



The Solar America Initiative

Role of Utilities

The Solar America Initiative

The U.S. Department of Energy (DOE) Solar America Initiative (SAI) was created in January 2006 as part of the President's Advanced Energy Initiative. The SAI's goal is to reduce the cost of solar photovoltaic (PV) technologies so they become cost competitive in most applications by 2015. DOE will achieve the goals of the SAI through partnerships and strategic alliances with industry participants, universities, Federal and state governments, utilities, and other non-governmental agencies.

This fact sheet focuses on the role of utilities in SAI Market Transformation activities, which address marketplace barriers and offer the opportunity for market expansion.

SAI Market Transformation

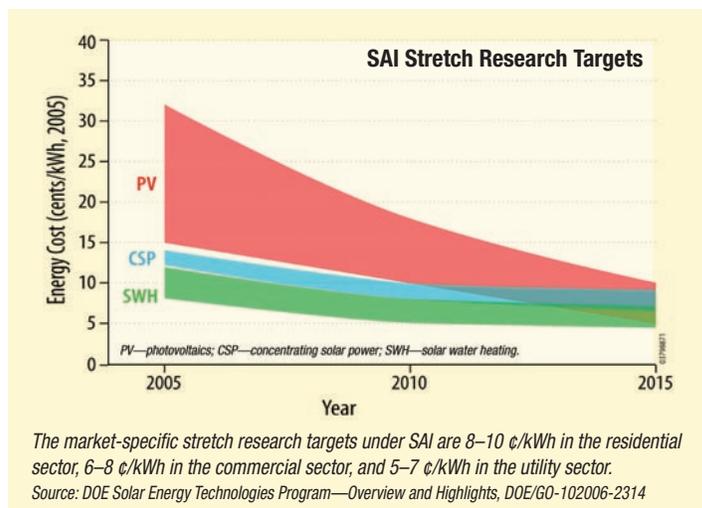
Market Transformation encompasses non-R&D activities in two areas:

- Providing technical, regulatory, institutional, financial, and educational solutions to market barriers
- Accelerating demand for new solar technologies primarily through provision of technical assistance

SAI Market Transformation is focused on near- and mid-term results, emphasizing activities with the greatest potential to help achieve the cost-competitiveness goal by 2015.

These activities will be performed in collaboration with key stakeholders who are committed to the SAI mission and who will benefit from the expansion of PV electricity generation.

DOE views utilities as critical partners in this effort.



Utility-Related Market Transformation Activities

Solar energy provides many societal benefits, from environmental sustainability to energy security to the creation of high-value jobs. Utilities can reap direct benefits of solar energy as well. Solar energy helps utilities satisfy renewable energy obligations and can provide new sources of revenue. Using solar energy presents a positive, “green” public image among utility customers. Surveys have shown that customers support utility development of solar energy, even if it costs more than other energy sources. Solar energy output is highest during daylight hours—providing a source of high-value peak power to utilities—and is not subject to volatility in fuel prices. Combined with government incentives, solar energy is even more attractive.

Utility participation in the SAI is crucial to the success of the Initiative. Utilities can enable sweeping progressive changes across large market areas, and, because the SAI is focused on grid-tied PV installations, utility partners are needed to achieve widespread increases in domestic solar capacity. Utility influence affects every end-use sector targeted by the SAI. Advances made in helping utilities incorporate PV into their planning and operations will have trickle-down benefits for all potential PV customers. Because of the importance of utilities in achieving SAI goals, several Market Transformation activities either involve utilities directly or address issues important to utilities. These include developing and disseminating solar codes and standards, quantifying system benefits of PV, disseminating solar technical information, and promoting large-scale solar energy installations. The activities addressing these issues are described briefly below.

Solar Codes and Standards Working Group

The lack of consistency in solar codes and standards is a key barrier to widespread PV use. A Solar Codes and Standards Working Group (SCSWG) will be created to handle all solar codes and standards issues encountered by DOE, DOE contractors, partners, SAI award recipients, and solar stakeholders. The SCSWG will provide guidance on and disseminate information about issues such as net metering, interconnection standards, tariff structures, product safety standards, and best practices. It will build on earlier DOE work performed through the National Association of Regulatory and Utility Commissioners (NARUC) and Million Solar Roofs. Membership in the SCSWG will be offered to utility representatives.

Experienced-Based Utility PV Capacity Credits

Evidence suggests that previously held conceptions about the intermittency of PV are no longer valid. To quantify the system benefits of PV, this activity will support the development and adoption of specific capacity credit values or other utility-approved metrics. This will involve



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working closely with utility-based PV projects, coordinating data gathering and operations with utility system and distribution planners, and developing cost-based proposals for adoption by utility management. It will also involve collaborative development of the system and utility characteristics needed to quantify the ability of grid-connected PV systems to address peak demand and development of specific and integrated rate, rebate, net metering, and interconnection approaches to optimally capture such benefits.

Utility Solar Technical Outreach

Because communicating with utilities is so vital to the success of the SAI, DOE is enlisting the help of utility membership organizations to provide targeted solar information and education to electric utilities. This will include creating and disseminating utility case studies documenting innovative program design or use of advanced solar technology, assisting utilities in making the business case for solar with model approaches and up-to-date technology information, responding to utility inquiries about the technical characteristics of solar technologies, and facilitating peer-to-peer communication among utilities to accelerate the spread of best practices for solar adoption. The goal is to help utilities overcome market barriers and adopt key commercialization activities in support of the SAI.

City Strategic Partnerships

To accelerate local adoption of solar technology, DOE will provide financial and technical assistance to support cities that demonstrate strong and lasting commitment to a sustainable solar infrastructure. Cities will be required to work with their local utilities to build a relationship that supports solar energy use.

Solar America Showcases

The Solar America Showcases activity aims to accelerate demand for solar technologies through large-scale (greater than 100 kW), high-visibility, replicable solar projects. DOE may provide technical assistance to utility-scale solar installations. Installations can include PV, concentrating solar power, and solar water heating applications.

Funding Opportunity Announcements

Participants for the activities described above have been solicited via several DOE Funding Opportunity Announcements and one Notice of Opportunity for Technical Assistance, all issued on October 11, 2006. Actual funding for the activities is contingent on Congressional appropriations. Utilities are encouraged to participate either by responding to the opportunities or by supporting the efforts of those who do respond.

Information about accessing SAI funding opportunities will be posted on the Market Transformation page of the SAI Web site: www.eere.energy.gov/solar/solar_america/technology_acceptance.html.

To access these and all other DOE funding opportunities, visit the DOE IIPS Web site at <https://e-center.doe.gov> and/or the grants.gov Web site at <http://www.grants.gov>. To learn more about the SAI in general, visit www.eere.energy.gov/solar/solar_america.



Arizona Public Service Concentrating Solar Powerplant. This 1-MW facility features Solargenix parabolic trough technology.



City of Napa, California, PV System. This 365-kW system was designed and developed by PowerLight Corporation.



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A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

For more information contact:
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Prepared by the
National Renewable Energy Laboratory,
a DOE national laboratory

DOE/GO-102006-2369
October 2006

Printed with a renewable-source ink on paper containing at least 50% wastepaper, including 20% post consumer waste.