



# NORTH CAROLINA Solar Center

Advancing Clean Energy for a Sustainable Economy

Energy Policy Program

## Commercial Solar Incentives

### Federal Business Energy Investment Tax Credit (ITC)

The federal government provides a tax credit worth 30% of the full installed costs associated with qualified renewable energy purchases. There is no maximum limit to the credit. If the credit is not used entirely in the year the equipment is placed into service, then the remaining credit may be carried back one year or forward 20 years. Eligible technologies are those that use solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process

heat. Hybrid solar lighting systems (those using solar energy to illuminate the inside of a structure using fiber-optic distributed sunlight) installed on or after January 1, 2006, are also eligible for the 30% credit. Passive solar systems, solar pool heating and solar equipment used to generate steam for industrial or commercial processes are not eligible for the federal credit.



Photo courtesy of Holocene-Energy

### US Department of Treasury Grants

The American Recovery and Reinvestment Act of 2009 created a [renewable energy grant program](#) administered by the U.S. Department of Treasury. This cash grant is generally available to projects that are otherwise eligible for the ITC but can not take advantage of it due to diminished tax liability resulting from the recent economic decline. The grants may only be taken in lieu of the ITC, not in addition to it. Grants are available for eligible property when construction commenced in **2009, 2010, or 2011**. Only tax-paying entities are eligible for this grant. Federal, state and local government bodies, non-profits, qualified energy tax credit bond lenders, and cooperative electric companies are not eligible to receive this grant. The grant is also only available to corporate income tax payers, not personal income tax payers. The grants are likely to reduce the basis for determining state tax credits, and taxpayers are strongly encouraged to consult a tax professional before applying for the grant. The Department of Treasury is required by law to process applications and issue checks within 60 days of receiving a completed application from a taxpayer, or within 60 days from the date the project is placed in service, whichever is later.

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## 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 the taxable year. The maximum credit for eligible non-residential renewable energy equipment is \$2.5 million for equipment placed in service in 2006 through December 31, 2010. Although the focus of this fact sheet is on commercial solar projects, note that the N.C. 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. For multi-family and non-residential projects, the credit is taken in five equal installments beginning with the year in which the property is placed in service. Single-family homeowners take the maximum credit amount allowable for the tax year in which the system is installed. If the credit is not used entirely during these five years, the remaining amount may be carried forward for the next five years, but it may not be carried back. The credit for non-residential projects may be taken against franchise tax or income tax.

### Federal Depreciation Deductions (\$68,000 basis)

Depreciation rate for 5-year recovery period:	Depreciation Deduction	Effective Tax Savings*
Year 1: 20%	\$13,600	\$4,624
Year 2: 32%	\$21,760	\$7,398
Year 3: 19.2%	\$13,056	\$4,439
Year 4: 11.52%	\$7,834	\$2,663
Year 5: 11.52%	\$7,834	\$2,663
Year 6: 5.76%	\$3,917	\$1,332
<b>Total</b>	<b>\$68,000</b>	<b>\$23,120</b>

\* Based on 34% federal tax rate

## Federal Accelerated Depreciation

Under the federal Modified Accelerated Cost-Recovery System (MACRS), businesses can recover investments in solar, wind and geothermal property through depreciation deductions. 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, the current MACRS property class life is five years. Systems placed in service in 2011 are also eligible for 100% bonus depreciation in the first year. In 2012, bonus depreciation will revert to 50%, and is schedule to be unavailable in any capacity as of January 1, 2013. (For more information, refer to IRS Publication 946, IRS Form 4562: Depreciation and Amortization, and Instructions for Form 4562, available on the IRS web site at [www.irs.gov](http://www.irs.gov).)

Note that the basis for calculating depreciation deductions is reduced by only half the value of the federal tax credit. For example, if a business makes an \$80,000 investment and claims a 30% federal tax credit of \$24,000, the basis is reduced by \$12,000, not the entire \$24,000 value of the tax credit. Therefore, the depreciation basis before bonus depreciation would be \$68,000. The chart below illustrates the resulting annual federal tax deductions for the investment – totaling \$23,121 – assuming a tax rate of 34%. This illustration does not account for bonus depreciation.

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## Other Solar Incentives in North Carolina

North Carolina provides for a [property tax exemption](#) for solar water heating and active space heating or 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 a [property tax abatement](#) for photovoltaic (PV) and solar thermal electric systems. The abatement exempts 80% of the appraised value of a PV system from property tax.

Businesses and other non-residential organizations in North Carolina are eligible for a low-interest [Energy Improvement Loan](#) from the N.C. State Energy Office. Loans of up to \$500,000 with an interest rate of 1% and a 10-year re-payment term are available for renewable energy projects.

[NC GreenPower](#), a statewide program designed to encourage the use of renewable energy in North Carolina, offers [production payments](#) (based on electricity production) in exchange for renewable energy credits (RECs) 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 generated by PV systems 5 kW or smaller. Larger systems may enter bids during occasional solicitation periods. Contact NC GreenPower at (919) 716-6398 for more information.



*Photo courtesy of Argand Energy*

Customers of Progress Energy can participate in the SunSense incentive program for [PV](#) and [solar water heating](#). Customers who install roof-mounted PV systems up to 500 kW in capacity may be eligible to receive production payments of \$0.18 per kWh for the electricity and renewable energy credits (RECs) their system produces for 20 years. This is a buy-all, sell-all arrangement, where the customer will continue to purchase all the electricity they consume while selling all the electricity they produce. Customers cannot take part in this program *and* net metering. The solar water heating program pays customers with solar water heaters \$20 for the equivalent of every 20 MWh their system produces for 10 years.

With [net metering](#), during times when a system's electricity generation exceeds the business's use, the excess electricity flows back to the electricity grid and "spins the meter backwards" to offset electricity consumed at another time. All renewable energy sources eligible under the [Renewable Energy and Efficiency Portfolio Standard](#) up to 1 MW in capacity can net meter. Customer-generators can choose to net meter under any rate tariff they prefer, but the utility will be granted all RECs if the customer chooses any rate other than a time-of-use rate.

Businesses are encouraged to consult with a tax advisor prior to making investment decisions.