



2008-2009 Utility Incentives for Arizona Utility Customers

This document applies to customers located in the service territories of the following utilities:

- Arizona Public Service
- Salt River Project
- Tucson Electric Power
- UniSource Energy Services (formerly Citizens)
- AEPCO Member Cooperatives

Note: These Programs have limited funding and are available on a "first come, first served" basis and a reservation process exists for each one. Contact our office for assistance in reserving your funds.

APS - Renewable Incentive Program

Last DSIRE Review: 05/22/2008

Incentive Type: Utility Rebate Program

Eligible Renewable/Other Technologies: Solar Water Heat, Solar Space Heat, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal Electric, Geothermal Heat Pumps, Solar HVAC, Solar Pool Heating, Daylighting, Anaerobic Digestion, Small Hydroelectric, Other Distributed Generation Technologies

Applicable Sectors: Commercial, Residential

Incentive Amount: PV incentives may be de-rated based on expected performance

Grid-tied residential PV: \$3/watt DC

Off-grid Residential (less than 5 kW): \$2/watt DC;

Grid-tied non-residential PV: \$2.50/watt DC or production-based incentive (PBI)

Off-grid non-residential PV: \$1.50/W DC or PBI

Residential/small solar water heating: \$0.75/kWh of estimated first-year savings

Commercial/large solar water heating and solar HVAC systems: production based incentive

Solar Daylighting: \$0.20/kWh estimated first year savings

Other renewables: performance-based incentive

Maximum Incentive: PV: 50% of project costs. Up-front incentive payment is limited to \$75,000

SWH: 50% of system costs

Eligible System Size: No size restrictions for grid-connected systems specified; Less than 5 kW for off-grid systems.

Under the small SWH system incentive, systems must have OG-300 ratings of 10,000 kWh per year energy savings. "Large" SWH systems have minimum 5,000 kWh/yr. estimated energy savings

Equipment Requirements: SWH systems must be certified to SRCC OG-300 standards

Installation Requirements: PV systems must be installed by a licensed contractor holding one or more of the following certifications with the Arizona Registrar of Contractors: C-11, K-11, L-11.

SWH systems must be installed by a licensed contractor holding one or more of the following certifications with the Arizona Registrar of Contractors, C-37, C-37R, K-77, K-78, L-77, L-78.

Program Budget: 2008 Budget: \$6,650,000. Includes \$5M for residential installations and \$1.65M to non-residential installations. Additional residential funds may be available later in the year.

Ownership of Renewable Energy APS

Credits:

Website: <http://www.aps.com/>

Summary: Through the Renewable Incentive Program, Arizona Public Service (APS) offers customers who install various renewable energy sources the opportunity to sell the credits associated with the energy generated to APS. Previously, APS only provided incentives for solar technologies, but they expanded the list of qualified renewables in 2008 to include all technologies eligible for Arizona's Renewable Energy Standard (RES). The solar technologies eligible for a rebate include photovoltaic (PV), solar hot water, solar HVAC and solar daylighting systems. Up-front incentives for PV may be de-rated based on expected performance. Renewable energy systems are eligible for the following credit amounts:

Grid-tied residential PV: \$3/watt DC, adjusted based on expected performance; No system size limit.

Grid-tied non-residential PV: \$2.50/watt DC; or commercial customers may opt for a production-based incentive (PBI) on a 10-, 15- or 20-year contract.

Off-grid residential PV: \$2/watt DC; System must be less than 5 kW.

Off-grid non-residential PV: \$1.50/W or PBI

Solar hot water systems (residential and non-residential): Rebate amounts for small systems are based upon an estimate of first-year energy savings at \$0.75/kWh based on OG-300 ratings, up to 50% of the system's cost. The incentive structure for large SWH systems is based on actual performance, and can range between \$0.051/kWh-equivalent and \$0.07/kWh-equivalent depending on the length of the contract. Incentives are limited to 50% of total system cost.

Solar HVAC systems (non-residential only): The incentive for the thermal energy delivered for cooling by a solar HVAC system is based on actual performance and ranges between \$0.12/kWh-equivalent and \$0.16/kWh equivalent. In addition, systems that incorporate solar thermal heating and/or solar thermal water heating are eligible for the large solar water heating PBI.

Solar Daylighting (non-residential only): \$0.20/kWh anticipated first year savings.

Other solar technologies (non-residential only): PBI amount varies by contract length and technology.

Grid-tied wind systems (residential and non-residential): \$2.50/W up to 50% of the system cost or \$75,000; non-residential systems may opt for the PBI

Off-grid wind systems (residential and non-residential): \$2.00/W up to 50% of the system cost or \$75,000; non-residential systems may opt for the PBI

Other renewables installed by non-residential customers can apply to receive a PBI. APS will evaluate the project to determine if it is able to qualify renewable energy incentives.

APS recently established a net metering pilot program for systems of 100 kW-DC or less. Click here for more information.

Funds are assigned through a reservation process. All necessary forms can be downloaded from the program website.

APS is purchasing solar credits and renewable energy certificates to help the company meet the state's Renewable Energy Standard (RES). Participating customers receive a one-time rebate or receive an incentive based on system output or kWh savings. APS will have access to the credits for the life of the RES program.



Contact: Credit Purchase Program Customer Service Line

Arizona Public Service Company
Solar Energy Services
Mail Station 3161
P.O. Box 53933
Phoenix, AZ 85072-3999
Phone: (602) 328-1924
Fax: (602) 250-2724
[E-Mail: renewables@aps.com](mailto:renewables@aps.com)

SRP - EarthWise Solar Energy

Last DSIRE Review: 06/03/2009

Incentive Type: Utility Rebate Program

Eligible Renewable/Other Technologies: Solar Water Heat, Photovoltaics, Solar Pool Heating

Applicable Sectors: Commercial, Residential, (SRP territory)

Incentive Amount: Incentive Levels through April 30, 2010: Residential PV systems: \$2.70/watt DC;
Commercial PV systems: \$2.25/watt DC, incentives for systems over 20 kW-DC may be adjusted based on performance

Maximum Incentive: Maximum Incentive Levels through April 30, 2010: Residential PV: \$13,500; Commercial PV: \$450,000; larger incentives may be awarded on a case-by-case basis if there is enough funding.

Eligible System Size: No system size restrictions

Equipment Requirements: PV: panels and inverter must be UL-listed; Solar water heating systems must be OG-300 certified

Installation Requirements: Must be installed by a licensed contractor. The following license classifications are acceptable and qualify for the incentive program: C-05, C-11, L-11, K-05 or K-11 for PV systems and C-37, C-37R, L-78 or K-77 for solar water heating systems.

Ownership of Renewable Energy SRP

Credits:

Website: <http://www.srpnet.com/environment/earthwise/solar/default.aspx>

Effective Date: 9/1/2004

Summary:

SRP's EarthWise Solar Energy Program provides incentives to residential and commercial customers who purchase photovoltaic (PV) or solar water-heating systems. For residential and commercial PV systems up to 20 kilowatts (kW) in capacity, the incentive is \$3/watt DC, with a maximum payment of \$60,000 per system. For commercial PV systems over 20 kW in capacity, the incentive is \$2.50/watt DC, adjusted based on the expected energy generation and verified during a 30-day performance test. There is no stated maximum incentive for commercial systems, but installations which expect to receive incentives totaling \$500,000 or more require pre-approval from SRP. A more detailed application process is required for systems over 20 kW in capacity. (Click here for more information on incentives for commercial applications.) PV systems that use battery back-up are eligible for the program.

For residential and commercial solar water-heating systems, SRP offers an incentive of \$0.50/kilowatt-hour (kWh) of first-year energy production. Incentive payments for residential systems will be made based on the system's SRCC OG-300 rating. For commercial solar water heating systems the incentive payment is based on actual energy production, and are awarded one year after the system is installed. However, incentives can be reserved before the system is installed. After the incentive is reserved, SRP will require an Energy Savings and Designed Output (ES&D) report. The contractor will be cleared by SRP to make the installation if the ES&D report is favorable. After the system has been in operation for a full year, SRP will read the system's meter and issue a rebate check based on the system's actual performance at \$0.50/kWh.

Residential solar pool heating systems are not eligible for incentives. Commercial solar pool heating systems are eligible for an incentive of \$0.50/kWh of first-year energy production, not to exceed 60% of the system's cost.

In exchange for incentive payments, customers must allow SRP to retain the renewable-energy credits (RECs) associated with the electricity produced. Systems must be installed by a licensed contractor. SRP will provide and install a required separate meter, but the utility does not install systems or promote individual contractors.

Contact:

Earthwise Solar Energy Program
SRP
1521 N. Project Drive
Tempe, AZ 85281-2025
Phone: (602) 236-4448
Phone 2: (602) 236-8888
[Web site: http://www.srpnet.com/solar](http://www.srpnet.com/solar)

TEP - Renewable Energy Credit Purchase Program

Last DSIRE Review: 05/16/2008

Incentive Type: Utility Rebate Program

Eligible Renewable/Other Technologies: Solar Water Heat, Solar Space Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal Electric, Solar Pool Heating, Daylighting, Anaerobic Digestion, Small Hydroelectric

Applicable Sectors: Commercial, Residential

Incentive Amount: Up-front incentives for PV may be de-rated based on expected performance

Residential PV: \$3.00/W-DC or performance-based incentive for on-grid systems, \$2.00/W-DC for off-grid systems;

Non-Residential PV: \$2.50/W-DC or performance based incentive for on-grid systems, \$0.121/kWh of estimated annual production for off-grid systems;

Wind less than 100kW: \$2.50/W-AC for on-grid systems, \$2.00/W-AC for off-grid systems;

Wind greater than or equal to 100kW, but less than 1MW: performance based incentive which varies according to contract length and whether the system is on- or off-grid;

Daylighting (non-residential only): \$0.20 per kWh savings for 5 years; Residential Solar Water Heater: \$0.25/kWh-equivalent, plus \$750 up to a maximum amount of \$1,750, or performance-based incentive;

Non-Residential Solar Water Heater: performance base incentive;

All other eligible technologies can receive performance based incentives which vary depending on the technology and the length of the contract. Contract options for performance-based incentives are 10, 15 and 20 years.

Eligible System Size: PV: Minimum size is 1.2 kW.

Equipment Requirements: Photovoltaic modules must be covered by a manufacturer's warranty of at least 20 years to qualify for the up-front incentive.

SWH systems must be certified to SRCC OG-300 standards

Eligible small wind systems must be certified and nameplate rated by the CEC



Program Budget: Total program funding is capped at 800 kW DC of installed solar capacity per year for 2007 and 2008. Once the maximum solar capacity is reached in a given calendar year, TEP will apply subsequent applications to the reservation quota for the following year.

Ownership of Renewable Energy TEP

Credits:

Website: <http://www.tep.com/Green/>

Effective Date: 2001

Summary:

Tucson Electric Power (TEP) created the SunShare Program in 2001 to encourage residential and business customers to install new photovoltaic (PV) equipment. TEP transitioned away from their original incentive structure for PV and added incentives for a variety of other technologies in May 2008. The technologies now eligible for funding through the SunShare program all qualify under Arizona's renewable energy standard (RES). TEP offers these incentives in exchange for the renewable energy certificates they generate. Incentives are as follows:

Residential PV (on-grid): \$3.00/W up front for qualified systems. Systems with less than a 20 year warranty on the module or a 10 year warranty on the inverter, or with a building-integrated PV (BIPV) system over 5kW must receive the 10, 15 or 20 year performance-based incentive (PBI) which is based on the actual metered electricity output.

Residential PV (off-grid):\$2.00/W

Non-Residential PV (on-grid):\$2.50/W for systems 20kW or less. Systems greater than 20kW must take the PBI

Non-Residential PV (off-grid): \$0.121/kWh of estimated annual production

Residential Solar Water Heating and Solar Space Heating: \$0.25/kWh equivalent, plus \$750 up to a maximum incentive of \$1,750. Or residential customers can elect to receive a 10, 15, or 20 year PBI.

Non-Residential Solar Water Heating and Solar Space Heating: PBI

Daylighting (Non-residential only):\$0.20/kWh equivalent for 5 years.

Wind (on-grid): \$2.50/W-AC for systems less than or equal to 100kW. Systems greater than 100kW and up to 1 MW can receive a PBI ranging from \$0.13/kWh to \$0.145/kWh depending on the length of the contract.

Wind (off-grid): \$2.00/W for systems less than or equal to 100kW. Systems greater than 100kW and up to 1MW can receive a PBI ranging from \$0.104/kWh to \$0.116/kWh depending on the length of the contract.

On-grid small hydro, biomas-biogas systems, pool heating (non-residential only), space cooling, and geothermal (electric, cooling and heating systems) are all eligible to receive PBIs. See program website for full details including contract options, equipment requirements and PBI amounts.

TEP also offers a net metering option which credits the customer for excess energy sent back to the grid.

Contact:

Blanka Anderson

Tucson Electric Power

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Mailstop RC 116

Tucson, AZ 85702

Phone: (520) 918-8296

[E-Mail: Banderson@tep.com](mailto:Banderson@tep.com)

[Web site: http://www.tucsonelectric.com/](http://www.tucsonelectric.com/)

Trico Electric Cooperative - SunWatts Incentive Program

Last DSIRE Review: 11/11/2008

Incentive Type: Utility Rebate Program

Eligible Renewable/Other Technologies: Solar Water Heat, Photovoltaics, Wind

Applicable Sectors: Commercial, Residential

Incentive Amount: PV and Wind Systems: \$4/watt DC

Solar Water Heaters: \$0.50 per expected first year kWh savings

Maximum Incentive: 50% of project costs

Eligible System Size: No restrictions specified

Equipment Requirements: PV and Wind Systems: Equipment must meet IEEE 929 standards, UL 1741 standards, and the NEC code; Minimum 2-year warranty

Solar Water Heaters: Must be given an OG-300 rating by the National Solar Rating and Certification Corporation

Ownership of Renewable Energy Trico Electric Cooperative

Credits:

Project Review/Certification: Installation and actual system output must be certified by a Trico representative or licensed electrician.

Website: http://www.trico.coop/sunwatts_information.html

Summary:

Through the SunWatts Program, Trico Electric Cooperative offers home and business owners a rebate of \$4/W DC for installing photovoltaic systems and wind energy systems, and \$0.50 per expected first year kWh savings for solar water heaters. The incentive can not exceed 50% of the total system cost. Eligible PV and wind energy systems may be either grid-tied or off-grid. Note that customers receive no credit or payment for excess generation that flows back to the grid.

Contact:

Member Services Representative

Trico Electric Cooperative, Inc.

8600 W. Tangerine Road

Marana, AZ 85653

Phone: (866) 337-2052

Phone 2: (520) 744-2944

Fax: (520) 744-2329

[Web site: http://www.trico.coop](http://www.trico.coop)



UES - Renewable Energy Credit Purchase Program

Last DSIRE Review: 07/19/2008

Incentive Type: Utility Rebate Program

Eligible Renewable/Other Technologies: Solar Water Heat, Solar Space Heat, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal Electric, Geothermal Heat Pumps, Solar HVAC, Solar Pool Heating, Daylighting, Anaerobic Digestion, Small Hydroelectric, Other Distributed Generation Technologies

Applicable Sectors: Commercial, Residential

Incentive Amount: PV incentives may be de-rated based on expected performance

Grid-tied residential PV: \$3/watt DC

Off-grid Residential (less than 5 kW): \$2/watt DC;

Grid-tied non-residential PV: \$2.50/watt DC or production-based incentive (PBI)

Off-grid non-residential PV: \$1.50/W DC or PBI

Residential/small solar water heating: \$0.75/kWh of estimated first-year savings

Commercial/large solar water heating and solar HVAC systems: production based incentive

Solar Daylighting: \$0.20/kWh estimated first year savings

Other renewables: performance-based incentive

Maximum Incentive: Up-front incentives can pay for no more than 60% of the cost

Installation Requirements: Solar system must meet orientation, tilt, and shading guidelines.

Ownership of Renewable Energy UES

Credits:

Website: <http://uesaz.com/>

Effective Date: 2004

Summary:

Through the Renewable Incentive Program, UniSource Energy Services (UES) offers customers who install various renewable energy sources the opportunity to sell the credits associated with the energy generated to UES. Previously, UES only provided incentives for solar technologies, but they expanded the list of qualified renewables in 2008 to include all technologies eligible for Arizona's Renewable Energy Standard (RES). The solar technologies eligible for a rebate include photovoltaic (PV), solar hot water, solar HVAC and solar daylighting systems. Up-front incentives for PV may be de-rated based on expected performance. Renewable energy systems are eligible for the following credit amounts:

Grid-tied residential PV: \$3/watt DC, adjusted based on expected performance; No system size limit.

Grid-tied non-residential PV: \$2.50/watt DC; or commercial customers may opt for a production-based incentive (PBI) on a 10, 15 or 20 year contract.

Off-grid residential PV: \$2/watt DC; System must be less than 5 kW.

Off-grid non-residential PV: \$1.50/W or PBI

Solar hot water systems (residential and non-residential): Rebate amounts for small systems are based upon an estimate of first-year energy savings at \$0.75/kWh based on OG-300 ratings, up to 50% of the system's cost. The incentive structure for large SWH systems is based on actual performance, and can range between \$0.051/kWh-equivalent and \$0.07/kWh-equivalent depending on the length of the contract. Incentives are limited to 50% of total system cost.

Solar HVAC systems (non-residential only): The incentive for the thermal energy delivered for cooling by a solar HVAC system is based on actual performance and ranges between \$0.12/kWh-equivalent and \$0.16/kWh equivalent. In addition, systems that incorporate solar thermal heating and/or solar thermal water heating are eligible for the large solar water heating PBI.

Solar Daylighting (non-residential only): \$0.20/kWh anticipated first year savings.

Other solar technologies (non-residential only): PBI amount varies by contract length and technology.

Grid-tied wind systems (residential and non-residential): \$2.50/W up to 50% of the system cost; non-residential systems may opt for the PBI

Off-grid wind systems (residential and non-residential): \$2.00/W up to 50% of the system cost; non-residential systems may opt for the PBI

Other renewables installed by non-residential customers can apply to receive a PBI.

Funds are assigned through a reservation process. All necessary forms can be downloaded from the program website.

UES is purchasing solar credits and renewable energy certificates to help the company meet the state's Renewable Energy Standard (RES). Participating customers receive a one-time rebate or receive an incentive based on system output or kWh savings. UES will have access to the credits for the life of the RES program.

Contact:

Renewable Energy Credit Purchase Program - UES

UniSource Energy Services

PO Box 3099

Kingman, AZ 86402-3099

Phone: (866) 467-1229

[E-Mail: renewables@uesaz.com](mailto:renewables@uesaz.com)

[Web site: http://uesaz.com/](http://uesaz.com/)

Sulphur Springs Valley EC - SunWatts Rebate Program

Last DSIRE Review: 08/05/2008

Incentive Type: Utility Rebate Program

Eligible Renewable/Other Technologies: Photovoltaics, Wind, Biomass

Applicable Sectors: Commercial, Residential

Incentive Amount: \$4/watt DC

Maximum Incentive: 50% of project costs

Eligible System Size: No restrictions specified

Equipment Requirements: Equipment must meet IEEE 929 standards, UL 1741 standards, and the NEC code; Minimum 2-year warranty

Installation Requirements: System must be installed by a licensed contractor on the SSVEC-approved contractor list.

Ownership of Renewable Energy SSVEC

Credits:

Project Review/Certification: Installation must be certified by an SSVEC representative

Website: <http://www.ssvec.org/programs/energySunWatts.php>

Summary:

Through the SunWatts Program, Sulphur Springs Valley Electric Cooperative (SSVEC) offers home and business owners a rebate of \$4/W DC for installing photovoltaic, wind and biomass systems, with a maximum rebate of 50% total unit cost. Systems must be grid-connected to be eligible for the rebate. Note that customers receive no credit or payment for excess generation that flows back to the grid.



Contact: SSVEC's rebate program can be combined with their loan program. The loan and the rebate combined cannot pay for more 75% of the system's cost.
Albert Gomez
Sulphur Springs Valley Electric Cooperative
350 North Haskell
Willcox, AZ 85643-1718
Phone: (520) 515-3473
[E-Mail: albertg@ssvec.com](mailto:albertg@ssvec.com)
[Web site: http://www.ssvec.org](http://www.ssvec.org)

Government Incentives for Arizona Residential & Commercial Utility Customers

State of Arizona - Residential Solar and Wind Energy Systems Tax Credit

Last DSIRE Review: 05/13/2008

Incentive Type: Personal Tax Credit

Eligible Renewable/Other Technologies: Passive Solar Space Heat, Solar Water Heat, Solar Space Heat, Photovoltaics, Wind, Solar Ovens, Solar Cooling, Solar Pool Heating, Daylighting

Applicable Sectors: Residential

Amount: 25%

Maximum Incentive: \$1,000 maximum credit per residence, regardless of number of energy devices installed

Carryover Provisions: Excess credit may be carried over 5 years.

Eligible System Size: Not specified

Equipment/Installation Requirements: System must be new and in compliance with all applicable performance and safety standards; must carry a minimum 2-yr warranty on collectors, heat exchangers, and storage units; other equipment and installation must carry a minimum 1-yr warranty.

Website: <http://www.revenue.state.az.us/Forms/2006/310%20instructions.pdf>

Authority 1: [A.R.S. § 43-1083](#)

Effective Date: 1/1/1995

Summary: Arizona's Solar Energy Credit provides an individual taxpayer with a credit for installing a solar or wind energy device at the taxpayer's Arizona residence. The credit is allowed against the taxpayer's personal income tax in the amount of 25% of the cost of a solar or wind energy device, with a \$1,000 maximum allowable limit, regardless of the number of energy devices installed. The credit should be claimed in the year of installation and if the amount of the credit exceeds a taxpayer's liability in a certain year, the unused portion of the credit may be carried forward for up to five years.

Qualifying technologies include solar domestic water heating systems, solar swimming pool and spa heating systems, solar photovoltaic systems, solar photovoltaic phones and street lights, passive solar building systems (trombe walls, thermal mass, etc.), solar daylighting systems (excluding conventional skylights), wind generators, and wind powered pumps.

Contact: Debby Tewa
Arizona Department of Commerce
Energy Office
1700 West Washington Ave.
Suite 220
Phoenix, AZ 85007
Phone: (602) 771-1241
[E-Mail: deborah@azcommerce.com](mailto:deborah@azcommerce.com)
[Web site: http://www.azcommerce.com/Energy/](http://www.azcommerce.com/Energy/)

State of Arizona - Commercial/Industrial Solar & Wind Tax Credit (Corporate)

Last DSIRE Review: 05/20/2008

Incentive Type: Corporate Tax Credit

Eligible Renewable/Other Technologies: Passive Solar Space Heat, Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Wind, Solar Cooling, Solar Pool Heating, Daylighting

Applicable Sectors: Commercial, Industrial, Nonprofit, Schools, Local Government, State Government, Tribal Government, Fed. Government, Agricultural, Institutional

Amount: 10% of installed cost

Maximum Incentive: \$25,000 for any one building in the same year and \$50,000 in total credits in any year

Carryover Provisions: Unused credit may be carried forward for not more than five consecutive taxable years

Eligible System Size: No system size restrictions specified

Project Review/Certification: Businesses/Non-residential entities must apply to the Arizona Department of Commerce and receive certification to be eligible for the credit

Website: <http://www.azcommerce.com/BusAsst/Incentives/Solar+Energy+Tax+Incentives+Program.htm>

Authority 1: [A.R.S. §43-1085](#)

Effective Date: 1/1/2006

Expiration Date: 12/31/2012

Authority 2: [A.R.S. §43-1164](#)

Effective Date: 1/1/2006

Expiration Date: 12/31/2012

Authority 3: [A.R.S. §41-1510.01](#)

Summary: Arizona's tax credit for solar and wind installations in commercial and industrial applications was established in June 2006 ([HB 2429](#)). In May 2007, the credit was revised by [HB 2491](#) to extend the credit to all non-residential entities, including those that are tax-exempt. Third parties who install or manufacture the system are now eligible as well -- not only those that finance a system as allowed in the original legislation. These provisions are retroactive to January 1, 2006.

The tax credit, which may be applied against corporate or personal taxes, is equal to 10% of the installed cost of qualified "solar energy devices" and applies to taxable years beginning January 1, 2006 and extending through December 31, 2012.



A solar energy device is defined as "a system or series of mechanisms designed primarily to provide heating, to provide cooling, to produce electrical power, to produce mechanical power, to provide solar daylighting or to provide any combination of the foregoing by means of collecting and transferring solar generated energy into such uses either by active or passive means, including wind generator systems that produce electricity. Solar energy systems may also have the capability of storing solar energy for future use. Passive systems shall clearly be designed as a solar energy device, such as a trombe wall, and not merely as a part of a normal structure, such as a window."

The maximum credit per taxpayer is \$25,000 for any one building in the same year and \$50,000 in total credits in any year. If the allowable credit exceeds the taxpayer's income tax liability, the amount of the claim not used to offset taxes may be carried forward for not more than five consecutive taxable years as a credit against subsequent years' income tax liability.

To qualify for the tax credits, a business must submit an application to the Arizona Department of Commerce (DOC). The DOC will review applications, provide an initial certification to qualifying installations, and issue a credit certificate to the business once the installation is complete and approved. The Arizona Department of Revenue will also receive a copy of the credit certificate. The DOC may certify tax credits up to a total of \$1 million each calendar year. The DOC and the Department of Revenue will collaborate in adopting rules to implement the tax credit program.

Contact: Program Manager
 Arizona Department of Commerce
 Energy Office
 1700 West Washington Ave.
 Suite 220
 Phoenix, AZ 85007
 Phone: (602) 771-1100
[E-Mail: solarenergy@azcommerce.com](mailto:solarenergy@azcommerce.com)
[Web site: http://www.azcommerce.com/Energy/default.asp](http://www.azcommerce.com/Energy/default.asp)

State of Arizona - Commercial/Industrial Solar & Wind Tax Credit (Personal)

Last DSIRE Review: 05/20/2008

Incentive Type: Personal Tax Credit

Eligible Renewable/Other Technologies: Passive Solar Space Heat, Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Wind, Solar Cooling, Solar Pool Heating, Daylighting

Applicable Sectors: Commercial, Industrial, Nonprofit, Schools, Local Government, State Government, Tribal Government, Fed. Government, Agricultural, Institutional

Amount: 10% of installed cost

Maximum Incentive: \$25,000 for any one building in the same year and \$50,000 in total credits in any year

Carryover Provisions: Unused credits may be carried forward for not more than five consecutive taxable years

Eligible System Size: No size restrictions specified

Project Review/Certification: Businesses/Non-residential entities must apply to the Arizona Department of Commerce and receive certification to be eligible for the credit.

Website: <http://www.azcommerce.com/BusAsst/Incentives/Solar+Energy+Tax+Incentives+Program.htm>

Authority 1: [A.R.S. §43-1085](#)

Effective Date: 1/1/2006

Expiration Date: 12/31/2012

Authority 2: [A.R.S. §43-1164](#)

Effective Date: 1/1/2006

Expiration Date: 12/31/2012

Authority 3: [A.R.S. §41-1510.01](#)

Summary: Arizona's tax credit for solar and wind installations in commercial and industrial applications was established in June 2006 ([HB 2429](#)). In May 2007, the credit was revised by [HB 2491](#) to extend the credit to all non-residential entities, including those that are tax-exempt. Third parties who install or manufacture systems for non-residential applications are now eligible to claim the credit -- not only those that finance a system as allowed in the original legislation. These provisions are retroactive to January 1, 2006.

The tax credit, which may be applied against corporate or personal taxes, is equal to 10% of the installed cost of qualified "solar energy devices" and applies to taxable years beginning January 1, 2006 and extending through December 31, 2012.

A solar energy device is defined as "a system or series of mechanisms designed primarily to provide heating, to provide cooling, to produce electrical power, to produce mechanical power, to provide solar daylighting or to provide any combination of the foregoing by means of collecting and transferring solar generated energy into such uses either by active or passive means, including wind generator systems that produce electricity. Solar energy systems may also have the capability of storing solar energy for future use. Passive systems shall clearly be designed as a solar energy device, such as a trombe wall, and not merely as a part of a normal structure, such as a window."

The maximum credit per taxpayer is \$25,000 for any one building in the same year and \$50,000 in total credits in any year. If the allowable credit exceeds the taxpayer's income tax liability, the amount of the claim not used to offset taxes may be carried forward for not more than five consecutive taxable years as a credit against subsequent years' income tax liability.

To qualify for the tax credits, a business must submit an application to the Arizona Department of Commerce (DOC). The DOC will review applications, provide an initial certification to qualifying installations, and issue a credit certificate to the business once the installation is complete and approved. The Arizona Department of Revenue will also receive a copy of the credit certificate. The DOC may certify tax credits up to a total of \$1 million each calendar year. The DOC and the Department of Revenue will collaborate in adopting rules to implement the tax credit program.



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US Federal Residential Renewable Energy Tax Credit

Last DSIRE Review: 10/07/2008

Incentive Type: Personal Tax Credit

Eligible Renewable/Other Technologies: Solar Water Heat, Photovoltaics, Wind, Fuel Cells, Geothermal Heat Pumps, Other Solar Electric Technologies

Applicable Sectors: Residential

Amount: 30%

Maximum Incentive: Solar electric: \$2,000 for systems placed in service on or before 12/31/08; no maximum limit beginning in 2009.

Solar water heating: \$2,000.

Fuel cells: \$500 per 0.5 kW.

Small wind: \$500 per 0.5 kW, up to \$4,000.

Geothermal heat pumps: \$2,000.

Carryover Provisions: Excess credit may be carried forward to succeeding tax year.

Eligible System Size: 0.5 kW minimum for fuel cells.

Equipment/Installation Requirements: Solar water heating property must be certified by SRCC or by comparable entity endorsed by the state in which the system is installed. At least half the energy used to heat the dwelling's water must be from solar.

Geothermal heat pumps must meet the requirements of the Energy Star program.

Fuel cells must have an electricity-only generation efficiency greater than 30%.

Authority 1: [26 USC § 25D](#)

Date Enacted: 8/8/2005 (amended 2006, 2008)

Effective Date: 1/1/2006

Expiration Date: 12/31/2016

Authority 2: [H.R. 1424: Div. B, Sec. 106 \(The Energy Improvement and Extension Act of 2008\)](#)

Date Enacted: 10/3/2008

Effective Date: 1/1/2008; elimination of the solar-electric credit cap effective 1/1/2009

Expiration Date: 12/31/2016

Authority 3: [IRS Form 5695 & Instructions: Residential Energy Credits](#)

Summary:

Established by the Energy Policy Act of 2005, the federal tax credit for residential energy property initially applied to solar electric systems, solar water heating systems and fuel cells. The Energy Improvement and Extension Act of 2008 (H.R. 1424, Division B) extended the tax credit to small wind energy systems and geothermal heat pumps, effective January 1, 2008. Other key revisions included an eight-year extension of the credit to December 31, 2016, the ability to take the credit against the alternative minimum tax, and the removal of the \$2,000 credit limit for solar electric systems beginning in 2009.

Click here for a four-page Q&A on the revised federal solar tax incentives, prepared by Solar Energy Industries Association.

A taxpayer may claim a credit of 30% of qualified expenditures for a system that serves a dwelling unit located in the U.S. used as a residence by the taxpayer. Expenditures with respect to the equipment are treated as made when the installation is completed. If the installation is on a new home, the "placed in service" date is the date of occupancy by the homeowner. Expenditures include labor costs for onsite preparation, assembly, or original system installation and for piping or wiring to interconnect a system to the home. If the federal tax credit exceeds tax liability, the excess amount may be carried forward to the succeeding taxable year.

The credit is calculated based on the individual's expenditures excluding subsidized energy financing, which is defined as "financing provided under a Federal, State, or local program a principal purpose of which is to provide subsidized financing for projects designed to conserve or produce energy." Consumers who receive other incentives are advised to consult with a tax professional regarding how to calculate this federal tax credit.

The maximum allowable credit, equipment requirements, and other details vary by technology as outlined below.

Solar electric property

Maximum credit of \$2,000 for systems placed in service from January 1, 2006, through December 31, 2008.

No maximum credit limit for systems placed in service from January 1, 2009, through December 31, 2016.

In case of joint occupancy, the maximum qualifying cost that can be taken into account by all occupants for figuring the credit is \$6,667. This does not apply to married individuals filing a joint return. The credit that may be claimed by each individual is proportional to the costs he or she paid.

The home served by the system does not have to be the taxpayer's *principal* residence.

History

The [Energy Policy Act of 2005](#) (Section 1335) established a 30% tax credit up to \$2,000 for the purchase and installation of residential solar electric and solar water heating property and a 30% tax credit up to \$500 per 0.5 kilowatt for fuels cells. Initially scheduled to expire at the end of 2007, the tax credits were extended through December 31, 2008 by Section 206 of the [Tax Relief and Health Care Act of 2006](#).

In October 2008, through the Energy Improvement and Extension Act of 2008 (Division B, Section 106), the tax credits were extended once again — until December 31, 2016 — and a new tax credit for small wind energy systems and geothermal heat pump systems was created.

Contact:

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[Web site: http://www.irs.gov](http://www.irs.gov)

US Federal Business Energy Tax Credit



Last DSIRE Review: 10/16/2008

Incentive Type: Corporate Tax Credit

Eligible Renewable/Other Technologies: Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Wind, Biomass, Geothermal Electric, Fuel Cells, Geothermal Heat Pumps, CHP/Cogeneration, Solar Hybrid Lighting, Direct Use Geothermal, Microturbines

Applicable Sectors: Commercial, Industrial, Utility

Amount: 30% for solar, fuel cells and small wind;
10% for geothermal, microturbines and CHP

Maximum Incentive: \$1,500 per 0.5 kW for fuel cells; \$200 per kW for microturbines; \$4,000 maximum credit for small wind. No maximum specified for other technologies.

Eligible System Size: Small wind turbines: 100 kW or less
Fuel cells: 0.5 kW or greater
Microturbines: 2 MW or less
CHP: 50 MW or less

Equipment/Installation Requirements: Fuel cells, microturbines and CHP systems must meet specific energy-efficiency criteria

Authority 1: [26 USC § 48](#)

Authority 2: [H.R. 1424: Div. B \(The Energy Improvement and Extension Act of 2008\)](#)

Date Enacted: 10/3/2008

Effective Date: 10/3/2008

Summary:

The federal business energy tax credits available under 26 USC § 48 were expanded significantly by the Energy Improvement and Extension Act of 2008 (H.R. 1424), enacted in October 2008. The new law extended the duration -- by eight years -- of the existing credits for solar energy, fuel cells and microturbines; increased the credit amount for fuel cells; established new credits for small wind-energy systems, geothermal heat pumps, and combined heat and power (CHP) systems; extended eligibility for the credits to utilities; and allowed taxpayers to take the credit against the alternative minimum tax (AMT), subject to certain limitations.

Credits are available for eligible systems placed into service on or before December 31, 2016.*

Solar. The credit is equal to 30% of expenditures, with no maximum credit limit stated. Eligible solar energy property includes equipment that uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat. (Passive solar systems and solar pool-heating systems are *not* eligible.) Hybrid solar lighting systems are those that use solar energy to illuminate the inside of a structure using fiber-optic distributed sunlight.

Click here for a four-page Q&A on the revised federal solar tax incentives, prepared by the Solar Energy Industries Association.

Fuel Cells. The credit is equal to 30% of expenditures, with no maximum credit limit stated. The credit for fuel cells is capped at \$1,500 per 0.5 kilowatt (kW) of capacity. Eligible property includes fuel cells with a minimum capacity of 0.5 kW that have an electricity-only generation efficiency of 30% or higher. (Note that the credit for property placed into service on or before October 3, 2008, is capped at \$500 per 0.5 kW.)

Small Wind Turbines. The credit is equal to 30% of expenditures, with a maximum credit of \$4,000. Eligible small wind property includes wind turbines up to 100 kW in capacity. This credit applies to eligible property placed into service after October 3, 2008.

Geothermal Systems. The credit is equal to 10% of expenditures, with no maximum credit limit stated. Eligible geothermal energy property includes geothermal heat pumps and equipment used to produce, distribute or use energy derived from a geothermal deposit. For electricity produced by geothermal power, equipment qualifies only up to, but not including, the electric transmission stage. For geothermal heat pumps, this credit applies to eligible property placed into service after October 3, 2008.

Microturbines. The credit is equal to 10% of expenditures, with no maximum credit limit stated (explicitly). The credit for microturbines is capped at \$200 per kW of capacity. Eligible property includes microturbines up to two megawatts (MW) in capacity that have an electricity-only generation efficiency of 26% or higher.

Combined Heat and Power (CHP). The credit is equal to 10% of expenditures, with no maximum limit stated. Eligible CHP property generally includes systems up to 50 MW in capacity that exceed 60% energy efficiency, subject to certain limitations and reductions for large systems. The efficiency requirement does not apply to CHP systems that use biomass for at least 90% of the system's energy source, but the credit may be reduced for less-efficient systems. This credit applies to eligible property placed into service after October 3, 2008.

meet any performance and quality standards in effect at the time the equipment is acquired. The energy property must be operational in the year in which the credit is first taken.

If the project is financed in whole or in part by subsidized energy financing or by tax-exempt private activity bonds, the basis on which the credit is calculated must be reduced. (The formula is described in the tax credit instructions.) Subsidized energy financing means "financing provided under a federal, state, or local program, a principal purpose of which is to provide subsidized financing for projects designed to conserve or produce energy." Therefore, a business must reduce the basis for calculating the credit by the amount of any such incentives received. Businesses who receive other incentives are advised to consult with a tax professional regarding how to calculate this federal tax credit.

History

The federal Energy Policy Act of 2005 (EPAAct 2005) expanded the existing federal business energy tax credit for solar and geothermal energy property to include fuel cells, microturbines and hybrid solar lighting systems installed on or after January 1, 2006, and raised the credit for solar to 30%. Prior to the provisions of EPAAct 2005, a 10% credit was available to businesses that invested in or purchased solar or geothermal energy property.

* Note that the credit for geothermal property, with the exception of geothermal heat pumps, has no stated expiration date. The credit for solar energy property reverts to 10% after December 31, 2016.

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Modified Accelerated Cost-Recovery System (MACRS) + Bonus Depreciation

Last DSIRE Review: 10/29/2008

Incentive Type: Corporate Depreciation

Eligible Renewable/Other Technologies: Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Landfill Gas, Wind, Biomass, Renewable Transportation Fuels, Geothermal Electric, Fuel Cells, CHP/Cogeneration, Solar Hybrid Lighting, Direct Use Geothermal, Anaerobic Digestion, Microturbines

Applicable Sectors: Commercial, Industrial

Authority 1: 26 USC §168

Effective Date: 1986

Summary:

Note: The 50% bonus depreciation expires December 31, 2008, but the five-year accelerated depreciation remains effective beyond 2008.



Under the federal Modified Accelerated Cost-Recovery System (MACRS), businesses may recover investments in certain property through depreciation deductions. The MACRS establishes a set of class lives for various types of property, ranging from three to 50 years, over which the property may be depreciated. For solar, wind and geothermal property placed in service after 1986, the current MACRS property class is five years. For certain biomass property, the MACRS property class life is seven years. Eligible biomass property generally includes assets used in the conversion of biomass to heat or to a solid, liquid or gaseous fuel, and to equipment and structures used to receive, handle, collect and process biomass in a waterwall, combustion system, or refuse-derived fuel system to create hot water, gas, steam and electricity.

The federal Energy Policy Act of 2005 (EPAct 2005) classified fuel cells, microturbines and solar hybrid lighting technologies as five-year property as well. The federal Economic Stimulus Act of 2008, enacted in February 2008, included a 50% bonus depreciation provision for eligible renewable-energy systems acquired and placed in service in 2008. To qualify for bonus depreciation, a project must satisfy these criteria:

- the property must have a recovery period of 20 years or less under normal federal tax depreciation rules;
- the original use of the property must commence with the taxpayer claiming the deduction;
- the property generally must be acquired during 2008; and
- the property must be placed in service during 2008 (or, in certain limited cases, in 2009).

If property meets these requirements, the owner is entitled to deduct 50% of the adjusted basis of the property in 2008. The remaining 50% of the adjusted basis of the property is depreciated over the ordinary depreciation schedule. The bonus depreciation rules do not override the depreciation limit applicable to projects qualifying for the federal business energy tax credit. Before calculating depreciation for such a project, including any bonus depreciation, the adjusted basis of the project must be reduced by one-half of the amount of the energy credit for which the project qualifies.

For more information on the federal MACRS, see IRS Publication 946, IRS Form 4562: Depreciation and Amortization, and Instructions for Form 4562. The IRS web site provides a search mechanism for forms and publications. Enter the relevant form, publication name or number, and click "GO" to receive the requested form or publication.

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Tax Exemption - Solar Energy Property

Last DSIRE Review: 06/23/2008

Incentive Type: Property Tax Exemption

Eligible Renewable/Other Technologies: Passive Solar Space Heat, Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Solar Cooling, Solar Pool Heating, Daylighting

Applicable Sectors: Commercial, Industrial, Residential

Amount: 100% of increased value

Authority 1: [A.R.S. §42-11054](#)

Date Enacted: 6/21/2006

Expiration Date: None

Summary:

Arizona's property tax exemption was established in June 2006 (HB 2429) and applies to "solar energy devices and any other device or system designed for the production of solar energy for on-site consumption." For property tax assessment purposes, these devices are considered to add no value to the property.

A "solar energy device" for the purpose of this incentive is defined as "a system or series of mechanisms designed primarily to provide heating, to provide cooling, to produce electrical power, to produce mechanical power, to provide solar daylighting or to provide any combination of the foregoing by means of collecting and transferring solar generated energy into such uses either by active or passive means. Such systems may also have the capability of storing such energy for future utilization. Passive systems shall clearly be designed as a solar energy device such as a trombe wall and not merely a part of a normal structure such as a window."

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