

ALTERNATIVE ENERGY

GENERAL

See CA rebates <http://www.consumerenergycenter.org/erprebate/index.html>

Check with CPA for federal tax credits

Turn off one circuit at a time to see how much the meter wheel slows down.

Use a wattage reader to see what each appliance uses (replace old appliances).

Use a checklist to find other ways to improve power efficiency.

Make sure insulation & windows are good. Use fluorescent lights as much as possible.

Calculate your power consumption to determine the size of system needed.

Establish how much you are willing to spend on the system.

Determine if solar or wind is better for each site. Wind costs less if there is any.

The power generated can be reversed back into the grid (usually at peak hrs).

Get a qualified electrician to connect it and check with power company first.

If off of the grid power can be stored into deep-cycle batteries.

Use natural gas or propane for high consuming appliances (ie, water heater, furnace, etc).

A generator can be used when needed (ie, running well pump, etc).

Most alternative energy is generated in DC (batteries). Invertors covert it to AC (110v).

SOLAR

See www.sunelco.com or www.renewable.com

In '04 a neighbor installed a 5kw solar system for \$24,000 (48k – 24k rebates and tax credits)

He has a 1200 SF all electric house with \$1600/yr (13,000 kw) utility bill prior.

The system sold power back to PG&E as a credit to be to use when needed.

His power bill is now \$150/yr. This would make it a 16.5-year return on investment.

The system he used has 42 collectors (24"x48" and 126w each) with two invertors.

This comes to \$10/watt.

Face collector panels (modules) to the south and out of shade.

WIND

See www.sunelco.com

See CA wind map <http://rredc.nrel.gov/wind/pubs/atlas/maps/chap3/3-54m.html>

A Bergey #BWC excel-S 10kw turbine (\$25k) can be mounted on a 30' tower (\$2k).

Installation is separate. This comes to \$3/watt (based on 30 mph ave wind speed).

Call local airport to find average wind speed.

WATER

See www.sunelco.com

Water wheels and turbines can be used in a river or creek.

This comes to \$10/watt.