

## **Relevant “hands-on” Renewable Energy Literature - Wind, Solar & Liquid bio-fuels:**

**Possibly a usefull selection among many other good sources & titles & as added help-material to the subjects discussed on - <http://www.otherpower.com> “The Discussion Board”**

### **Wind Energy -**

#### **A: Hands-on & background texts.**

1: “Wind Power” - Paul Gipe - James & James Science Publishers Ltd.  
London, UK - 2004. ISBN:1-902916-54-9.

This is a very thorough and absolutely essential book.

2: “The Wind Power Book” - Jack Park - Cheshire Books, Palo Alto Ca. USA - 1981.  
ISBN:0-917352-06-8.

Jack Park has written other very useful books on wind energy - however this title is the book of choice.

3: “The Home-built, Wind-generated Electricity Handbook” - Michael A. Hackleman -  
Earthmind Press, Mariposa, Ca. USA - 1975. ISBN: 0-915238-05-5.

An essential and thorough book.

4: “The Homemade Windmills of Nebraska” - Erwin Hinckley Bardour - Nebraska - USA -  
1899 - [reprinted by The Fallones Institute - Occidental, Ca.- USA - 1976]

5: “A Field Guide to American Windmills” - T. Lindsay Baker - University of Oklahoma  
Press - USA - 1985 - ISBN: 0-8061-1901-2.

6: “Windpower Workshop” - Hugh Piggott - Centre for Alternative Technology,  
Machynlleth, Wales, UK - 1997. - ISBN: 1-898049-13-0. - [<http://www.cat.org.uk>]

Plus: - The yearly editions of “How to build a wind turbine” - available from the author.

[<http://www.scoraigwind.com>]

#### **B1: Hands-on construction texts - Sail windmills & “American-type” farm windmills:**

1: “Constructional Manual for a Cretan Windmill” - Niek van de Ven - Steering committee  
for wind energy in developing countries, Amersfoort, The Netherlands - 1977.

2: “Technical Report 1990 - WOT Diever 450”

3: “Constructional Manual for 12 PU350, 12 PU500 Windmills”

4: “ Technical Report 1982”- Niek van de Ven - TOOL/WOT -

Obtainable from WOT - Twente University of Technology, P.O. Box 217 - 7500

AE - Enschede, - The Netherlands.

NB: When ordering these books/manuals - insist upon - and ensure that the copy process of both the text and the drawings is as good as absolutely possible and that the photographs in "Cretan Windmill" are as good and as clear as possible !!!

The last title can also possibly still be obtained from The Regional Wind Energy Test Station, Institute of Engineering & Rural Technology, Allahabad, India.

Otherwise these three good books can only be accessed by borrowing from libraries or purchasing AND QUALITY CONTROL - by good contacts or friends in The Netherlands itself.

During the late 1970's-1980's - the "Australian Council of Churches" published a book-report concerning low-cost house construction and windmill irrigation projects near Saighanchi, Afghanistan. I have previously seen a copy of this book and note that a full set of drawings for the 12PU500 windmill are included with the text. Perhaps a good friend in Australia can find & recover a copy of this very good report & thereby make all of this usefull information available to others.

Likewise "The World's Council of Churches" in Geneva, Switzerland published in the late 1970's-1980's - the 80 page book "Pompe Eolienne - Sahores" [Sahores Windmill Pump - in French] - by Jean Sahores. After many attempts a hard-copy of this book is still untraceable. All the relevant archives in Geneva have been "cleaned-out" in connection with an office re-construction. If any friends discover an original hard-copy or can obtain a good & clear photocopy taken from an original hard-copy edition - kindly let me know.

5: "The Gaudgaon Village Sailwing Windmill" - William W. Smith III - VITA Publications , Arlington Virginia , - USA - 1982.

6: "DIY Plan nr. 5 Sail Windmill [Cretan] - parts 1 & 2" - Centre for Alternative Technology, Machynlleth, Wales, UK - 1977. [<http://www.cat.org.uk>]

7: "How to build a Cretan Sail Windpump" - R.D. Mann - Intermediate Technology Publications, London, - UK. - 1983/1992 - ISBN: 0-903031-66-3.

This is a very comprehensive work - although possibly complicated as perhaps it deviates too far from the simpler models in Crete.

8: "Low-cost Windmill for Developing Nations" - Hartmut Bossel - VITA Publications USA - 1970/1977.

This is a classic text - well-suited for small metal workshops.

9: "WaterPumping Windmill Book" - Gary Hirshberg & The New Alchemy Institute. - Brick House Publishing, Andover Mass. - USA - 1982. - ISBN: 0-931790-23-9.

This is a very good and comprehensive book - based on previous work done by Marcus Sherman with the so-called Madurai wind pumps in India. [<http://www.fuzzylu.com/greencenter/publist.html>]  
Illustrations and a good short description of this NAI windmill will also be found in:

“Technological Self-sufficiency” - Robin Clarke - Faber & Faber Ltd. London, - UK - 1976 - ISBN: 0-571-11057-6

However those who are seriously interested in building a “Cretan-type” windmill - and who require further assistance or information - f.ex. photographs of the various necessary constructional details of the actual models on site in Crete, - which often considerably differ from those described in the available literature, or with regard to other different literature etc.- should write a letter and send by postal-mail to the following address in Denmark:

Danmarks Vindkraftshistoriske Samling: - For the personal attention of - John Furze. - Smed Hansensvej 11, Lem - 6940, Vest Jutland, Denmark.

Much wind energy technological information is deposited or archived with the DVS. This material will be available for all serious students to freely consult - “for the benefit of all” - in addition to the vast quantities of other material & know-how.

### **B2: Hands-on construction texts - low-cost small wind turbines under 1 kW.**

1: “Windkraft - ganz einfach”, “Windkraft - ja bitte”, “Windkraft - echt stark” - Christian Kutzt, - Oekobuch Verlag, Staufen - Germany [<http://www.oekobuch.de>]. These three low-priced booklets are full of drawings, photographs etc on every page - for the construction of cheap and simple wind turbines - they can easily be fully understood by all & are therefore very highly recommended.

2: Read the posts & the present & previous archives at [<http://www.otherpower.com>] - learn & then consult other colleagues & friends on the discussion board & through the links

### **B3: Hands-on construction texts - simple small wind turbines under 20 kW.**

1: “The Penryn Windmill Book” - Patrick Arnoldi - Penryn Farm Peterborough, Ontario - Canada. - [<http://www.windmillconstruction.com>]  
This book is a gold-mine of practical experience and good ideas.

2: “Windenergie - Praxis” - Horst Crome - Oekobuch Verlag, Freiburg - Germany. - 1987  
ISBN: 3-922964-40-0

Unfortunately this book is now very hard to obtain, except from libraries in Germany - a later similar book by the same author is below.

3: “Handbuch Windenergie-Technik” - Horst Crome - Oekobuch Verlag, Staufen - Germany - 2004 - ISBN: 3-922964-78-8. [<http://www.oekobuch.de>].

These two books by Prof. Crome from the Technical University of Bremen, Germany - are very descriptive, lavishly illustrated and can be fully understood without too much difficulty by non-German readers - and although they badly need to be translated into English - they are however very highly recommended indeed.

The technology described in these books - as practiced by local cooperative working construction-groups & by his own students - is based on inspiration from the former Danish Agricco 20-40 kW induction generator - grid-connected wind turbines [with aerofoil blades] from 1919. These models

from 1919 were also produced under licence in both Germany and The Netherlands.

4: "Maine-built Windmills" - Everet Russell - Home Power Magazine # 79 Oct-Nov 2000, - USA - 2000 [<http://www.homepower.com>]

The famous book by Professor Poul La Cour & Jacob Bjerre - "Landlige Elektricitetsvaerker" - [in Danish] Copenhagen, Denmark - 1907. - should finally be mentioned for the record. This book fully describes the complete construction and installation etc of small automatic 5-20 kW de-central wind-diesel power systems for small farms and communities [with full battery and Hydrogen-gas back-up for energy storage]. This book had a great influence on the development of de-central wind-energy power-generation systems in several European countries in the 1920's-1940's.

A full description in English together with diagrams - of the "La Cour" automatic wind-energy control systems, was published in the book - "Windmills & Wind Motors" - F.E. Powell - Camelot Press, New York - USA - 1910 - presently available as a reprint from Lindsay Publications - [<http://www.lindsaybks.com>]

### **C: Hands-on construction texts for horizontal rotors:**

1: "Wind and Windspinners" - Michael Hackleman - Earthmind/Peace Press Publication, Mariposa Ca. - USA - 1974/1977.

2: "Savonius Rotor Construction" - Jozef A. Kozlowski - VITA Publications - Arlington Virginia, - USA - 1977 - ISBN: 0-86619-062-7

Several of the minor errors and faults in Hackleman's comprehensive good book are covered & rectified by Kozlowski.

3: "Der Savonius Rotor - Eine Bauanleitung" - Heinz Schulz - Oekobuch Verlag, Staufen, Germany - 1989/1999 - ISBN: 3-922964-48-6. [<http://www.oekobuch.de>].

This book by the former director of the State Agricultural-technology Research Institute of Bavaria - packed with fully detailed construction drawings is absolutely essential for those contemplating the construction of large and powerful horizontal-rotors & is very highly recommended.

### **Solar Energy:**

#### **A1: Solar Thermal - background etc:**

1: "Golden Thread" - Ken Butti & John Perlin - Cheshire Books - Van Nostrand Publishing - New York - USA - 1980 - ISBN: 0-442-24005-8.& - 0-917352-07-6.

This book - based on an article originally published in "The CoEvolution Quarterly # Fall 1977" - should be in all libraries everywhere.

2: "Solar Living Sourcebook" - Real Goods Company - Chelsea Book Publishing, Vermont - USA. - ISBN: 0-930031-68-7 [<http://www.realgoods.com>].

3: "Energy from Nature" - Rainbow Power Company - Nimbin - Australia  
[\[http://www.rpc.com.au\]](http://www.rpc.com.au).

## **A2: Solar Thermal - hands-on:**

1: "Solar Homes & Sun Heating" - George Daniels - Harper & Row Publishers - New York - USA - 1976 - ISBN: 0-06-010937-8.

2: "Passive Solar Water Heaters" - Daniel K. Reif - Brick House Publishing, Andover Mass. - USA 1983 - ISBN: 0-931790-39-5.

3: "Sunshine to Dollars" - Steven E. Harris - USA 2003  
[\[http://www.KnowledgePublications.com\]](http://www.KnowledgePublications.com).

4: "Thermische Solarenergie" - Friedrich Udo Muller - Franzis-Verlag, Feldkirchen - Germany - 1997. - ISBN: 3-7723-4622-7. - [\[http://www.amazon.de\]](http://www.amazon.de)

5: "Solaranlagen" - Heinz Ladener & Frank Spate - Oekobuch Verlag Staufen - Germany - 8th fully revised edition 2003. - ISBN: 3-922964-94-X.

6: "Solaranlagen Selbstbau" - Armin Themessl & Werner Weiss - Oekobuch Verlag, Staufen - Germany & Arbeitsgemeinschaft Erneuerbare Energie, Gliersdorf - Austria.  
ISBN: 3-922964-73-7 [Germany], &: 3-901425-09-8 [Austria].  
[\[http://www.oekobuch.de\]](http://www.oekobuch.de) & <http://www.aae.at>

This book is the fully-illustrated course-notes for the very successful home-owners self-build solar-thermal construction courses in Austria and other countries and is very highly recommended.

7: "Solarwarme Optimal Nutzen" - Wagner & Co.- Colbe - Germany  
- ISBN: 3-923129-36-X. - [\[http://www.wagner-solartechnik.de\]](http://www.wagner-solartechnik.de)

This is a good comprehensive construction & installation manual from Wagner Solartechnik & is also very highly recommended.

8: "Manuel pour la conception, le dimensionnement et la realisation des installations collectives" - Download from ADEME [Agence de l'Environnement et de la Maitrise de l'Energie - France April 2002. - [\[http://www.tecsol.fr/st\\_fr/manuelSol.htm\]](http://www.tecsol.fr/st_fr/manuelSol.htm)

9: "Home Power Magazine" - [\[http://www.homepower.com\]](http://www.homepower.com).

## **A3 Photovoltaics -for experimental use:**

1: "Practical Photovoltaics" - Richard J. Komp - Aatec Publications - Ann Arbor Mich., USA. - ISBN: 0-937948-02-0. - [\[http://www.bookstep.ie/bks/showbk2.php?bookid=578\]](http://www.bookstep.ie/bks/showbk2.php?bookid=578)

2: "Strom aus der Sonne" - Bernhard Krieg - Elektor Verlag, Aachen, - Germany 1992.- ISBN: 3-928051-05-9. - [\[http://www.amazon.de\]](http://www.amazon.de)

- 3: Home-made "Fruit-Jam" & Titanium oxide solar cell - [<http://www.solideas.com/>]
- 4: "Homemade Solar Cells" - [<http://www.fuelless.com>]
- 5: "Home Power Magazine" - has many good & thorough articles concerning medium & larger PV systems - likewise consult among others - [<http://www.solarenergy.org>]

**Liquid biofuel technology & conversion systems for diesel engines - [not including various forms of alcohol fuels - such as ethanol or methanol nor algae-technologies etc.]:**

- 1: "From the Fryer to the Fuel Tank" - Joshua Tickell - [<http://www.JoshuaTickell.com>]  
ISBN: 0-9707227-0-2.
- 2: "Mecanique des Fleurs" - Reseau Petales - C/O Roule Ma Fleur,- Fraissinet de Lozere, 48220 France - [[roulemafleur@free.fr](mailto:roulemafleur@free.fr)]
- 3: "Pflanzenol als kraftstoff" - Barbara Eder & Franz Eder - Oekobuch Verlag, Staufen - Germany - 2004. - ISBN: 3-936896-05-4. - [<http://www.oekobuch.de>]
- 4: "Die Energie Insel" - Wolf Rudiger Weiss - Germany  
Available from [<http://www.conrad.com>]
- 5: "Handbook of Agricultural Energy Potential of Developing Countries" - James A. Duke - CRC Press, Boca Raton, Florida - USA - 1987 - ISBN: 0-8493-3640-6
- 6: "Biological Paths to Self-Reliance" - Russel E. Anderson - Van Nostrand Reinhold Publishers - New York - USA - 1979 - ISBN: 0-442-20329-2
- 7: "Energy Plant Species" - N. El Bassam - James & James Science Publishers, London - UK - 1998 - ISBN: 1-873936-75-3.
- 8: "Edible Nuts of the World" - Edwin A. Menninger - Horticultural Books Inc. - Stuart, Florida - USA - 1977 - ISBN: 0-9600046-4-5
- 9: "The book of Edible Nuts" - Frederic Rosengarten Jr. - Walker Publishing Company, New York - USA - 1984 - ISBN: 0-8027-0769-9

All these books are highly recommended - plus consult - [<http://www.journeytoforever.org>], "Home Power Magazine" & other sources - etc.