

Solar Fiesta 2008

Workshop Descriptions

Track Legend:

Energy Basics/Efficiency (EB)	Professional Track (P)
Electricity-PV/Wind (E)	Sustainable Lvg/Dvlpmt (S)
Financial/Real Estate (F)	Thermal/Water (W)
Design & Materials (D)	

Energy Literacy: The Key to Energy Efficiency (EB, F) (Free and Open to the Public)

Sat and Sun

9:30am-10:45am

Aspen

Speaker: Alan Zelicoff

Join Al Zelicoff to learn how easy it is to be green. Al will begin our Energy 101 track for people wanting to lower their energy use with Energy Literacy: the Key to Energy Efficiency. Al will show how to know how much energy you are using and use his home experiences to show free and low-cost ways to lighten your utility bill load, frequently up to 30%.

Al Zelicoff is a doctor and scientist concerned with energy use and conservation. Look for Dr. Zelicoff's "Energy Tips" on the Metro cover of the print Journal every Tuesday and go to ABQJournal.com/energy any time for more information.

100 MPG with Today's Technology (S)

Sat

11:00am-12:00pm

Dogwood

Speaker: Jeron Smith of Lasya Design Group

Proven 100MPG technology already exists. Adopting it worldwide is a challenge requiring education design innovation, and a change in lifestyle. We will be looking at new modes of transportation that are truly Green in terms of embodied energy, manufacture, product lifecycle, ongoing energy consumption, and recycle-ability.

Jeron Smith is a small aircraft designer and inventor with a 30-year background in solar energy and alternative design. He gives free educational forums sponsored by Lasya Design Group on solar energy, low-cost housing, high desert greenhouses, 100MPG alternative transportation, and other related topics throughout the year.

A Framework for Sustainability: Using The Natural Step (S)

Sat

2:45pm-3:45pm

Dogwood

Speaker: Randy Sadewic of Positive Energy, Inc.

Pursuing an aggressive environmental strategy can become a competitive advantage. The catalyst for this change is a process developed in Sweden called The Natural Step. The Natural Step introduces a new way of thinking about sustainability. The heart of The Natural Step are four scientifically-based principles that act as a compass to guide organizations.

Randy Sadewic works at Positive Energy and is a frequent speaker and teacher on renewable energy-related topics. One of his epiphany's that led to a career change was a presentation he heard about The Natural Step 11 years ago. Randy has organized and presented The Natural Step framework in Portland, Oregon and recently in New Mexico.

Bamboo Basics (D)

Sat

12:15pm-1:15pm

Cedar

Speaker: Peter Fust of Natural Building Resources-Black Range Lodge

Bamboo has been called the most useful plant in the world. It is the largest of the grasses, yet is stronger by weight than steel. Bamboo grows very fast and can thrive in diverse climates including the American Southwest. Poles can be harvested from established groves in three to five years. Bamboo Basics will dispel common myths as well as review identifying bamboos that will thrive in the West and how to grow and maintain bamboo in a dryland climate.

Pete Fust grew up on a North Dakota farm, has a degree in horticulture and worked designing and creating landscapes in Seattle and California. He currently practices permaculture and natural building in Kingston, NM.

Building/Buying a Green Home (D)

Sun

2:45pm-3:45pm

Dogwood

Speaker: Steve Hale of Build Green New Mexico

Take a holistic look at green home design and construction. What does it take to create a living space that is healthy, efficient, and has a lower impact on the planet? Site selection, design, materials, and construction techniques are just a few of the topics that will be addressed.

Steve Hale is a founding member of Build Green NM. Build Green NM is the end result of a 2005 "Presidential Priority" to establish a viable Green Building program. Steve Hale was President of the Home Builders Association of Central NM at that time. Steve Hale is a custom home builder with about 20 years experience in the Albuquerque area. Steve builds "Green" exclusively. Steve Hale also serves on two national committees. He is a member of the National Association of Home Builders Green Building Sub-committee (there are about 40 members from across the country) and Steve also sits on an ANSI (American National Standards Institute) Consensus Committee which is in the process of developing the first Green Building Standard which is the first "code" of it's kind.

Creating Sustainable Living Environments (D, S)

Sat

1:30pm-2:30pm

Cedar

Speaker: Joe Matesi of Holistic Habitats

Joe will present ideas on how best to build with straw, sticks & other alternative materials.

Joe Matesi is founder and President of Holistic Habitats Inc., based in Cedar Crest, New Mexico. He has been an inveterate builder for over 30 years, specializing in green building.

Energy Efficiency & Solar Tax Incentives (F, E, D, W)

Sat (Ryan), Sun (Susie)

4:00pm-5:00pm

Aspen

Speaker: Ryan Helton and Susie Marbury of Energy, Minerals and Natural Resources Dept., State of NM

In this workshop, Ryan and Susie will discuss state and federal incentives for renewable energy and energy efficiency designed to encourage New Mexicans to utilize clean, renewable energy and reduce their system payback time. Come learn the nuts and bolts from the experts!

Ryan Helton is an Energy Program Manager for New Mexico's EMNRD Energy Conservation and Management Division. Susie Marbury is the Energy Efficiency & Green Building Administrator for New Mexico's EMNRD Energy Conservation and Management Division.

Geothermal Heating and Cooling (W)

Sun

11:00am-12:00pm

Dogwood

Speaker: Arthur Clerx of Total Service Company, Inc.

In this exciting workshop, Arthur walks participants through the latest in geothermal heating and cooling. Starting with a walk through of the complete process of designing and installing a geothermal heating and

cooling system for homes and small office buildings, participants will learn the benefits and advantages geothermal heating and cooling provides over conventional and solar systems. Arthur helps participants understand the calculations needed to determine a system's required capacity and layout of duct system, radiant floors and ground loops.

Arthur Clerx has a Masters Degree in Mechanical Engineering from the Technical University Eindhoven in

Holland. He has been in development and manufacturing for 20 years. Alex and his wife, Josie now own a mechanical contracting company Total Service for 8 years. Total Service does plumbing cooling and heating for residential and commercial buildings. They specialize in geothermal heating and cooling and other green building technologies.

Green Building Design (tent.) (D)

Sun

12:15pm-1:15pm

Birch

Speaker: Stephen Dent of UNM School of Architecture & Planning

Green Building Design (tent.) (D)

Sat

4:00pm-5:00pm

Cedar

Speaker: Stace McGee (Tentative) of Environmental Dynamics, Inc.

Green Collar Jobs for New Mexico: Retooling for a Clean Energy Economy (S, P)

Sat

2:45pm-3:45pm

Cedar

Speaker: Juan Reynosa (NM Youth Organized, 1Sky New Mexico) and Carrie McChesney (1Sky)

Come learn what's happening on a national and local level to develop "Green Collar Jobs" and why this is so important for New Mexico's future. This workshop covers the growing green collar job movement, explains the basics of green collar jobs, and explores the economic, environmental and social benefits of green economic development for all New Mexicans.

Juan Reynosa is the field organizer for New Mexico Youth Organized and is currently working on a city bill to help start a pilot green jobs training program in the city of Albuquerque. Carrie McChesney is a 1Sky Climate Leader for New Mexico and former Environmental Sustainability Coordinator for PNM Resources.

Green Home, Dream Home: Find Your Level of "Green" (tent.) (S, D)

Sun

4:00pm-5:00pm

Birch

Speaker: Cara Leigh and Jody Feyas

Thinking about doing something to save the earth, but not sure how far to go? Find your level of "green" comfort by learning about "green" products and building methods you may have never seen or heard of before.

Cara Leigh, designer/owner and Jody Feyas, owner/builder of The Dream Home; Evolution in Design and Technology will share insights about the home and cool new technology--you decide what's right for you.

Grid-tied Solar PV Systems (E)

Sat *12:15pm-1:15pm* *Birch*
Speaker: Claudia Pavel of Positive Energy

In this workshop, Claudia will walk participants through the grid-tied solar PV system, covering the basics of how these systems work and how they interconnect to the grid.

Heating and Eating with a High Desert Greenhouse (D, S)

Sun *1:30pm-2:30pm* *Cedar*
Speaker: Jeron Smith of Lasya Design Group

Jeron's presentation is an outgrowth of a free design studio (offered last spring) to create an energy efficient attached geodesic lattice greenhouse with active solar heated growing beds for year around growing--even in our cold winter climate. A demonstration greenhouse using recycled waste sawmill lumber was built by volunteers and exhibited at the Solar Village in Taos, NM this summer. This workshop shares the outcomes of the design studio and provides useful tips and design information so participants can build their own simple, practical, low-cost greenhouses for food production and supplemental space heating of their home.

Jeron Smith has been involved in solar energy as a designer and installer of both passive and active solar systems since the 80's. He founded Lasya Design Group as an educational organization to incubate new designs in the fields of alternative energy, affordable housing and alternative transportation a few years ago. He gives free educational forums on an ongoing basis.

Holistic Solar Building Design and Rainwater Harvesting (D, W)

Sat *2:45pm-3:45pm* *Birch*
Speaker: Karlis Viceps of Solar Plans LLC

This workshop covers the principles of passive solar design, the incorporation and integration of thermal mass, passive solar hot water, rainwater harvesting and green building materials. Participants will be educated and inspired to consider their own holistic solar building designs.

Karlis provides consulting, systems research/design for architectural and engineering firms following LEED principles and offers predrawn solar home plans. Karlis' own home of 25 years exemplifies the simple comfort of "green" living.

How You Can Combat Global Warming (tent.) (S)

Sun *12:15pm-1:15pm* *Cedar*
Speaker: Shrayas Jaktar of Sierra Club

LEED Building 101: A Primer on Green Building Rating Systems (D)

Sat *11:00am-12:00pm* *Cedar*
Speaker: TBD of USGBC-NM

Making a Plan for Household Energy Independence (EB, F)

Sat and Sun

11:15am-12:45pm

Aspen

Speaker: Randy Sadewic of Positive Energy Inc. and Larry Gorman of Building Energy Solutions

This workshop walks you through a step-by-step process of performing an energy audit, learning to use simple tools to help you identify savings opportunities, and provides you with resources to help you evaluate solutions that could cut your energy bill by up to 50%.

Randy Sadewic works at Positive Energy and is a frequent speaker and teacher on energy efficiency topics. Larry Gorman is a co-owner of Building Energy Solutions and has over thirty years in the construction industry.

Net Metering and Renewable Energy Certificates (E, F)

Sat

1:30pm-2:30pm

Dogwood

Speaker: Frank Andazola of PNM

Use PV to provide all or part of your electrical needs while remaining hooked up to the electric utility. You may be able to shorten your payback period by selling your RECs to PNM. Frank will explain PNM's Renewable Energy Certificate Purchase Program and net metering rules.

Frank manages PNM's Small PV Program and Net Metering Department.

New Mexico's Path to a Sustainable Energy Future (S)

Sat

11:00am-12:00pm

Birch

Speaker: Jason Marks of New Mexico Public Regulation Commission

Over the next few decades, we can transition from an electricity supply based on coal and other fossil fuels to one in which clean and sustainable renewable energy sources provide the majority of our needs. This session will give an overview of utility-scale and distributed solar technologies in a New Mexico context, as well as wind, biomass, and geothermal opportunities. We will discuss incentives and regulatory policies in place to increase the use of renewable energy.

Jason Marks is the Chairman of the New Mexico Public Regulation Commission. He drafted and sponsored the 2007 PRC rule requiring utilities to dramatically increase their solar portfolios by 2011, and he is active in western regional efforts to promote renewable energy.

Off-Grid Solar PV Systems (E)

Sun

1:30pm-2:30pm

Dogwood

Speaker: Allan Sindelar of Positive Energy, Inc.

This class is for those seriously considering living off-the-grid using solar PV power. We will discuss the joys and limitations, the design process and load analysis, and the principles and costs of off-grid living. By workshop's end, you will either know it's not for you or be excited to get started.

Allan Sindelar has been designing, installing, and teaching about off-grid PV systems since 1988. He is a NABCEP nationally-certified installer and the founder of Positive Energy of Santa Fe.

Photovoltaics 101 (E)

Sat and Sun

1:30pm-2:30pm

Aspen

Speaker: Marlene Brown of NM Solar Energy Association

This presentation is an introduction to photovoltaics (PV). Marlene will cover the basics including solar electric terminology and PV components. Take this workshop before delving further into PV. The

amount of material covered and the pace of the class will be determined by the participants. Come with questions.

Marlene is President of NMSEA . She has almost 20 years of experience with photovoltaics technology. Marlene has been teaching photovoltaic hands-on design and installation classes for over 10 years and installing systems on non-profit and community based organizations. Marlene installed a PV system on her home with a class of all-women participants. She currently teaches co-ed hands-on PV classes locally through NMSEA. She also has solar hot water, so she enjoys free electricity and a low gas bill.

Rebuilding America With Global Warming In Mind (S)

Sun *4:00pm-5:00pm* *Cedar*
Speaker: Michael David Lipkan of Linear City Concepts

Severe weather damage from global warming causes, as well as earthquakes or other damage, will require us to rebuild many structures. It will be important to use durable quality designs coupled with effective and efficient use of renewable energy to live well during this time of renewal.

Michael Lipkan is a futurist with a passion for sustainable design supported by clean, renewable energy.

SAMESHINE (D, W, E)

Sun *11:00am-12:00pm* *Cedar*
Speaker: Steve Baer of Zomeworks

This workshop discusses Sameshine: the practice of designing to reflect sunlight, light dark places in buildings, and reflect sunlight to use its heat.

Steve Baer has worked with solar energy in New Mexico since the 1960's. President of Zomeworks. Inventor: developed and received many patents on passive solar devices.

Solar Cooking (S)

Sat *1:30pm-2:30pm* *Birch*
Speaker: Jean Welles of University of New Mexico-Gallup

This course will focus on the concept of Solar Cooking, with discussion on related solar intensity, altitude and cooking possibilities.

Jean Martinez Welles, is a Professor in Health Careers at the University of New Mexico - Gallup Campus. Current research includes solar cooking and development of a solar oven. Awarded the Science and Technology at UNM, 2007 Creative Award in recognition of her registered copyright titled Solar Oven. Co-creator of the Solar Oven project is John L. Welles, Woodshop teacher at Gallup High School.

Solar Fountain Design/Build

Sat *1:30pm-2:30pm* *Behind Main Bldg*
Speaker: Laurie Lange of BotanicArts

Both a backyard project and an educational workshop of how the sun can power a fountain, Solar Fountain Design/Build will provide the basics of photovoltaic and pump know-how and ideas for designing a fountain powered by the sun. The workshop is for adults, teachers, and kids from junior high on up.

Presenter Laurie Lange is an artist and builder who lives off the grid and has been creating solar fountains for 6 years.

Solar Hot Water (W)

Sat *12:15pm-1:15pm* *Dogwood*

Speaker: Odes Armijo-Caster of Sacred Power

Solar Ovens (S)

Sun *12:15pm-1:15pm* *Dogwood*

Speaker: Rose-Marie Kern of Solar Ranch

Rose Marie Kern goes over the basics of how to cook using only sunlight. She demonstrates the solar and meteorological requirements and discusses various types of solar cookers focusing primarily on the box oven. The discussion is half an hour, after which the class will adjourn outside to the solar cooking area to taste some solar-cooked foods.

Author of “The Solar Chef” cookbook, Rose is a past president of the New Mexico Solar Energy Assn, and the creator of the Solar Fiesta. Her book is now in its fifth edition and is endorsed by the Global Sun Oven Company.

Solar PV and Solar Thermal in the Home (tent.) (W, E)

Sat *2:45pm-3:45pm* *Aspen*

Speaker: Larry Mapes of Valverde Energy

NEED

NEED

Solar Rights in New Mexico (E, W)

Sun *1:30pm-2:30pm* *Birch*

Speaker: Patrick Griebel of 310 Solar

Attorney Patrick Griebel provides an overview of New Mexico’s statutes and public policy favoring the advancement of solar energy in New Mexico.

Patrick has been a practicing attorney for several years, specializing in construction and business law litigation. His experiences in these areas have fueled his passion to address the serious threat fossil fuels pose to our planet.

Strawbale Structures (D)

Sun *2:45pm-3:45pm* *Birch*

Speaker: Derek Roff of Builders without Borders

Solar design and strawbale construction can complement each other, to produce a beautiful, energy conserving house. This presentation will show pictures of many successful solar strawbale homes, and discuss some of the features and considerations that contribute to an effective synergy.

Derek Roff is co-director of Builders Without Borders, a volunteer network that creates educational materials and collaborates on special projects to spread information on natural building, energy conservation and sustainability. He has been involved in strawbale building for about 15 years.

Technical Sessions, Parts I & II (P)

Sun

12:15-2:15 (Session I); 2:45-4:45 (Session II)

Elder Room

Speaker: Various speakers

This year's Technical Sessions are geared toward technical aspects of solar and renewable energy and will consist of a series of short talks, each followed by a Q&A period. The sessions will feature: Dr. Thomas Mancini, the Program Manager for concentrating solar power at Sandia National Laboratories, speaking on the status and potential for concentrating solar power in New Mexico. Dr. Daniel Laird, also of Sandia National Laboratories and the current chair of the American Society of Mechanical Engineers' Wind Energy Technical Committee, will discuss the current state of utility-scale wind energy and Sandia's research in this area. Dr. Matthew Lloyd, Postdoctoral Researcher, Surface and Interface Sciences, Sandia National Laboratories, will be giving an introduction to organic photovoltaics. Members of the North American Wind Research and Training Center in Tatum, NM. Dr. Carl Axness will speak on building an off-grid, passive and PV solar, sustainable home.

Ten Things I Wish I Knew Before I Flipped the Switch (P)

Sun

11:00am-12:00pm

Elder Room

Speaker: Aaron Cabral of Affordable Solar

The Benefits of Energy Storage Integrated with Renewable Energy (E, P)

Sat

4:00pm-5:00pm

Birch

Speaker: Steve Willard of PNM Center for Innovation & Technology

In order to make the most effective use of renewables, utilities across the nation are looking hard at how energy storage technologies can alleviate issues stemming from renewable resource intermittency. This talk will discuss the intricacies of system operation, the rules governing system operation and how intermittent resources are currently being accommodated. The benefits of energy storage will then be discussed along with a review of currently available and proposed storage technologies. The concept of smart grids and how they relate to storage and renewables will also be discussed.

NEED

The Six Principles of Good Solar Heating Design (W)

Sun

11:00am-12:00pm

Birch

Speaker: Bristol Stickney of Cedar Mountain Solar, LLC

He will share the principles and examples of how they are used to create successful solar heating projects (as well as the consequences of not balancing these principles.)

Bristol Stickney, Partner & Technical Director at Cedar Mountain Solar Systems in Santa Fe, NM, has been designing, manufacturing, engineering, repairing, and installing solar hydronic heating systems for over thirty

years. Mr. Stickney is a nationally published columnist on solar heating topics for several industry magazines.

Wind Basics (E)

Sun

2:45pm-3:45pm

Cedar

Speaker: Mark Rumsey of Wind Energy Technology Dept., Sandia National Laboratories

This presentation will provide basic information to help you determine if a wind turbine will work for you. Topics to be discussed are: wind resource assessment; siting; wind turbine types, characteristics and sizing; with a few words on storage, zoning, financing and vendors. References to other material will be provided.

Mark Rumsey has been involved in wind energy technology research and development for over 20 years at Sandia National Laboratories.