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## **Lighting the Way to Solar Power**

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Fact one: The earth receives more energy from the sun in just one hour than the entire world uses in a whole year.

Facts two through four: According to the US Environmental Protection Agency, electricity generation is the largest single source of greenhouse gas emissions in the US, accounting for 30 percent of all such emissions in the 1990s, compared with 26 percent from vehicle emissions. And burning coal also produces toxic particles of cadmium, aluminum, lead, nickel and sulfur, much of it falling on working-class communities. Additionally, transmitting this generated energy over high tension wires wastes as much as two-thirds of the energy originally created.

The electricity we rely on is polluting, wasteful, and expensive. Essentially, the energy industry in this country is mired in 19th-century thinking, and the veiled faces behind Vice President Cheney's energy policy are fighting hard to keep it there.

In parts of the U.S. and around the world, however, energy companies are paying consumers who have switched over to solar power for their homes and businesses to supply the grid with their excess energy. Some areas even have subsidies for those who install solar power in their homes.

In the San Francisco Bay Area, a \$21,000 investment in solar panels will bring about \$10,000 in refunds and cut your energy bills down to nearly nothing. On top of that, more than half of state governments have what's called "Net Metering" laws on the books. This means that the energy utility company must pay the consumer retail costs for excess power generated by solar, at least up to their average monthly consumption.

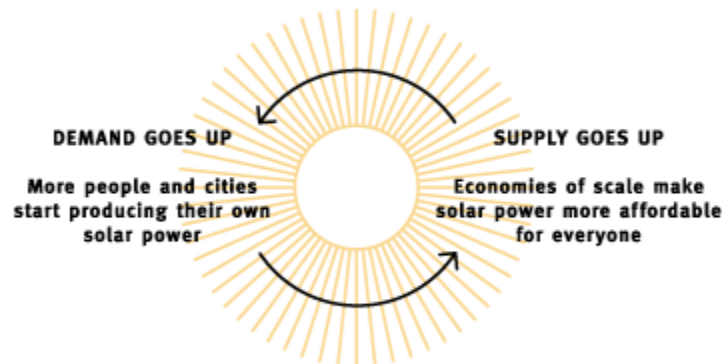
So instead of using an outdated, wasteful and dirty method of generating electricity, the public could switch to solar energy and save money in producing it; save health costs by having cleaner energy; and protect the environment all at once. It sounds like an environmental fairy tale, but the technology is available and is rapidly dropping in price. As more people start buying solar generators, they become more affordable to manufacture, thus allowing more people to buy them and lowering the

price ever further. It's just a matter of getting the ball rolling.

And while many people (especially those who live in the White House) seem to think that converting to renewable and efficient energy is unnecessary and difficult, around the country groups are working to make it happen.

In 2001, San Francisco voters overwhelmingly passed a public bond measure that would fund \$100 million in renewable energy projects and conversion to more energy-efficient technologies. A revolutionary step in sustainable urban living, this bond measure, created by the Vote Solar Initiative, costs voters nothing, since the bond money comes from the energy savings in converting to solar power.

David Hochschild, one of the founders of Vote Solar and an architect of the initiative, calls this a truly groundbreaking piece of legislation. "We've got a very aggressive agenda in San Francisco. Thanks to the overwhelming support of the voters, we're sending a clear signal to Washington that the people want change on our energy policy, and it's starting here."



Vote Solar unveiled its first major San Francisco project on Nov. 21 -- it is also the first major governmental solar project in the nation. At 1.3 million square feet, Moscone Center is SF's largest convention center. The \$7.4 million solar retrofit includes plans for installing solar panels on the roof of the center and upgrading its internal lighting with more energy efficient methods, including motion sensors connected to light switches and more efficient bulbs. Compact fluorescent light bulbs, which cost from \$3 to \$8 apiece and are growing in availability, can last up to seven years and will save about \$30-\$80 more in electricity costs than the original investment.

All told, the project will have a net savings to the city of about \$210,000 per year. How can anyone argue with that?

The next project for the San Francisco solar initiative, which is scheduled to be completed within five years barring any bureaucratic setbacks, is a \$2.4 million solar rooftop on a wastewater treatment facility. Future goals include installing a four megawatt generator atop a capped reservoir, solarizing City Hall, and essentially any city building on the eastern side of San Francisco, including the main library and port buildings. Four megawatts at a single location would make that site one of the

largest solar energy structures on the planet.

Among the most exciting aspects of the project is that it is both practical and feasible -- terms not normally associated with solar power. Similar bonds will not cost the public a cent, nearly ensuring their success at the polls. As more municipalities enact similar programs, the cheaper it will become for everyone to get involved.

New York state has begun working on a similar, if more ambitious, project. Solar Challenge has just begun a campaign to raise \$500 million in bonds for solar projects throughout the state.

The solar landslide is happening on other fronts as well. The Million Solar Roofs Initiative began in 1997 with a goal of installing solar energy systems on one million commercial and residential roofs by 2010. While not a lobbying group, MSRI is working with the Department of Energy to add solar energy to government buildings, and MSRI has established itself as a hub for interested consumers to get information and tools to go solar in their homes and offices.

San Francisco's Vote Solar Initiative is helping to promote the solar bond cause around the country, and it looks like two major fronts have opened up. San Diego is a hot prospect for the next municipal solar bond initiative; San Diego city councilwoman Donna Frye is spearheading the initiative for the city.

Frye's senior policy advisor, Nicole Capretz, says that thanks to the structure of Vote Solar's bond measure, a public vote on a solar bond may not even be necessary. "We're still in the hunting and gathering phase of the operation, but when we finish our feasibility study next year, that would be all we need to get the bond funded."

Capretz says that thanks to the recent efforts of Greenpeace, which brought its rolling solar generator to spots around the city and has launched a Solar Yes! campaign, the San Diego solar movement has growing public support. A public ballot initiative is likely, and local groups are working to build momentum within the City Council.

The other major scene for solar progress is Hawaii, a sun-drenched island state with some of the best resources for solar and wind energy. Dependent on fossil fuel energy imported from the mainland, Hawaii also has the most outrageous energy prices in the country. During this year's gubernatorial race, Democratic nominee Mazie Hirono promised that if she were elected, a statewide solar bond would be on her agenda. Hirono lost to Republican Linda Lingle, but the new governor, along with some state legislators, is warming to the idea of solar power for Hawaii.

Earlier this year, California attempted to enact a quota of zero-emissions vehicles sold in the state to help its ailing air quality. Automakers responded by taking the state government to court, and in an unprecedented move, President Bush on Oct. 9 filed a brief supporting the auto industry in the claim.

When the powers that be are so obviously in support of the status quo, the only solution is for ever more creative tactics, and these major solar projects serve as

shining examples. As Adam Browning of Vote Solar observes, "We will never drill our way to energy independence. We will have to find other means to get there." Fortunately for the planet, other means are in the works.

*For more information and to get involved, visit [Vote Solar](#), [Million Solar Roofs](#), and [Solar Challenge](#). [Matt Wheeland](#) is an AlterNet Fellow, and is giving compact fluorescent light bulbs to friends and family for Christmas.*

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