MILLION Solar ROOFS

One million solar energy systems on the nation's buildings by 2010.

Solar Design Associates, Inc., PIX08563

Office of Energy Efficiency and Renewable Energy
U.S. Department of Energy

The Million Solar Roofs Initiative

The Million Solar Roofs Initiative, announced in June 1997, assists businesses and communities in installing solar energy systems on one million buildings across the United States by 2010. The U.S. Department of Energy leads this trailblazing initiative by partnering with the building industry, local governments, state agencies, the solar industry, electric service providers, and non-governmental organizations to remove barriers and strengthen the demand for solar technologies.

Why Is the Initiative Important?

- **It creates high-tech jobs.** By 2010, approximately 70,000 new jobs could be created by the demand for solar energy technologies.
- **It slows greenhouse gas emissions** by using clean energy from the sun. By 2010, solar energy technologies could reduce carbon dioxide emissions equal to the amount produced by 850,000 automobiles.
- **It keeps U.S. companies competitive.** Increased demand will drive the cost of solar energy systems down, strengthening U.S. competitiveness in a world market expected to reach the multi-billion-dollar range by the next decade.

Lawrence Berkeley Lab, PIX01053

Ascension Technology, Inc., PIX04478

The Initiative's Solar Technologies

The Million Solar Roofs Initiative includes photovoltaics that produce electricity from sunlight and solar thermal panels that produce heat for domestic hot water, space heating, or swimming pools. Home and commercial or government facility systems must be located on or adjacent to the buildings.

Photovoltaics. Often called "solar electricity," photovoltaics convert sunlight directly to electricity. It is an attractive alternative to conventional sources of electricity for many reasons: it is silent, non-polluting, and renewable; it requires no special training to operate; it is modular and versatile; it is extremely reliable and virtually maintenance free (with no moving parts); and it can be installed almost anywhere. The customer pays only for the system; the fuel is free.

Solar Water Heating. Solar water heaters use the sun to heat either water or a heat-transfer fluid, such as an antifreeze mixture, in collectors usually mounted on a roof. The heated water is then stored in a tank similar to a conventional gas or electric water-heater tank. Some systems use an electric pump to circulate

the fluid through the collectors. These environmentally friendly systems can be cost competitive for providing domestic hot water and heating swimming pools.

Solar Space Heating. Solar space heaters can be used to heat recirculated building air or preheat ventilation air from outside a building. Recirculating heaters work much the same as solar water heaters. The solar panels receive direct sunlight, heat the air that is circulated through them, and send it back into the building. For preheating outside air, a transpired solar collector—dark-colored sheets of perforated metal mounted on a sunny south-facing wall—is most effective.

Energy-Efficient Buildings. Ideally, solar energy systems should be installed on efficient buildings. The Department of Energy advocates a whole-building approach to energy efficiency. By integrating the latest in energy-efficient design, construction, and equipment with solar energy technologies, we can significantly reduce energy use in buildings—and enjoy the benefits to the environment and our wallets.

Hawaiian Electric Co., Inc., PIX05573

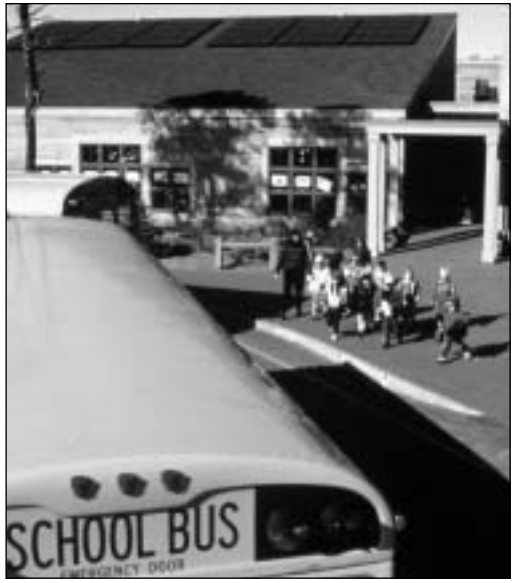
How Does the Initiative Work?

The Million Solar Roofs Initiative works by establishing state and community partnerships. These collaborative ventures, which bring together business, government, the energy industry, and community organizations, have committed to install more than one million solar energy systems by 2010. By setting and meeting goals, the partnerships are helping to create sustainable solar energy markets across the country.

The Million Solar Roofs Initiative strives to coordinate national resources and eliminate barriers to the use of solar energy by:

- Working closely with federal agencies to expand the use of solar technologies
- Improving financing options for solar installations
- Addressing specific issues that prevent consumers from easily using solar energy systems in new construction
- Encouraging builders and developers to include solar energy systems in new construction
- Continuing to develop and improve on solar technologies.

Tim Ellison (ECD), PIX04473



Jack Weinberg, PIX06461

How Can I Find Out More?

By Phone:
Energy Efficiency and Renewable Energy Clearinghouse (EREC), 1-800-363-3732

On the Internet:
Million Solar Roofs Website, *www.MillionSolarRoofs.org*

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