



NEW HAMPSHIRE ELECTRIC COOPERATIVE'S (NHEC) 2009 SMALL WIND TURBINE REBATE PROGRAM FREQUENTLY ASKED QUESTIONS

What is a small wind turbine system?

A small wind turbine system is a wind turbine with a rated capacity of 100kW or smaller as defined by the American Wind Energy Association.

How much electricity does it generate?

This will vary greatly depending on your site, the amount of wind, the height of the wind turbine, the capacity of the equipment, and how the manufacturer rates the equipment. For example, a 2 kW system is rated by a manufacturer to generate 2,700 kWh per year at an average wind speed of 10 miles per hour and 4,800 kWh per year at an average wind speed of 12.3 miles per hour. Wind systems are very site specific and energy production is dependent on many factors including height of the turbine, available wind, capacity of turbine, etc. 10 miles per hour on average is a significant amount of wind.

How much does a system cost?

Costs vary. One of the most popular sized units, 2 kW, costs between \$15,000 and \$24,000 installed. A 10kW wind turbine could cost \$45,000 or more.

Are there any utility incentives/rebates, government incentives/rebates, or local property tax exemptions at this time?

Your New Hampshire Electric Cooperative's actions, comments, or written materials shall in no way be considered tax advice, rebate advice, or any other type of advice. Members should consult their personal tax advisor for a federal energy tax credit qualification determination. Also, members should consult the NH Public Utility Commission (Sustainable Energy Division) for qualification of renewable energy projects rebates.

NHEC is currently offering rebates of 25% of the installed cost up to \$3,500 per member (capital account). Go to www.smallsteps.coop and the drop down of Co-op Programs for more details and an application or call Member Solutions at 800-698-2007. Rebates are given on a first come first served basis since there are a limited number of available rebates.

The 2009 American Recovery and Reinvestment Act made significant changes to federal energy tax credits, the most significant of which is the extension of a 30% tax credit of the cost of installation of a small renewable energy project. Contact your installer regarding federal tax credit equipment qualification or visit <http://www.energystar.gov>. Also, please consult your personal tax advisor to determine if you would qualify.

The State of NH is offering a rebate of \$3/Watt up to \$6,000 for residential projects. Go to www.puc.nh.gov and click on Sustainable Energy for more details.

The United States Department of Agriculture (USDA) offers loans and grants for renewable energy projects for qualified rural small businesses. Many NHEC businesses may qualify as a rural small business. Please call the USDA Business Programs Specialist at 603-223-6041 for more information.

Members may qualify for a local property tax exemption. Please contact your city or town to determine if you qualify and contact your personal tax advisor to see if you would qualify. See <http://www.nh.gov/oep/programs/energy/RenewableEnergyRebates.htm> for more information.

What about financing and other grants?

For residential projects, you may be able to take a home equity loan or line of credit. Check with your lender. See our list of lenders that offer energy loans. Go to http://www.smallsteps.coop/coop_programs/financing_options.php

What is a good height to install the turbine and what should or shouldn't be in the area?

Usually, the higher the better. However, taller towers cost more money. Your installer can assist with the options. Typically, units are installed from 33 to 120 feet above the ground. Higher elevations are typically better than lower elevations. Also, the unit should be mounted above nearby buildings and trees.

Are there permits required?

Check with your local codes authority. Usually, there is a height restriction in NH towns and you may need a variance. The State of NH has a model ordinance. See HB310.

What is Net Metering?

NH's Net Metering Law allows your electric meter to spin backwards during periods of use when your wind turbine's electric production is greater than your usage. This credit will show on your electric bill. In effect, you will be storing kWh of electricity on NHEC's grid and will be credited the retail rate for production. You will never actually receive any payment from NHEC. To participate in net metering, you must fill out the NHEC INTERCONNECTION APPLICATION, a MUTUAL INDEMNITY FORM, and the system must qualify as specified. These are included in the application. See CHAPTER Puc 900 NET METERING FOR CUSTOMER-OWNED RENEWABLE ENERGY GENERATION RESOURCES for more information.

What is the Warranty and Maintenance?

Check with your installer. Small wind turbines will require periodic maintenance.

How do I find an installer and does NHEC certify installers?

Go to www.nhsea.org and click on the yellow sun (Consumer Resource Guide). You may use any installer normally engaged in the business of installing small wind turbine systems. An installer does not need to be on our list for your project to qualify. NHEC does not certify or qualify installers.

Can I install it myself and still receive a rebate?

No. Your Small Wind Turbine system needs to be installed by a professional installer for you to qualify for the rebate.

What happens if there is a power outage, can I still use power from the Solar PV system as a backup?

No. The inverter will not allow power to flow up NHEC's power line. This is a safety feature to protect our line workers. You can have batteries installed and a transfer switch, which would give you backup power. This equipment is fairly expensive.

Can someone from NHEC come to my house to determine if I would qualify?

NHEC may be conducting site visits and analysis for pre-qualification after your application has been received. You must submit a quote and analysis completed by an installer with your application.

Who do I call or where do I go for more information?

Call NHEC's Member Solutions at 1-800-698-2007 or go to www.smallsteps.coop (Co-op programs dropdown menu).

Could you provide any other links to small wind turbine information?

NH Sustainable Energy Association

www.nhsea.org

Northeast Sustainable Energy Association

www.nesea.org

American Wind Energy Association

<http://www.awea.org/smallwind/>

U.S. Department of Energy's website has an economics model

http://www.eere.energy.gov/windandhydro/windpoweringamerica/small_wind.asp

U.S. Department of Energy's guide to Small Wind Electric Systems

http://www.windpoweringamerica.gov/pdfs/small_wind/small_wind_guide.pdf

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