

Windy Dankoff

Specialist in photovoltaic applications, solar water pumping, and energy management

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Windy Dankoff's career combines his technical talents with his passion for environmental preservation. In 1977, he began a wind-electric and photovoltaic business in New Mexico, to electrify homes beyond the power lines. He has worked solely in the private sector, where systems had to be cost-effective. In 1983, he became one of the first manufacturers of solar powered water-well pumps. In the 90's, Dankoff Solar Products became a worldwide wholesale distributor. He sold the company in 2005. It is now Conergy, Inc. and Dankoff Solar Pumps, LLC.

Windy has had over 40 technical papers and magazine articles published, covering photovoltaic applications, energy management, and solar water pumping. He has taught at various schools, and advises other pioneering business owners and educators.



Identity

Legal name Mark H. Dankoff

Experience

2013

- Under contract as co-author of book for Taylor & Francis (London), Earthscan Expert Series: Solar Water Pumping (with Robert Foster and Alma Cota)
- Advisor to Dankoff Solar Pumps, div. Solar Power and Pump Co.
- Juror for Greenpeace Challenge: Solar Pump for Bihar (India)

2001-2005

Vice President, Dankoff Solar Products, Inc.

- Oversight of solar pump product development and support
- Technical writing (specifications, instruction manuals)
- Producer, author, Dankoff SunPaper (dealer training series)
- Employee and dealer training
- **Retired from commerce in 2005**

1994 - 2001

President, Dankoff Solar Products, Inc.

- All the above
- Administration
- Minister of Propaganda
- Recipient, PV Pioneer Award (PV Network, 1996)

1987 - 1994

President, Flowlight Solar Power, Inc.

- All the above
- Engineering and sales of wind and solar-electric power systems
- Engineering and sales of solar water pumps and systems

1977 - 1987

Owner-Manager, WindLight Workshop

- First wind-electric service business in New Mexico (1977)
- First solar-electric service in New Mexico (1980)
- Developed and manufactured wind generator towers (1978-79)
- Developed and manufactured *Charge-A-Stat* control/monitor systems for wind and solar, sold nationally (1979-84)
- Engineering, sales and installation of wind and solar-electric power systems for remote (off-grid) residences
- Engineering, sales and installation of solar water pumps and systems (starting 1980)
- Developed the first low-power (<250 watts) solar water pump to be nationally distributed – *Solar Slowpump* (1983) followed by four more pump product lines, all still in production.
- National retail sales by catalog (1982–1989)
- Office and production were 100% wind and solar powered

Publications 1979 - present

- Major contributions to books Wind and Windspinnners (1975) and The Homebuilt Wind Generated Electricity Handbook (1975), both by Michael Hackleman
- Authored over 40 articles on wind and solar power and water pumping (listed below).
- Authored instruction manuals for all Dankoff Solar pump products (1983-2004) and for Bernt Lorentz KG solar submersible pumps (2001-2004)
- Host of “Solar Water Pumping” video, Renewable Energy with the Experts video series, 1996
- Editorial advisor to Home Power Magazine, (2000-present)
- Coauthor of a solar water pumping text book under contract to Southwest Technology Development Institute, for Sandia National Laboratories and Winrock International (1999)
- Contributor to Harvest the Rain by Nate Downey (2009)

Education 1974 - 1977

- Prescott College, B.S., Wind-Electric Power and Home Energy Management, included 2 years field study with Michael Hackleman, researcher and author.

1970 – 1972

- Attended Carnegie-Mellon University, Electrical Engineering

Articles Published • Solar and Independent Power

Electricity from the Wind

New Mex. Solar Energy Assn. SunPaper, June 1978

Charging Batteries from a Generator
Home Power, March 1988
PV Network News, January 1988

House Wiring Standards and the Electrical Code
Home Power #7, October 1988

Getting Ready for Winter with an Independent Power System
Home Power #14, December 1989
PV Network News, October 1989

The Importance of Energy Efficiency
Home Power, 1988

Photovoltaics and our Future (editorial)
Home Power, January 1988

The Integrated Energy System
Home Power March 1988
Sunworld, Vol. 12 #2, 1988

Efficient Lighting for the Independent Home
Home Power #9, June 1988
Real Goods Sourcebook

Grounding and Lightning Protection
Home Power #6, Fall 1987
Backwoods Home September 1992,
PV Network News, 1986
Real Goods Sourcebook (several annual editions)

Selecting the Voltage for an Independent Power System
Home Power #4, 1977
Backwoods Home, June 1993

Flowlight Solar's Solar Power System
PV Network News, May 1988

Ham Radio for the Remote Home
Home Power, August 1988

Things that Work! – Electro-Warmth Bed Warmers
Home Power #8 December 1988

Wire Sizing and Voltage Drop in Low Voltage Power Systems (with John Davey)
Part I: Home Power #13
Part II: Home Power #14

Things That Work! – Wind Seeker II
Home Power #14, December 1989

The Secret of Solar Power
Crosswinds Monthly, July 1992

Photovoltaic Predictions
New Mexico Solar Home, A Source Book (New Mexico Energy,
Minerals and Natural Resources Dept.) June 1993.

Graphic Overview of a Home Power System
Home Power, June 1995
SW Unplugged, Summer 1996
Canadian RE News, Summer 1996

Survival Tips for Winter
Colorado Solar Energy Industries Assn. Newsletter, December 1998

How to keep your Batteries Alive for years and years and years
Home Power#69, February 1999

Troubleshooting a PV Array
Dankoff SunPaper, 1999

Y2K Prescription (contributor)
Home Power #71, Fall 1999

What is a Charge Controller?

Home Power #72, Aug 1999
Maximum Power Point Tracking
Dankoff SunPaper, 2000
Windy Dankoff's Home PV System
Home Power #76, 2000
Logging On in the Rocky Mountains (solar powered logging and sawmill)
Home Power # (2001)
Lightning Happens! (lightning protection for independent power systems)
Home Power #107 (2005)
The Top Ten Battery Blunders
Home Power #114 (2006)
Other articles on many web sites

Articles Published • Solar Water Pumping

Pumping Water With Sunlight
New Mex. Solar Energy Assn. SunPaper, 1983, Solar Age, Feb. 1984
An Introduction to Solar Water Pumping
Home Power #5, 1987, Borehole Water (S. Africa) September 1988
Solar Water Pumping in the USA
Borehole Water (S. Africa) Vol. 16, 1989
Solar Water Pumping
The Enchantment (New Mexico Rural Electrical Coops) 1988
Solar Powered Water Pumping (with Steve McCarney)
Home Power #11, 1989, Water Well Journal, Summer 1989
Running an AC Submersible Pump on Inverter Power
Home Power # 17, June 1990
Solar Pumping – NOW!
Program Guide, Midwest Renewable Energy Fair, June 1993
Using a DC Submersible Pump in a Domestic Water System
Part I – Home Power #38, December 1993
Part II – Home Power #39, February 1994
Water Pumping for the Independent Home: AC or DC?
Home Power #40, April 1994
A Design Guide to Solar Water Pumping
Home Power #46, January 1995
Solar Water Pumping
European Directory of Renewable Energy, February 1995
An Introduction to Solar Water Pumping (with Glossary)
World Directory of Renewable Energy, January 1997
Speaking the Language of Solar Water Pumping
Home Power, October 1997
Adding a Solar Deep Well Pump to a PV Home
Home Power, October 1997
Tune up your Water System to Save Energy
Backwoods Home July 2000
BOOKLET: Solar Water Pumping
Booklet self-published and reprinted by Real Goods and others, 1988-90
As article in Waterlines (UK), 1988
Backwoods Home March 1991
Sun World, March 1991
PV/Wind Energy Update (New Delhi, India), 1991
Solar Water Pumping Basics
Backwoods Home, May 2000
Solar Water Pumping has Come Of Age

Water Well Journal, 2002
Solar Water Pumping Makes Sense (residential installation in Oregon)
Home Power, October 2003
Other articles on many web sites

Articles Published • Miscellaneous

Ergonomic Improvements to a Bass Flute
Flute Focus, July 2008

Teaching and Training

Instructor, Electricity from the Wind, College of Santa Fe Continuing Education, 1977-1979.
Instructor: Introduction to Photovoltaics, 2001, Solar Water Pumping, 1987, 1997, 2003, guest presenter 1992-2004, Solar Energy International (Carbondale, CO)
Training engineers from Central America and Mexico, solar pumping, Southwest Technology Development Institute, Las Cruces, NM, 1992, 1995, 1997.
Solar pump training for Zia Pueblo, NM, 1992, 1995
Guest presenter, solar water pumping and solar careers, San Juan College Renewable Energy Program (professional training), 2003-2005
Public presentations, Solar Powered Water Supply, at Midwest Renewable Energy Fair, Solwest RE Fair, NM Solar Fiesta, Southwest RE Fair, 1991-2003
Co-instructor: Introduction to Solar Design and Techniques, 2003, 2004, guest presenter in 2005-2006, Ecoversity (Santa Fe, NM)
Co-instructor: Sustainable Water Management, 2006, Ecoversity (Santa Fe, NM)
Guest presenter, various energy courses, Santa Fe Community College, 2003-2006
Assistant Instructor: Renewable Energy for the Developing World, Solar Energy International (Durika, Costa Rica) May 2010
Invited speaker at Bernt Lorentz KG company conference (Hamburg, Germany) June 2015

Advisory Membership

Member, Advisory Committee for Santa Fe Community College Associate of Applied Science Program in Environmental Technologies (Oct. 2006-7)

Volunteer Work

Thupden Choling Monastery, Nepal: Distribution of LED flashlights and establishment of a rechargeable battery program, survey of existing energy systems, with Renewable Energy Development International, 2006
Designed and directed installation of a 12-bed dormitory lighting and music system using one 30-watt solar panel, Ecoversity, Santa Fe, 2006
Advisor to Oak Ridge Solar Project, powering 10 homes, Navajo Nation, 2008-2009

Other Interests

Family with grandchildren
Making and playing flutes, jazz playing and study
Sculpture in wood and metal
Teen Mentor, advisor, co-founder (2009) Boys to Men New Mexico
Wilderness travel and camping

Contact

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