

# Door County Renewable Energy Resource Guide

*preparing for  
the renewables century*

*small scale renewable energy and  
energy conservation in and near door county  
2008*



*this publication was funded by the  
Wisconsin Focus on Energy Renewable Energy Program*

## Table of Contents

Introduction	3
People and Places	5
Comments & Details	8
Renewable Energy Contractors	10
Renewable Energy Resources	12

### **RETF Contact Information**

To participate or tell us about your  
renewable energy system

**Don Pardonner**

PO Box 260, Sister Bay, WI 54234

920-839-1182

infoRETF@dcec-wi.org

# Introduction

## **WHAT is Renewable Energy?**

Simply, HEAT and ELECTRICITY provided from the sun, the wind, the heat stored in the earth, vegetation (wood, biomass) and in some locations the power of moving water. (Renewable energy for transportation is another subject, not addressed in this guide.)

## **NON-renewable Energy:**

Fossil fuels include coal and oil, natural gas and propane, and nuclear. Non-renewable sources of energy are a store of irreplaceable materials laid down eons ago; using them, is using them up.

In the 21st century "renewables" are coming into mainstream use - not only because "nonrenewables" will not last forever; but more importantly, to avoid the severe pollution and global warming caused by burning fossil fuels.

-3-

Door County has a head start coming into the "Renewable Century." We already have more than two-dozen homes and small businesses that use renewable sources for some or most of their energy needs. Many of them are willing to talk about their systems and experiences in order to help others make the transition to renewable energy, in small ways or large.

In these pages we introduce the people and places already using renewable energy and state-of-the-art energy conservation. Our final section lists resources for information and installation of systems.

*Note: "Small-Scale" is used here to mean on-site energy systems, such as an individual home or small business, as distinguished from "Utility Scale" wind towers or photovoltaic installations that tie directly into the utility grid for utility distribution.*

*The following pages may not include all systems, users and installers—but only those we know about or who have given us permission to list their site. Please contact RETF (see the bottom of page 2 for contact info.) If you are in this group of energy-wise citizens, then we want to know you.*

-4-

# People and Places

## ***Small Scale Systems and Designs***

### Solar Hot Water

<b>Baileys Harbor</b>	Don Pardonner, Judy Reninger John Wilson Jr.
<b>Brussels</b>	Bruce Van Oss
<b>Carlsville</b>	Guy Fortin, Judy Samida
<b>Egg Harbor</b>	Russ and Linda Cockburn Dave and Cindy Enigl Glenn and Diane Mandel/Redelin
<b>Jacksonport</b>	Kathy Navis
<b>Sturgeon Bay</b>	Town Hall Bakery—Don Jervis Guy Fortin, Judy Samida John and Ann Hippensteel
<b>Anonymous</b>	Fred Wittig three sites

### Solar Active & Passive Heating

<b>Algoma</b>	The Flying Pig, Susan Conner
<b>Baileys Harbor</b>	Don Pardonner, Judy Reninger John Wilson Jr.

<b>Egg Harbor</b>	Russ and Linda Cockburn Dave and Cindy Enigl Glenn Mandel, Diane Redelin
<b>Jacksonport</b>	Town Hall Bakery—Don Jervis
<b>Ellison Bay</b>	Terrie Cooper Steve Daubner
<b>Sturgeon Bay</b>	John and Ann Hippensteel
<b>Anonymous</b>	two sites

### Solar Electric (photovoltaic)

<b>Algoma</b>	Bob and Sue Ryan
<b>Baileys Harbor</b>	Donna Brown, Errol Keir
<b>Egg Harbor</b>	Russ and Linda Cockburn Dave and Cindy Enigl
<b>Jacksonport</b>	Kathy Navis
<b>Sturgeon Bay</b>	John and Ann Hippensteel Brett and Virge Temme
<b>Anonymous</b>	three sites
<b>Door County Lighthouses</b>	Chambers Island Eagle Bluff Pilot Island Rock Island
<b>Door County Parks</b>	Cave Point Restrooms
<b>State Parks</b>	Rock Island State Park

### Wind Electirc

<b>Egg Harbor</b>	Dave and Cindy Enigl
<b>Sturgeon Bay</b>	John and Ann Hippensteel Brett and Virge Temme

Solar Electric (photovoltaic) continued

**Anonymous** three sites

Geothermal Heating/Cooling

**Algoma** The Flying Pig, Susan Conne  
**Brussels** Bruce Van Oss  
**Baileys Harbor** Don Pardonner, Judy Reninger  
John Wilson Jr.  
**Egg Harbor** Clarence and Mary Anne Scherer  
**Jacksonport** Town Hall Bakery—Don Jervis  
**Luxemburg** Allen Luedtke  
**Oneida** Joe VanKauwenberg  
**Sturgeon Bay** Adam Goettelman  
Clifford Kracht  
Doug and Betsy Rosberg  
**Washington Island** Hoyt and Kirsten Purinton  
**Anonymous** three sites

“Green Construction”

**Algoma** The Flying Pig—Susam Conner  
**Baileys Harbor** Don Pardonner, Judy Reninger  
John Wilson Jr.  
**Egg Harbor** Russ and Linda Cockburn  
Dave and Cindy Enigl  
Clarence and Mary Anne Scherer  
**Sturgeon Bay** Adam Goettelman  
Brett and Virge Temme  
Fred Wittig  
**Anonymous** -7- one site



Comments

**“My 2 kilowatt system is grid-intertied, selling extra power back to the utility at the current rate one pays for utility power. In addition, a battery back-up assures several days of power for critical loads [pump, freezer] in times of utility outage.”**

**“ [geothermal heating my] 3300 square-foot home, supplemental heating bill \$550, central air in summer is from my heat pump, approximately \$10 per month.”**

**“We produce approximately two times more electricity than we use, with 28 kilowatts of wind and photo voltaics. For thermal heat—space and water—[we have] about 184 square-feet of solar collectors.”**

Examples of energy efficient design and sustainable construction in Door County

Straw-bale insulation	Energy Star Homes
Insulated concrete forms	Reclaimed materials
On-demand hot water	Natural day-lighting
“Light tubes”	Super-efficient wood heat
Super-insulation	Passive solar design

### Positives comments about renewable energy

- Varying degrees of energy self-sufficiency, depending on the size of system.
- Doing your part to reduce demand for polluting fossil fuel energy
- Monthly savings on heating and/or electric bills

### Negative comments about renewable energy

- Substantial "up front" costs that is usually financed by the owner. There can be a lengthy period before monthly savings "pay back" the original investment.
- Relative lack of a cadre of installers and maintenance people, at this point in time. "Do it yourselfers" generally have an advantage in maintenance and repair

**Maintenance** is necessary, as with other aspects of your home, but our respondents overwhelmingly mentioned low maintenance and high satisfaction.

## Renewable Sustainable Contractors

*Many of the systems listed in this Renewal Energy Resource Directory were self designed and installed by the owners themselves. Survey Respondents who used contractors additional help employed the following contractors, who provide renewable energy services in the Door County area.*

*Listing of a company in this directory should not be considered an endorsement, or implied endorsement, by either the Renewable Energy Task Force or the Door County Environmental Council. Consumers should exercise their own judgement in choosing any contractor.*

### **Key Codes for the follow chart:**

DE=Designer

IN=Installer

SW=Solar Hot Water

SS=Solar Space Heat

SE=Solar Electric

WE=Wind Electric

GT=Geothermal

SC=Sustainable Construction

COMPANY	DE	IN	SW	SS	SE	WE	GT	SC
<b>Amherst</b>								
Artha Renewable Energy, LLC 715-824-3463	X	X		X	X			X
Photovoltaic Systems, LLC 715-824-2069	X	X		X				
<b>Egg Harbor</b>								
Russ Cockburn Construction 920-746-0885	X	X	X	X				X
<b>Ellison Bay</b>								
SLD Electric 920-854-4886	X	X	X		X			X
<b>Luxemburg</b>								
AJ Electric, Refrigeration & Heating 920-866-2538	X	X					X	
<b>Oneida</b>								
Van's Refrigeration 920-869-3196	X	X					X	
<b>Sister Bay</b>								
Carlson-Erickson Builders 902-854-2162	X	X	X	X				
LaaksonenBuilders 920-854-2061	X	X						X
Wulf Brothers 920-854-5587	X	X	X				X	
<b>Sturgeon Bay</b>								
Edgeline Builders 920-495-3343	X	X						X
Lake Michigan Wind & Sun 902-743-0456	X	X	X	X	X	X		
One Planet Design 920-743-743-9480								X
Rob Vogel 920-746-0885	X	X						X
Virge Temme Architecture, Inc 920-746-8422	X	X	X	X	X			X
Wulf Brothers 930-743-5587	X	X	X				X	

## Online Resources

American Institute of Architects: [www.aia.org](http://www.aia.org)  
 AIA Committee on the Environment: [www.greenbiz.org](http://www.greenbiz.org)  
 American Solar Energy Society: [www.ases.org](http://www.ases.org)  
 American Wind Energy Association: [www.awea.org](http://www.awea.org)  
 Energy Star program: [www.energystar.gov](http://www.energystar.gov)  
 Fresh Energy: [www.fresh-energy.org](http://www.fresh-energy.org)  
 Geothermal Heatpump Consortium [www.wisgeo.org](http://www.wisgeo.org)  
 Green Source: [www.construction.com/greensource](http://www.construction.com/greensource)  
 KEEP - Wisconsin Energy Education Program: [www.uwsp.edu/keep](http://www.uwsp.edu/keep)  
 Midwest Renewable Energy Assn.: [www.the-mrea.org](http://www.the-mrea.org)  
*Note: MREA Annual Renewable Energy Fair in June, largest in nation*  
 NAHB Research Center/Green Building: [www.nahbrc.org/green](http://www.nahbrc.org/green)  
 Renew Wisconsin: [www.renewwisconsin.org](http://www.renewwisconsin.org)  
 Solar Energy International: [www.solarenergy.org](http://www.solarenergy.org)  
 US Green Building Council: [www.usgbc.org](http://www.usgbc.org)  
 Wisconsin Focus on Energy: [www.focusonenergy.com](http://www.focusonenergy.com)  
 Wisconsin Green Building Alliance: [www.wgba.org](http://www.wgba.org)  
[www.heatmore.com](http://www.heatmore.com) (furnaces)  
[www.permaculture.com](http://www.permaculture.com) (sustainable gardening)  
[www.radiantec.com](http://www.radiantec.com) (in-floor heating)  
[www.houseneeds.com](http://www.houseneeds.com)  
[www.ifnotwind.org](http://www.ifnotwind.org)

### Books and Magazines:

Home Power Magazine: [www.homepower.com](http://www.homepower.com)  
 Mother Earth News: [www.motherearthnews.com](http://www.motherearthnews.com)  
 Natural Home Magazine: [www.NaturalHomeMagazine.com](http://www.NaturalHomeMagazine.com)  
 Solar Today: [www.solartoday.org](http://www.solartoday.org)  
 The Last Straw: [www.strawhomes.com](http://www.strawhomes.com)  
*Homing Instinct* by John Connell  
*The Not So Big House* books by Sarah Susanka