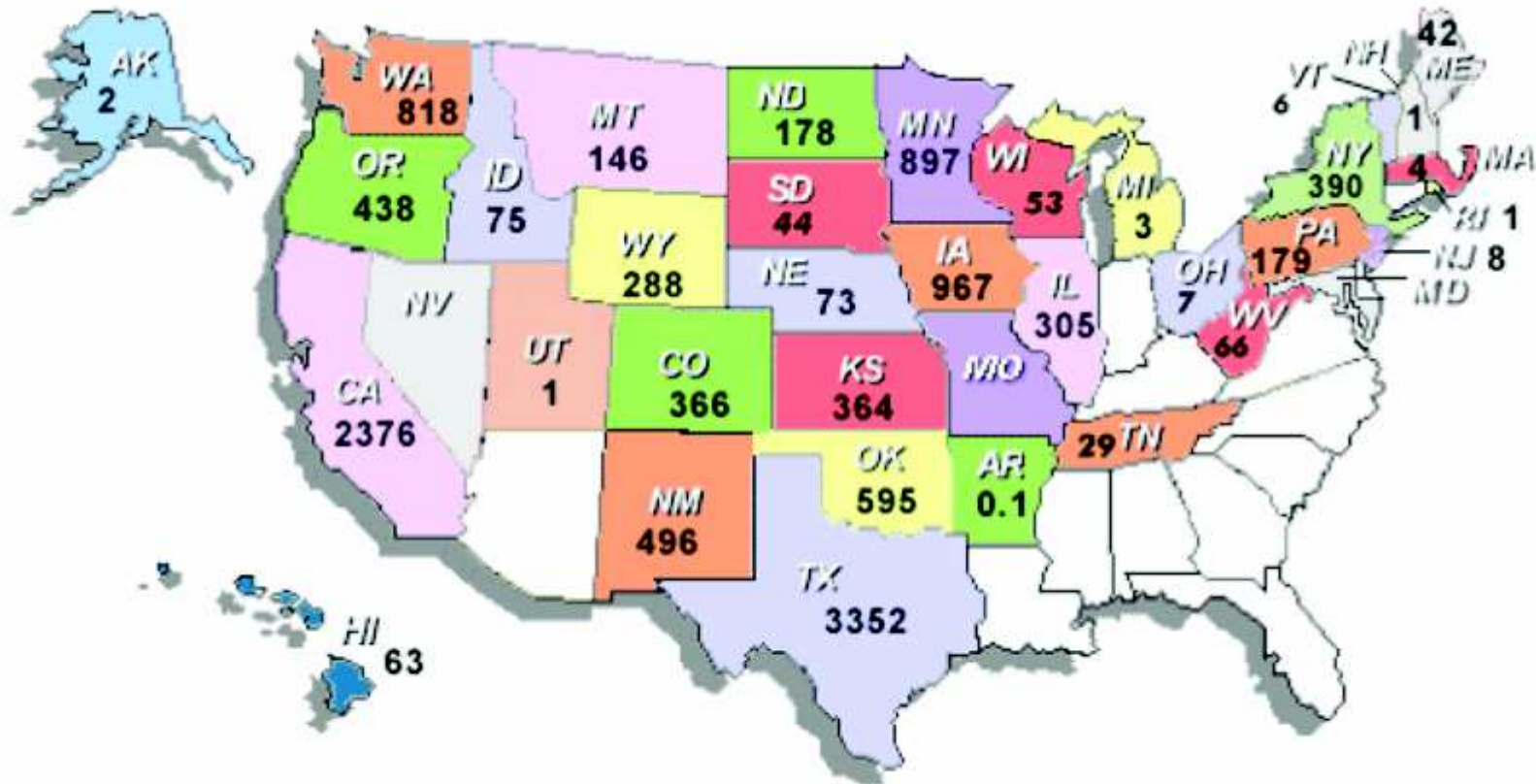
Data from <http://www.eia.doe.gov>

Wind power is the fastest growing renewable source of electricity

GLOBAL CUMULATIVE INSTALLED CAPACITY 1995-2006



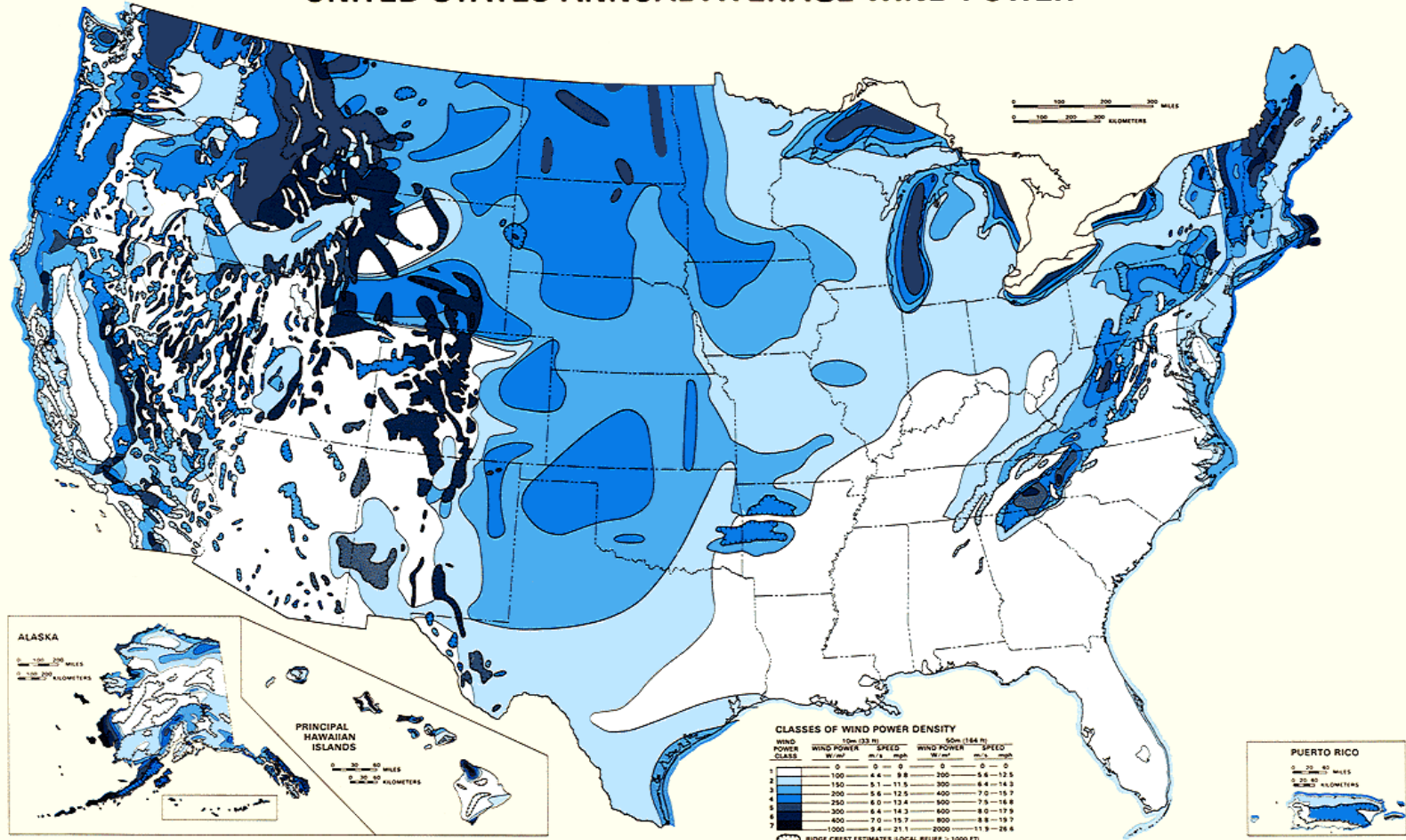
Most states have wind power projects



TOTAL INSTALLED U.S. WIND ENERGY CAPACITY: 12,634 MW as of June 30, 2007

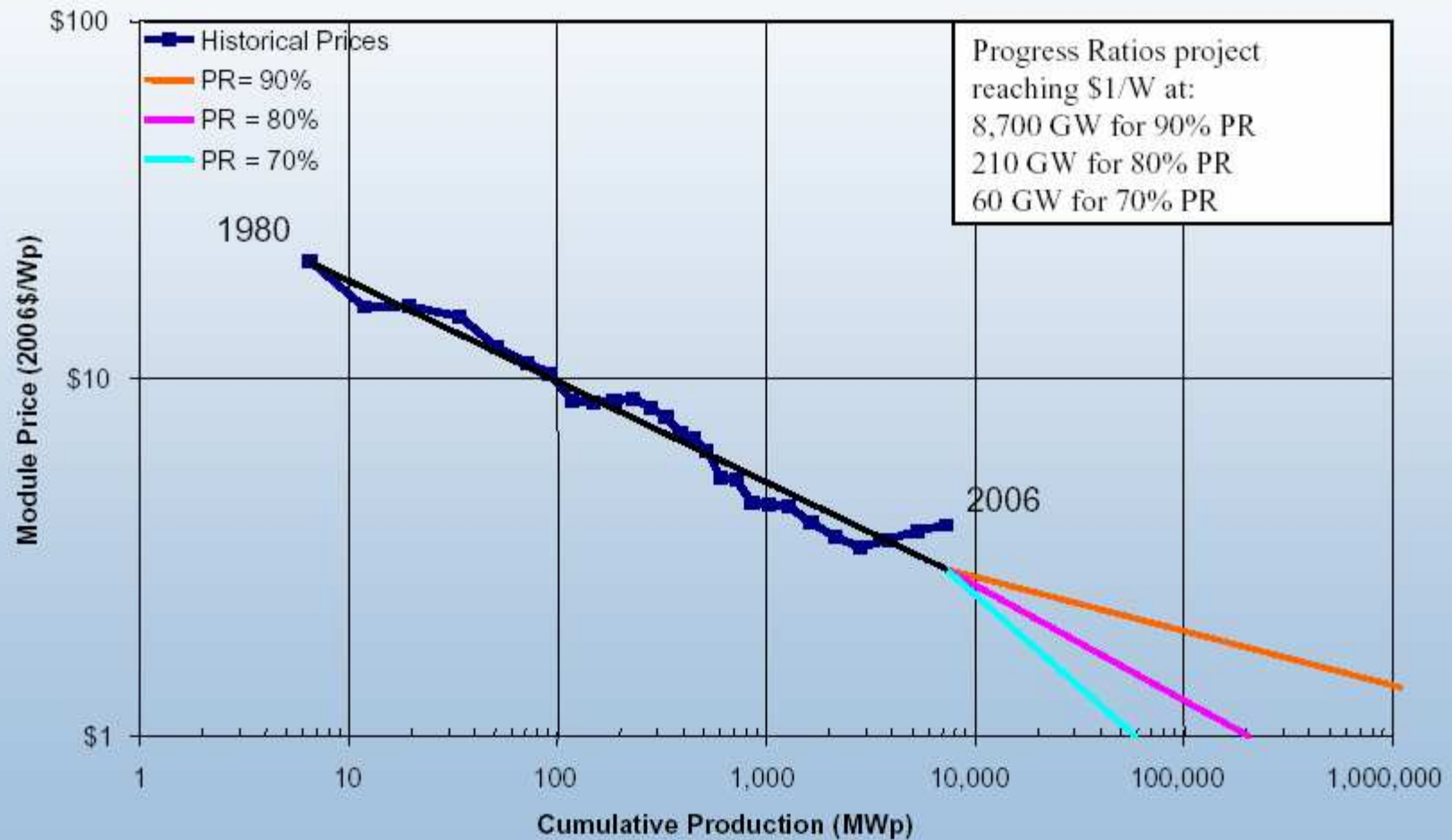
Georgia has limited wind power potential

UNITED STATES ANNUAL AVERAGE WIND POWER

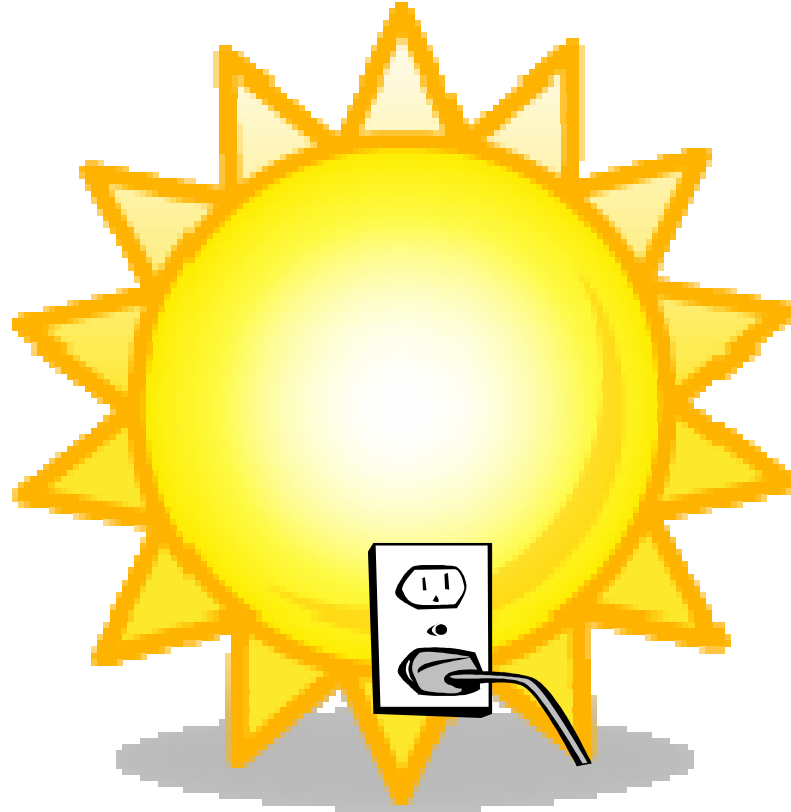


Cost of solar is going down

Historical and Projected Experience Curve for PV Modules



Electricity from the Sun



Will every roof look like this someday?



Fernbank Solar Experiment






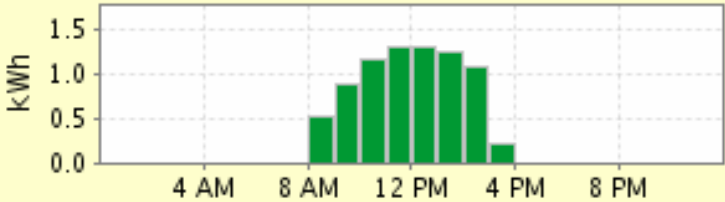






The Fernbank solar panel is capable
of producing 1.29 kW of power

Fernbank Science — Atlanta, GA

VIEW **Simple** **Detail**

As of 3:13 PM Nov 10, 2008 System Size: 1.29 kW DC

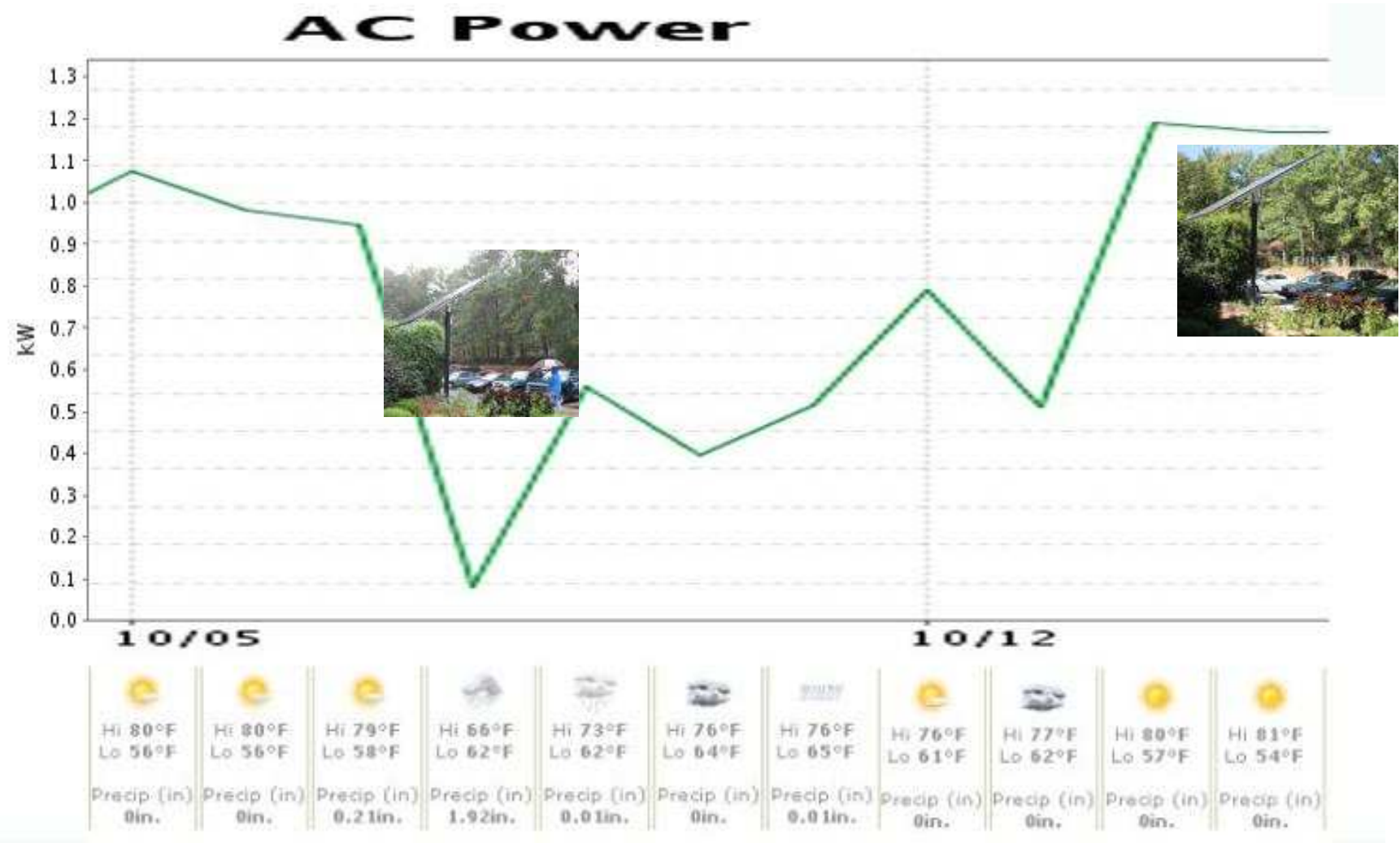
Generating 892 W 	 Irradiance 608.8 W/ M ²	 Ambient Temp 61.4°F	 Cell Temp 101.4° F												
Historical  Today <u>Week</u> <u>Month</u> <u>Year</u> <u>Lifetime</u>	 <table border="1"><caption>Estimated kWh Generated by Time of Day</caption><thead><tr><th>Time</th><th>kWh</th></tr></thead><tbody><tr><td>4 AM</td><td>0.0</td></tr><tr><td>8 AM</td><td>0.5</td></tr><tr><td>12 PM</td><td>1.2</td></tr><tr><td>4 PM</td><td>0.2</td></tr><tr><td>8 PM</td><td>0.0</td></tr></tbody></table>			Time	kWh	4 AM	0.0	8 AM	0.5	12 PM	1.2	4 PM	0.2	8 PM	0.0
Time	kWh														
4 AM	0.0														
8 AM	0.5														
12 PM	1.2														
4 PM	0.2														
8 PM	0.0														
Generated 8 kWh 	Greenhouse Gases Avoided Since Installation May 27, 2008 														
CO₂ 1,619 lbs. Average household CO ₂ output is 22,750 lbs./yr.	Equivalent to:  The energy to power 12 homes for one day.	 The pollution an average passenger car emits over 59.11 days.													

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Click this link to see real time data from the Fernbank solar panel

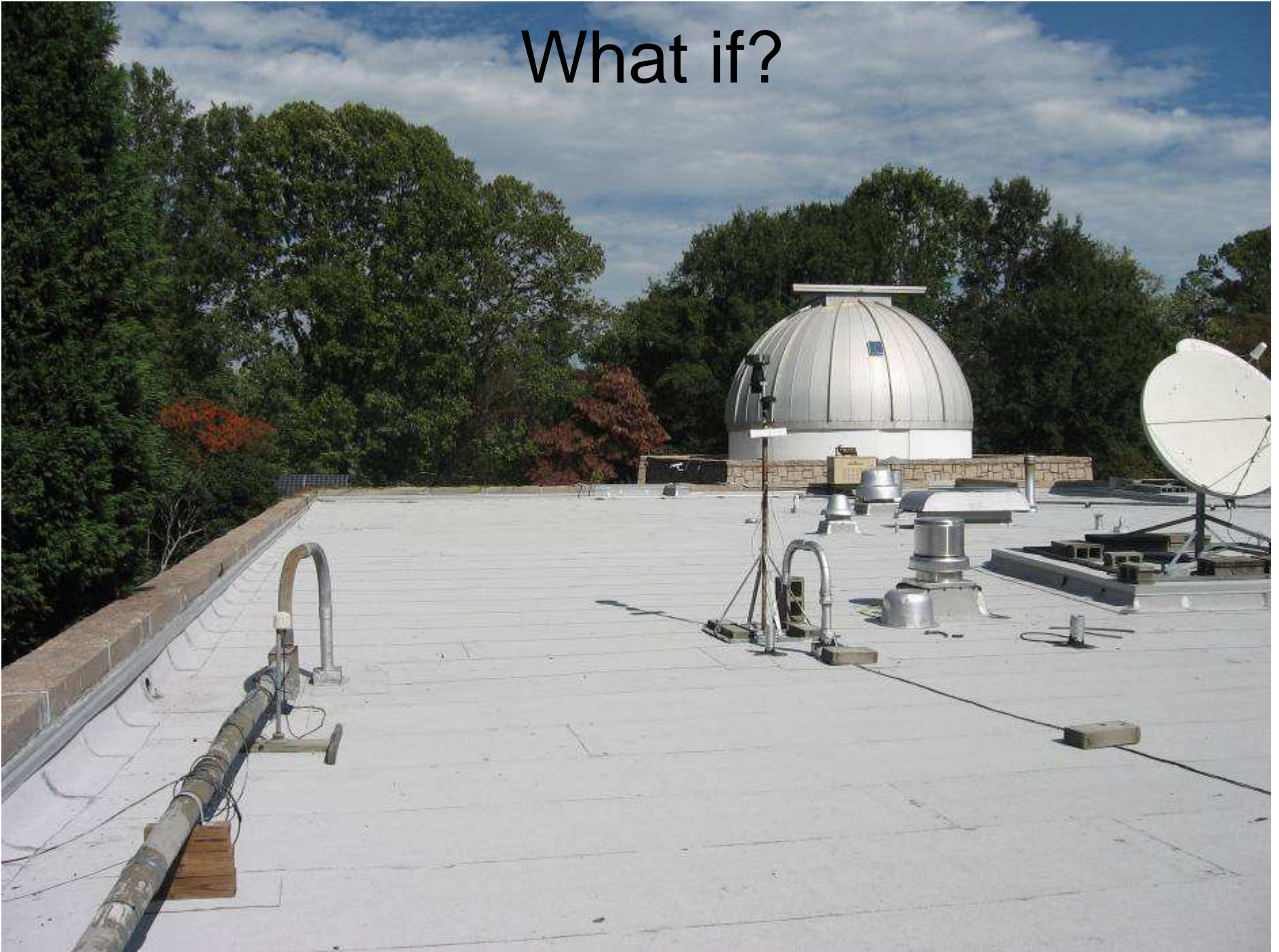
<http://view2.fatspaniel.net/PV2Web/merge?&view=PV/detail/HostedAdmin&eid=46688>

Does the weather matter? Notice any trends?



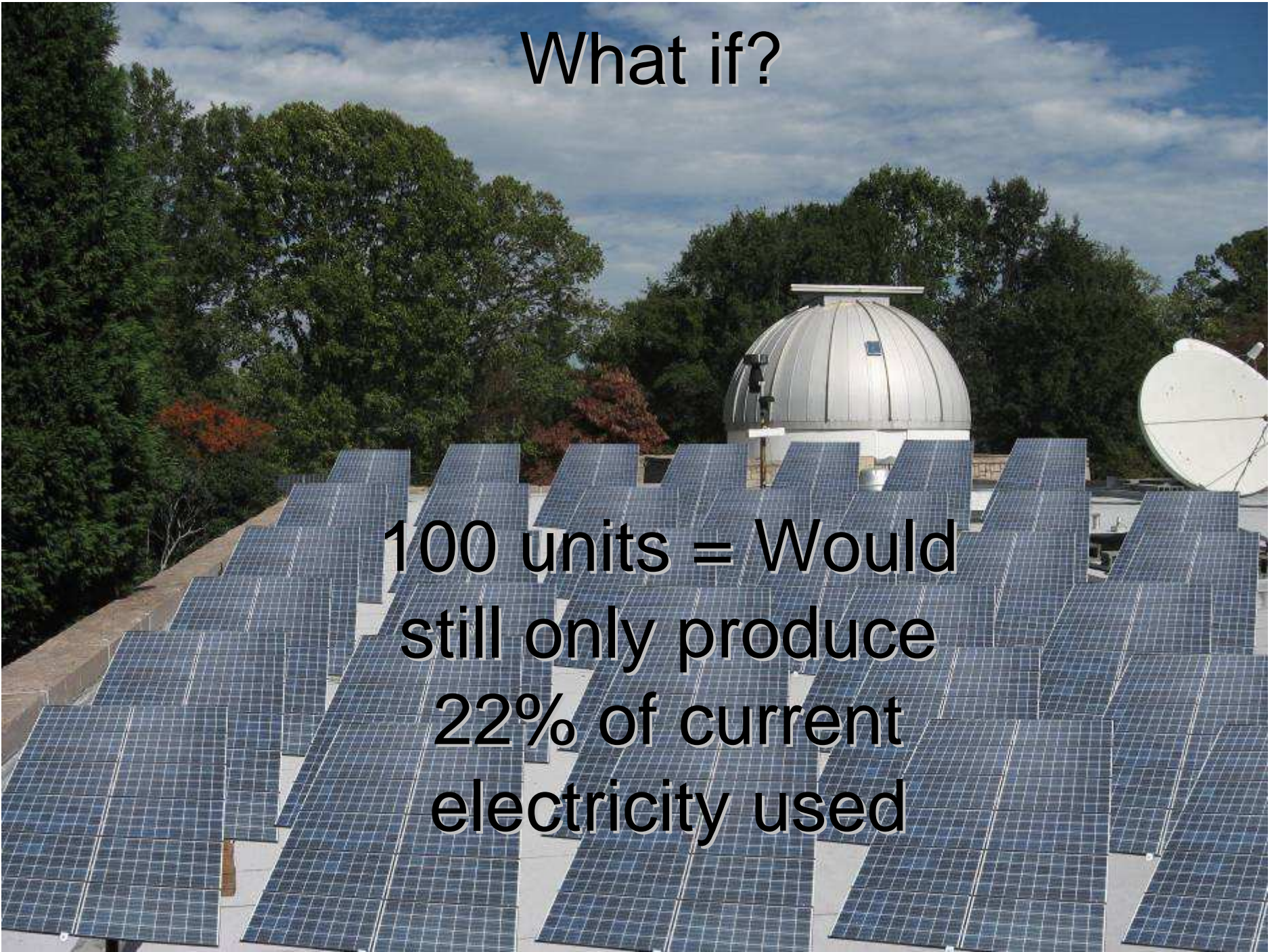
(Weather records from www.weather.com)

What if?



What if?

100 units = Would
still only produce
22% of current
electricity used



To get to a solar economy:

- Improve building energy efficiency
- Keep bringing solar panel costs down

In the meantime, please save electricity



Change your light bulbs



Look for the Energy Star label

Set the thermostat



Turn off lights

