

Renewable energy can provide electricity, hot water and space heating for single family homes as well as apartments and condominiums, both urban and rural. These homes can be connected to the electric distribution network (“grid connected”), or function independently off the electric grid (“off grid”).

Renewable energy can be added most easily when homes are still being designed. For example, homes should be oriented and designed to fully utilize winter solar heating and summer passive cooling; southern walls with the appropriate amount of windows and correctly-sized roof overhangs can allow winter sun into the home, but block summer sun. South-facing roofs are ideal for incorporating solar electric

panels and solar water heating systems. Renewable energy systems can also be added to many existing homes.

BENEFITS

Renewable energy can provide all or part of your home’s electric and heating needs. It can also:

- Improve your home’s energy security and independence
- Increase your home’s market value as energy prices increase
- Reduce pollution and greenhouse gas production
- Enhance the state and local economies by creating jobs

RESIDENTIAL RENEWABLE ENERGY OPTIONS

TECHNOLOGY	APPLICATION	REQUIRES	ADDED BENEFITS
Daylighting	Natural lighting	Homes designed for daylighting	Lowers lighting costs, natural light health benefits
Geothermal heat pump	Space heating and cooling, water heating	Land available for vertical or horizontal shafts or wells, summer cooling requirement	Increased comfort with in-floor radiant, or exchanger-driven heating and cooling systems
Hydroelectric	Electricity	Stream or river with reliable flow, permit required for water diversion	Can supply nearly continuous sources of electric power
Solar electric (also known as photovoltaics)	Electricity	Unobstructed access to the sun	Can be incorporated into building structure as roofing
Solar space heating — passive	Space heating	Homes that have southern exposure	Brings winter sunshine into home
Solar space heating — thermal mass heating	Space heating	Home should use radiant in-floor heating	Improved comfort
Solar water heating	Hot water	Unobstructed access to the sun	Provides about 50% of annual hot water needs
Wind machine	Electricity	Good wind resource, space for tower	Small footprint, land surrounding tower available for other uses
Wood stove or masonry heating	Space and water heating	Rural sites are best	Improved comfort

TAX BENEFITS

Certain renewable energy technologies are eligible for tax benefits. Below are brief descriptions of federal and Wisconsin tax policies related to renewable energy. For more information on these tax policies, see the Database for State Incentives for Renewable Energy at www.dsireusa.org. Also, be sure to consult your tax advisor because tax benefits change frequently.

SOLAR AND WIND ENERGY EQUIPMENT EXEMPTION (WISCONSIN)

This statute exempts taxpayers from any value added by a qualified renewable energy source for property tax purposes. Qualified equipment includes any active solar equipment and any wind devices, as well as transmission equipment, but "does not include equipment or components that would be present as part of a conventional energy system or a system that operates without mechanical means."

FINANCIAL INCENTIVES

Focus on Energy incentives include Cash-Back Rewards and low interest loans.

NET ENERGY BILLING

All investor-owned electric utilities (and many municipal utilities and electric cooperatives) allow customers who have renewable electric systems with a capacity of 20 kW or less to direct surplus power back to the grid when their system is generating more power than they require and draw power from the grid when the customer needs more power. Contact your electric utility for more information.

UTILITY PROGRAMS

Some utilities offer rebates and low interest loans. Contact your local electric utility for more information.

EDUCATIONAL OPPORTUNITIES

WORKSHOPS

Scholarships are available for attending workshops on renewable energy. Workshops offer practical information that can help you select the renewable energy technologies appropriate for your home.

DEMONSTRATION SITES

Demonstration sites and tours are available that show renewable energy systems in action on homes throughout Wisconsin.

SITE ASSESSMENTS

If you would like more in-depth information about how renewable energy can be added to your home, we can arrange for a consultant to visit your residence.

FOR MORE INFORMATION

focusonenergy.com

Visit this site for fact sheets on various renewable energy topics; case studies showing how other homeowners have implemented renewable energy technologies; the Renewable Energy Yellow Pages, which consists of consultants, contractors and suppliers of renewable energy technologies, and workshop and demonstration site information.

www.dsireusa.org

The Database of State Incentives for Renewable Energy (DSIRE), is a comprehensive source of information on state, local, utility and selected federal incentives that promote renewable energy. Visit this site for more information on incentives available for renewable energy technologies.

the-mrea.org

The Midwest Renewable Energy Association is a nonprofit network for sharing ideas, resources and information with individuals, businesses and communities to promote a sustainable future through renewable energy and energy efficiency. Visit this site for a list of renewable energy workshops, information about the Wisconsin Tour of Solar Homes and the Midwest Renewable Energy and Sustainable Living Fair. Renewable Energy and Sustainable Living Fair.