# NC CLEAN ENERGY TECHNOLOGY CENTER

Formerly the NC Solar Center

Advancing Clean Energy for a Sustainable Economy

Energy Policy Program | www.nccleantech.ncsu.edu

## Commercial Solar Incentives

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

The federal government provides a tax credit worth 30 percent 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 percent 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.

### North Carolina Renewable Energy Tax Credit

North Carolina offers a tax credit of 35percent 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 systems used for a business purpose is $2.5 million, and the credit is scheduled to expire after December 31, 2015. 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, geothermal and certain 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 percent of a taxpayer's liability for the year, reduced by the sum of all other credits. For systems used for a business purpose, the credit is taken in five equal installments beginning with the year in which the property is placed in service. 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 may be taken against franchise tax, corporate tax, income tax, or gross premiums tax.

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## 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. (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.)

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 percent 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 would be $68,000. The chart to the right illustrates the resulting annual federal tax deductions for the investment – totaling $23,121 – assuming a tax rate of 34 percent.

**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 |
| Total | $68,000 | $23,120 |

* Based on 34% federal tax rate

## 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 percent 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) in exchange for renewable energy credits (RECs) for grid-tied electricity generated by solar, wind, small hydropower and biomass resources. NC GreenPower pays $0.06 per kilowatt-hour for RECs produced by new small solar PV (5 kW or less capacity) systems for a period of 5 years. Larger systems may enter bids during occasional solicitation periods. Contact NC GreenPower at (919) 716-6398 for more information.

All renewable energy sources eligible under the Renewable Energy and Efficiency Portfolio Standard up to 1 MW in capacity can net meter if they are customers of Duke Energy Carolinas or Duke Energy Progress. 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. The customer's electric bill will reflect the difference between the electricity consumed by the facility in that month and the electricity produced by the system. If the difference is net-positive for the system, the net excess generation will roll over to the customer's next monthly bill. 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.