

Take the Mystery out of Solar Heating Controls

BRISTOL STICKNEY & CEDAR MOUNTAIN SOLAR SYSTEMS

welcome you to their
SOLAR THERMAL TRAINING INTENSIVE

In Santa Fe, New Mexico

OCTOBER 1-2, 2009

supplemental programs on Sept. 30 & Oct. 3

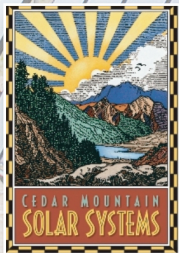
Solar Heating Expert, Bristol Stickney, author of Solar Solutions articles in PHC News and Plumbing Engineer, demonstrates his elegantly simple, comprehensive solar heating control strategies for integrated systems in a working lab environment.

Two-day intensive hands-on training
Special rates for company groups

See our website for program information:

cedarmountainsolar.com

505-474-5445



Cedar Mountain Solar and Solar Logic Present...

A Solar Thermal Training Intensive

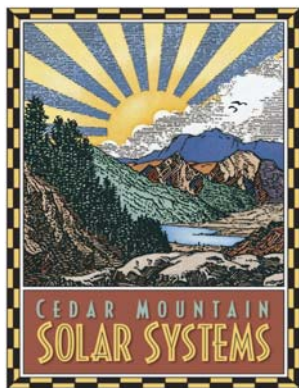
Practical Solar Heating Design Guidelines for Professional Installers

Basic (1 Day): The fundamentals of solar hydronic heating systems will be covered including collector orientation and tilt, drainback vs. closed loop pressurized systems, AC vs. DC circulators, overheat protection and system sizing for tanks and collectors. Solar DHW and its common components will be the focus of this class. At the end of the class, the successful student will be able to size tank and solar collectors for standard residential DHW applications, be knowledgeable of overheat protection for solar systems and know basic plumbing layout for several types of solar hot water system. This class requires no pre-requisites.

Main course (2 Days): Making the transition from Solar DHW to Solar Hydronic Combi systems using closed-loop glycol collector systems. Solar heating for the whole home will be discussed with the focus on how to connect multiple heating sources and multiple heating loads together in a systematic way, and how to control them. This workshop will include innovative energy efficient control methods and how they can be most easily applied using certain standard piping strategies that can be expanded and duplicated. Working examples will be presented of systems using primary loops, flow separators, modular pump stations and modular manifolds as design options. The logic of how solar heat effects boiler usage and how heat storage and heating loads can be prioritized will be covered. Basic programming and troubleshooting of some common solar controls will be included. At the end of the class, the successful student will be able to understand the principles of good solar hydronic design and be able create designs that include the basic controls for solar systems with multiple heating sources (solar with backup) for multiple heating loads. Course pre-requisites are either the Basic Solar class (above) or actual hands-on experience with solar systems.

Advanced (1 Day): This class will continue with the discussion of more advanced whole home heating systems and controls. It will introduce solar assisted ice melt, spa and pool heating, and using collector panels for night sky radiant cooling. Troubleshooting systems will play a large role in the class. These advanced controls are capable of utilizing radiant mass floors as both heat storage and overheat protection. In this advance course, the successful student will gain a deeper level of understanding of solar hydronic system controls and using glycol loops for heating multiple outdoor loads and radiant night cooling. Pre-requisite: Main Course (above)

Registration Form



Cedar Mountain Solar's Thermal Training Intensive

October 1 – 2, 2009

with supplemental programs September 30 and October 3

Welcome to the first of Cedar Mountain Solar's continuing Solar Thermal Training series, focused on solar heating system integration and controls. We look forward to meeting you.

Please read and complete the following Registration Form.

Registration Forms must be sent by mail or carrier to:

Cedar Mountain Solar, 3212 Richards Lane, Santa Fe, NM 87507

or by fax to: E. Robinson at 505 474 6818

For all registration questions please call 505-474-5445 ext: 107

or email Eric Robinson: erobinson@cedarmountainsolar.com

PARTICIPANT INFORMATION:

For up to four participants from a company, please have each person complete a Registration Form. Larger groups, please contact CMS. Payments may be made by individuals or by one company check.

Participant's Name: _____

Company Name: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Participant's Phone: _____ Fax: _____

Email: _____ Co. Phone: _____

Company Contact (if other than Participant): _____ Ext: _____

**Cedar Mountain Solar's Thermal Training Intensive
Santa Fe, NM - October 2009**

REGISTRATION & FEES:

*Please check the classes you will be attending and the related fee at right, adding your total.
Registration fees include access to classes, course materials and lunches for registered days only.
Registration fees include NM tax. If your company is tax exempt, please attach a GST exemption letter.*

Sept 30th : Fundamentals of Solar Hydronic Heating Systems \$350.00

October 1st & 2nd : Solar Heating Strategies for Integrated Systems \$800.00

October 3rd : Advanced Solar Heating Systems and Controls \$350.00

Total: \$ _____

PAYMENT:

Payments may be made by individual Participants or, in the case of multiple Participants from one Company, by a single Company check for the total of all Participants.

Check or Money Order enclosed, payable to Cedar Mountain Solar LLC : \$ _____

Credit Card: (*VISA or MasterCard only please*) \$ _____
Your card statement will read, "Cedar Mountain Solars LLC"

Card Number: _____ Expiration Date (m/y): _____

Cardholders Name: _____

By signing, I authorize the above charge to this credit card, and understand that refusal by VISA or MC to accept this charge will stop the Registrations process for this event until funds are received by CMS.

Signature: _____

REGISTRATION DEADLINES & PAYMENT INFORMATION:

If you have any further questions, please don't hesitate to contact CMS. Contact info on page one.

1. Deadline for registration is September 23rd, 2009. ◀
2. Registration forms can only be accepted via fax, mail or carrier.
3. Please make checks & money orders payable to "Cedar Mountain Solar LLC."
4. Fee Total must be included with Registration Form. CMS will not be responsible for correcting errors of omission in Participants' registration forms or payments. Participants are responsible for their own corrections and follow-through with CMS.
5. Registration fees are non-refundable.
6. Any check refused due to insufficient funds will need to be replaced by a money order or credit card, with a \$50 NSF fee added to the above total, before registration form will be processed.

continued...

REGISTRATION DEADLINES & PAYMENT INFORMATION, continued:

7. Substitutions of Participants will be accepted by September 23, 2009. Individuals substituting for previous Registrant must provide a completed Registration Form with a letter from the Substituted Participant (or their Company) verifying the substitution. All Parties understand that the fee change/reimbursement in such substitutes must be made between the two Participants (or the Parties and their Company, in the event the Company paid the fee) and will not be handled by CMS; CMS will hold original payment for the substitution.
8. VISA and MasterCard are accepted for credit card payments. Your statement will read: "Cedar Mountain Solar LLC"
9. Confirmation of receipt of Registration Forms and clearance of payments will be emailed to Participant (or, in the event of Company payment to the "Company Contact" person indicated on the first page of this Registration Form). Following this confirmation, a Registration Packet will be sent to each Registrant by U.S. mail. In the event of Company payment for multiple registrants, each Registrant will be sent a packet, but the packets will be sent together to the "Company Contact" indicated on the front of this Registration Form. Registration Packets will include a payment receipt from CMS, additional information about the Program, maps and travel/accommodation information.
10. If a Registration Form is received after September 23rd, 2009, CMS reserves the right to refuse registration based on Participant numbers already registered. In the event we can accommodate a late registration, we will confirm your registration and fee clearance by email (per above Item 9) but your receipt and Registration Packet will be held at CMS for your arrival at the Training.

GENERAL LOCATION & TRAVEL INFORMATION

The closest commercial airport to Santa Fe is Albuquerque. Santa Fe has a private airport. Our Registration Packets will include additional company information, a general program itinerary, maps of Santa Fe and of the routes from both Albuquerque and Santa Fe Airports, as well as brochures of a small range of hotels, some a few block from our company's business park and a few others further uptown, closer to the historic Santa Fe Plaza. If we can help you with other information, please don't hesitate to contact CMS by phone or email, as provided on the first page of this form.

This intensive will be a highly informative and interactive event. We look forward to a great week of dynamic conversations and shared ideas, and we appreciate your interest in the field.

"The success of any solar hydronic heating installation depends on the balance between... six principals. Finding the balance between them defines the art of solar heating design." — Bristol Stickney

BRISTOL STICKNEY

Solar Heating Designer and Consultant

BRISTOL STICKNEY is Co-Owner and Partner of CEDAR MOUNTAIN SOLAR, LLC in Santa Fe New Mexico where he leads the company as Technical Director, primarily focused in developing solar technology, high efficiency solar hydronic heating, passive solar building design, E10 evaluations and industry consulting. Cedar Mountain Solar is a design-build company specializing in solar hydronic heating systems for residences, businesses and commercial applications in NM and surrounding states. As such, Mr. Stickney works with Cedar Mountain Solar Systems' design and installation teams, consulting and providing custom design and integration elements for a variety of client applications. Recently Bristol Stickney and CMS Co-Owner Boaz Soifer formed a new company with a third colleague, Fred Milder, PhD-Nuclear Physics. This company, SOLAR LOGIC, LLC was formed to meet the growing national demand within the industry for Mr. Stickney's highly-regarded approach to Solar Heating Controls, by "packaging" Mr. Stickney's control systems and training others in this technology, its strategies and applications, first nationally and eventually internationally. The objective is to assist and expedite the national expansion of quality solar heating by providing industry professionals with the Black-Box that will "fold" the most complex steps into a portable, usable, working system - affording the sharing of decades of R&D with others in this field, providing them with knowledge, skills and new revenue streams as independent representatives of the CMS/Solar Logic aggregate.

In addition to his primary businesses, BRISTOL STICKNEY offers his knowledge and years of experience in alternative energy by consulting to companies in various industries, speaking at symposiums, conferences and industry conventions, and teaching aspects of solar hydronic heating in alternative energy and renewable fuel programs at colleges and universities. Mr. Stickney writes articles and ongoing columns for various publications including industry magazines such as Solar Pro, PE and PHC News. He is also currently writing a book which will be a synthesis of his knowledge and his most current research. Mr. Stickney worked with the New Mexico Solar Energy Association over a 17-year period in several positions including Director of Research and Board Vice-Chair. He was a Research Associate of Amory Lovins at the E-source office of The Rocky Mountain Institute, and a consultant to Zomeworks Corporation on heating and cooling optimization. Mr. Stickney's awards include a 2008 Showcase Award for Solar Heating Design from the Radiant Panel Association. His degree from the University of Maine is in Mechanical Engineering (1976) and he has continued his education through a spectrum of programs, and the NASA Database. He holds a Mechanical Contractor's license and is a skilled technical writer, public speaker, computer programmer, control systems designer (awarded a patent with another patent-pending), energy efficiency expert, water heating researcher, construction worker, auto mechanic, backhoe tractor operator, skier, photographer, musician, motorcyclist, bicyclist, kayaker, canoer and hiker. "— Any excuse to spend more time outdoors."

BOAZ SOIFER

Solar Energy Entrepreneur & Advocate

BOAZ SOIFER is Co-Owner and Partner of CEDAR MOUNTAIN SOLAR, LLC in Santa Fe, New Mexico where he leads the company as its General Manager. Mr. Soifer formed Cedar Mountain Solar with Solar Heating Designer/Researcher Bristol Stickney in 2004, having recognized the enormous national absence of knowledgeable, highly skilled solar heating companies, alongside the unique and superb conditions of New Mexico as a Solar Laboratory. Mr. Soifer is directly involved in all aspects of Cedar Mountain Solar, with particular focus on business development, industry outreach and alliances, consulting, legislation and education. Recently he and CMS Partner Bristol Stickney formed a new company with a third Partner - colleague Fred Milder, PhD-Nuclear Physics. This company, SOLAR LOGIC, LLC was formed to meet the growing demand within the industry for Mr. Stickney's solar heating controls, and will create a national pathway by implementing Mr. Soifer's business model and "packaging" Mr. Stickney's patented control systems. The objective is to assist and expedite the national expansion of quality solar heating by providing industry professionals with the Black-Box that will "fold" the most complex steps into a portable, usable, working system - affording the sharing of decades of R&D with others in this field, providing them with knowledge, skills and new revenue streams as independent representatives of the CMS/Solar Logic aggregate.

In addition to his work with CMS and Solar Logic, BOAZ SOIFER is a highly active member of the Northern New Mexico community, volunteering his time to colleagues in the field, college programs, planning and community efforts, including various State and City groups working to advance renewable energy incentives. He is Vice-President of the NM Renewable Energy Industries Association and sits on the Board of the Santa Fe Alliance. Mr. Soifer made CMS an active Sponsor for Youthworks Green Collar Jobs Apprenticeship Program - and was honored with a "Muchas Gracias" award from the City of Santa Fe for exceptional partnership and commitment. His leadership has brought CMS both national and local awards, including a Small Business of the Year Award and a Fastest Growing Small Company Award from NM's Business Weekly in 2007, when the company was barely three years old. Mr. Soifer is a solar heating expert and an adept technical writer in local and national publications such as The Sustainable Santa Fe Guide and SolarPro Magazine. He is a consultant, public speaker, planner, implementer, negotiator, ambassador, mediator and musician. He lives on Cedar Mountain in an off-the-grid home that continues as a work-in-progress.

Biographical Summary
August 2009

MARK STEVENS

Installation Operations & Construction Manager
Cedar Mountain Solar LLC

Mark Stevens moved to Santa Fe from the East Coast to join Cedar Mountain Solar in 2008, and leads the company's Installation Operations. Mark has a BS in Aerospace Engineering from the University of Maryland, and is a Certified NABCEP Solar Thermal Installer. His hands-on experience includes over 40 CMS solar hot water systems and numerous CMS whole home heating systems. As part of Cedar Mountain's educational outreach, Mark teaches and speaks to Northern NM communities on solar heating options, and has taught several solar hydronic heating courses at the well-known, lean and green Santa Fe Community College.

Biographical Summary

August 2009

FREDRIC MILDER, PhD

Chief Operations Officer

SolarLogic LLC

DR. FRED MILDER is a Principal of SolarLogic and leads the company as its Chief Operations Officer. As COO he is responsible for business planning, financing, intellectual property and product development. He brings an impressive track record of experience and execution in building companies. Dr. Milder was founder and CEO of Implemed for nine years, and founder of Cryocath Technologies in 1995 - a company that went public in 2000 and was recently bought by Medtronic. Dr. Milder has worked as a consultant, and taught Physics and Mathematics at the Wentworth Institute of Technology in Boston, MA. He also developed science and mathematics courses for Website education under Harcourt Higher Education (Thompson Publishing).

Over the years, Dr. Milder has served as a researcher and consultant in various arenas, including intellectual property, materials property enhancements through ion implantation and directed energy, medical imaging, the artificial heart and other medical devices. He holds a Ph.D. and M.A. in Nuclear Physics from the University of Michigan, and a B.A. in Physics from the Massachusetts Institute of Technology. Dr. Milder and his family currently live in Santa Fe, in an exemplary off-grid home powered by photovoltaics and an integrated, whole-home hydronic heating system — leaving no appliances, electronics or modern conveniences behind.