



NORTH CAROLINA Solar Center

Advancing Clean Energy for a Sustainable Economy

Energy Policy Program

Residential Solar Incentives

If you've been thinking about installing a solar-energy system on your home, now is the time to do it! [North Carolina's tax credit](#) for renewable energy combined with the expanded [federal tax credit](#) for solar energy makes purchasing a solar water heater or a photovoltaic (PV) system more affordable than ever.


Residential Solar Tax Credits at a Glance

Tax Credit Details	North Carolina Tax Credit	Federal Residential Tax Credit
Eligible Solar Technologies:	<ul style="list-style-type: none"> Solar Water Heating Photovoltaics Solar Pool Heating Active Solar Space Heating Passive Solar Space Heating Solar Thermal Process Heat Solar Thermal Electric 	<ul style="list-style-type: none"> Solar Water Heating Photovoltaics
Credit Amount:	35% of installed cost	30% of installed cost
Maximum Credit:	<ul style="list-style-type: none"> Solar Water Heating & Solar Pool Heating: \$1,400 Active & Passive Space Heating; Combined Space & Water Heating: \$3,500 Photovoltaics: \$10,500 	<ul style="list-style-type: none"> Solar Water Heating and Photovoltaics placed into service after 12/31/2008: No limit
Window of Opportunity:	Equipment placed in service before January 1, 2016	Equipment placed in service before January 1, 2017
Forms & Instructions:	<ul style="list-style-type: none"> Guidelines for NC Tax Credit NC-478 NC-478 Instructions NC-478G NC-478G Instructions 	<ul style="list-style-type: none"> IRS Form 5695 & Instructions: Residential Energy Credits

North Carolina Renewable Energy Tax Credit

North Carolina offers a tax credit of 35% of the cost of renewable energy property constructed, purchased or leased by a taxpayer and placed into service in North Carolina during any taxable year

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through 2015. The credit is subject to various limits (shown above) depending on the type of renewable energy system. Although the focus of this fact sheet is residential solar projects, note that the NC tax credit also applies to wind, hydroelectric, biomass and biofuels equipment.

Expenditures eligible for the tax credit include the cost of the equipment and associated design, construction costs and installation costs less any discounts, rebates, advertising, installation assistance credits, name referral allowances or other similar reductions. Under North Carolina's tax code, the allowable credit may not exceed 50% of a taxpayer's liability for the year, reduced by the sum of all other credits. If the credit cannot be used entirely during the first year, the remaining amount may be carried over for the next five years.

Other Solar Incentives in North Carolina

In addition to the tax credit, North Carolina provides for a [property tax exemption](#) for solar water heating and active space heating and cooling systems. This means that the additional value of your solar system (relative to a conventional heating or cooling system) is excluded in the appraisal for property tax purposes. North Carolina also provides for a [property tax abatement](#) for photovoltaic (PV) systems. The abatement exempts 80% of the appraised value of a PV system from property tax.

[NC GreenPower](#), a statewide program designed to encourage the use of renewable energy in North Carolina, offers [production payments](#) (based on electricity production) for grid-tied electricity generated by solar, wind, small hydropower and biomass resources. As of January 2011, NC GreenPower provides payments of \$0.10 per kilowatt-hour for the renewable energy credits (RECs) generated by PV systems 5kW or smaller. Participating in this program could mean an additional revenue stream of several hundred dollars per year for a PV system. Contact NC GreenPower at (919) 716-6398 for more information.

Customers of Progress Energy can participate in the [SunSense incentive program](#) for PV. Program participants will receive an upfront payment of \$1,000 per kW, and monthly bill credits of \$4.50 per kW for the first 5 years. SunSense participants are not allowed to also receive payments from NC GreenPower; the two programs are mutually exclusive. Instead, SunSense customers must enter a net metering agreement with Progress Energy. With [net metering](#), during times when a system's electricity generation exceeds the home's use, the excess electricity flows back to the electricity grid and "spins the meter backwards" to offset electricity consumed at another time.

Federal Solar Tax Credit

The federal government offers a 30% tax credit for the purchase and installation of PV systems and solar water heating property for residential use. The tax credits for PV and solar water heating systems installed before January 1, 2009, is capped at \$2,000; but there is no cap for systems installed after December 31, 2008. Eligible expenditures include labor costs for the on-site preparation, assembly, or original installation of the system and for piping or wiring to interconnect the system to the dwelling. The equipment must serve a dwelling unit in the United States used as a residence by the taxpayer. Remember that as a tax credit – not a deduction – the amount of the credit is subtracted from the bottom line of your federal tax bill, dollar for dollar. Any credit that can not be claimed in the first year may be carried forward to the following year. To be eligible for the credit, equipment must be "placed in service" before January 1, 2017.

For more information:

To learn more about North Carolina's tax credit for solar energy and other renewables, call the N.C. Solar Center's toll free number at (800) 33-NC-SUN. To learn more about the federal Business Energy Tax Credit for solar and other renewables, contact the Internal Revenue Service at (800) 829-4933 or visit www.irs.gov. Visit the *Database of State Incentives for Renewables & Efficiency (DSIRE)* at www.dsireusa.org for more information on these credits and other incentives in NC and elsewhere.