

## Benefits of Solar Electricity

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### Reducing long-term utility costs

Electricity in the PG&E utility region have increased an average of 6 percent a year over the last thirty years. To the extent that you "own" rather than "rent" your electricity you are buffered against price increases.

### Environmental and social benefits

In California, extensive use of PV power will offset the need to build new natural gas-powered "peaker" electricity plants. These plants are designed to come online during the peak periods of energy demand (e.g. summer afternoons) in order to stabilize the electricity grid. The more PV systems are reducing the peak demand, the fewer peaker plants will be burning natural gas, which releases global-warming carbon dioxide (CO<sub>2</sub>) into the atmosphere. On an annual "per kilowatt" basis, PV typically offsets or saves up to 16 kilograms of nitrous oxides (NO<sub>x</sub>), nine kilograms of sulfur oxides (SO<sub>x</sub>), and 0.6 kilogram of other particulates. In addition, a typical 2.5kW residential PV system will offset 4,050 lbs. of CO<sub>2</sub> per year. These savings, of course, vary depending on how much fossil fuel is used to produce local power, and the amount of sunlight falling in the area.

Muir Woods Co-housing in Davis, CA. 10kW system installed by residents and Cooperative Community Energy.

### Reliability

PV technology is very reliable and has been tested for more than thirty years in both laboratory and real-world applications. There are no moving parts to the basic system components.

### Availability of State and Federal Incentives

The initial investment in a PV system is significant—however, financial incentives are often available at the federal, state, and sometimes the local government levels. California has an incentive program available to customers of PG&E, SCE, and SDG&E (see the California Solar Initiative Fact Sheet ). Municipal utilities will be offering PV incentives by 2008 if they aren't already. The federal tax credit available for non-commercial customers is currently capped at \$2,000, but expected to rise soon. The federal tax credit for commercial PV systems is 30 percent of the cost, with no cap, and includes a five-year accelerated depreciation schedule. Both commercial and non-commercial PV customers benefit significantly from California's net metering laws and time-of-use rate agreements (available in most utility areas).