NMERDI 2-71-4519

**EIGHTH NATIONAL
PASSIVE SOLAR CONFERENCE**

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Principal Investigator:
Aubrey Owen

Principal Author:
Ron Zee

December 1983

MASTER

New Mexico Energy Research and Development Institute

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EIGHTH NATIONAL PASSIVE SOLAR CONFERENCE

Final Report

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7. ABSTRACT (A 200-word or less factual summary of the most significant information. If report includes a significant bibliography or literature survey, mention here.) <p>The Eighth National Passive Solar Conference was held near Santa Fe, New Mexico at the Glorieta Conference Center on September 5-11, 1983. Nearly 900 people from all across the nation and the world attended the conference. Close to 200 technical papers were presented, 50 solar product exhibits were available; 34 poster sessions were presented; 16 solar workshops were conducted; 10 renowned solar individuals participated in rendezvous sessions; 7 major addresses were delivered; 5 solar home tours were conducted; 2 emerging architecture sessions were held which included 21 separate presentations; and commercial product presentations were given for the first time ever at a national passive solar conference. Peter van Dresser of Santa Fe received the prestigious Passive Solar Pioneer Award, posthumously, from the American Solar Energy Society and Benjamin T. "Buck" Rogers of Embudo, received the prestigious Peter van Dresser Award from the New Mexico Solar Energy Association.</p>		
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Introduction

The Eighth National Passive Solar Conference was held near Santa Fe, New Mexico at the Glorieta Conference Center on September 5-11, 1983. The culmination of many months of planning and organization, the conference attracted nearly 900 people from all over the world. Judged by many who attended as one of the best passive solar conferences ever held, "Passive 83," its shorter name, accomplished its primary goal without fanfare - the enhancement of information dissemination and technology transfer related to solar energy. Nearly 200 technical papers were presented; 50 solar product exhibits were available; 34 poster sessions were presented; 16 solar workshops were conducted (only 3 additional workshops previously scheduled had to be cancelled for lack of attendance); 10 renowned solar individuals participated in rendezvous sessions, 7 major addresses were delivered, including addresses by the Honorable Toney Anaya, Governor of New Mexico and by the Honorable Mike Runnels, Lieutenant Governor of New Mexico; as well as J.B. Mulcock of Public Service Company of New Mexico, J. Douglas Balcomb of Los Alamos National Laboratory, Jeffrey Cook of Arizona State University, John Yellott of Arizona State University, and Donald Aitken of San Jose State; 5 solar home tours were conducted in Santa Fe, Albuquerque, Los Alamos and Taos; 2 emerging architecture sessions were held which

included 21 separate presentations; commercial product presentations were given for the first time ever at a National Passive Solar Conference; and there were many informal gatherings as well.

New Mexicans who attended the conference took special pride in seeing the entire event dedicated to the late Peter van Dresser of Santa Fe, who received the prestigious Passive Solar Pioneer Award, posthumously, from the American Solar Energy Society (ASES) and its Passive Systems Division. Few would deny that New Mexicans who have made substantial contributions to the solar field were given special emphasis. Indeed, individuals with the names Balcomb, Yanda, Nichols, Mazria, Rogers, Haggard, Morris, Stromberg, Wright, Lumpkins, Mingenbach, Jones, Wilson - all with strong ties to the New Mexico Solar Energy Association (NMSEA) and all solar household words - were very much in evidence at this conference.

The American Solar Energy Society, the sponsor of Passive 83, and the New Mexico Solar Energy Association, the local host of Passive 83, both can take satisfaction in having accomplished their objectives and achieved a successful, professional conference. This achievement, however, would not have been possible without major contributions from many individuals and organizations. Special recognition should be given to Public Service Company of New Mexico, the

New Mexico Energy Research and Development Institute, the New Mexico Energy and Minerals Department, the New Mexico Economic Development and Tourism Department, and the New Mexico Solar Industry Development Corporation without whose strong support this conference would never have achieved success. A list of all major contributors is found on Page vi of the ASES Conference Papers Preprint Edition. The deep gratitude of ASES and NMSEA should be expressed also to the many volunteers who put in long hours to make this conference a success, for often they go unrecognized.

This Final Technical Report on the Eighth National Passive Solar Conference will review conference organization, attendance, finances, conference evaluation form results, and will include press coverage samples, selected conference photos courtesy of Marshall Tyler, and a summary with recommendations for future conferences. The Appendices include conference press releases and a report by the New Mexico Solar Industry Development Corporation on exhibits management. The New Mexico Energy Research and Development Institute, the New Mexico Energy and Minerals Department, and the New Mexico Solar Energy Association will maintain additional conference documents in their files, including the ASES Conference Papers Preprint Edition, conference registration handout materials, and pre-conference advertising brochures which are not part of this report.

Organization

Critical to the success of any conference is how well it is planned and organized. ASES (and NMSEA) employed an elaborate structure for conference planning and organization for Passive 83, which ASES has used for previous conferences. Essentially, there are two parts to a national passive solar conference - technical sessions and ancillary events. Technical sessions are the sole responsibility of ASES through its National Organizing Committee (NOC) and its Technical Review Committee (TRC). Ancillary events are the sole responsibility of the local host chapter of ASES, in this case, NMSEA through its Local Organizing Committee (LOC). A 5-page legal contract between ASES and NMSEA was signed which detailed the responsibilities of each organization relating to Passive 83. As mentioned in the contract, ASES (and the NMSEA) were bound by provisions of the 19-page ASES Conference Policy Manual which provides additional guidance in the form of policies and procedures relating to organization, conference identity and conference events, printed materials, contract, finances, papers and proceedings, volunteers, exhibits, staff, registration, complimentary rooms, and arbitration. The passive conference is the annual conference of the Passive Systems Division of ASES, and, therefore, the Passive Systems Division Board has a major role to play. In addition, the LOC was responsible to the NMSEA Executive Committee, which approved all major financial and contractual agreements the LOC entertained.

The resulting organizational structure of Passive 83 looked like this:

Passive 83 also marked the first time that overall on-site conference coordination and exhibits management were delegated to the local host organization, NMSEA. In planning the conference, the bottom line for the NOC (responsible for planning the technical conference along with the TRC) was a desire to see a wide range of technical sessions, including

expanded emerging architecture and new architecture sessions, poster sessions, rendezvous sessions (a new feature), and high-caliber addresses. The bottom line for the LOC (responsible for planning ancillary events) was a wide range of workshops, worthwhile solar home tours, high quality exhibits, commercial product presentations (first time ever at a passive conference), and a professionally coordinated conference.

The essential factors in employing the above structure successfully were constant communication, effective coordination, and professional administration. The end result of the conference planning and organization process can be seen in the conference program guide and the conference itself.

Documents produced in the planning and organizing of the conference included a call for papers, a conference announcement brochure, a conference program guide, press releases, and a conference activity schedule.

It should be noted that associated events held in conjunction with Passive 83 included the annual meeting of the New Mexico Society of Architects, (AIA), the annual meeting of the American Society of Testing and Materials Subcommittee on Passive Solar Heating and Cooling Systems, the annual meeting of the New Mexico Solar Energy Association, and the annual meeting of the ASES Passive Systems Division Membership. In addition,

NMSEA's Annual Life Technics Conference Luncheon was held during Passive 83 which saw Benjamin T. "Buck" Rogers of Embudo, New Mexico receive the prestigious Peter van Dresser Award.

Special mention should be given to a number of individuals who played critical roles in this organizational structure. The 7-member NOC was chaired by Sara Balcomb of Santa Fe. Other New Mexicans on the NOC included Michael Lechner of Public Service Company of New Mexico and Edward Mazria of Santa Fe. The 5-member TRC was chaired by Harry Gordon of Washington, DC. One New Mexican was on the TRC, Bruce Hunn of Los Alamos. The 20-member LOC was chaired by Michael Lechner. The other nineteen members of the LOC from New Mexico were Sara and Doug Balcomb, Leslie Davis, George Ellis, Mark Jones, Paul Lusk, Edward Mazria, Steve Meilleur, Scott Morris, Wayne and Susan Nichols, Aubrey Owen, Dale Stolz, Robert Stromberg, Harold Trujillo, Peter Vogel, Bill and Susan Yanda and Harry Zwibel. Special mention should be given also to the competent ASES conference staff, which included Karen George, Jeanne Treadway, and Barbara Bradley; to Lee Alhorn and Augustine Apodaca from the New Mexico Solar Industry Development Corporation, who, along with Coralie McGuire, did an excellent job managing exhibits; to Susan Yanda and Michael Goodrich who coordinated volunteers (Susan Yanda also handled the difficult job of coordinating transportation), Bob Stromberg who coordinated workshops, and Sherrill Imerman who coordinated tours - who all worked hard to make the conference a success.

Attendance

Estimates of conference attendance prior to Passive 83 exceeded 1,000 individuals, and it was hoped and planned that a number approaching that figure would attend. Final figures show that Passive 83 attracted 875 registrants from all over the world. The factors that may have influenced a lower attendance include economics (ASES was forced to increase the conference registration fee over last year), travel distance, scheduling (only 3 months after ASES Annual Meeting in Minneapolis in June, and immediately after the ASES co-sponsored RETSIE Conference in Anaheim), remote location, time of year (just after the start of school), and lack of adequate, advance national advertising and promotion by ASES.

Complete conference attendance figures are given below:

ASES Member Full	440
ASES Member 1 Day	59
Student Member Full	133
Student Member 1 Day	6
Non-Member Full	71
Non-Member 1 Day	44
Press	15
Complimentary	107
Total Registrants	875
Basic Calculations Workshop #1	64
Gardening in Greenhouse Workshop #3	8
Greenhouse Trilogy 1 Workshop #4	14
Rammed Earth Workshop #5	18
Solar Stills Workshop #7	7
Sunspace Retrofits Workshop #8	26
Passive Design/Evaluation Workshop #9	143
Greenhouse Trilogy 2 Workshop #10	18
Photovoltaic Residences Workshop #11	23
Solar Business Workshop #13	25
Solar Drying Workshop #14	4
Solar Hot Water Workshop #15	16

Utilities & Passive Solar Workshop #16	15
Beamed Sunlighting Workshop #17	28
Greenhouse Trilogy 3 Workshop #18	37
Wood Heat/Solar Backup Workshop #19	18

(Solar Lumber Kiln Workshop #2, Solar Cooking Workshop #6, and Solar Access Workshop #12 were cancelled due to lack of attendance)

Tour #1 Santa Fe Solar Homes 9/10	162
Tour #2 Santa Fe Solar Homes 9/11	28
Tour #3 Passive Solar Showcase	23
Tour #4 Los Alamos/Bandelier	22
Tour #5 Taos	7

It is interesting to note that every state in the nation was represented at the conference, and 45 visitors came from 13 foreign countries (West Germany, Canada, France, Switzerland, Japan, India, Austria, Israel, Czechoslovakia, England, Greece, Spain, and the Netherlands). Over 100 people attended from each of three states - New Mexico, Colorado, and California, and between 25 to 50 people attended from each of three other states - Texas, Arizona and Oregon.

Finances

The accounting of all finances for Passive 83 related to ancillary events is complete as of December 1, 1983. Though no added expenses are contemplated, the books on Passive 83 will remain open until December 31, 1983. Finances for the technical sessions part of Passive 83 are the exclusive property of ASES and are not included in this report. The final accounting for ancillary events appears on the following page.

<u>Category</u>	<u>Amount Budgeted</u>	<u>Amount Expended</u>	<u>Amount Overbudget</u>	<u>Amount Underbudget</u>	<u>Amount Remaining</u>	<u>Income Source</u>
1. Conference Coordination	\$16,637.50 4,851.00 600.00	\$16,621.00 4,851.00* 586.41	- - -	- - 13.59	\$ 16.50 0 13.59	NMERDI NMEMD Passive Account
2. Information Dissemination	2,400.00 4,000.00	2,208.86 3,209.03	- -	- -	191.14 790.97	NMERDI NMEMD
3. Exhibits	23,707.18	23,707.18	-	-	0	NMSIDC
4. Workshops**	250.00	594.00	344.00	-	0***	NMEMD
5. Tours	750.00	500.00	-	250.00	0***	NMEMD
6. Social Events	1,000.00 1,000.00	1,000.00 775.60	- -	- 224.40	0 130.40****	TSEA Gift Passive Account
7. Transportation	0	0****	-	-	0	Charges
8. Volunteers	500.00	251.06	-	248.94	0*****	ASES,
9. Sundries	2,013.80 400.00	2,013.80 280.00	- -	- 120.00	0 116.80*****	ASES Passive Account
10. Scholarships	500.00	500.00	-	-	0	TSEA Gift
11. Life Technics Luncheon	100.00	247.00	147.00	-	0*****	TSEA Gift
12. Reunion Luncheon	400.00	505.14	105.14	-	0*****	TSEA Gift
<u>TOTAL</u>	\$59,109.48	\$57,850.08	\$ 596.14	\$ 856.93	\$ 1,259.40	

* This amount was an in-kind contribution assumed to have been used in total.

** This item includes the costs of AV rental, copying, etc., and does not include the costs of workshop presenteror fees (totalling \$14,876.17) which were paid out of workshop attendee charges.

*** Overbudget \$344.00 paid from underbudget \$250.00 from Tours and underbudget \$94.00 from Social Events.

**** Actual costs of transportation (\$4,870.00) were paid form per person charges collected at the conference.

***** Overbudget \$147.00 and overbudget \$105.14 (total \$252.14) paid from underbudget \$248.94 from Volunteers and underbudget \$3.20 from Sundries.

Conference Evaluation Form Results

Each Passive 83 registrant received a 3-page conference evaluation form. The total number of evaluation forms received by ASES to date is 177, a valid statistical sample upon which the following information is based.

1. General Information

A. What is your profession?

Architect	<u>35%</u>
Builder	<u>10%</u>
Developer	<u>less than 1%</u>
Educator	15%
Engineer	<u>25%</u>
Researcher	<u>15%</u>
Other	<u>20%</u>

B. Are you an ASES member?

Yes	<u>88%</u>
No	<u>12%</u>

C. How did you find out about the conference?

Brochure in Mail	<u>60%</u>
Friend/Colleague	<u>20%</u>
Advertisement	<u>10%</u>
Article	<u>5%</u>
Calendar Listing in Publication	<u>15%</u>
Local Solar Organization	<u>5%</u>
Other	<u>5%</u>

D. Did you notice the list of co-sponsors of the conference in literature or conference signs?

Yes 78%

No 22%

E. If yes, do you remember the names of any of the co-sponsors?

Yes 83%

No 17%

2. Overall Conference Rating

How do you rate the conference overall?

Excellent		Good		Poor
1	2	3	4	5
19%	50%	26%	5%	0%

3. PROGRAM

	No Opinion	Excellent	Good	Poor
A. WORKSHOPS	0-55%	1-11%	2-14%	3-15%
B. TOURS	0-79%	1-4%	2-8%	3-3%
C. TECHNICAL SESSIONS	0-2%	1-12%	2-48%	3-30%
D. RENDEZVOUS	0-58%	1-15%	2-14%	3-11%
E. EMERGING ARCHITECTURE	0-22%	1-28%	2-29%	3-16%
F. COMMERCIAL PRODUCT PRESENTATIONS	0-40%	1-7%	2-20%	3-26%
G. POSTER/ INTERACTION SESSIONS	0-16%	1-6%	2-24%	3-28%
H. OPENING PLENARY	0-22%	1-34%	2-24%	3-16%
I. CLOSING PLENARY	0-59%	1-19%	2-14%	3-7%

4. EXHIBITION

	No Opinion	Excellent	Good	Poor
A. OVERALL QUALITY	0-4%	1-12%	2-33%	3-38% 4-12% 5-1%
B. TENT AS FACILITY	0-4%	1-10%	2-30%	3-24% 4-19% 5-13%
C. How important are exhibits to overall conference?	0-5%	1-48%	2-29%	3-12% 4-4% 5-2%
D. Do you plan on buying any of the products displayed?	73% 1. Yes 27% 2. No			

5. CONFERENCE SERVICES/INFORMATION

	No Opinion	Excellent	Good	Poor
A. Registration	0-7%	1-38%	2-31%	3-21% 4-7% 5-3%
B. Program Guide	0-0%	1-38%	2-43%	3-13% 4-5% 5-1%
C. Material in Registration Package	0-3%	1-29%	2-42%	3-22% 4-4% 5-0%
D. Signs	0-11%	1-12%	2-25%	3-35% 4-14% 5-3%
E. Bus Service to/from site	0-65%	1-3%	2-5%	3-11% 4-5% 5-11%

6. REPRINTS

How useful is the volume of papers presented at the conference?

No Opinion	Excellent	Good	Poor
0-8%	1-64%	2-19%	3-9% 4-0% 5-0%

7. SPECIAL EVENTS

	No Opinion	Excellent	Good	Poor
A. Welcome/ Altitude Adjustment Reception	0-49%	1-8%	2-10%	3-17% 4-12%

	No Opinion	Excellent	Good	Poor
B. Luncheon Programs	0-57%	1-2%	2-9%	3-14% 4-11% 5-7%
C. Zozobra	0-62%	1-25%	2-8%	3-5% 4-0% 5-0%

8. COST

Overall, was the cost of the conference worth it to you?

91% 1. Yes 9% 2. No

9. COMMENTS

The following comments are grouped by most positive comments/most negative comments, with the number of people responding in each category.

<u>Most Positive</u>	<u>Most Negative</u>
A. Conference was well-run and well-organized - 20	A. Food was horrible - 27
B. Remote setting was beautiful and appropriate - 12	B. Papers and speakers should be more rigorously screened - 18
C. Emerging Architecture and Architecture Retrospective Sessions were great - 11	C. Speakers should be better trained in the art of presentation - 17
D. Thanks for a wonderful experience - 6	D. Need more "how-to" sessions less theoretical
E. Keep the humor in the conference - 5	E. Remote setting was beautiful but not appropriate - 12

Press Coverage Samples

The following samples of local press coverage, the responsibilities of the LOC (national press coverage was the responsibility of the NOC), show a combination of general interest pieces, advertisements, and in-depth coverage.

NM hosts national conference

Located in the mountains 14 miles east of Santa Fe on Interstate 25, the Glorieta Conference Center lies at the foot of 10,300-foot Glorieta Baldy, part of the Santa Fe National Forest.

The Glorieta Conference Center in the mountains southeast of Santa Fe will be the site this year for the 8th National Passive Solar Conference and Exhibit to be held September 5-11. Surrounded by colorfully landscaped grounds, including world-famous gardens framed by high mesas and heavily forested mountains, the Glorieta Center was chosen to stimulate communication among conference participants in an isolated geographic environment.

Since 1976, when the first passive conference was held in Albuquerque, the event has grown to encompass the worldwide attention and participation of passive solar advocates. This year's program, hosted by the New Mexico Solar Energy Association, promises to be one of the most diverse and interesting to date.

The three-day technical program will include:

- **Technical and seminar sessions**
 - technical advances
 - design and analysis tools
 - performance monitoring results
 - building occupants surveys
 - state and local initiatives
 - international activities
- **Emerging architecture**
 - buildings of the Southwest region
 - buildings of other regions and overseas
- **Posters**
 - an opportunity for authors to display their work
- **"Rendezvous,"** a new feature
 - an opportunity to meet individuals who have made major contributions to the development of passive solar over the years.

over

Energy Source (con't)
July, 1983

A highlight of the conference will be a series of 19 workshops sponsored by the New Mexico Solar Energy Association. (A complete listing of workshops is included in the conference brochure.)

Several tours have been planned for September 10 and 11—solar homes in Santa Fe, the New Mexico Showcase of Solar Homes (two subdivisions, one in Rio Rancho, one in El Dorado near Santa Fe), Los Alamos National Laboratory, Bandelier National Monument, and the city of Taos.

Passive 83 exhibits, a major feature of the event, will be open to the public at no charge on Saturday, September 10. Viewers will see a wide selection of products and services related to passive solar energy: window treatments, insulation products, glazing materials, computer hardware and software, thermal storage materials and components, controls, measurement and testing devices, photovoltaics, greenhouses, collectors, woodstoves, and specialized publications.

A complete conference announcement, including registration, housing, and transportation information, is available from NMSEA, P.O. Box 2004, Santa Fe, NM 87501, telephone (505) 827-5878 or ASES, 1230 Grandview Avenue, Boulder, CO 80302, telephone (303) 492-6017.

Solar energy society conference planned for Glorieta

The American Solar Energy Society will conduct its 8th National Passive Solar Conference and Exhibition at the Glorieta Conference Center near Santa Fe Sept. 5-11.

Architects, builders, engineers, researchers, equipment suppliers and others in the field will convene at the conference to participate in full programs of workshops, tours, exhibits and three days of technical sessions.

Speakers will include Jeffrey Cook, AIA, editor of the Passive Solar Journal and professor at Arizona State University; Dr.

Douglas J. Balcomb of Los Alamos National Laboratory; Dr. Donald A. Aitken, chairman of the American Solar Energy Society and professor at San Jose State University; Gov. Toney Anaya; J.B. Mulcook, Public Service Company of New Mexico sector vice president of corporate affairs; Lt. Gov. Mike Runnels; and John Yellott, professor at Arizona State University.

According to Harry Gordon, technical programs chairman, and an architect with Burt, Hill, Kosar and Rittleman in Washington, D.C., "Conference attendees will be

brought up to date on state-of-the-art passive solar design and technology. Major progress has been made in research and application of passive solar cooling and daylighting. Also, performance results of passive solar buildings will be included."

The host organization of the conference, the New Mexico Solar Energy Association (NMSEA), will expand the technical programs and the exhibition by sponsoring more than a dozen workshops on such topics as passive solar design and evaluation, greenhouse design and maintenance, gar-

dening in the solar greenhouse, residential use of photovoltaic cells, solar business, solar water heating and solar cooking. The workshops and tours are open to the public at varying prices.

NMSEA will also conduct tours of local solar projects. Sites to be visited include some of the most renowned solar homes in Santa Fe, as well as two new solar subdivisions, Native American dwellings and "high-tech" buildings at the Los Alamos National Laboratory.

NEW MEXICO: SOLAR LEADER

Organizers of this month's 8th National Passive Solar Conference and Exhibit, September 5-11 in Glorieta, say the seven-day event will solidify New Mexico's position as the leading state in the solar energy field. According to Ron Zee, conference director, "The conference will focus national attention on New Mexico regarding solar energy and the progress we've made here in that area."

Sponsored by the American Solar Energy Society and hosted by the New Mexico Solar Energy Association, the series of workshops planned range from solar access and emerging architecture to commercial building performance and

Joan Daw

Solar house by Mark Jones, Santa Fe architect.

community initiative. Funding and aid for the conference came from the New Mexico Energy Research and Development Institute, the state Energy and Minerals Department, the state Economic Development and Tourism Department via the

New Mexico Solar Industry Development Corporation, and the Public Service Company of New Mexico.

For more information on attending individual workshops, call 505/827-5878.

—C.S.

Promoters expect passive confab to be active

National and regional solar businesses will be displaying their products and services to architects, engineers, builders and developers at the Eighth National Passive Solar Conference Exhibition at the

Glorieta Conference Center near Santa Fe Sept. 7-10.

Public Service Company of New Mexico and the state of New Mexico have given support to the conference. Exhibits will range from window treatments to computers to woodstoves. The first passive conference was conducted in Albuquerque in 1976. The conference this year will overlap the Santa Fe Fiesta and is expected to draw as many as 2,000 of the simply curious.

8th Passive Solar Conference

The Passive Systems Division of the
American Solar Energy Society

The Glorieta Conference Center
Santa Fe, New Mexico
September 5-11, 1983

**Come to a National Conference on the
use of Passive Solar Technologies**

workshops

- For the Laymen to Professional
- Reasonably priced
- Greenhouses to Water Heaters
To Photovoltaics and more . . .

tours

- New Mexico Showcase of
Solar Homes
- Santa Fe Solar Homes

exhibits

- Open to the Public
11:00 a.m. til 3:00 p.m.-September 10, 1983
50¢ Grounds Fee
- Solar Systems, Components,
and Hardware
- Over 50 Exhibitors

technical conference

- Design and Analysis Tools
- Emerging Architecture
- Performance Results
- Daylighting
- And more . . .

Contact:

Ron Zee at the
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Minerals Department
525 Camino de los Marquez
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(505) 827-5878

—Hosted by the New Mexico Solar Energy Association

Community goes solar

Egyptian village gets dose of high technology

By HELEN GAUSSOIN
The New Mexican Staff

An Egyptian physicist and a late New Mexico solar energy pioneer have combined to introduce solar energy and high technology to a rural Egyptian village.

The physicist said Friday the success could be duplicated by small communities in northern New Mexico.

Salal Afafa, the physicist who started the eight-year project in Basaisa, Egypt, said many of the concepts used to develop the village of 300 were being investigated at the same time by New Mexico solar advocate Peter van Dresser, who died this spring.

For more than four decades, van Dresser had advocated the use of solar energy and energy-efficient devices to provide both energy and a simple, but adequate standard of living.

The coincidence, in addition to similarities in the type of rural, poor communities and climate, prompted the two scientists to exchange ideas on Basaisa, Afafa said.

He said van Dresser provided much input on the Egyptian project.

"Every year I'd make a point to see him," he said.

Afafa said he was teaching at the American University at Cairo when he decided the best application of his skills would be with the people.

"Being a physicist and a scientist, the question came, 'What can we do with these small communities?'" he said.

He said he first introduced himself to the village, which was typical of 29,000 Egyptian communities with fewer than 1,000 people. Later, through a \$100,000 grant from the United States Science Foundation, he began introducing high technology.

The program has grown significantly since the initial investment, he said, and now includes a solar-powered irrigation system, a bio-gas plant that converts trash into high-grade fuel, lights, and a windmill water pump.

Afafa said one of his favorite programs is the clothing-making cottage industry that started with two women and has expanded to include workers from other villages.

"They produce an industry and that gives them a sort of dignity and a status, a new vision to see," he said.

But, he said, the experiment was not merely an attempt to push the rural community into the 20th century.

"There are possibilities for really improving especially those small communities in a beautiful way," he said.

He said development of Basaisa was done gradually, with all the decisions made by the villagers.

"We don't want to go to a village and destroy the community," he said. "You have to grow or else it will shock."

He said the Basaisa villagers have accepted the advances, unlike unsuccessful attempts to develop villages.

"It was gradual and it was their decision," he said.

He said the guidelines used in Basaisa did not always point to high technology.

A transportation problem was solved through taking out a loan and buying bicycles for every household, he said.

The experiment has garnered a lot of attention from scientists all over the world, he said.

Basaisa was visited by 80,000 people last year, he said.

Afafa is working on scheduling a conference, one week of which would be spent at the Ghost Ranch near Abiquiu and one week of which would be spent in Basaisa, to discuss the ideal technological advancement and develop goals using the natural resources and the unique characteristics of the community.

He said he has not been able to find the money to sponsor the conference, and is thinking of asking the scientists invited to pay their own way.

"As long as you have people devoted to the ideas, it costs less," he said.

He said he was sad that his trip to the state this year did not include a visit with van Dresser.

"It was nice to come to New Mexico and find all that interchange," he said.

Afafa was in Santa Fe to attend the Eighth Annual Passive Solar Energy Conference and Exhibit sponsored by the American Solar Energy Association and the New Mexico Solar Energy Association.

Ironically, part of this year's conference, which is expected to attract more than 800 engineers and scientists from throughout the world, will be dedicated in the memory of Afafa's old friend, Pete van Dresser.

Opinion

Editorials

Solar power

Solar energy people in New Mexico often talk about being on the "front edge" of their rapidly expanding industry. Active and passive solar research and development have become an integral part of the construction, agriculture and recreation industries of the region.

The worldwide solar energy conference that gets underway Monday at the Glorieta Conference Center promises to advance that work even further, bringing society closer to self-sufficiency and farther from dependence on diminishing reserves of fossil fuels.

The conference has been dedicated to the late Peter van Dresser, a well-known New Mexican who moved to the forefront of solar development through his simple experiments in and around Santa Fe.

One northern New Mexican who also has reached the "front edge" of solar development is Douglas Balcomb of Los Alamos National Laboratory. His efforts and those of the New Mexico Solar Energy Association will bring together hundreds of experts in the solar field to New Mexico for the conference.

Solar experts from a dozen countries around the world will gather on Monday, which begins two days of consumer-oriented workshops covering greenhouse gardening, passive solar design and other subjects. Those workshops are open to the public. Those who attend will have opportunities to meet and talk with various national and local experts in solar construction and techniques.

The fun stuff for the technically-oriented participants begins on Wednesday, when experts will discuss the economic, planning, legal and design aspects of solar use.

A wide variety of solar products also will be on display during the conference, which ends Sept. 11, including many offered by local manufacturers and merchants. Tours of solar homes in the Santa Fe area also will be offered during the conference.

Eldorado site of solar use showcase

By ROBERT STOREY
The New Mexican Staff

In Eldorado, 19 miles southeast of Santa Fe, crews from almost a dozen contractors are working feverishly on 11 model homes for the New Mexico Showcase of Solar Homes.

The homes, each with both active and passive solar features, were designed under a new solar concept which tries to provide uniformity and accurately projected performance for potential homebuyers.

Although the homes will not be finished, they will be part of the tours scheduled for scientists and engineers attending the eighth annual Solar Conference and exhibit sponsored by the American Solar Energy Society and the New Mexico Solar Energy Association.

The six-day conference begins in Glorieta Monday.

The project will be toured by the solar energy experts next week, but should be ready in a couple of weeks for public inspection.

The fact that New Mexico solar energy leaders Doug and Sarah Balcomb are organizers of the conference, are founding members of the Solar Energy Association and were two of the developers of the showcase is not coincidental.

Research on solar energy done by Doug Balcomb over the past 20 years became a key part of the engineering which went into designing the solar homes.

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Balcomb is a scientist at Los Alamos National Laboratory. Working with other scientists and technicians and computers, the solar energy team converted thousands of scientific calculations on how the sun affects different materials in different locations at different times of the year to complete a huge, thick book of technical data and charts.

"The key thing was to convert that technical data into information which architects and contractors could use to design and build solar homes," said Griff Ellison, a spokesman for New Mexico Showcase of Solar Homes.

Ellison explained that the showcase is a combination of scientific technology, contractors planning and design, plus innovative financing to bring together a commercial project to sell affordable solar homes.

The show case chose Eldorado near Santa Fe because it had affordable sites, it offered a single area to which restrictive covenants could be added to require solar applications and it was in an area where many of the owners already were using solar energy, Ellison said.

The goal of the project was to produce marketable homes in the \$85,000 to \$105,000 price range with 1,100 to 1,500 square feet which used both passive and active solar applications.

Another goal was to use standard designs so that each home would have predictable, uniform performance for both solar applications and energy efficient insulation.

Glorieta site for annual solar conference

By MALINDA ELLIOTT
For the New Mexican

Scientists and engineers and solar industry professionals from throughout the nation and world will gather in Glorieta beginning Monday for the Eighth Annual National Passive Solar Conference and Exhibit.

The six-day conference is sponsored by the American Solar Energy Society (ASES) and hosted by the New Mexico Solar Energy Association (NMSEA). The event will be held at the Glorieta Baptist Conference Center.

The conference will include workshops and technical study sessions, 60 exhibits of state-of-the-art solar products, and tours of solar homes and public buildings in the area.

Numerous social events, including a visit to Santa Fe's annual Fiesta, are included on the conference's schedule.

According to Ron Zee, conference coordinator, more than 900 architects, builders, engineers, researchers, equipment manufacturers and suppliers, and others interested in renewable energy sources are expected to attend.

Participants will also come from several other countries, including Austria, Canada, Denmark, Israel, England, Japan, France, Greece, Egypt and Spain.

"We're providing something for everyone interested in solar," said Zee. "The first two days NMSEA is sponsoring 16 workshops on subjects like greenhouse gardening, passive solar design, and solar business survival. Then on Wednesday the technical sessions begin — discussions by experts in energy economics, planning, legal aspects, design, and others fields."

Among those participating in the conference will be Governor Toney Anaya, who will speak on Wednesday morning at the beginning of the technical sessions. Also addressing the conference that morning will be scientist Douglas Balcomb of Los Alamos National Laboratory and architect Jeffrey Cook, professor at Arizona State University and editor of the Passive Solar Journal.

"Those opening speeches will be kind of 'crystal ball talk,'" says conference chairman Sara Balcomb. "We want to be on the very front edge of the newest developments."

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According to Harry Golden, technical program chairman and an architect with Burt, Hill, Kosar, and Rittleman Associates of Washington, D.C., "Conference attendees will be brought up to date on the latest passive solar design and technology. Major progress has been made in research and application of passive solar cooling and daylighting. Also, performance results of passive solar buildings will be included."

The workshops offered during the first two days of the conference are open to the public at prices ranging from \$25 to \$80. Several workshops will be taught by solar professionals well-known in New Mexico, such as greenhouse innovator Bill Yanda and design expert and author Ed Mazria.

Balcomb says she expects the evening sessions, called "Emerging Architecture" and focusing on recent trends in southwestern, national and inter-

national passive solar architecture, to be among the best attended events at the conference.

During late afternoon informal discussion sessions, participants will also have the opportunity to speak informally with experts, including Santa Fe architect William Lumpkins, solar designer/builders Wayne and Susan Nichols, and professors from the Massachusetts Institute of Technology and several California universities.

According to Augie Apodaca of the New Mexico Solar Industry Development Corporation, the organization that coordinated the exhibit displays, a cross-section of recently developed solar products will be shown during the conference. "We'll be showing double-paned windows, shades, skylights, passive solar water heaters, software for design, and even a solar still."

The exhibits of solar products will be shown throughout the conference and will be open to the public on Saturday from 11 a.m. to 3 p.m. Companies showing products include General Electric, Zomeworks, the Berkeley Solar Group, Intersolar of South Africa, software companies Scribe International and F-Chart, Weba, and Sundown of Santa Fe.

Tours, which are also available to the public at various prices, will be conducted on September 10 and 11. Participants will look through Santa Fe solar homes, modern and ancient Pueblo dwellings, and solar buildings in Los Alamos.

Also to be shown is the New Mexico Showcase of Solar Homes, which includes 11 recently built passive solar homes near El Dorado outside of Santa Fe and 8 homes in a subdivision in Rio Rancho near Albuquerque.

"This year's conference marks a return to our beginnings in New Mexico," says Balcomb. "There's a reunion feeling to the whole event." The First National Passive Solar Conference was held in Albuquerque in 1976, he said, and since then the conference has moved each year to another U.S. city.

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"We want this year's conference to have a unique New Mexico flavor," he added, "and to recreate some of the closeness between participants that developed at meetings during the early days."

In honor of a New Mexican who pioneered passive solar developments, said Zee, this year's conference is dedicated to Peter Van Dresser, who died in June.

Zee also said that he was pleased by the support he had received from the sponsors of the conference, which included several branches of state government, the U.S. Department of Energy, and numerous professional and industrial associations, as well as Public Service Company of New Mexico and the Sandia and Los Alamos National Laboratories.

"Without the efforts of the State of New Mexico and Public Service Company of New Mexico we would'nt be seeing nearly a thousand people coming to Santa Fe to attend this conference," he said.

For more information on the conference, call the conference office at 757-6161.

Schedule

Monday

- 11 a.m. - 7 p.m. Registration
- 12 - 12:30 p.m. Lunch
- 1 - 5 p.m. Workshops
 - Basic Calculations
 - Gardening in Solar Greenhouses
 - Passive Solar Greenhouse Trilogy, Session I
 - Rammed Earth
 - Solar Stills
 - Sunspace Retrofits
- 6 - 6:30 p.m. Dinner

Tuesday

- 7 a.m. - 9 p.m. Registration
- 7:30 - 8 a.m. Breakfast
- 8:00 a.m. - 12:00 p.m. Workshops
 - Solar Design and Evaluation
 - Solar Greenhouse Trilogy, Session II
 - Photovoltaic Residences Today
 - Solar Business - Survival & Growth
 - Solar Drying
 - Solar Hot Water Systems
 - Electric Utilities: Research Results
- Noon - 12:30 p.m. Lunch
- 1 - 5 p.m. Workshops
 - Workshops 8, 10, 11, 14 continue
 - Beamed Sunlighting
 - Solar Greenhouse Trilogy - Session III
 - Wood Heaters as Back-Up
- 1:30 - 4 p.m. ASES Board Meeting
- 6 - 6:30 p.m. Dinner
- 6:30 p.m. - 8:30 p.m. Bus Service to Sweeney Center
- 7 p.m. - Midnight Altitude Adjustment Reception
- 10 p.m. - Midnight Buses return to Glorieta

Wednesday

- 7 a.m. - 7 p.m. Registration
- 7:30 - 8 a.m. Breakfast
- 8:30 - 10 Opening Plenary
 - Commercial Building Performance
 - Economic Issues for Building
 - State Initiatives
- 11:30 a.m. - 5:30 p.m. Exhibit
- Noon - 12:30 p.m. Lunch
- Noon - 1 p.m. Reunion Luncheon
- 1 - 2:30 p.m. Technical Sessions
 - Passive Components
 - Commercial Research
 - Community Initiatives
- 2:45 - 4:15 p.m. Technical Sessions
 - Space and Water Heating
 - Occupant Reactions: Commercial Buildings
 - Passive Solar Economics
- 4:30 - 5:30 p.m. Rendezvous
- Commercial Product Presentations
- 5 - Midnight Buses to town leave hourly, return on half hour
- 5 - 7 p.m. NASA/AIA Annual Meeting
- 6 - 6:30 p.m. Dinner
- 6:30 - 7:30 p.m. East-West Basketball Game
- 7:30 - 10:15 p.m. Emerging Architecture Southwest
- 10 - midnight Entertainment at El Gancho
- 12:30 a.m. Last bus leaves Inn at Loretto for Glorieta

Thursday

- 7:30 a.m. - 7:00 p.m. Registration
- 7:30 - 8 a.m. Breakfast
- 8:30 - 10 a.m. Technical Sessions
 - Retrospective
 - Measured Performance
 - Occupant Reactions: Residential
- 10:15 - 11:45 a.m. Technical Sessions
 - Design and Analysis Tools II
 - What Matters Besides Energy?
 - Passive Solar Education I
- 11:30 a.m. - 5:30 p.m. Exhibit
- 12 - 12:30 p.m. Lunch
- Noon - 1 p.m. 11th Annual Life Technica Luncheon
- 1 - 2:30 p.m. Technical Sessions
- 2:45 - 4:15 p.m. Technical Sessions
- 4:30 - 5:30 p.m. Closing Plenary
- 6 - 7 p.m. Buses leave on the hour for downtown
- 7:30 - 9:30 p.m. Zozobra Fiesta
- 11 p.m. - 12:30 a.m. Buses return to Glorieta

Saturday

- 7:30 a.m. - noon Registration
- 7:30 a.m. - 8 a.m. Breakfast
- 9 a.m. - 5 p.m. Tours
 - Santa Fe Solar Homes
 - New Mexico Showcase of Solar Homes
 - Los Alamos, Bandelier
- 11 a.m. - 3 p.m. Exhibits, open to public
- Noon - 12:30 p.m. Lunch
- Santa Fe Fiesta Continues
- 6 - 6:30 p.m. Dinner

Solar expert foresees industry growth

By Malinda Elliott
For The New Mexican

While solar technology will gain worldwide acceptance in the 1980s, solar technicians and researchers will increase comfort levels and the efficiency of passive solar buildings, predicts Douglas Balcomb chief of the Los Alamos National Laboratory's Solar Energy Group.

Speaking to an audience of about 500 architects, scientists, and solar industry representatives at the Eighth National Passive Solar Conference this week at the Glorieta Baptist Conference Center, Balcomb discussed past and future goals in solar research.

Solar designers are now facing major challenges in natural daylighting and solar cooling, he said.

In the past seven years, basic problems of passive solar heating and residential and commercial design have been solved, while public acceptance of solar technologies has grown. But there have been obstacles.

"We have had to deal with the anti-passive-solar contingent," said Balcomb showing a slide of a windowless building, "and we have to deal with the government."

Before 1975, federal government policy was "to ignore passive solar." From 1975 to 1980, the Carter administration showed strong interest in solar technology and the policy changed to "catch up," he said.

Since 1980, the Reagan administration's approach has been to "bail out" of most solar programs, except research projects.

However in the past three years, worldwide interest in passive solar building has grown. "From 1976 to 1980, passive solar was U.S.-dominated," the scientist said. "Now other strong participants include France, England, Italy, Japan, Australia, South Africa and Scandinavia." Many Third World countries also are developing passive solar programs and construction.

Those who study data from solar buildings have been deluged (with information) in the past two years," Balcomb said in an interview. "The data is coming out of the Department of Energy's passive building monitoring program." That study monitored 70 houses around the country.

Future research will focus on "subtle issues," such as how to increase comfort in solar buildings and gaining precise understanding of the

air movements in solar heated and cooled buildings, predicted Balcomb.

Daylighting technologies, which rely on building designs that maximize natural light and drastically cut the need for electrical lighting, will become increasingly important. "Reasons for using daylighting include energy savings and reduction of peak loads (for electric utilities)," he said.

"The movement of air in a building is a major mechanism for passive heat transport," explained Balcomb. "We're starting to get a lot of experimental data. I take measurements in solar buildings with a couple of very simple instruments — for example, smoke sticks that show which way the air is moving."

Balcomb also sees continuing progress in simplification of solar designs.

"We prepared some simplified design guidelines that worked well for the builders in the New Mexico Showcase of Solar Homes," he said. The showcase includes two solar subdivisions of 12 homes in El Dorado near Santa Fe and eight homes in Rio Rancho near Albuquerque.

"The designs were changed and improved as a result of the guidelines we provided for builders. We wanted to try to influence the buildings themselves by simplifying the technical information, and approach worked."

Balcomb prepared the technical background information for the design guidelines. This data was then boiled down to set of worksheets that builders fill out to check the effectiveness of a passive solar design before construction begins.

Balcomb's wife, Sara, representatives from the Public Service Company of New Mexico, and Mark Conkling, project director of the showcase, all worked on the guidelines project.

"It's a fill-in-the-blanks approach," said Balcomb. "The worksheet goes one step at a time, and it allows the builder to make his own decisions."

To compile data for the guidelines project, Balcomb used a tool that is now standard for passive solar research — the computer. However, in spite of increasing use of computers in design analysis, Balcomb says they remain "just a tool" for solar designers.

"Improvement in the relationship between the designer and the computer is needed," Balcomb said.

Currently, designers faced too many pro-

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Doug Balcomb
...major challenges ahead

grams and do not have enough information on how to use them effectively, he said.

Computers are frequently used now to monitor the performance of passive solar homes.

Balcomb's own Santa Fe home, a passive solar classic designed by William Lumpkins and Susan Nichols, includes a computer monitoring system.

Balcomb has lived in the house seven years. "It's one of the best monitored passive solar buildings," he says. "Our understanding of what is happening in that house has led to a lot of the research we're discussing at this conference."

Public accepting solar technology

By Malissa Elliott
For The New Mexican

Technology advances and increasing public acceptance of passive solar building designs were in the spotlight last week at the Eighth National Passive Solar Conference held at the Glorieta Baptist Conference Center.

The six-day event was attended by 830 architects, engineers, researchers, designers, and industry representatives from around the nation and the world.

Participants discussed the rise in public appreciation of solar buildings over the past seven years since the first national conference was held in Albuquerque.

Jeff Cook, editor of the Passive Solar Journal and professor at Arizona State University, told conference participants, "Solar has now become the mark of esteem, the essence of quality, the new standard of amenity."

Also emphasized in workshops and technical sessions was the importance of fitting solar designs into conventional building styles.

"The classic mistake was to make a design statement with solar — a monument to the new technology," Wayne Nichols of Communico, Inc. of Santa Fe told a workshop audience. "We've found that the trick is to slip

the solar features into the traditional style of building."

The key to working passive solar designs into traditional looking buildings has been the experience gained in the past decade, often by a small group of innovative builders, Nichols said.

Many of those "grassroots innovators" worked in Santa Fe in the 1970's.

Nichols and other experts at the conference pointed to the growing amount of data on solar building performance gathered over the last seven years as the key to simplification — and increasingly widespread use — of solar design principles.

"Passive solar is a subtle complexity," said solar architect Ed Mazria, of Mazria Schiff Associates, Albuquerque. "The rules of thumb are complex to generate but simple for anyone to understand once we've come up with them."

Nichols said that in spite of the lower profile of the solar industry in recent years, private sector solar activity is healthy.

"We're getting more clients — while the government has pulled back," said Mazria.

Some government support was promised at this year's conference, however. Governor Toney Anaya told

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conference participants in a speech Wednesday that he would push for implementation of the Solar Energy National Security and Employment Act now before Congress. Anaya promised to rally support for the legislation from governors in the 49 other states.

Robert Stromberg, who represented Sandia National Laboratories at the conference, said that increasing interest in passive solar could be tracked at each of the past seven national conferences.

"At first, the only people who came were considered 'fringe,' but then at each conference another group would show up — one the year the architects started coming, then the builders."

Manufacturers who displayed about 60 new products at exhibits at the conference said that new passive solar technologies aim to appeal to a more "mainstream" conventional audience. "The new systems approach is the trend (in products)," says Larry Fisher, president of Sunwood Energy of Harrisburg, Virginia.

As an example, Fisher showed a new rod wall, a heat storage device that is easy for builders to install and requires few changes by the homeowner.

"The industry is really maturing," said Fisher. "Consumer comfort and convenience is more important now."

Bill Althouse of WEBA Supply of Santa Fe said that solar products are selling well in the area. Althouse, who was showing photovoltaic systems at the conference, said he was currently installing photovoltaics for 20 houses in the Santa Fe vicinity. And WEBA has installed 4,000 water heaters in the area in the past four years.

State-of-the-art advances in solar technology were also in focus at the conference. Several technical sessions and workshops covered work in solar cooling. One system is designed to cool a building by spraying water on the structure's tin roof and relying on evaporation — and storage of cool air in a rock storage bed — to cool the building.

Other sessions examined progress in daylighting — especially for large commercial office buildings where use of natural lighting systems can sometimes cut energy costs in half. Daylighting systems rely on building designs that let in more sunlight, and use various techniques to introduce or bounce the light into interior areas not reached by natural light in conventional designs.

Selected Conference Photos

The following selected conference photos, courtesy of Marshall Tyler, are intended to give a brief look at conference events and to capture (as much as possible) the flavor of Passive 83.

Plenary Session - Glorieta Auditorium

Plenary Speaker - Governor Toney Anaya

Plenary Speakers - Sara and Doug Balcomb

Plenary Speakers - John Yellott and Donald Aitken

Technical Session (Edward Mazria)

Workshop (Bill Yanda)

Poster Session

Exhibit (Brother Sun)

Benjamin T. "Buck" Rogers - Recipient of 1983 NMSEA
Peter van Dresser Award

Summary and Recommendations

The Eighth National Passive Solar Conference is now history. Those who attended gave the clear indication that the conference was one of the best passive solar conferences ever held. This summary will serve as a critical evaluation of major aspects of the conference, as well as identifying the major benefits derived from the conference. In pointing out problem areas, it is the express intention of the authors' not to criticize any individual, but to point out clearly where improvements can be made in future conferences to the benefit of ASES, local host chapters, and conference attendees.

First and foremost, it should be mentioned that a very harmonious working relationship existed between the ASES conference staff and the local conference coordination staff. It cannot be stressed how critical this aspect is in conference planning and organization. The level of comraderie and common purpose that existed between the Boulder office of ASES and the Santa Fe office of NMSEA should be a goal to be attained in future conferences.

No major, insurmountable problems occurred in coordinating Passive 83, but a few minor problems (that were handled as well as possible) did exist. One problem area was the organizational structure of the conference itself (as noted on page 5). It was overly cumbersome and bureaucratic. A

significant amount of time, energy, and money could be saved with a more streamlined conference planning and organizational structure, with little or no change in the end result of the process. Indeed, the end result - a high-quality, technical conference - would be improved in the authors' estimation. It should be understood that the unusual organizational structure of Passive 83 may have been a partial outgrowth of an understaffed ASES and NMSEA. Nonetheless, a suggested structure below that could be considered by ASES in the future would involve a core of only three individuals plus two small committees with complete authority and responsibility for all aspects of conference planning and organization.

The ASES Board (and its Passive Systems Division Board) would delegate complete authority and responsibility for overall passive conference coordination and organization to the ASES Conference Director (a paid staff person). The ASES Board would delegate authority to a 3 to 5-member NOC for technical events planning. The NOC would employ a

Technical Events Director (with a modest stipend) who would be responsible for technical events organization. The Technical Events Director would be supervised by the NOC Chair, and would take the planning advice of the NOC in organizing technical events. The local host chapter Board would delegate authority to a 3 to 5-member LOC for ancillary events planning. The LOC would employ a Ancillary Events Director (with a modest stipend) who would be responsible for ancillary events organization. The Ancillary Events Director would be supervised by the LOC Chair, and would take the planning advice of the LOC in organizing ancillary events. A good deal of communication and coordination would exist between the ASES Conference Director and the Technical and Ancillary Events Director. All three of these individuals would have to be chosen carefully, and would need to be very knowledgeable in the field and very experienced in conference organizing. The ASES Conference Director would be responsible also for monitoring the progress of the NOC and the LOC in their planning activities. This system would allow for greater accountability, and a much smoother, less complicated conference planning/organizing process would result. The quality of the conferences would depend on a smaller number of people, and any specific post-conference problem could be clearly identified - which was not the case under the structure employed for Passive 83. With such diffuse responsibility and authority, Passive 83 evidenced a general lack of control, more often than desirable, in the planning/organizing process.

Advertising is an important aspect of any conference. It helps to attract people, both old and new, to the subject matter being presented. In the process of organizing Passive 83, it was learned that ASES had been employing a totally inadequate national press list. Information about the conference was simply not getting out to the interested national public. This problem has been corrected now (presumably) so that Passive 84 will not suffer potentially lower attendance for this reason. Local advertising was adequate, though with more funds wider coverage and better timing might have been achieved.

Scheduling is another important aspect of any conference because of its impact on conference attendance. Passive 83 seemed to suffer somewhat from being too closely scheduled to other ASES-sponsored conferences. Passive 83 was only three months after the ASES Annual Meeting Conference, and it is assumed that a sizable portion of the same people attended both conferences. In addition, ASES parent organization, the International Solar Energy Society, held its Annual Meeting Conference in August in Perth and ASES co-sponsored the RETSIE Conference in Los Angeles only one week prior to Passive 83. (Maybe ASES should have their annual meeting in the summer of one year and Passive conference in the summer of the next year so that they alternate years). Another scheduling factor (which might be a problem) is having a conference begin just after the start of a school year. A significant

number of ASES members are from universities, and the possibility of having a conference serve as a family vacation opportunity also is virtually eliminated. It would appear that if ASES wants to maximize attendance at its conference, more careful attention needs to be paid to scheduling.

Scheduling involves not just the question of when to schedule, but also where to schedule. The selection of the Glorieta Conference Center as the site of Passive 83 had some built-in problems, like transportation and exhibits accommodations, which were largely overcome, but not without difficulty and major expense. The value of hindsight in this instance will be useful to future ASES conference organizers.

Another minor problem area in which partial progress was made at Passive 83 related to standardization of some key elements of the conference. Standardization, quite simply, cuts costs and makes conference coordination easier. Badges were standardized for the first time ever at this passive conference, and now can be purchased in bulk quantities at less cost. A canvas banner was purchased which can be reused at succeeding conferences (apparently one-time-only paper banners were used at the previous seven passive conferences). Walkie-talkies, critical to communication between conference leaders at large conferences, also were purchased for the first time (ASES staff noted that some conference communication problems occurred at their Annual Meeting Conference in

Minneapolis in June which walkie-talkies could have solved) and will be very helpful at future conferences. Further progress might be made in having a standard ASES volunteer manual, a registration manual, and even an ancillary events manual (maybe a technical events manual, too). Some standard signage, that would be used at every passive conference, might also be helpful.

As for the actual conference itself, the technical sessions and workshops ran smoothly and were well-received. No difficulties occurred in these areas. Transportation and tours, however, did not run as smoothly as expected. Transportation was a constant headache for two reasons. The first reason was the general remoteness of the Glorieta Conference Center where Passive 83 was held. A downtown Santa Fe location for the conference would have eliminated transportation problems almost completely. The second reason was the way in which transportation was handled, a sole-source contract to a private company which was responsible for all arrangements. Hindsight has shown that one leased bus and driver, under the supervision of the conference staff rather than a private company, would have been adequate for most transportation needs of conference attendees. Transportation was an area in which more was offered than necessary, to the frustration of the conference staff when the system didn't work.

Tours, though planned with the best intentions, needed greater attention to details. Better organization, more reliable tour guides, and improved tour scheduling would have made tours an overwhelming success - rather than an average show. The most complaints received by the conference staff related to tours, by contrast, there were virtually no complaints regarding workshops.

Exhibits were a major success of Passive 83, well-organized and well-managed by the New Mexico Solar Industry Development Corporation (NMSIDC). A report on exhibits by NMSIDC appears in Appendix A. Only an Act of God (a rainstorm) caused some temporary problems for the tent in which exhibits were housed.

The volunteer program for Passive 83 was adequate, but improvements like a standard volunteer manual previously mentioned and just greater numbers of volunteers would have helped. Santa Fe suffers from the fact that it does not have a large university (with architectural and engineering schools) - an ideal recruiting ground for solar conference volunteers. The University of New Mexico was just far enough away (and the conference scheduled at a poor time for students) not to be of much help.

An overall assessment of the conference from the authors' perspective is that it was solid success. Minor problems were

overcome, and the vast majority of conference attendees left Santa Fe with a very positive impression of the conference and its value to them. Because of the distinct emphasis of this conference on past, present, and future accomplishments of New Mexico and New Mexicans in the solar field, conference attendees will recognize and remember Passive 83 as the "Solar Enchantment Conference," inextricably linked to our state. From an information dissemination and business promotion standpoint, the conference met, and may have exceeded, expectations. The rewards of increased knowledge and greater profits were attained by conference attendees and exhibitors, one either left Passive 83 with one or both, but rarely neither, in the authors' estimation. The New Mexico Solar Energy Association can be proud to have hosted Passive 83, and New Mexico can be proud to have given the conference such wholehearted support. For future conferences to be a success, it would be advisable to gain the support of organizations like the local utility, state energy office, state energy institute, and other private energy organizations. In the case of Passive 83, this kind of support was critical to its success. As a final note, the unprecedented cooperation between the State of New Mexico and Public Service Company of New Mexico in helping to make this conference a success was both refreshing and encouraging. It is hoped that other avenues of endeavor might be found where this sense of common purpose could be put to mutually beneficial advantage.

NMSIDC Exhibits ReportI. BACKGROUND

By decision of the American Solar Energy Society (ASES) board of directors, the 8th National Passive Solar Conference and Exhibits were held at the Glorieta Baptist Conference Center during the week of September 5-11, 1983. The New Mexico Solar Energy Association, a local chapter of ASES, was given the opportunity to sponsor the solar exhibits as an independent undertaking during September 7-10. The Local Organizing Committee (NMSEA) selected the New Mexico Solar Industry Development Corporation to coordinate the passive solar exhibits. Following is a report on the activities and results of the exhibition.

II. SITE LOCATION AND FACILITY

Since a suitable building near the center of conference activities was not available at Glorieta, a decision was made to hold the exhibition in a tent adjacent to the Glorieta Chapel in order to ensure exhibitors of the maximum traffic. Space limitations dictated that maximum size of the tent to be a 140'x80' big top. The tent was floor planned to house 60 exhibitors in 8'x8' and 8'x12' booths plus concession areas. Rader Awning and Upholstering, Inc. from Albuquerque, was contracted with to locate and put up the tent. A key decision was made at this point to cover the ground with astroturf in order to eliminate problems with dust for exhibitors. This resulted in an unexpected additional cost of \$2990 for the tent. The tent was scheduled to be erected on September 2 and taken down September 12, but due to the wishes of the conference officials for reasons of not interfering with an on-going conference, the tent could not be erected until September 5, Labor Day, this resulted in adding \$600 to the tent costs.

III. BOOTH SALES

An experienced exhibits manager, Exposition Management, Inc., of Albuquerque, was contracted to assist with the management of the booth sales and other exhibit activities. Over 400 national, regional, local and international solar businesses were sent the exhibits prospectus for the purpose of soliciting booth sales. Follow-up phone contacts were completed and resulted in the sale of fifty booths which represented revenues of \$18,260. Ten complimentary booths were issued to ASES (6) and state agencies (4) who supported the conference.

Solar companies represented various areas of the nation as follows:

New Mexico	-	19
California	-	7
Colorado	-	6
Arizona	-	2
Washington	-	1
Connecticut	-	2
Virginia	-	1
New Jersey	-	1
Massachusetts	-	1
Wisconsin	-	2
New York	-	1
Tennessee	-	2
Texas	-	1

IV. MAJOR EXPENSES

The major expenses incurred in sponsoring the exhibits were associated with the tent. Tent rental, astroturf, electricity, security, and miscellaneous expenses accounted for \$13,802.00 or 58% of expenses totalling \$23,707.18. Expenses in excess of revenues were \$5,447.18.

V. EXHIBIT RESULTS

An estimated 3,000 persons attended the exhibits during its four-day duration. Feedback from exhibitors indicated that they were satisfied with the type of traffic and with the business derived from the exhibition. Although statistics are not available for the dollar volume of business conducted at the exhibition, it is expected to be substantial.

VI. RECOMMENDATIONS

Based on information received from exhibitors and conference attendees, NMSIDC recommends that the exhibits be an integral part of future national passive conferences held by ASES. They clearly added to the success of the overall conference and should be able to generate profits for ASES.

8th NATIONAL PASSIVE SOLAR CONFERENCE EXHIBITS

FINANCIAL STATEMENT

September 30, 1983

REVENUES:

Booth Sales	\$17,610.00	
Outstanding Accounts	<u>650.00</u>	
TOTAL REVENUES		\$18,260.00

EXPENSES:

Advertising	\$ 877.80	
Booth Decor/Electrical	2,262.00	
Exhibits Manager	4,000.00	
Glorieta Services		
(Security,Electrical)	1,690.97	
Insurance	54.00	
Telephone	1,031.23	
Postage	161.65	
Printing	1,551.46	
Supplies	243.21	
Tent Rental	10,836.65	
Travel	475.58	
Miscellaneous	<u>380.38</u>	
TOTAL EXPENSES		<u>\$23,707.18</u>

EXCESS OF EXPENSES OVER REVENUES

\$ 5,447.18

NMSIDC
9/83

AMERICAN SOLAR ENERGY SOCIETY® , INC.

1230 Grandview Avenue Boulder, CO 80302 303-492-6017

**8th Passive Solar
Conference****September 5-11, 1983
Santa Fe, NM**Conference Chairman:
Sara Balcomb
Passive Solar AssociatesTechnical Program Chairman:
Harry Gordon
Burt Hill Kosar RittlemanLocal Organizing Chairman:
T. Michael Lechner
Public Service Company of
New MexicoBruce Austin
Essentially SolarJohn Hayes
Marlboro CollegeEdward Mazria
Mazria Schiff & AssociatesBruce Wilcox
Berkeley Solar GroupEx-Officio Member:
Peggy Wrenn
City of Boulder**NEWS RELEASE****FOR IMMEDIATE RELEASE
27 JULY 1983****CONTACT: RON ZEE
505/827-5878****8th National Passive Solar Conference and
Exhibition Scheduled in Santa Fe, New Mexico**

The American Solar Energy Society's 8th National Passive Solar Conference and Exhibition is scheduled to be held in Santa Fe, New Mexico on September 5-11, 1983. This year's conference will highlight the increasing sophistication and proven effectiveness of passive solar design and technology.

"The sense of excitement about this conference has not been paralleled since the first of these annual meetings was held in New Mexico in 1976. Virtually all of the key experts in the field will be here, and the whole conference will be infused with a spirit of reunion and rejuvenation. It will be an historic and unique opportunity for conference-goers to be brought up-to-date on the cutting edge of the best in passive solar design and technology," according to Sara Balcomb, chairman of the National Organizing Committee for the conference.

Over a thousand architects, builders, engineers, researchers,

27 July 1983

equipment manufacturers and suppliers, and others interested in the passive solar field are expected to attend the September conference to participate in a full and varied program of workshops, tours, exhibits, and three days of technical sessions. The technical program will focus heavily on the progress in solar architecture in the past eight years.

This year's conference is being hosted by the New Mexico Solar Energy Association at the Glorieta Conference Center, a resort-like retreat in the mountains southeast of Santa Fe. One of the oldest continuing celebrations of its kind in America, the Fiesta de Santa Fe, will be held on September 9-11, 1983, providing conference-goers an opportunity to partake of the traditional pageantry, dancing, singing, arts and crafts, and other unique cultural amenities that Santa Fe has to offer.

The 8th National Passive Solar Conference and Exhibition is the annual meeting of the Passive Systems Division of the American Solar Energy Society. The American Solar Energy Society is a multidisciplinary membership organization dedicated to the advancement of solar technology and to the increased public understanding of renewable energy resources.

AMERICAN SOLAR ENERGY SOCIETY®, INC.

1230 Grandview Avenue Boulder, CO 80302 303-492-6017

8th National Passive Solar
Conference and Exhibition

For Immediate Release
August 9, 1983

For More Information Contact:
Ron Zee (505) 827-5878

8th Passive Solar
Conference

September 5-11, 1983
Santa Fe, NM

Conference Chairman:
Sara Balcomb
Passive Solar Associates

Technical Program Chairman:
Harry Gordon
Burt Hill Kosar Rittleman

Local Organizing Chairman:
T. Michael Lechner
Public Service Company of
New Mexico

Bruce Austin
Essentially Solar

John Hayes
Marlboro College

Edward Mazria
Mazria Schiff & Associates

Bruce Wilcox
Berkeley Solar Group

Ex-Officio Member:
Peggy Wrenn
City of Boulder

The American Solar Energy Society will conduct its 8th National Passive Solar Conference and Exhibition at the Glorieta Conference Center near Santa Fe September 5-11.

Architects, builders, engineers, researchers, equipment suppliers and others in the field will convene at the conference to participate in a full and exciting program of workshops, tours, exhibits, and three days of diverse and significant technical sessions.

"The increasing sophistication and effectiveness of passive solar design and technology will be presented by virtually all the key experts in the field," said Sara Balcomb, national conference chairperson.

Speakers will include Jeffrey Cook, AIA, Editor of the Passive Solar Journal and professor at Arizona State University; Dr. Douglas J. Balcomb, of Los Alamos National Laboratory; Dr. Donald W. Aitken, chairman of the American Solar Energy Society and professor at San Jose State University; Governor Toney Anaya; J.B. "Bud" Mulcock, Public Service Company of New Mexico sector vice president of corporate affairs; Lt. Governor Mike Runnels; and John Yellott, professor at Arizona State University.

According to Harry Gordon, technical program chairman, and an architect with Burt, Hill, Kosar and Rittleman in Washington, D.C., "Conference attendees will be brought up to date on state-of-the-art passive solar design and technology. Major progress has been made in research and application of passive solar cooling and daylighting. Also, performance results of passive solar buildings will be included."

The host organization of the conference, the New Mexico Solar Energy Association (NMSEA), will enhance the technical program and the exhibition by sponsoring more than a dozen specialized workshops on such topics as passive solar design and evaluation, greenhouse design and maintenance, gardening in the solar greenhouse, residential use of photovoltaic cells, solar business, solar water heating and solar cooking. The workshops and tours are open to the public at varying prices,

NMSEA also will conduct tours of local solar projects. Sites to be visited include some of the most renowned solar homes in Santa Fe, as well as two new solar sub-divisions, Native American dwellings and "high-tech" buildings at the Los Alamos National Laboratory.

"Many things that were only ideas at the first conference are now off-the-shelf products that will be on display at the exhibition. The economics of solar design, emerging architecture, design and analysis tools, and a number of other topics also will be featured. The solar industry has developed dramatically in recent years," Gordon said.

The conference is also the annual meeting of the Passive Systems Division of the American Solar Energy Society (ASES). ASES is a multidisciplinary, membership organization devoted to the advancement of solar science and technology and to increasing public understanding of the importance of renewable energy resources.

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8th Passive Solar Conference

September 5-11, 1983
Santa Fe, NM

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NEWS RELEASE

FOR IMMEDIATE RELEASE
2 SEPTEMBER 1983

CONTACT: RON ZEE
505/827-5878

UNPRECEDENTED SUPPORT SHOWN FOR NATIONAL SOLAR CONFERENCE

Public and private sector support has made it possible for the 8th National Passive Solar Conference to convene September 5-11, at the Glorieta Conference Center, north of Santa Fe.

Ron Zee, conference coordinator, summed up his impression of the conference's support by saying, "It has been extremely gratifying to see Governor Toney Anaya's administration's dedication to the promotion of solar energy in the State of New Mexico demonstrated in both word and deed.

"Contributions of this nature usually go unrecognized, and constructive actions in promoting an important aspect of economic development in New Mexico are lost in the press of current events," Zee said.

During the past year, the spirit of cooperation in putting together a professionally organized and managed

--more--

conference has exceeded expectations. Substantial financial and logistical contributions have been made by the New Mexico Energy Research and Development Institute, the New Mexico Energy and Minerals Department, and the New Mexico Economic Development and Tourism Department (through the New Mexico Solar Industry Development Corporation).

"Public Service Company of New Mexico (PNM) also has shown their commitment to solar energy as a feasible alternative energy resource. This sense of common purpose and support being shown by the state and PNM is invaluable," Zee said.

Approximately 1,000 people are expected to attend the conference which will stimulate the economy of Glorieta and Santa Fe through tourism, entertainment, and lodging.

Exhibits will be open to the public on Saturday, September 10, enabling local solar industries the chance to display the latest in solar applications.

Additional support has come from the New Mexico Solar Energy Industry Association, the New Mexico Society of Architects, Sandia National Laboratories, and Los Alamos National Laboratory.

"Sara Balcomb of Santa Fe, the National Organizing Committee, Chairperson, was instrumental in coordinating the event," Said Zee.

"Also, the local host, the New Mexico Solar Energy Association made an overwhelming commitment to the success of the conference," he said.