

## SUN DAY CAMPAIGN

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### SUSTAINABLE ENERGY STUDY #4

Solar Roadmap for Arizona Unveiled - Report Touts Solar Energy's Bright Future in the State:

Arizona could generate up to 1,000 megawatts of solar electricity and create 3,000 jobs by 2020 by supporting solar-energy technologies and boosting the state's solar-electric industry, a state report says.

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### ARIZONA SOLAR ELECTRIC ROADMAP STUDY

<http://www.azcommerce.com/Newsroom/ViewRelease.aspx?1875>

On January 19, 2007, the Arizona Department of Commerce released the state's recently completed "Solar Roadmap Study" which projects up to 1,000 megawatts of solar electricity could be implemented in Arizona by 2020 creating more than 3,000 new jobs in the process and reducing emissions by 400,000 tons per year.

The roadmap calls upon the public and private sector to launch several new program initiatives that will accelerate the adoption of solar energy technologies and develop a robust solar electric industry within Arizona.

"I've long said Arizona is the 'Saudi Arabia of solar energy' within the United States, yet the vast solar resource of the state and its economic potential remain largely untapped," said Governor Janet Napolitano. "Developing these technologies will provide substantial economic benefit for Arizona while reducing air pollutant emissions, creating jobs, and redirecting the amount of money that flows out of state for energy."

Currently over \$6 billion out of the more than \$10 billion that Arizonans spend on energy annually goes out of state.

"We must work to develop more sustainable energy sources in Arizona," said Arizona Department of Commerce Director Jan Leshner. "New approaches to energy efficiency and the development of the state's clean energy resources will create good, high-wage jobs for Arizonans."

"As the economic, social and political forces all align around the need for renewable energy, Arizona is seizing the moment with this report and the initiative that will follow," said Fred

Duval, roadmap committee member and President of DuVal and Associates. “It is, indeed, our moment in the sun.”

Public sector Roadmap initiatives call for the Energy Office to establish the Arizona Sustainability Partners program and a marketing and outreach program to attract solar manufacturing companies to Arizona.

“Bringing this resource to widespread use will require cooperation among all of the key stakeholders: the solar industry, utilities, government, and the consumers of electricity,” noted Lee Edwards, roadmap committee member and President and CEO of BP Solar.

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### Solar Roadmap Highlights (with corresponding study page numbers)

- CEDC and Arizona Department of Commerce commissioned this project to help inform the strategy for future business development in the solar industry.
- AZ has the potential to become a world leader in many aspects of solar development, and is a model location for the evolution of new solar technologies. (Page 2)
- Currently, customer sited PV is more expensive than retail electricity, but future expected cost reductions will close the cost gap. (Page 9)
- Technology improvements/cost reductions will allow central solar to compete with conventional baseload and intermediate generation. (Page 11)
- Cost of electricity from parabolic trough is near the cost of peaking power today, with costs expected to decline by more than 50 percent by 2025. (Page 13)
- Total solar deployment could exceed 2,600 MW in the accelerated scenario with rooftop PV accounting for about 45 percent of the capacity (2025). (Page 17)
- The accelerated scenario for solar could add over 3,000 jobs in 2020 (Page 18)
- Emission reduction is estimated at 400,000 tons per year in an accelerated scenario in 2020. (Page 19)
- If some barriers can be overcome, there is potential for annual installations of more than 250 MW/yr in 2020. (Page 23)
- Implementing the roadmap initiatives will allow Arizona to build upon its assets and policies to establish a leadership position in fostering solar. (Page 30)

- As of June 2006, nine states have RPS bills introduced and three are considering increasing RPS targets, including the Arizona target. (Page 47)
- Arizona renewable energy funds are expected to provide approximately \$13.5 million in 2006, and more than \$50 million a year upon implementation of Renewable Energy Standard and Tariff (REST). (Page 49)
- PV can be sited at customer premises to compete with retail power, but high first cost is still a major barrier to broader market penetration. (Page 65)
- The National Renewable Energy Laboratory estimates the technical potential for concentrating solar power at ~2.5 GW in Arizona. This is almost three times the potential for California. (Page 75)
- Arizona roof space available on residential buildings for PV installations is around 27 percent of total roof area. Not considering economics, the rooftop area available for residential PV could support ~7.5 GW of installations in 2025. (page 106 and 107). (Editors Note, this is roughly twice the size of the Palo Verde Nuclear Generating Station.)
- The roof space available in commercial buildings for PV installations is around 60 percent of total roof area. Not considering economics, the rooftop area available for commercial building PV could support ~7 GW of installations in 2025. (Page 108 and 109).
- Arizona technical market potential in 2025 is 14,520 MW (7,485 residential and 7,035 commercial) (Page 116)
- NCI along with the Steering Committee identified five initiatives and policies that would address three goals and ambitions. (Page 158 -167)

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To read the 23-page Executive Summary, please go to:

[http://www.azcommerce.com/doclib/energy/az\\_solar\\_electric\\_roadmap\\_study\\_executive\\_summary.pdf](http://www.azcommerce.com/doclib/energy/az_solar_electric_roadmap_study_executive_summary.pdf)

To access the complete 189-page "Solar Roadmap" study, please go to:

[http://www.azcommerce.com/doclib/energy/az\\_solar\\_electric\\_roadmap\\_study\\_full\\_report.pdf](http://www.azcommerce.com/doclib/energy/az_solar_electric_roadmap_study_full_report.pdf)

A story about this study appears in the January 20, 2007 issue of the "Arizona Daily Star" and can be found at: <http://www.azstarnet.com/sn/business/165461.php>