The Vote Solar Initiative

2008 Annual Report

OUR MISSION

Vote Solar is a non-profit organization working to fight climate change and foster economic opportunity by bringing solar energy into the mainstream.

Successfully combating global warming requires a national transition to renewable energy sources. So will keeping our energy dollars at home. And cleaning our air. In fact, there's hardly a major issue facing our nation today for which solar doesn't have an answer. Solar energy can play a large part of the solution—with proper leadership, rooftop solar PV can generate 80 percent of the country's total residential electricity demand by 2020[1]. That's equivalent to the production from more than 500 moderately sized power plants and would reduce CO2 emissions by 620 million tons per year[2]. And in the American Southwest alone, we could produce seven times the total US demand for electricity with a new generation of large-scale solar power plants[3].

While solar energy is currently the fastest growing energy source in the world, we have only scratched the surface of solar's potential, and huge challenges must be overcome if solar is to come to scale. Financial incentives can help bring down costs—but, unfortunately, most states also have significant regulatory barriers that impede solar's market penetration. If solar is to come to scale, we need to do more than lower costs. We need to free markets. The technology works great. The problem is policy.

Since 2001 Vote Solar has engaged in state, local and federal advocacy campaigns to remove barriers and bring solar to scale. Success will mean hope in the fight against global warming, literally millions of new jobs building a new energy economy, and a new source of clean, homegrown power ensuring our independence and enhancing our country's security. That's a future worth working for.

[1] Extrapolated EIA data and the study by Maya Chaudhari, Lisa Frantzis, and Tom Hoff, PV Grid Connected Market Potential Under a Cost Breakthrough Scenario, The Energy Foundation and Navigant Consulting, September 2004.

[2] To put this in perspective, according to the EIA, only 6 countries in the world produced more than 620 million tons of CO2 from fossil fuels in 2003. See: http://www.eia.doe.gov/pub/international/iealf/tableh1co2.xls

[3] Mining for Solar Resources, Mehos, M, and Perez, R., Atmospheric Science Research Center. http://www.asrc.cestm.albany.edu/perez/2004-2005/img-not.pdf

Much of Vote Solar's efforts are focused on developing retail markets for rooftop solar. Under this model, a customer installs solar on her roof, and energy generation serves her load, and the value of the system comes from reducing the amount of electricity she needs to purchase from the utility. A key benefit of this approach is that the solar electricity competes against utility power rates. So once solar reaches cost parity with retail grid prices, the market can take off without subsidy.

Vote Solar works to implement the four key elements of policy necessary to make a state distributed solar market function effectively:

Financial support. Solar will truly succeed when it becomes cost-competitive with the traditional energy sources we seek to replace. The key to lower costs is economy of scale. The price history of solar shows that every time demand doubles, costs come down about 20 percent. The more we invest now, the sooner solar will reach grid parity. We can lower prices for the long-term through short-term financial incentives in the form of public goods funds, tax credits, a renewable portfolio standard (RPS) with a solar carve-out, and utility purchasing policies.

Standardized interconnection procedures. State governments regulate the process by which distributed energy systems like solar can connect to the utility grid. We work to make those rules transparent and fair to protect new solar energy systems against otherwise arduous and expensive interconnection processes that can and do stop projects cold.

Net metering. This policy gives solar system owners proper credit for the electricity they feed into the grid. During the day, the meter rolls backwards, and at night, forward again as the banked credit is used. This makes solar installations more economical for owners and reduces costs for all other ratepayers by supplying much-needed electricity during expensive peak demand periods.

Fair rate design. Solar is a particularly valuable source of energy because it produces electricity when demand on the grid is highest—namely during sunny mid-day hours. Utility rates can and should be designed to fairly compensate solar systems for their contribution as a peak shaving resource. We work to implement time-of-use tariffs without demand charges, an updated system of energy billing that reflects electricity's changing value over the course of the day.

HOW WE DO IT

WE WORK WITH POLICYMAKERS

Policy leaders across the country are showing unprecedented support for cleaner, cost effective energy. But setting a renewable energy goal is one thing and achieving it is something else entirely. Solar policy is complex and changing all the time. We help regulators and legislators understand their policy options, draft legislation, and implement the programs that are going to most effectively support a solar market that benefits individuals, businesses, and communities alike.

WE WORK WITH THE PUBLIC

We are a grassroots organization with more than 55,000 members nationwide. We help our members and others stay informed about the latest in solar policy through regular email newsletters, online social networking, community events and news media outreach. When it's time to take action, we mobilize our supporters and give them the easy tools they need to make their voices heard.

WE WORK WITH OTHER ADVOCATES

We aim to transform one of this country's most powerful industries, and we can't do it alone. We make the most of our resources and those of our skilled advocacy peers by collaborating wherever possible. Whether it's sharing our own models or highlighting best practices from the successful efforts of others, we provide the tools, guidance and support needed to help others make a difference in their own communities.

WE COMMIT FOR THE LONG-TERM

Each law and program successfully enacted requires sustained attention to make sure it is implemented correctly, operating effectively, protected from opposing interests, and amended when necessary. We stay the course and maintain watchdog vigilance to make sure positive progress is made.

Opposite page, left: **Warehouse installation, Hunters Point/Bayview neighborhood in San Francisco. Credit: Akeena Solar**

Opposite page, right: **Residential installation, Connecticut. Credit: Akeena Solar**

This page, left: **California State Senator Mark Leno and Vote Solar's Adam Browning at our Equinox Fundrdaiser.**

This page, right: **Grassroots Rally for Federal Solar Tax Incentives in DC.**

A YEAR IN SOLAR POLICY

2008 was marked by many policy successes on the road to clean, reliable and affordable solar energy for all. Vote Solar and our members helped shape solar-friendly policies in 15 states as well as exciting developments at both the city and national level.

STATE PROGRAMS:

Arizona: Unleashing Solar Potential in the Southwest

With its sunny climate and fast-growing population, Arizona is a perfect fit for solar energy. Since 2003, Vote Solar has been working with local partners to help establish world-class solar policy to match. At the time, the state maintained a paltry renewable energy target of just 1.1 percent as well as net metering and interconnection standards that trailed nearly every other state in the country. We met with state regulators at the Arizona Corporation Commission to make our case for the benefits of a strong solar market and the best policy tools to support that new local industry. We encouraged our members to voice their support as well, and 5,600 Arizonans contributed online signatures for an expanded renewable energy standard in the state. In order to clear the way for market growth, we hired a lawyer to intervene in a ratecase to successfully defeat what would have been a disastrous net metering policy at the state's largest utility.

With hard work from our team and partners, we've seen exciting progress. In October of 2006 the Commission issued a decision requiring utilities to get 15 percent of their energy from renewable resources, with 30 percent of that coming from distributed sources like rooftop solar. In 2008 the ACC approved implementation plans for an expanded renewable energy standard providing a concrete path for achieving the State's goals. In total, the new programs amount to an estimated $120 million in funding available for renewable projects in 2009. With financial incentive in place, the Commission also established improved net metering laws and began its review of interconnection standards, opening the grid up for distributed solar generation. In short, the state is now open for business.

California We worked to ensure the State's strong solar targets are achieved through fair and effective program implementation. We worked to develop solar-friendly rate-design in multiple general rate cases, helped secure tax policy to reduce costs for all solar customers including both new home construction and utility-scale solar (worth about a penny per kWh for wholesale solar generation), fought ill-advised policy proposals that would have undercut the California Solar Incentive, spent an inordinate amount of time dealing with the misguided Proposition 7, and worked to maximize the benefit of major new distributed generation solar initiatives from utilities including SDG&E, SCE, LADWP, and PG&E. We also worked extensively on a regulating proceeding to establish a feed-in tariff for 1–20 MW sized systems.

Connecticut The state's ripe for a program expansion, and in preparation, we have been asked to join Connecticut's Solar work group, have developed key relationships among policymakers and advocates, and laid groundwork to build support for an aggressive solar program in 2009.

Florida The state is one of our top targets. In 2007, we presented Governor Crist with a detailed plan for a 10 GW PV and solar thermal market—and 10,000 signatures of Floridians to prove popular support for solar action. In 2008, we shepherded the solar effort through a potentially treacherous Public Service Commission proceeding, building support by providing timely analyses to regulators and maintaining a strong media presence. We achieved an interim success in late 2008 when the PSC issued an endorsement of a stronger-than-anticipated renewable plan; now the effort moves to the legislature. We also worked with the Interstate Renewable Energy Council to implement gold-standard net metering and interconnection standards through the regulatory commission—another key win on the way to putting the sun in the sunshine state.

Hawaii A central focus of our work in the state was to provide expert analysis supporting increases in the state net metering caps—an effort that resulted in a 100 percent increase in the system size allowed under the net metering rule.

Massachusetts We mobilized grassroots support for and are participating in the implementation of the state's Green Communities Act of 2008 to ensure a fair market for customer-sited solar.

Michigan At the Governor's Office request, we drafted a solar program as part of the state's economic revitalization package.

Nevada We built a coalition and game plan in preparation for the 2009 legislative session. We drafted proposed legislation to increase the RPS requirement, improve the Solar Generations program, and strengthen the state's net metering program. We prepared job and economic impact analyses to support both distributed and large-scale solar policy discussions.

New Mexico We worked with the Public Regulatory Commission to request an increase in the solar program, filed numerous analyses in the docket, and traveled to Santa Fe three times to provide testimony as an expert witness. The result was a requirement expanding the distributed generation solar program from 1.2 MW to 60 MW, and a central station solar requirement of 400 MW. We also participated in successful net metering rulemaking, with an 80 MW requirement.

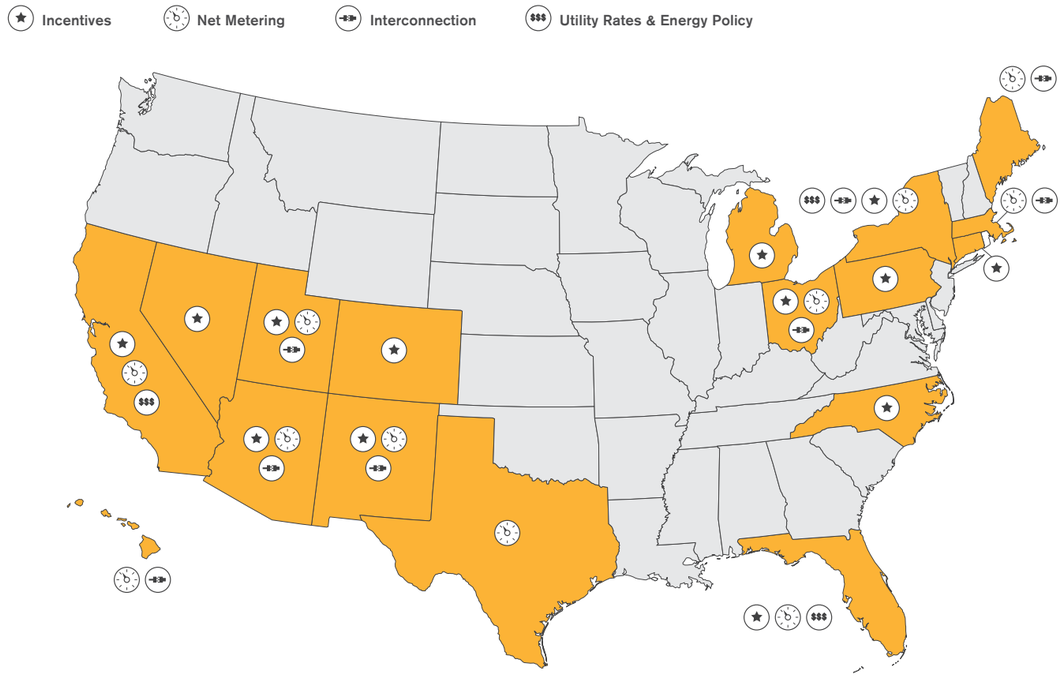
New York The state is one of our top targets for an aggressive expansion—our goal is a 2 GW solar program. In preparation, we helped establish a gold-standard 2 MW net metering program by providing expert testimony, rallying support from businesses, municipal leaders, and the grassroots. We also helped secure a 30 percent property tax abatement for solar installed in the 5 boroughs of New York City.

North Carolina We supported our partners at the North Carolina Sustainable Energy Association in obtaining a solar carve-out in the state's new renewable portfolio standard. However, state regulators have so far declined to establish program parameters, and in the absence of regulation, Duke Carolinas, a local utility, filed an application to install 20 MW of utility-owned solar. In order to build on this proposal and use the momentum to leverage an additional program to provide incentives for customer-owned solar, we hired a lawyer and an expert witness (Dr. Thomas Starrs), and intervened in the proceeding. Unfortunately, we did not prevail. On net metering, our first effort to establish a better interconnection and net metering standard was unsuccessful, and a future effort remains a priority.

Ohio: Creating Economic Opportunity in the Rust Belt

Ohio may not be well known for renewable energy. In fact, the state currently generates about 87 percent of its electricity from coal, making it one of the most polluting energy portfolios in the country. That's why we were so excited to be part of the state's big solar win in 2008.

VOTE SOLAR'S POLICY EFFORTS



In solar Ohioans saw a new opportunity to keep energy dollars at home, provide employment opportunities for their underutilized workforce, and attract new businesses to the state. Working with the local activists at Environment Ohio, Vote Solar built grassroots support for change in the state's energy policy. We ran online action campaigns to mobilize our members and helped place advertisements in major local papers urging residents of the Buckeye State to support reliable renewable energy and green job creation. In May 2008 that support paid off. Governor Strickland made Ohio history by signing SB 221 which called for 12.5 percent renewables by 2025, at least 594 MW of which will come from solar

Pennsylvania We collaborated with local partners at Mid Atlantic SEIA and PennFutures to help establish a new $180 million solar rebate program for residential and small commercial systems.

Texas As one of the nation's largest energy markets, Texas is a top solar priority. We invested in relationship building and program planning for the critical 2009 legislative session in this state that only meets every two years.

Utah We assisted Utah Clean Energy in their RPS work, and we supported both Utah Clean Energy and the Interstate Renewable Energy Council in their ongoing net metering proceedings.

FEDERAL TAX CREDITS: GENERATING 440,000 SOLAR JOBS NATIONWIDE

The single most watched solar policy battle of the year was the drive to extend the federal investment tax credit (ITC), a critical financial incentive that reduces the cost of a new solar installation by 30 percent. The effort was long, arduous and filled with Congressional impasse. We saw 15 unsuccessful votes. We dodged one attempt to pass an energy bill without a tax title—and no tax title meant no support for solar. The effort had more story lines than a telenovella.

Vote Solar members did their part by generating nearly 100,000 faxes and emails—and even more through our partner networks—to their Congressional representatives. We also held a rally in Washing DC: 100 solar installers wearing green hard hats and carrying banners calling for the tax credits greeted Secretary of Energy Bodman as he dedicated a solar system on the Department of Energy's roof. Photos of the event made it into prominent Hill publications such as Roll Call. We played a large role in ensuring that Congress knew that solar was a top-of-mind issue for their constituents.

With mere months left before existing the incentive was set to lapse, Congress finally passed the ITC extension in October, and the President signed into law the same day. The new law extended the solar tax credit for an unprecedented eight years, replacing financial uncertainty with the long term

predictability that this growing industry needs. Even better, the legislation removed a previous monetary cap on residential systems and expanded the benefits to include utility systems. For the first time, commercial, residential and utility solar energy system owners can all receive the full 30 percent tax credit. That's a recipe for solar success that is expected to create more than 440,000 jobs, pump $232 billion into our nation's economy, and provide the foundations for a strong, thriving, self-sufficient market for decades to come.

MUNICIPAL PROGRAMS: LOCAL LEADERSHIP

2008 brought a slew of developments in municipal support for solar. Solar scored a major win in the 5 boroughs of New York City with a 35 percent property tax abatement for residents and businesses that install photovoltaic systems. With plenty of encouragement from local Vote Solar members, San Francisco supervisors approved a 10-year program that will help put more than 55 MW of solar on 10,000 roofs. Across the bay, Berkeley made history with a solar program that allows residents to wrap the cost of solar into their property tax over 20 years rather than footing a hefty upfront bill. It's an exciting new way for even the most budget-constrained local governments to make solar more affordable for property owners – and cities from coast to coast are moving to follow suit. Vote Solar staff developed online resources to help other cities replicate the pioneering finance model. In the year ahead, we'll be working to ensure State and Federal laws don't stand in the way of positive local action like this.

UTILITY SCALE: BRINGING IN THE HEAVY HITTERS

Centralized solar power station development represents an exciting opportunity to replace fossil fuels with emission-free solar energy at entirely new orders of magnitude. A fully renewable-powered future with the energy reliability and security our society has come to depend upon will require that we make full use of every clean energy resource available. We will need to aggressively invest in conservation, energy efficiency and demand response programs. We will need to cover every rooftop with photovoltaic panels or solar thermal collectors. We will need to invest in smart grid and energy storage technologies and optimize how we use the existing transmission and distribution networks. And we will need to take full advantage of the different generating profiles of various renewable resources in order to effectively use intermittent and non-dispatchable resources for a low-carbon future.

But big solar requires big policy changes to effectively address utility procurement, tax policy, transmission and land-use issues. In mid-2008 Vote Solar launched a program to advance the utility-scale opportunity in the resource rich states of Arizona, California, New Mexico, and Nevada. To date, we have engaged a broad coalition of more than 60 advocacy, regulatory, and industry stakeholders to help us develop and execute the policies needed to streamline solar deployment at this scale. Next up, we'll be putting plan into action.

Build Demand Effective and aggressive renewable portfolio standards (RPS) in each state are key to driving the economies of scale that will bring down the cost of large-scale solar generation. Having already engaged in the development and implementation of RPSs in each of our target states, we are well-positioned to continue strengthening those renewable energy goals.

Plan, Fund and Build New Transmission New transmission infrastructure is required to carry clean, reliable energy from remote solar power plants to the communities that need it. Currently very little in the way of transmission development is taking place. Renewable developers can't finance projects without guaranteed access to transmission, yet transmission owners are reluctant to build for fear that they will not be allowed to recover their costs. This chicken and egg problem is a result of 20th century policies and processes that are not designed to handle our 21st century energy needs. Vote Solar is proposing solutions including the designation of a national or regional authority with oversight for effective planning across state lines and tariff administration to allow for regional cost allocation that will get these renewable energy lifelines built.

Unlock Land Use Issues Large-scale solar energy project development will require the use of large tracks of land. The key will be to ensure that this development is done in a way that minimizes impact and maximizes our conservation values. Vote Solar has an important role to play in making that process transparent, more efficient and properly attuned to smart growth and conservation principles.

EXTRACURRICULARS

Equinox Redux. Our second annual Equinox Fundraiser was a resounding success. We had the pleasure of bestowing much-deserved honors upon Speaker of the House Nancy Pelosi, California Public Utility Commission President Michael Peevey, California State Assemblyman Mark Leno, San Francisco Mayor Gavin Newsom and San Francisco City Assessor Phil Ting for their respective contributions to solar policy. The solar industry and advocate community came out in force to help us celebrate our recent successes and build support for the year to come.

Music to our Ears. Vote Solar was the "headlining" non-profit for the Maroon 5 and Counting Crows 2008 national concert tour. With help from Reverb, a group focused on bringing sustainability to the music industry, the bands helped get fans fired up about solar energy and Vote Solar's work. Maroon 5 also partnered with Vote Solar to develop a viral video urging people to ask congress to extend the federal solar energy tax credits. The video was viewed on YouTube more than 20,000 times, delivering our message to a whole new generation of music fans-turned-solar supporters. Closer to home, Vote Solar helped spread the word at San Francisco's Outside Lands Music & Arts Festival. In addition to 150,000 attendees and 64 performers, the three-day festival featured an "Ecolands" educational area with booths from a number of environmental organizations including Vote Solar.

In Our Backyard. Vote Solar joined Green for All and more than 50,000 other Americans in a National Day of Action for green collar jobs. We spent a sunny day with our neighbors in Oakland rallying for clean energy and sharing solar-blended smoothies. Together with hundreds of other grassroots events around the country, we sent our leaders a resounding message of support for green jobs in a sustainable economy.

THE VOTE SOLAR INITIATIVE 2008 ANNUAL REPORT

HISTORY

The Vote Solar Initiative was founded after a successful 2001 effort to pass a solar ballot initiative in the city of San Francisco. Buoyed by immense community support, the $100 million solar program passed by a 73 percent margin . The two campaign leaders—Adam Browning and David Hochschild—were inspired to replicate that success and make clean, reliable and cost-effective energy from the sun available in cities and states nationwide. In 2002 they formally founded Vote Solar to give solar supporters a voice in the policy debates shaping their energy future.

Propelled by increasing awareness of solar's invaluable environmental, economic and national security benefits, the solar market has experienced tremendous growth in recent years. The once-marginal industry has experienced an unprecedented influx of innovation, investment and market participants. As the industry has matured, new policy needs have arisen, and Vote Solar has expanded its operations accordingly. Today Vote Solar is proud to have more than 55,000 grassroots members helping to advance solar across the country.

Adam Browning, Executive Director Adam co-founded the Vote Solar Initiative after working on the successful campaign for San Francisco's 2001 solar bond. Prior to Vote Solar, Adam spent 8 years with the Environmental Protection Agency where he ran an award-winning pollution prevention program.

Gwen Rose, Deputy Director Gwen designs and implements solar programs for states nationwide with a particular focus on Florida and Hawaii. Gwen joined Vote Solar from Marin County's solar and climate protection programs, where her work earned the "Best Progress in the Western Region" Award from the Department of Energy's Million Solar Roofs Initiative.

Claudia Eyzaguirre, Solar Advocate Claudia leads municipal and state level solar advocacy efforts throughout the Western States. A GreenCorps-trained campaigner, she came to Vote Solar after two years as the California Chapter Coordinator for the National Audubon Society.

Shaun Chapman, East Coast Campaigns Director Based in Brooklyn, Shaun leads Vote Solar's efforts on the East Coast with a particular focus on New York. Shaun was previously with Network for New Energy Choices, where he focused on advancing net metering policies throughout the U.S.

Annie Carmichael, Federal Policy Director Annie spearheads Vote Solar's federal policy efforts as well as a number of state level initiatives. Annie recently finished her masters in environmental policy at Oxford University. Before that she spent several years advocating for energy efficiency policies at the Alliance to Save Energy in Washington, DC.

Jim Baak, Utility-Scale Solar Policy Director Jim leads Vote Solar's new utility-scale solar program focused on developing the market for centralized solar power plants. Jim joined Vote Solar from Pacific Gas & Electric Co., one of the largest utilities in the United States, where he helped shape and manage the California Solar Initiative program. Jim brings 20-years experience from various sectors of the electric utility industry, from public power to energy service providers to investor owned utilities.

Rosalind Jackson, Director of Communications and Development Rosalind supports Vote Solar campaign initiatives and organizational growth through media and donor relations. Rosalind previously spent more than four years in cleantech public relations with a particular focus on solar issues. She has a degree in Environmental Sciences and Mass Communications from UC Berkeley.



Clockwise from left:

Adam Browning
Gwen Rose
Claudia Eyzaguirre
Jim Baak
Rosalind Jackson
Annie Carmichael
Shaun Chapman




Vote Solar is a fiscally sponsored project of both the Tides Center and Tsunami Fund, and as such we are responsible to the Tides Center's Board of Directors. In addition, Vote Solar has an active Board of Advisors that focuses on strategy and policy.

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JP Ross
VP Strategic Relations, Sungevity

Dr. Thomas Starrs
Managing Director, Solar, PPM Energy

Vote Solar is grateful for the support we receive from individuals and organizations throughout the solar energy community. We'd like to extend a special thanks to some of our most active partners and volunteers.

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