



Fall '98 Solar Center Calendar

Passive Solar Strategies & Energy-10 Software

November 12 & 13, 1998

D.H. Hill Library, NC State University

Designing and Building A Solar Home

December 4 & 5, 1998

Appalachian State University, Boone, NC

National Tour of Solar Homes

October 17, 1998

Address Correction Requested



Division
North Carolina
Department of Commerce

Box 7401, NCSU
Raleigh, NC 27695-7401

NORTH CAROLINA
SOLAR CENTER

Box 7401, NCSU

Raleigh, NC 27695-7401

NC STATE UNIVERSITY

College of Engineering

Industrial Extension Service

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Fall '98 Solar Center Calendar

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Work Phone: _____ Home Phone: _____ Fax: _____

E-mail: _____

Passive Solar Strategies & Energy-10 Software D.H. Hill Library, NCSU, November 12 & 13

Enclosed is my **Registration Fee**, \$250 per person _____ (received by Nov. 5) \$300 _____ (after Nov. 5)

Designing and Building a Solar Home Boone, NC, December 4 & 5

Enclosed is my **Registration Fee**, \$110 per person _____ (received by Nov. 25) \$125 _____ (after Nov. 25)

Dietary Preferences _____

National Tour of Solar Homes – The Triangle Tour '98 October 17

Enclosed is my **Registration Fee**, \$115* per person _____ (received by Oct. 9) \$20 _____ (after Oct. 9);

NCSEA members, \$10 per person _____ (received by Oct. 9) \$15 _____ (after Oct. 9);

Students, \$5 _____ (received by Oct. 9) \$10 _____ (after Oct. 9)

*Non-members will receive a one-year NCSEA membership, with registration.

Fax or mail me a National Tour of Solar Homes '98 Brochure.

Total enclosed: _____ Cancellations with refund may be made up to one week before the events. Substitutions allowed.

Make check or money order payable to: **N.C. Solar Center**, Box 7401, Raleigh, NC 27695-7401

For more information, call the N.C. Solar Center at **919-515-3480** or **1-800-33 NC SUN** (toll free in N.C.)



Designing Low Energy Buildings: Passive Solar Strategies & Energy-10 Software

November 12 & 13, 1998
D.H. Hill Library, NC State University

This two-day, hands-on computer workshop covers all aspects of designing energy efficient small commercial buildings. Developed for architects and consulting mechanical engineers, the workshop is built around the fast and easy-to-use Windows-based Energy-10 software package. It is designed to be used on commercial, institutional and residential buildings with one or two thermal zones and approximately 10,000 square feet and under. It relies on a "whole building" approach and integrates passive solar strategies, daylighting, and low energy cooling strategies with energy-efficient shell design and mechanical systems.

Since re-designing a building is rarely possible in the fast pace and tight budgets of the commercial market, Energy-10 was developed to demonstrate the consequences of various decisions early in the design process. The software first compiles a default building file based on building size and use, then evaluates and ranks any of sixteen different strategies and presents the results in easy to understand color graphs. The designer can then further define the building file, adding their own custom materials and building assemblies if needed. The evaluations are comprehensive, hour-by-hour calculations based on typical long-term average conditions for a wide selection of locations in the United States.

The sixteen energy-efficient strategies covered in the workshop:

Daylighting	Glazing Options
Shading Techniques	Energy-Efficient Lighting
Lighting Control	Insulation Levels
Air Leakage Control	Thermal Mass
Passive Solar Heating	Natural Ventilation
Economizer Cycle	Exhaust Heat Recovery
High Efficiency HVAC	HVAC Controls
Evaporative Cooling	Solar Water Heating

The presenters are: Bill Bobenhausen, P.E., a nationally known engineer and educator from New York; Alicia Ravetto, AIA, a N.C. architect with many years of experience in daylighting and passive solar design; and Henry Rogers, a solar energy extension specialist with the N.C. Solar Center.

Designing & Building A Solar Home

December 4 & 5, 1998
Kerr Scott Hall, Appalachian State University

What the Workshop Will Cover

This workshop is for anyone—homeowners, architects, builders—involved in the process of building a new home. Information covered in the workshop addresses the most important decisions when designing and building a resourceful, efficient and healthy house. Topics include choosing a site with good solar access, selecting "green" building materials, and evaluating active solar, photovoltaic and HVAC systems.

The workshop presenters will be Henry Rogers, solar energy extension specialist, N.C. Solar Center and Jeff Tiller, Asst. Professor of Building Science at Appalachian State University and co-founder of the Southface Energy Institute in Atlanta, GA. In addition to the instructors, a building professional from the area will present specialized information.

The workshop fee is **\$110** and includes a workbook, materials, lunches, and publications. A 10 percent discount is offered for couples or group registrations. Kerr Scott Hall is located on the campus of Appalachian State University in Boone, NC.

Agenda

Friday, December 4

8:30-9:00	Registration
9:00-9:30	Introduction to Workshop
9:30-10:45	The Homebuilding Process
11:00-12:00	Siting Your Solar Home
1:00-2:15	Plans, Drawings and Contracts
2:30-5:00	Solar Home Design Guidelines

Saturday, December 5

9:00-10:30	Energy Efficient Construction: <i>Techniques</i>
10:45-12:00	Energy Efficient Construction: <i>Materials</i>
1:00-2:00	Environmental Building Issues
2:15-4:30	Energy Efficient Construction: <i>HVAC & Lighting</i>
4:30-5:00	Additional Resources and Closing Remarks

For More Information Call:

1-800-33 NC SUN or 919-515-3480

The N.C. Solar Center is sponsored by the Energy Division, N.C. Department of Commerce, and the U.S. Department of Energy, with State Energy Conservation Program funds, in cooperation with North Carolina State University.

 17,500 copies of this document were printed on recycled paper at a cost of \$1,325 or \$.08 each.

National Tour of Solar Homes

Saturday, October 17, 1998

Experience the energy and beauty the sun can bring to your home by participating in the 1998 National Tour of Solar Homes. Home tours will be taking place in almost every state in the U.S., and North Carolina is offering three tours plus a few "solo" homes in other towns. Last year more than 12,000 people visited solar buildings in over 100 communities across the country! Don't miss out on this opportunity to see your solar dream house first-hand. Talk to the owners, builders and designers to see for yourself how well solar works and how affordable it is.

Tours in North Carolina will be held in the Triangle area, Asheville, Boone, and Burnsville Area. This year's Triangle Area Tour will feature homes in Chatham and Durham County, demonstrating a range of solar technologies and healthy building designs including: **passive solar heating, active solar hot water and space systems, radiant floors and high-mass houses.**

Meet at the Church of Reconciliation, 110 N Elliott Rd., in Chapel Hill on the morning of October 17th, for the Triangle Area Tour. Registration is from 8:30 – 10:30 am. Be sure and come early for a program on solar home design from 9:00 – 9:45 am. The tour includes a booklet, which describes the energy features of each home, and a map that guides you through the tour. Go at your own pace, visiting as many or as few of the homes as you like. There will be knowledgeable people at each home to answer your questions.

The Triangle Area Tour lasts from 10:00 a.m. – 4:00 p.m. Included in the registration fee for non-members is a one-year membership to the North Carolina Solar Energy Association (NCSEA). Discounted tickets are available for current members.

Immediately following the tour at 4:30 p.m. is the NCSEA annual meeting, followed by a social hour, and then dinner with speaker Tom Starrs. For additional information about the Triangle Area Tour, see the NCSEA web page:

www.mindspring.com/~ncsea

For more information on other North Carolina Tours, please refer to the following phone numbers:

Asheville:	(828) 687-7618
Boone*:	(828) 262-2949 or (828) 264-6026
Burnsville Area:	(828) 675-5591 or (828) 675-9048

*The Boone tour will be held on October 31, 1998.