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Michael L. Neary


Executive Director, Arizona Solar Energy Industries Association

Michael Neary is principal of Desert Sun Solar, Inc., which has been involved in a variety of activities in the solar industry for the past fifteen years. Mr. Neary acts as executive director of the Arizona chapter of the Solar Energy Industries Association (SEIA) and has worked with local solar companies on marketing, product development, and meeting national standards, such as the Solar Rating and Certification Corporation's (SRCC's) OG-300 rating for solar water heating systems.

He is a registered lobbyist in the state of Arizona and has recently worked towards passage of legislation in that state, including the state's solar tax credit, sales tax exemption, reduced tax rates for utility solar and renewable power generation facilities and other measures that benefit solar and renewables. He has also worked towards the adoption of a renewable energy portfolio standard and support for homeowners' rights to install solar energy systems on their residences.

In addition to his activities for the Solar Energy Industries Association, Mr. Neary was appointed by Governor Jane D. Hull to Arizona's Solar Advisory Council and is on the Board of Directors of the Arizona Solar Energy Association, the Arizona Chapter of the American Solar Energy Society (ASES). Mr. Neary has written extensively on codes, covenants, and restrictions (CC&R) issues, and spearheaded efforts to develop a national Strategy and Action Plan directed to the problems of CC&Rs.

Arizona Public Policy - Solar and Renewable Energy



Arizona Public Policy - Solar and Renewable Energy

Michael Neary
Arizona Solar Energy Industries
Association

For approximately seven years, the Arizona Solar Energy Industries Association (ARISEIA) and the Concerned Arizonans for Renewable Energy (CARE) have been actively working on legislation that creates positive public policy promoting greater use of solar and renewable energy in Arizona.

Two public bodies in the state of Arizona have the authority to approve measures that support good public policy related to solar and renewable energy in the state of Arizona:

- Arizona Corporation Commission: Responsible for the regulation of public service corporations
- Arizona Legislature: Branch of state government that creates laws related to solar and renewables




Arizona Corporation Commission

Regulates Public Service Corporations

Arizona Legislature

Creates laws related to solar and renewables

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Arizona Corporation Commission

Renewable Energy Portfolio Standard benefits solar and renewable energy in Arizona's electric industry restructuring process by requiring a small percentage of the electricity provided consumers be generated from solar resources.

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The Arizona Corporation Commission recently adopted a Renewable Energy Portfolio Standard which benefits solar and renewable energy in Arizona's electric industry restructuring process by requiring a small percentage of the electricity provided consumers be generated from solar resources.



Renewable Energy Portfolio Standard

Docket R14-2-1609

2001	0.2%	50% Solar electric
2002	0.4%	50% Other clean renewables, including solar thermal water heating
2003	0.6%	
2004	0.8%	
2005 -12	1.0%	

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In recent years, a bipartisan effort to pass legislation supportive of solar and renewable energy has been successful in the passage of the following measures:

Solar energy tax credits

The tax credit allows a direct credit of 25% of the cost of the system with a \$1000 maximum. The credit may be carried forward for a period of five years.

Solar energy in public buildings

This bill requires the state of Arizona to use any solar or renewable energy application, including passive design, that has a direct pay back of seven years or less when remodeling or building state buildings.

DHW stub-out tax credit

Allows home builders a credit of \$75 to “stub out”, or install, transport lines for solar water heating systems and/or a 220V electrical line to be used for electric vehicle recharging.

Retail sales tax exemption

Extended a sales tax exemption for solar retail companies.

Continuation of Solar Advisory Council

Extended the life of the Solar Advisory Council, a body of solar experts that advises the Arizona Department of Commerce, Energy Office in matters related to solar and renewable energy.

Contractors sales tax exemption

Included solar contractors in the exemption of solar taxes for solar systems.

Energy efficient homes tax deduction

Created a income tax deduction for the building of energy efficient homes. The top ten percent of energy efficient homes in a given year will qualify for a \$5000 income tax deduction.

Utility Tax Valuation

Equalizes the property taxes paid by utilities on solar and renewable energy power plants with that of a traditional power plant.


2001 Legislative agenda

Deed restrictions/CC&R’s-strengthen current law

One of the major barriers to the installation of residential solar thermal and PV systems in Arizona’s metropolitan areas are restrictions placed on rooftop solar installations by builders and developers in the Conditions, Covenants and Restrictions (CC&R’s) that are placed on homes in planned communities. Arizona’s Legislature passed a law in 1979 prohibiting such restrictions, but the law is largely ignored by developers.

Commercial solar tax credit

In recent sessions, legislation has been introduced that would allow a commercial credit of 25% of the cost of a solar system with a \$5000 maximum.




Arizona Legislature

Legislative Accomplishments

- Solar energy tax credits
- Solar energy in public buildings
- DHW stub-out tax credit
- Retail sales tax exemption
- Continuation of Solar Advisory Council

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Legislative accomplishments

2000 session

- Contractors sales tax exemption
- Energy efficient homes tax deduction
- Benefits for utility/electric service providers

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Legislative Agenda

- Deed restrictions-strengthen current law
- Commercial solar tax credit
- Funding for solar energy projects/programs
- Resource technology zones


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Funding for solar energy projects/programs

In order to increase promotion of solar and renewable energy to the public and to promote Arizona as prime location for solar and renewable energy companies, legislation has been introduced to provide the Arizona Department of Commerce, Energy Office with \$300,000 a year for a two year period.

SOLAR ENERGY AIR QUALITY BENEFITS TO ARIZONA

Over 1.5 million Americans have invested in solar, mostly hot water systems for their homes and businesses. Surveys taken over the last ten years confirm that the vast majority of owners (94% or more) consider that investment a wise decision. Enough energy falls on every Arizona household every day to more than meet the energy needs of that house. Developing that resource would benefit Arizona both economically and environmentally. The opportunity exists to develop that resource and make Arizona a leader in solar technology.




Benefits to Arizona - Air Quality

One major advantage of using solar energy is that it avoids the use of conventional fuels. These conventional fuels, generally a hydrocarbon based fuel, cause pollution. Oxides of carbon (COx), Nitrogen (NOx), and sulfur(SOx) are released into the atmosphere. By using solar energy this pollution is avoided.

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AIR QUALITY BENEFITS


- Solar energy is pollution free.
- Solar water heating systems in use in the United States today produce approximately 1000 megawatts of energy annually. That is the equivalent eliminating the emissions of two medium sized coal power plants.
- One major advantage of using solar energy is that it avoids the use of conventional fuels. These conventional fuels, generally a hydrocarbon based fuel, cause pollution, oxides of carbon (COx), Nitrogen (NOx), and sulfur(SOx) are released into the atmosphere. By using solar energy this pollution is avoided.
- By using solar to heat water rather than electricity, a family will keep an average of 2900 pounds of pollution from entering our atmosphere each year.
- By using solar energy to heat water, rather than a gas water heater, a family will save 1200 pounds of pollution each year. When solar energy replaces gas water heaters the pollution avoided is site based. These and the above figures are based on 55% of a 70 gallon per day load at 120 degrees. The vast majority of solar water heating systems in Arizona will supply 95% of that load, increasing the air quality benefits.
- Most solar DHW system users are able to supply 100% of their hot water from April through October. Arizona's current solar tax credit provides for a 25% credit with a \$1000 maximum allowable credit. The new generation of solar water heating systems provide long term service, performance and reliability. The Arizona Department of Commerce, Energy Office, in consultation with the solar industry, has adopted standards to insure that all domestic solar water heating systems installed in Arizona are certified by a third party meet the highest standards for quality and performance. To insure the highest standards for installation,



Benefits continued

Solar water heating systems in use in the United States today produce approximately 1000 megawatts of energy annually. That is the equivalent of eliminating the emissions of two medium sized coal power plants.

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Air Quality benefits continued

- By using solar to heat water in place of electricity, an average of 2900 pounds of pollution will be avoided. This is the equivalent of taking one-third of a car a year off the road. Over a ten year period a solar water heater displaces the equivalent pollution of 3.3 cars.
- By using solar energy to heat water rather than a gas water heater, a family will save 1200 pounds of pollution each year.

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the solar industry in conjunction with the Arizona Department of Commerce, Energy Office has developed a program for the certification of installers of solar water heating systems. The majority of solar thermal technicians in Arizona are certified. The infrastructure for a major solar DHW industry is in place.

- Improving the energy efficiency of Arizona's commercial and residential buildings through passive solar design will have a beneficial impact on air quality. Passive solar design in new construction will reduce the energy consumption of Arizona's housing stock with little or no additional costs. Simple solar orientation of a house will result in a 15% energy reduction. Properly orienting a subdivision will cost approximately \$1.00 per lot.
- Arizona's Energy Policy, which was developed at the request of the legislature in 1988, through the input of hundreds of Arizona citizens, makes solar energy the number one priority. In 1995, a survey of Arizona adult heads of households found that 95% would be willing to pay more for electricity if it came from a cleaner resources. Over half of that group would be willing to pay \$7 per month more for electricity.
- The U.S. Department of Energy's Million Roof Initiative plans on installing one million solar systems in the United States by the year 2010. This will be accomplished through low interest long term loans and planned buy downs of photovoltaics. Arizona is a natural location to take advantage of the program to install solar water heating systems.
- Electric utility restructuring offers opportunities to improve air quality with solar energy. The Solar Portfolio Standard calls for electric service providers to obtain one half of one percent of their electricity from solar in 1999 and one percent by the year 2003. Based on the maximum cost of 30 cents per kWh for a solar resource this would increase the average residential customer's bill by 18 cents in 1999 and \$1.80 per month in 2003. Currently the Sacramento Municipal Power District (SMUD) is installing solar electric resources for less than 20 cents per kWh. A systems benefit charge will also be created to benefit renewable technologies. The use of system benefits charge funds to facilitate the installation of solar would provide additional incentives for consumers and businesses to use solar.

ECONOMIC BENEFITS

- By the end of the Federal solar tax credit Arizona was the number one state in the per capita use of solar energy.
- By some estimates there are approximately one-hundred thousand solar water heating systems in service in Arizona. These systems save Arizona families on the average \$28.00 each month. This amounts to 2.8 million dollars that is saved by Arizona families every month. This money is spent on the every day needs of Arizona families.



Air Quality benefits continued

When solar swimming pool heating systems are used in place of natural gas, significant emissions reductions (10,000 lb.) are realized during the winter months, when air quality is at its worst.

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Economic Development Benefits

It is estimated there are approximately 100,000 solar water heating systems in Arizona, once the number one state in the per capita use of solar energy. Saving Arizona families on the average \$28.00 each month. this amounts to \$2.8 million saved by Arizona families monthly, spent on the every day needs of Arizona families, locally and benefiting our state's economy.

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- Money saved with solar is kept in our community. Input/output analysis demonstrates that each \$1.00 spent to acquire energy resources from outside a community generates only \$0.33 of economic activity within the community. However each \$1.00 spent within the community produces, through the economic multiplier effect, about \$1.67 of local economic activity.




Economic Development Benefits Continued

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- However, each \$1.00 spent within the community produces, through the economic multiplier effect, about \$1.67 of local economic activity.

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- The investment in solar and energy-efficient technology increases local economic activity three ways. First local businesses that sell solar and energy conserving goods and services benefit directly. Second, a regenerative cycle is created when funds realized through energy savings in businesses are reinvested in the businesses, Third, lower utility bills for commercial and residential energy consumers result in increased profits and disposable income. With all three effects much of the profit or money saved will be spent locally.




Economic Development Benefits Continued

Local businesses that sell and use solar and energy conserving goods and services benefit directly. A regenerative cycle is created when funds realized through energy savings are reinvested in the business. Also, lower utility bills for commercial and residential energy consumers result in increased profits and disposable income, with money spent locally.

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- The Arizona solar industry is a potential job creator. The solar product industry and portions of the solar construction industry are labor intensive in nature since there is use of local materials and equipment manufactured in the state. Installation and maintenance of systems has the potential for the creation of hundreds of jobs.



Economic Development Benefits Continued

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Solar Industry Recommendations - Arizona

- Develop programs and additional incentives to promote the use of cost effective solar and renewable energy technology.
- Pass legislation to create a commercial tax credit.
- End deed restrictions and CC&R's against the installation of residential solar heating systems.

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Solar Industry Recommendations - Arizona

- Make use of the electric utility restructuring process to promote the installation of all solar technologies.
- Take advantage of and promote the Department of Energy's Million Rooftop initiative to install solar in Arizona.

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