

Energy Solutions and Contacts for Auburn-Placer Library



1. Solar Panels

We recommend installing solar panels onto the roof of the library. At a current price of \$6-\$9 per watt to install, we estimate that it would cost around \$150,000 to purchase and install a 180,000 KWH system. This system could save the library \$20,000 plus a year on their energy bill.

However, as solar technologies are changing, we recommend that this solution be considered two to three years from now. Several new manufacturers are developing more cost effective panels that will be brought onto the market within the next year and their products should drop the installed cost by about \$3.00 per watt.

PG&E offers several rebates on solar installation and will buy back any extra energy created.

contact: *Placer County Facilities, Solar Power, Inc., Nanosolar, Inc.*

2. HVAC

We recommend 2 short terms solutions for the library HVAC system: insulating the ducts in the attic and replacing the old thermostats with Smart Thermostats. PG & E offers rebates on attic insulation and thermostat replacement.

For a longer term solution, we recommend installing an Ice Bear cooling system by Ice Energy. This system freezes water in off-peak hours and in peak energy hours, runs the air conditioning air through it to cool it at a much lower cost. this system would cost around \$35,000 and could save the library about \$9000 per year on their energy bill.

contact: *www.ice-energy.com (877) 542-3232*

3. Structural

We suggest installing an air curtain to the library's automatic sliding front doors. Air curtains can save 10 units of energy for every 1 of its uses and would cost around \$1800 or less to install.

contact: *Berner International (800) 245-4455 sales@berner.com*

4. Lighting

We recommend that the library replace their T12 fluorescent bulbs with T8 bulbs that use 22 watts less power and give the same amount of lighting.

PG&E offers a rebate to cover the complete cost of the bulbs and also has a contract with HRG to install them at no cost. The library could save up to \$16,000 per year on their energy bill.

contact: *Maisee Xiong, PG & E (916) 386-5027*

Scott Bond, PG & E (530) 889-5063

5. Appliances

We recommend that the library replace 20 of their most used CRT computer monitors with LCD screens, which use 67% less energy. This would cost around \$3000 but save the library around \$1100/year on energy cost.

We also recommend replacing the 4 old refrigerators with 2 Energy Star refrigerators which would cost around \$1400, but save the library \$450 plus per year on energy.

contact: www.Best Buy.com

6. Windows

We recommend that the library apply window film to their windows. Current film technology is based on metal particles in plastic which reflect heat and cost about \$2.50 per square foot (\$4-5K installed cost). The library could save up to \$1200 per year on their energy bill if installed, plus PG & E offers a rebate of up to \$1.35 per square foot.

contact: Best Solar Control Co. (916) 939-7733
or Window Covering Solutions (916) 362-4601