

The TREIA Newsletter

Texas Renewable Energy Industries Association

2nd Quarter 1989

1990 SOLAR MEETING UPDATE

by Russel E. Smith
Executive Director of T.R.E.I.A.

The conference Coordinating Committee for the national solar conferences to be held in Austin next March has decided that all events will not take place under an umbrella "Solar '90" title. Instead, there will be "two separate, co-located, but highly coordinated conferences" sponsored by the American Solar Energy Society and the Solar Energy Industries Association. Organized under the same unified theme, the meetings will be billed as follows:

SOLAR ENERGY: "TODAY'S USES - TOMORROW'S OPPORTUNITIES"

SOLAR 90

Featuring:
ASES Annual Conference
15th National Passive Solar Conference

in conjunction with

SOLTECH 90

Featuring:
Photovoltaic Annual Systems Symposium
SEIA Annual Convention
ISCC Annual Meeting
DOE Annual R&D Review: Solar Thermal Technology
DOE Annual Review: Buildings Technology

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To Be Held At:

The Hyatt Regency Hotel
and
Palmer Auditorium
Austin, Texas

March 19-22, 1990

OIL OVERCHARGE FUND: ALTERNATIVE ENERGY DEMONSTRATION PROGRAM UPDATE

by Judith Carroll
State of Texas Office of The Governor

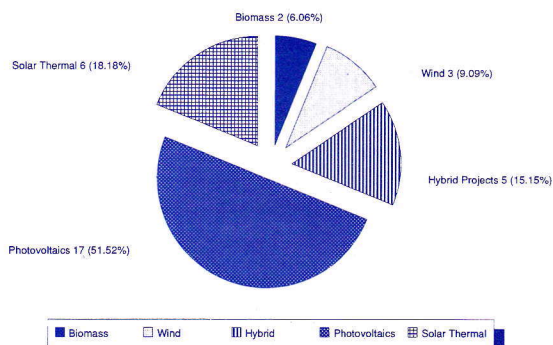
Although today's alternative energy systems provide an attractive energy source for numerous applications, many Texans remain unfamiliar with renewable energy technologies.

In view of this, the 70th Texas Legislature established a \$2.5 million Alternative Energy Program as part of the Oil Overcharge Restitutionary Act. The primary purpose of this program is to accelerate public acceptance of renewable energy technologies through practical and economical demonstrations located in appropriate user environments.

All renewable energy technologies are eligible for this demonstration program, including photovoltaics, wind, solar thermal, hybrid systems, biomass and biofuels.

In response to the request for proposals for the first funding cycle, thirty-three proposals were received by the Energy Management Center. The evaluation committee has now completed its review recommending twenty-three of the projects for funding. Contracts should be in place by June 1, 1989.

Alternative Energy Demonstration Proposals Received



All committees relating to the ASES "Solar 90" meetings have met, including gatherings of the Local Organizing Committee (LOC), and the National Organizing Committee (NOC), in Austin. The interlocking Conference Coordinating Committee (CCC) has met once, with several phone and partial group sessions along the way. Most major policy issues have been settled and the total program is beginning to take shape.

		<u>Block Schedule</u>						
		S	M	T	W	Th	F	S
ASES SOLAR 90	Workshops/Tours	XXXX					XXXXXXXXXX	
	Passive Conference		XXXXXXXXXXXXXX					
	ASES Annual Meeting		XXXXXXXXXXXXXX					
	ASES BOD Meeting						XXXX	
SEIA SOLTECH 90	PASS		XXXXXXXXXXXXXX					
	SEIA Convention		XXXX					
	ISCC Meeting		XXXX					
	DOE Solar Thermal		XXXXXXXXXXXXXX					
	DOE Buildings		XXXXXXXXXXXXXX					

With everyone agreed and committed to making this event happen, it now seems certain that this will be the biggest solar event in many years. I will be working with the TREIA Board to assure that our industry and members have every opportunity to reap the maximum benefits possible. Fund raising efforts, and the search for invited speakers for keynotes and the like, are under way. If you feel you have suggestions, leads, or inside contacts in either of those areas, please let me know. Please note the following list of individuals serving on the "Solar 90" LOC and

OFFICERS - 1989

L.M. "Mac" Holder, AIA, President
Pat Fitzgerald, Vice President
Kevin Conlin, Secretary
Chris Higgs, Treasurer

MEMBERS OF THE BOARD:

Robert Batho, AIA
Dr. Robert Walters
J.A. "Gus" Hutchison
Gene Hoffman
Ken Robinson
Jay Carter
Marshall Blalock
Vaughn Nelson

The TREIA Newsletter is a quarterly publication of the Texas Renewable Energy Industries Association.

Special thanks to Suzan Kuest for putting it all together!

NOC. They serve under the ASES structure. The SEIA side of things tends to progress almost totally from the national office in Washington, D.C. The TREIA Board will be exploring ways for working more closely with SEIA to help make the "Soltech 90" side of things happen.

NATIONAL ORGANIZING COMMITTEE

Bruce D. Hunn, General Chairman
Center for Energy Studies
The University of Texas at Austin

Russel E. Smith, LOC Chair
TX-SES, TREIA

Craig Christensen, Passive Conference TPC Chair
Buildings Research Branch
Solar Energy Research Institute

Joe O'Gallagher, Annual Conference TPC Chair
Enrico Fermi Institute
University of Chicago

Paul Notari, 1989 NOC Chair
Publications Branch
Solar Energy Research Institute

Pamm McFadden
Elements Design Group
Boulder, CO

Kenneth Haggard
San Luis Obispo Solar Group
Santa Margarita, CA

Gary J. Jones, SOLTECH Rep.
Photovoltaic Systems Research
Sandia National Laboratories

Ex Officio Members:

Mike Nicklas, ASES Chair
Innovative Design
Raleigh, NC

Larry Sherwood, Exec. Dir.
American Solar Energy Society

Linda Ladas, SEIA Rep.
Solar Energy Industries Assoc.

John Duffy, ASES Meetings & Conference
Committee Chair
University of Lowell
Lowell, MA

LOCAL ORGANIZING COMMITTEE

Russel E. Smith, LOC Chair
TX-SES/TREIA

Bob Hutchins
Lower Colorado River Authority

Judith Carroll
Governor's Energy Management Center

Dr. Gary Vliet
Mechanical Engineering Dept.
The University of Texas at Austin

John E. Hoffner
Solar Program Manager
City of Austin Electric Department

Bob Walters
ENTECH, Inc.

Chris Higgs, Pres.
Texas Solar Energy Society

Lynn Lightsey
City of Austin
Resource Management Dept.

Dr. Dan Turner
Mechanical Engineering Dept.
Texas A&M University

Dr. Andrew Swift
Mechanical and Industrial Engineering
The University of Texas at El Paso

Dr. Vaughn Nelson
Alternative Energy Institute
West Texas State University

Keren Ware
Texas Department of Commerce

Robert King
Texas Department of Agriculture

Mac Holder, Pres.
Texas Renewable Energy Industries Assoc.
L.M. Holder III
Architecture, Planning and Energy Consultation

cont'd.

Dr. Richard Bannerot
Dept. of Mechanical Engineering
University of Houston

Mike Osborne
Osborne Solar

Eric Graf
Texas Instruments, Inc.

Ex Officio Members:

Dr. Bruce D. Hunn
U.T. Center for Energy Studies

Larry Sherwood
American Solar Energy Society

Linda Ladas
Solar Energy Industries Assoc.



MEMBER NEWS

New Members:

Eric Graf, Marketing Manager for **Texas Instruments, Inc.** has just become our very latest Category "A" member. Their business involvement is in the advanced research stages of a photovoltaic product. His mailing address is P.O. Box 655936, MS-54, Dallas, Texas 75265. Phone number: 214/995-0155. "We're happy to have you, Eric!"

Jerry Yudelson, Western Regional Director for **Chronar Corporation** has become a new Category "B" member with TREIA. Chronar manufactures solar consumer, and other products. He can be reached by mail at P.O. Box 4081, Santa Ana, CA 92702. Phone number 714/534-4413. "It's great having you with us, Jerry!"

And finally, **Wayne Best**, President of **Apollo Energy Systems, Inc.** has also become one of TREIA's newest Category "B" members. Apollo Energy Systems manufactures solar powered water well equipment. Their mailing address is: P.O. Box 238, Navasota, Texas 77868. Phone number: 409/825-8188. "Welcome, Wayne!"

Our apologies to **Wayne L. Sibley**, Owner of **Advanced Solar Services** for the misprint of his company's information. His correct address is 3671 Ridgeway, San Antonio, Texas 78259. Phone number: 512/497-3856.

Solar SignAge, Inc. recently shipped a solar powered sign system for the Highland Appliance Superstore in Ft. Worth. The 60 W solar module was furnished by another TREIA member, Marshall Blalock, General Manager of **Southwest PV Systems**. Working together makes good things happen!

Luz International Limited Update: The last year was an exciting one for Luz on a number of fronts. Its Solar Electric Generating Systems (SEGS) performance continued to meet or exceed projections. Two additional 30 MW plants were brought on line to bring the total in California to 194 MW. Construction has begun on what will be the world's first 80 MW plant. And finally, Luz was awarded an 80 MW contract for SEGS power sale to the San Diego Gas & Electric Company. This brings the Luz backlog of projects to 194 MW installed and 460 MW under development.

On the economic front, Luz announced that SEGS plants installed in the early 1990's will be economically competitive with combined cycle plants even without credits for environmental benefits. Discussions are proceeding in Arizona, Nevada, Colorado and Texas as well as on several international fronts. Recent increases in world energy prices as well as concern about the Greenhouse Effect promise a bright future for the company.

News from ENTECH: The 3M/Austin PV Project is about ready to begin the collector installation phase at the new 3M Center West of Austin. Installation of the 300 kilowatt system is planned to begin in early May and be finished in July. ENTECH is currently fabricating 720 photovoltaic receivers that will be installed in Fresnel lens concentrating modules and installed in a tracking structure on top of the 3M Center's multi-story parking garage. ENTECH has established a PV receiver fabrication facility at the DFW Airport that is able to produce 1,000 kilowatts of PV modules per year. The exciting part of the project is that the modules that will be installed at the 3M Center will be the most efficient commercially available PV modules in the world. These modules can convert 17% of the direct sunlight to electricity at standard test conditions. In the near future ENTECH will be installing an even more efficient module in a demonstration system in California. (See ENTECH's PVUSA Project)

The 3M/Austin PV Project is jointly funded by the U.S. Department of Energy, 3M, and the City of Austin. If you are in Austin during the next 3 months, you can see the progress on the system going on from Highway 2222 which provides a good view of the collectors on the garage. The structural steel that supports the collectors up over the parking area is already in place as well as the electrical wiring and the inverter that will convert the DC electricity to AC electricity so it can be tied into the City of Austin utility grid.

For additional information on the project you can contact **Bob Walters** at 214/456-0900.

PVUSA Program: ENTECH, Inc., headquartered in the Dallas/Fort Worth Airport's Foreign Trade Zone, has been notified by Pacific Gas & Electric Company and their contractor Bechtel that ENTECH will be awarded a contract to build an advanced solar photovoltaic system. This demonstration unit will contain 60 modules similar to the type that will be installed in the 3M Center's 300 KW system. However, these 60 advanced modules will contain a new, higher efficiency cell that will bring the module efficiency up to the 18% level. The demonstration unit will be rated at 21 KW (AC). The PG&E program is code named, PVUSA, for Photovoltaics for Utility Scale Applications. The program objectives are to demonstrate and test advanced PV systems that can be used by the utilities for future, large scale power generation needs. This program is funded primarily by PG&E, UIS, Department of Energy, California Energy Commission, and other interested utilities.

For further information, you can contact **Bob Walters** at 214/456-0900.

NEW DEMONSTRATION OPPORTUNITY ANNOUNCED

RFP's for projects done in conjunction with local governments were sent out by the Governor's Energy Management Center recently. These were only mailed to local governments, and not to companies in the renewable energy industry. An example of a desirable proposal would be solar water heating for a jail. Anyone interested in such a project can probably secure a list of prime jail prospects from the GEMC.

With a little imagination dozens of other demonstrations with local governments could be proposed. The contact person for information and forms for this program at the GEMC is Ernie Moore. Call him at 512/463-1909. Deadline for receipt of proposals is August 2, 1989.

PV CAR SPONSORS SOUGHT

The University of Texas at Austin's Dr. Gary C. Vliet is seeking sponsors for a photovoltaic powered car now in the design phase (see article below). If your company would like some publicity as a supporter, give Dr. Vliet a call at 512/471-3120. It should also be noted that a second Texas based car is under development as well, at The University of North Texas, in Denton. If your loyalties lie in that area, or in both places, please consider helping.

SOLAR 90 L.O.C. TO MEET - TREIA BOARD TO FOLLOW

The Local Organizing Committee for SOLAR 90 will hold its next meeting on July 7, 1989 (Friday), from 2 to 5 p.m. As usual the meeting will be held at the Center for Energy Studies, U.T. at Austin.

The TREIA Board of Directors will hold its next meeting on Saturday, July 8, 1989. The exact time and location of the meeting will be announced soon.

UT students to build solar race car

A team of UT Austin students is designing and preparing to build a solar-powered car to enter in a national race from EPCOT Center, Florida, to Detroit, Michigan, in July 1990.

The UT group received a \$5,000 award April 19 in Detroit from General Motors and \$2,000 from the US Department of Energy. The UT students are seeking donations from other corporate sponsors to help pay development costs.

General Motors is sponsoring the Florida-to-Michigan race, Sunrayce USA. Thirty-one student groups from other universities received \$7,000 grants also and were invited to compete. GM will pay to send the three winning

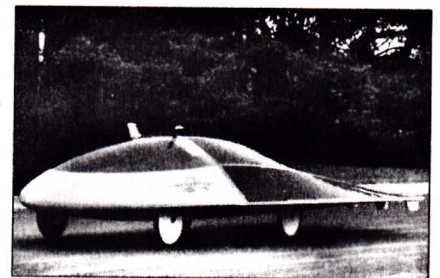
teams to the International Solar Challenge race across Australia in November 1990.

Ronald D. Matthews and Gary C. Vliet are the faculty advisors to the UT solar car team. Both are center researchers and faculty members in the Department of Mechanical Engineering.

UT mechanical engineering and electrical engineering students will design and build the solar race car. The designated project leader is student Matt Cranor, president of the UT Society of Automotive Engineers. Other students from radio-television-film and business are expected to participate. An Austin businessman, Randy Ashelman, is raising funds.

Dr. Matthews said that the group will start to build the car this summer.

General Motors won the 1987 International Solar Challenge with its solar-powered, teardrop-shaped GM Sunraycer (see photo). It completed



The GM Sunraycer (above), won the 1987 World Solar Challenge, a 1,950-mile race across Australia.

the 1,950-mile race across Australia in just under 45 hours, beating its closest competitor by two and a half days. Its speed averaged 45 mph.

The UT design will be based on an aerodynamically efficient teardrop shape and will use lightweight composite materials, lightweight batteries, and high-performance photovoltaic cells, said Dr. Matthews.

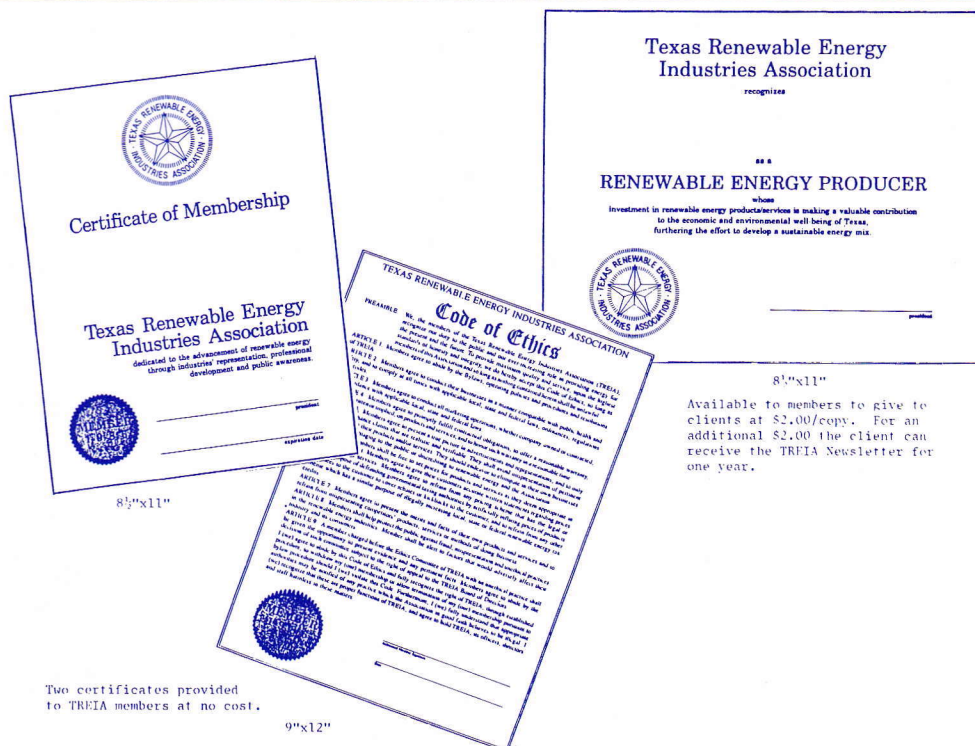
T.R.E.I.A. CHARTER

Six years ago several people in the renewable energy business in Texas determined that it was important to join together in a common cause for promoting renewable energy. The Texas Renewable Energy Industries Association is the non-profit organization headquartered in Austin that was formed from this common concern. The objectives of the association are to:

1. Establish an effective relationship with our local, state, and national governments.
2. Increase public awareness of the "here and now" contribution of renewables, as well as their vast potential.
3. Aggressively promote the use of renewable energy.
4. Encourage high business and professional ethics and high standards within our profession.
5. Provide cooperation and liaison with other persons, organizations and institutions having an interest in the utilization of renewable energy in a constructive and beneficial manner.
6. Enhance the widespread understanding of the many applications of renewable energy.

TREIA's membership is open to manufacturers, distributors, power producers, dealers, marketing companies, installers, service companies, financial institutions, building contractors, architectural and engineering firms, individual architects, engineers, and other professionals. Our membership is currently about 30 members.

TREIA is an association of business people who are interested in (1) using the sun for hot water heating, space heating and air conditioning for homes, businesses, industries and institutions, (2) using the sun, wind, biomass and other renewable and high-efficiency sources to generate electricity for electrical needs throughout the state, (3) using passive solar design and good energy conservation design in buildings, and (4) using renewable energy in any other applications that can offset use of non-renewable energy.



TEXAS RENEWABLE ENERGY INDUSTRIES ASSOCIATION

MEMBERSHIP APPLICATION

PLEASE TYPE OR PRINT:

Check applicable membership category. Your voluntary category selection will be reviewed by the TREIA Board of Directors.

Voting Member (Company)

CIRCLE
AMOUNT

- CATEGORY "A": ☐ Sustaining Member ☐ Power Producer of 1 MW or more.....\$1,000
- CATEGORY "B": ☐ Manufacturer ☐ Wholesaler ☐ Power Producer of
100 KW but less than 1 MW.....\$ 500
- CATEGORY "C": ☐ Dealer ☐ Marketing Company ☐ Installer/Service Company
☐ Architectural Firm ☐ Engineering Firm ☐ Building Design/
Construction ☐ Power Producer of less than 100 KW.....\$ 250
- CATEGORY "D": ☐ Individual Architect ☐ Individual Engineer
☐ Other Professional (please specify)_____ \$ 100

Non-voting Member (Individual)

- ☐ Associate (employee of member company other than voting representative; individual not
involved in renewable energy as a business).....\$ 50
- ☐ Student (must provide proof of student status).....\$ 25

COMPANY NAME:_____

VOTING REPRESENTATIVE:_____TITLE:_____

MAILING ADDRESS:_____

CITY:_____ST:_____ZIP:_____BUS. PHONE: (____)_____

Please provide a brief description of your renewable energy business involvement:_____

Make checks payable to: TREIA, P.O. Box 16469, Austin, Texas 78761-6469

- ☐ Total Dues Enclosed
☐ Invoice for Full Amount
☐ *Invoice in Installments

*Only Categories A,B or C may use installment
payments. Category "A" - 5 monthly payments
of \$200. Category "B" - 4 monthly payments of
\$125. Category "C" - 2 monthly payments of \$125.

Note: Upon signature of this application, member agrees to abide by the Code of Ethics of this organization.

TEXAS RENEWABLE ENERGY INDUSTRIES ASSOCIATION

CODE OF ETHICS

PREAMBLE: We, the members of the Texas Renewable Energy Industries Association (TREIA), recognize our duty to the public and our ever-increasing role in providing energy for the present and the future. To provide maximum quality and service, upon the highest standards of honesty and integrity, we do hereby accept this Code of Ethics, so long as members of this Association and so long as nothing contained herein shall be unlawful.

ARTICLE I Members agree to abide by the Bylaws, operating policies and procedures and resolutions of TREIA.

ARTICLE II Members agree to conduct their businesses in a manner compatible with public health and safety; and to comply at all times with applicable local, state and federal laws, ordinances regulations and codes.

ARTICLE III Members agree to conduct all marketing operations, whether company owned or contracted, in accordance with applicable local, state and federal laws.

ARTICLE IV Members agree to promptly fulfill contractual obligations; to offer a reasonable warranty, whether written or implied, on products and services, and to honor such warranty in a reasonable time.

ARTICLE V Members agree to present a true picture in advertisements and representations; to only make performance claims that are realistic and verifiable. They shall avoid misrepresentation of pertinent facts regarding their products and/or services. They should endeavor to eliminate in their own businesses, any practice damaging to the public or discrediting to renewable energy and the Association.

ARTICLE VI Members shall be free to set prices for products and services as they deem appropriate in their own judgment. Members agree to give their customers accurate written statements regarding prices for products and services. Members agree to refrain from any pricing scheme that has the legal or practical purpose of defrauding governmental taxing authorities by artificially inflating prices of products or services to the customer to cover rebates or kickbacks to the customer, and to refrain from any other scheme which has a similar purpose of illegally increasing local, state, or federal renewable energy tax credits.

ARTICLE VII Members agree to present the merits and facts of their own products and services and to refrain from misrepresenting competitors' products, services, or methods of doing business.

ARTICLE VIII Members shall help protect the public against fraud, misrepresentation and unethical practices in the renewable energy industries. Members shall be alert to factors that would adversely affect their industry and its consumers.

ARTICLE IX A member charged before the Ethics Committee of TREIA with an unethical practice shall be given the opportunity to present evidence and any pertinent facts. Members agree to abide by the decisions of such committee subject to the right of appeal to the TREIA Board of Directors.

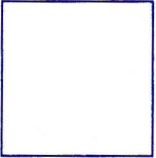
I (we) agree to abide by this Code of Ethics and fully recognize the right of TREIA, through established procedure, to withdraw my (our) membership or allow termination of my (our) membership pursuant to bylaw procedure should I (we) violate this Code. Furthermore, I (we) fully understand that appropriate authorities may be notified of any practice which the Association in good faith believes to be illegal. I (we) recognize that these are proper functions of TREIA, and agree to hold TREIA, its officers, directors, and staff harmless in these matters.

Authorized Member Signature

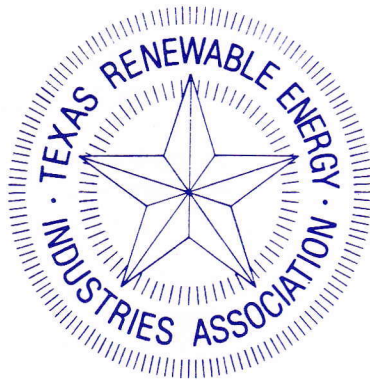
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SHAPING TEXAS' ENERGY FUTURE

JOIN TODAY!