

TX-SES NEWS

A PUBLICATION OF THE TEXAS SOLAR ENERGY SOCIETY

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A CHAPTER OF THE AMERICAN SECTION OF ISES

1007 SO. CONGRESS, SUITE 348 AUSTIN, TEXAS 78704



- ISES Congress: Pursuing a Reality
- TEAC—GOER—NRC . . . TENRAC
- DOE Funds Available

This Issue New Series:
CASE STUDIES

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TEAC-GOER-NRC...TENRAC

by Bob King

By now most of you that are interested or affected by such affairs of state know that the state's energy and natural resource planning agencies are being consolidated. This won't be so significant as to threaten the positions of the likes of the Railroad Commission or the Public Utility Commission. The Texas Energy Advisory Council (TEAC), the Governor's Office of Energy Resources (GOER), and the Natural Resources Council (NRC), however, will, as of September, all be combined. Their staffs, although likely to remain separate and retain a certain amount of autonomy, will all be reporting to a new executive director, Ed Vetter, and to a new Texas Energy and Natural Resources Advisory Council (TENRAC). The Governor and Lt. Governor will co-chair the Council, although a Lt. Governor staffer said that Hobby won't buck the Governor if he wants to take over. From what we've seen so far, Bill Clements is the type to take over. Confirming this feeling was the less than substantive June quarterly meeting of the TEAC. Apparently the TEAC will take a summer break and then see what the Governor wants to do.

On the brighter side, if the new TENRAC decides to take the energy situation in hand, the Energy Development Fund (EDF) will have about \$3.75 million for this biennium, more than double the first round. Milton Holloway, present director of the TEAC, hopes to increase the size of the EDF staff in order to give it more attention. And, Commissioner Reagan Brown (who astounded political observers with his support for unionizing farm labor) may be a sleeper on the TENRAC. Although the Governor vetoed extra R&D funds for alcohol distillation plant construction, Brown is already pushing to have EDF funds designated for teaching farmers how to make fuel as well as food and fiber. Solar advocates should not, in any case, give up on the state because of the Governor's derogatory statements. The new TENRAC (of 21 members) may take a while to get rolling, but their acceptance of energy R&D responsibility for Texas may affect their actions, and affords the solar community the opportunity to educate a key group of powerful political individuals.

ISES CONGRESS: PURSUING A REALITY by Alan Felder

Atlanta, Georgia was the host for over 2000 scientists, engineers, government and civil leaders, and architects from 70 countries for the ISES Congress last month. The week-long conference featured technical sessions with topics ranging from systems to marketing strategies, to national governmental programs. A large turnout of manufacturers' displays complimented the conference, presenting products concerning virtually every facet of alternative energy.

This year the ISES included a poster session for the presentation of systems and research by various concerns. Despite a less-than-expected contingency of participants, the session was a success and will more than likely become a tradition in the future.

Concurrent with the Congress was the On The Rise II Sessions. Interest generated by the On The Rise I in Denver last August contributed to the success of this second year's program. The primary focus of these sessions was to provide grounds for an exchange of strategies concerning the development of solar energy from a socio-political standpoint. Major topics from these sessions include income redistribution, the role of utility companies in solar development, and aspects of solar energy as related to changes in living patterns and levels of self-reliance. Apparent at these sessions was the growing number of state and local governmental positions concerning alternative energy, and the convergence of interests among those officials.

A new wrinkle has been added to the evolution of the American Section with the advent of the "Chapter Caucus." Russel Smith, Gary Vliet, and Pete Jenkins represented the TX-SES in the "Caucus" meeting held in Atlanta. The major aim of this approach is to bring about increased communication and cooperation between AS-ISES chapters and to push for an American Section which is more responsive to the needs of the growing grass-roots nature of the regional/state chapters and their affiliates.

The newly created position of Chapter Coordinator has been filled by Lee Salmon of Loveland, Colorado. Exposure to him in Atlanta revealed a man capable of meeting the challenges of his position. He has launched immediately into a program which will develop supporting services to the chapters and is open to suggestions (P.O. Box 238, Loveland, CO 80537, 303/669-4811).

A number of recommendations were made to the AS/ISES Board by the "Caucus" including providing each chapter with a complete set of all AS/ISES publications (now in progress), selection of AS/ISES meeting sites through the issuance of a bid for services, that low-cost housing be made available at future AS/ISES meetings, and that a family membership be instituted at \$30/year.

In further action, under new AS/ISES rules, the "Caucus" nominated four candidates for the AS/ISES Board Elections next fall. These persons are Drew Gillett (New Mexico), Ann Cicero (New Mexico), Joe Barbish (Ohio), and Don Osborn (Arizona). Alternates are Dr. Bing Chen (Nebraska), and Leon Neal (North Carolina).

It was noted that the best way for these chapter candidates to have a chance is for more chapter members to join the AS/ISES. Also noted was the acceptance of

the Minnesota S.E.A. as the 28th AS/ISES Chapter, pending revision of their bylaws.

An observation by a participant in the ISES Congress states that this year the feeling of those involved was less exuberant, but more realistic in their ideals, and more dedicated in their actions toward the development of solar energy. Overall, the ISES 25th Year Silver Jubilee was a complete success as it served to bring together representatives of all aspects of solar energy, in an atmosphere of concreteness and reality.

DOE FUNDS AVAILABLE FOR MANUFACTURED AND COMMERCIAL PASSIVE SOLAR BUILDINGS

by Daniel Perez

Two new Program Opportunity Notices (PON) have been issued by the U.S. Department of Energy (DOE) to support the development and construction of passive solar manufacturing and commercial buildings. The Passive Solar and Hybrid Manufactured Buildings Program is a three-phase program toward design, prototype testing, and test marketing of passive solar manufactured buildings. PON's for the manufactured buildings program are available from Martin A. Langsum, 312/972-2129.

The Passive Solar Commercial Buildings Design Assistance and Demonstration Program is a three-phase program supporting the design of Passive Solar Commercial Buildings in Phase One, with their construction occurring in Phase Two, and support for evaluation and dissemination of information about the buildings during Phase Three. Recipients of a Phase I award will receive seminar instruction in the latest methods in passive solar design and evaluation before their final review for the construction award. PON's for the commercial building program are available from the National Heating and Cooling Information Center, 800/532-2929.

Proposals are due at the DOE address, below, no later than 4 p.m., July 27, 1979:

Department of Energy
Chicago Operations/Regional Office
Passive Solar Commercial Buildings Design
Assistance and Demonstration Panel
Attn: Eduardo J. Marrero, Secretary
Building 2, Room I-109
9800 South Cass Avenue
Argonne, IL 60439

OUTCOME: SOLAR ENERGY LEGISLATION by Steven Stepan

Solar-related legislation fared poorly in Texas' 66th Legislative Session, most bills dying in the oil and gas dominated House Energy Resources Committee.

Of the Solar Omnibus Bill, the Property Tax and Ad Valorem Tax Exemption Bills, and the Alternative Energies Fund Bill, only the Property Tax Exemption Bill, which exempts solar and wind devices from state property taxes, survived, due mainly to positive voter response in the fall referendum. The final draft of

the bill, according to Mike Plaster of Rep. Keese's office, includes provisions for passive solar, broadening the scope of possible benefits from the bill. However, energy saving devices operating on other than solar or wind power are not entitled to exemption. It becomes law January 1, 1980.

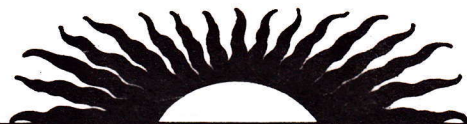
The Solar Omnibus Bill, which would have removed many institutional barriers to solar implementation, died as a rider attached to a Thermal and Lighting Standards Bill sponsored by the Governor's Office of Energy Resources, killed in the House. However, because the standards bill is necessary to comply with federal energy conservation regulations, it could possibly reappear in this summer's special legislative session. If so, the Solar Omnibus rider could again be attached. Among the obstacles the bill can expect if it resurfaces will be the utility antidiscrimination clause, and inexplicably, the solar rights clause which provides merely for voluntary purchase of easements.

Senator Vale's Alternative Energy Resources Fund Bill, which would have created a money pool to encourage the development of solar, wind, geothermal and other alternative energies, never made it out of Committee for open debate. A related bill, dealing with solid waste disposal in renovated or new waste treatment plants, was also killed, delayed in the House's Energy Resources Committee. The bill would have required plants under construction to study the feasibility of burning solid waste.

Most gasohol legislation was introduced by Rep. Kubiack, Rep. Keese, Sen. Price and Sen. Longoria. Only one survived the legislative ax. The bill granted a new permit under the Alcoholic Beverage Code authorizing manufacture of alcohol as a fuel within state boundaries by almost anyone. Since 1937, it has been illegal to produce 200-proof alcohol from anything other than petroleum products within the State of Texas. A companion bill also called for the creation, establishment and administration of a Texas Gasohol pilot plant. One gasohol-related bill which failed, the Gasohol Motor Fuel Tax Exemption Bill, would have exempted gasohol from the regular gasoline taxes to promote sales, phasing out only when gasohol penetrated 10% of gasoline's market.

LUBBOCK MEETING DRAWS CROWD

Jane Cohen, Extension Agent for the Home Energy Program, Texas Agricultural Extension Service, in Lubbock reports the somewhat surprising attendance of over 200 individuals at the Solar Energy For Your Home program May 28. There were 10 speakers as well as 12 exhibitors. People came in from surrounding towns as well, including Abernathy, Brownfield, Floydada, Idalou, Knott, Lamesa, Monahans, Muleshoe, Paducah, Plainview, Post, Ropesville, Wolfforth, and even Clovis, NM. Media coverage included two television news teams, five radio broadcasters, and five newspaper reporters. The meeting seems to indicate an upsurge in public interest in solar technologies in the Lubbock area since last year.



The First Passive Solar Home Awards. U.S. Department of Housing and Urban Development. Washington, DC. U.S. Government Printing Office, January 1979.

A new publication from the U.S. Department of Housing and Urban Development provides a thorough treatment of the state of the art in passive solar design. Concepts are illustrated through the 162 award winners from the Residential Passive Solar Design Competition and Demonstration conducted by HUD during the summer of 1978. Among the projects illustrated, six are from the state of Texas.

Representing the concept of Direct Gain are David Smith's design for an adobe structure in Bovina, TX and Harry Brengden of Spartan Technologies, Inc., design for a solarium-type two-story speculative house in Spring, TX near Houston. Another adobe structure in El Paso, TX by Mack and Phillip Caldwell is included under the concept of Indirect Gain. The largest number of Texas award recipients are found under the solarium concept. A 3200 Sq. ft. speculative home in Arlington, TX was submitted by James M. Rohe of Concept Consultants, Inc. and Magnus Magnussa of the Ehren Kratz Group. L.R. Bachman of Design Technology, Inc. received an award for a moderate-cost solarium home in Hockley, TX. The final recipient from the state was Ray Booth of Booth and Associates, architect for a one-story partially buried structure incorporating both the solarium-type collector and a wind tower ventilator for summer cooling.

In addition to the survey of award recipients, chapters are also included on construction details for passive systems along with the most commonly made thermal mistakes found among the HUD competition entries. A chapter on performance calculations presents the state of the art in estimating passive system performance.

Emergency Building Temperature Restrictions Set New Comfort Levels for Non-Residential Structures from the Federal Register/Vol 44, No. 107.

New federal regulations for thermostat settings in non-residential buildings are scheduled to go into effect during the month of July. Temperature restrictions of 65 degrees maximum heating, 80 degrees minimum cooling, and 105 degrees maximum hot water temperature are to be instituted for a period not to exceed six months unless extended by Congress. Violators will be subject to a \$5000 fine to the owner and a \$5000 fine to the operator of the building, with each day constituting a separate offense. Exempt under the plan are residences, hotels, health care facilities, elementary schools, and other similar building types. Applications for exemption will also be considered for buildings incorporating other conservation strategies which yield similar results. The plan is part of the President's energy package, submitted to Congress March 1, 1979, approved by the Senate and the House in May.

TSAC Rides Again by Russel Smith

The Center for Renewable Resources in Washington, DC has contracted with the Texas Solar Action Coalition (TSAC) to perform the Texas portion of its "Model Programs" project. TX-SES member Bob Russell has been serving as coordinator of the effort until such time as a part-time program manager is hired. The two main tasks to be performed are 1) the compiling of a catalog which documents renewable resource, conservation, and community self-reliance programs underway around the state, and 2) host a statewide conference at which the results are to be discussed.

Performance of this contract provides an opportunity for the continuation of the political organizing effort begun last year which culminated at the National Solar Congress in Washington, DC. Individuals are needed who are willing to participate in the project and the revival of TSAC by serving as local coordinators. If you are interested, please contact Bob Russell at 512/476-5678 or 444-2226, or Ray Reece at 512/447-9274.

AUSTIN'S RENEWABLE ENERGY RESOURCES COMMISSION

by Daniel Perez

Austin's newest citizens' advisory board is the seven-member Renewable Energy Resources Commission, which joins some 36 other citizens' boards such as the Planning Commission, the Urban Transportation Commission and the Electric Utility Commission, in advising the City Council on policies and programs. The Renewable Energy Resources Commission (RERC) is virtually the first in the nation. Only the cities of Seattle and Davis, California have something similar. Indeed, ordinary citizen influence over energy policy anywhere is quite a rarity.

The Commission Chair is Ray Reece, a free-lance energy writer. The other members of the Commission are: Vice-Chair Bob Henderson, a professional biologist; Jean Spence, a partner in a solar design and installation firm; Leon Barrish, from the State Attorney General's Energy staff; Jack Howell, a mechanical engineer and University of Texas professor with a solar research background; Lawrence Baye, a professor of chemistry at Huston-Tillotson College; and a yet-to-be-named replacement for Bob King.

The seven members appear to represent a balanced and appropriate diversity of interests, skills and experience. Other groups will have the opportunity to influence the direction of the Commission through open access to Commission meetings, public hearings, and special Commission-appointed task-forces.

The meetings thus far have primarily dealt with internal Commission procedures and sketching a tentative series of priorities and policy objectives. The RERC is dividing its work into "short-term," "mid-term," and "long-term" categories -- the sum of which will constitute a Renewable Energy Resources Development Plan for

the City of Austin, as mandated by the ordinance which established the Commission. While it is impossible to predict the specifics of this plan, one can speculate as to what it might eventually include.

Within the next two years (short-term), the Commission may work towards projects such as low-cost solar collector and attached solar greenhouse workshops, building code and zoning law amendments, and the completion of a master plan for alternative energy development in Austin.

Projects during the next five years (mid-term) may include design and construction of the first of a series of "total energy systems" for residential and commercial buildings. This system may include on-site food production. Other mid-term projects are an experimental methane gas plant and on-site commercial and industrial co-generation of electricity from process steam.

The six-to ten-year plans (long-term) are expected to be items such as neighborhood-scale solar-electric generating plants, the use of solid wastes as boiler fuels, and the applications of renewable energy technologies to local transportation.

These goals should not be taken as individual proposed projects. Rather, these should be thought of as expectations of what Austin's "solar age" may include.

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EDITORIAL

BOB'S LAST

Persistence. Persistence. Persistence. That would have to be the message I would leave you as I move on. In the years I have been involved in advocating solar energy in Texas, I have seen many changes. Yet, I can also see a great deal which remains the same. Public support for solar energy is prevalent enough that special interests opposed to a solar transition will rarely venture to admit such prejudices publicly. Still, the prejudices exist. No one testified against solar legislation this year, but all our solar legislation did not pass. The "Omnibus Solar Bill" was buried in a sub-committee of the House Energy Resources Committee by Rep. Joe Hanna.

Persistence. At least this year we could tell more clearly who is who. Solar and other renewable resources were given hearings. More money was appropriated to renewables RD&D than ever before. I've received ten letters a week this year, on the average, from people with more than passing interest in solar for their homes, schools or businesses. Last year the Alcohol, Firearms and Tobacco Regulation Office in Dallas let 18 permits for alcohol stills. This year they are processing ten each month for this region. Most of the difference is Texas. In Brownsville we managed to train teams of remodeling contractors to install and maintain solar water heating systems. Before the first ten units was in, the installation time was down to seven hours each. Residents receiving the systems have in many cases turned off their back-up systems all together. The Brownsville Community Development Corporation project manager is being flooded with inquiries from other homeowners. And on June 22, even Governor Clements was in Brownsville to hear about it.

Persistence. The Texas Solar Energy Society began as a committee. Today it supports a staff with commodious (not glamorous) offices. The GOER/TX-SES Solar Realities Workshops are on the road and having over-capacity attendance.

Persistence. In Atlanta, Lola Redford said she received seven thousand letters after making a televised solar speech recently. When she told President Carter this, his head dipped and eyes closed as he asked somewhat perplexed, "How come that never happens when I talk about solar energy?" Persistence, Jimmy. Some of us have been talking about solar for a long time without seeing much response either.

My observation at this point is that all which remains is a "longer-than-we'd-like" educational process. There is a tremendous demand for individuals with solar-related experience. Gaining experience may require some effort now, but it will pay off later, believe me. Persistence.

SOCIETY UPDATE

TX-SES CO-FOUNDER DEPARTS

by Russel Smith

Robert King has departed the Texas Energy Advisory Council to become Director of Solar Residential Programs for the Tennessee Valley Authority in Chattanooga, Tennessee. During the almost three years since Bob assumed the position of Director of Solar Programs at the TEAC, he played a major role in the battle to bring about a solar transition in Texas. Indeed, one can hardly point to a solar program in the state that doesn't have his mark on it, or to a person involved in solar in Texas who hasn't been affected by Bob's presence. The \$1.5 million Energy Development Fund (EDF) which he was instrumental in both creating and administering funded numerous research and demonstration projects in the fields of solar, wind, biomass, and geothermal. This legislature has expanded the EDF to \$3.75 million for the next biennium.

In December of 1976, Bob met with Dr. Peter Jenkins to discuss the possibility of organizing a chapter of the American Section of the International Solar Energy Society. In a subsequent meeting with Earl Braun, George Smith, Al Hildebrandt, Anna Fay Friedlander, Harold Blum, Warren Cole, Gary Vliet, Henryk Orłowski, Bill Davis, Vaughn Nelson, Bill Huffman and others, the charter for the TX-SES was drawn up. The first newsletter was published by Robert Floyd and Bob, and Bob remained as chairman of the Publications Committee until his departure from Texas. He also served for a time as Treasurer of the Society. He was largely responsible for the creation of local TX-SES chapters, served as a delegate to the 1978 National Solar Congress, is a board member of SUN/REP, and was a coordinator for Sun Day in Texas. The first Sunday of the month "Sunset Parties" at Bob's house, where interested solar advocates met over wine (carefully selected by the connoisseur himself, of course) and cheese had become a tradition in Austin that will be missed, as will Bob.

Solar and the TVA is a challenge worthy of Bob's energy and creativity. He expects to remain in close contact with the TX-SES and all of his friends here in Texas. We will doubtless gain a great deal of useful information from Bob's experiences, and wish him the best of luck.

TX-SES TexAd Winner

We are pleased to announce that an advertisement for the TX-SES has won a TexAd design award from Texas Monthly magazine. Designed by Janice Ashford, with copy by Russel

Smith, the full-page ad features an antique engraving and several paragraphs on the age-old idea of the "solar clothes dryer." This ad is one of ten winners and can be found on page 207 of the June issue. It has gotten a great deal of response from the public, as well as attention from other publications.

Workshops Greet Summer Solstice

The Solar Realities '79 workshop series being performed by the TX-SES for the Governor's Office of Energy Resources got underway in Austin on June 20 and 21. Originally scheduled as two sessions (one day for passive design techniques and one day for active systems), the demand was so great that it became necessary to duplicate the workshops in reverse order at another location. The attendee limit was extended beyond the original ceiling of 50 persons for the second set, resulting in a final attendance count for all four sessions of over 200. These included architects, engineers, designers, builders, HVAC and plumbing contractors, realtors, representatives of state agencies, city codes officials, and professionals in other areas with a need and desire to learn about current solar applications.

According to evaluations turned in by participants, the meetings were a rousing success. With the assistance of the TX-SES Advisory Committee who critiqued the sessions, the presentation teams will "tighten up their act" and make any adjustments necessary to add to the overall effectiveness as the series moves around the state.

DOCUMENTATION RESPONSE A TRICKLE NOT A FLOW

by Russel Smith

To date only a handful of individuals with access to information on solar installations have responded to the Society's Documentation Project. The information and photos they have provided are excellent and are beginning to provide the potential for a very good publication. It should be pointed out that although a response date of June 1 was requested, this project is an ongoing one and we hope to continue to receive your information. To be able to show, as graphically as possible, the large number and variety of solar projects in Texas is a goal truly worthy of our attention as a society. Please take the time to help us live up to the objectives we have set forth. In the process, solar involved people will also help themselves.

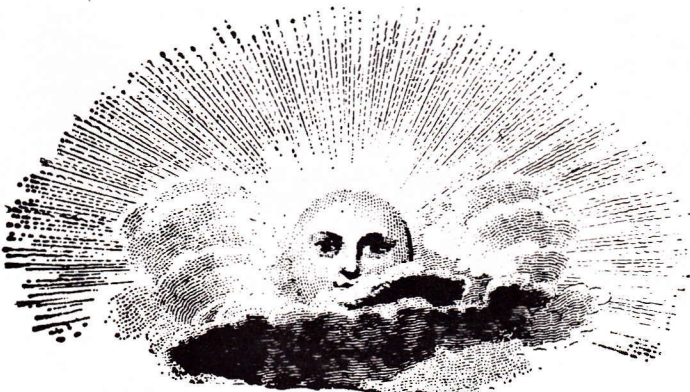
Director's Message

It is becoming increasingly apparent that while much can be accomplished by this office on a large scale with your continued support, the fight still must concentrate in "the trenches." The local situation can best be dealt with and reported on by solar advocates active in their local communities. Some communities seem to be able to keep formalized solar groups together, while others seem only to function in a very loose-knit network format. My feeling is, if that's what works best, do it. A formalized chapter does, however, offer opportunities for a higher profile, and is a potential recipient of funds which in certain cases could not be distributed through informal networks.

In any case, TX-SES members in each and every community in the state should try to contribute to the local effort. If a TX-SES chapter exists, join it. If not, check out the TX-SES membership list to see if a nucleus exists and try to establish regular periodic contact. The "First Sunday of the Month: Sundown Party" established by Bob King in Austin proved to be an excellent avenue for solar interested people to gather to socialize, share experiences and strategize. More formalized approaches can follow such informal groupings.

An inventory of local solar and renewable resources installations and programs can provide a rallying point project worthy of the immediate attentions of any solar group. Lots of local publicity could be gained in the release of such a survey and the results could become part of the TX-SES statewide documentation project. Think about it, then act. Please call me for assistance any time.

Best regards,
Russel E. Smith
Executive Director



Dallas-Fort Worth Solar Energy Association
12547 High Meadow Drive
Dallas, TX 75234
214/241-9133

Programs during the last three months have included a visit from Russel Smith, TX-SES Executive Director, presentation on barriers to the financing of an underground solar home, and a tour of a solar-assisted heat pump installation. A show of public support for the Solar Bank Bill is being organized and directed to Congressman Jim Mattox, with the support of the Texas Committee on Natural Resources, the Sierra Club, the Dallas League of Women Voters, and the Audubon Society.

El Paso Solar Energy Association
P.O. Box 12321
El Paso, TX 79912

The Southwest Border States Solar Conference, hosted by EPSEA, has dominated the group's time over the last few weeks. It has been a rewarding experience and could be considered a success even before the actual conference simply because of the organizational benefits and contacts which have been derived in the course of preparation.

Houston Solar Energy Society
P.O. Box 13629
Houston, TX 77019

The HSES has a very successful public information "Sunline" program under way which includes radio and TV talk shows, phone-ins, and information packets. Recent meetings have featured tours of local installations, presentations by Mike Meyer of Marshall Space Flight Center on an air system, and Dr. Lorin Vant Hull from the University of Houston on the Barstow project.

Austin Solar Energy Society
2525 Wallingwood Dr., #501
Austin, TX 78746

Most recently, the group met at and toured the Krispy Kreme Donut solar installation (one of the more visible arrays in Austin). ASES members also led groups on tours of other local passive and active systems during the TX-SES/GOER workshops.

Other solar group addresses:

Earth, Air Solar Energy Society
6011 S.W. 34th St.
Amarillo, TX 79109

Proposed East Texas Solar Energy Association
(Tyler-Longview area)
Contact: Judi Basehore
Box 488
Brownsboro, TX 75756

Red River Solar Energy Society
4301 S. Kelly, #5
Denison, TX 75020

COMMUNITY APPLICATIONS

TEXAS APPROPRIATE TECHNOLOGY NEWSLETTER ISSUED

by Bill Garfield

THE PRESIDENT'S RURAL ENERGY INITIATIVES

by Charles Galvin, Jr.

In his energy speech to the nation on April 5, 1979, the President reaffirmed the three basic goals of his energy policy: to increase domestic energy production, to encourage greater energy conservation, and to stimulate the use of our vast technological resources to develop alternative energy sources so that we can reduce our dependence on imported oils.

In his announcement, the President included several rural energy initiatives among which included an agreement among Department of Energy (DOE), Economic Development Administration (EDA), and Community Services Administration (CSA) to provide technical and financial assistance for the construction of up to 100 small-scale plants by the end of fiscal year 1981 to produce alcohol as a transportation fuel. The funding for this program will be \$11 million.

The White House selected the Federal agencies because EDA and CSA have grant, loan, and loan guarantee resources which could be used to encourage and assist small family farmers, farm cooperatives, and others in the development of small-scale fuel alcohol plants. DOE has technical assistance capabilities that could be made available to applicants in the design and construction of such plants, and EDA and CSA will be responsible for the technical evaluation of applications for financial assistance.

If anyone in Texas is interested in applying for financial assistance for the construction of a small-scale alcohol plant, contact Hugh Farmer, Deputy Regional Director, c/o the Economic Development Administration, 221 W. 6th, Austin, TX; (512) 397-5193.

Community Built Systems Spotlighted

The National Center for Appropriate Technology has just released a new publication entitled The Solar Survey. Included are the results of an NCAT survey detailing a number of low-cost, community built (do-it-yourself) solar collectors. In many cases detailed drawings are provided as well as descriptive information. Systems from across the country are included. For information write NCAT, P.O. Box 3838, Butte, Montana 59701.

The first Texas appropriate technology (A.T.) newsletter was produced and mailed to about 800 people throughout the state in May. The newsletter is called ACT I and represents the collective effort of a committee formed to try and help to facilitate networking A.T. activities in Texas. The ACT group also helped organize the Greenhills Center A.T. conference held in Dallas on May 26 and 27. About 100 people attended to hear what people were doing in areas related to A.T. Such topics as passive cooling, energy conserving architectural techniques, the Solar Bank Bill, evapo-transpiration human waste systems, trickle irrigation, intentional/self-reliant communities, and solar greenhouses were discussed. The next newsletter will be called, appropriately, ACT II and will include articles contributed by many of the people who spoke there.

The ACT group is always looking for relevant articles and persons interested in subscribing. For information and a free copy of ACT II (if you are already on the mailing list for ACT I you should get one) drop a line to Bill Garfield, Editor, 612A West 33rd Street, Austin, TX 78705. They plan to also be represented at the Southwestern States Solar Energy Fair in El Paso July 6-8, so please stop by if your are attending.

A.T. SMALL GRANTS PROGRAM PROGRESSING

by Russel Smith

Pete Baldwin of the Governor's Office of Energy Resources reports that the seven hundred plus proposals received under the A.T. Small Grants Program have now gone through the evaluation phase. Preliminary ranking will be done in July with final ranking and selection of awardees to be completed by the Department of Energy in August.

Mr. Baldwin indicated it is his office's hope that next year's cycle under the program will allow more time for preparation, information dissemination, evaluator selection, and processing of the huge number of responses they expect. Such was not the case with this first cycle. According to Pete, little opportunity existed for the staff to analyze various approaches to administering the program, so the most expeditious method was chosen out of necessity. "We are only now becoming fully aware of the renewable energy and appropriate technology network in Texas," said Baldwin, "and we intend to work with them next year to the maximum extent possible. We welcome comments and suggestions on our programs from the public at any time." Mr. Baldwin can be contacted at the Governor's Office of Energy Resources, 7703 N. Lamar, Rm. 502, Austin, TX 78752, or by calling 512/475-5407.

TX-SES CASE STUDY NUMBER 1

System Type: Hybrid Solar Greenhouse

Location: San Marcos, Texas

Climatic Data: 1650 heating degree days

Latitude: 29° 54' N.

Owner: Southside Community Center

Building Type: Community Center

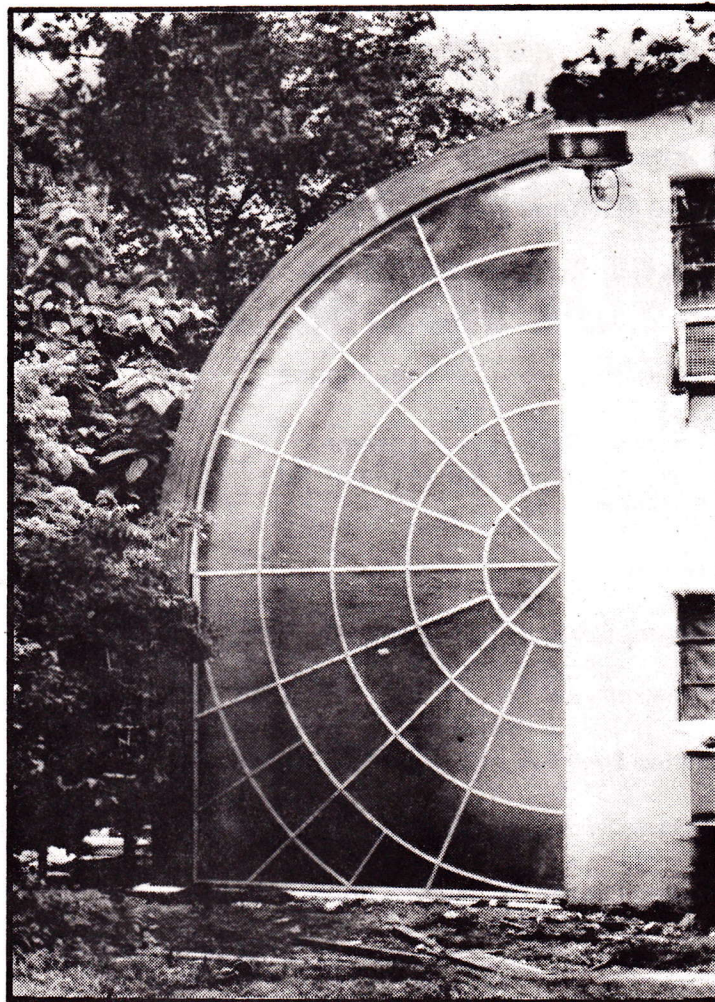
System Sized For: space heating for 1/3
of a 4000 sq. ft. structure

System Designed By: David Bentley & Phillip
Pommier Passive Solar Designs

System Installed By: CETA workers

Building Design By: others

Solar System Manufacturer: -



System Description: Greenhouse heated air is cycled down through air ducts located within laminated wooden columns to subfloor thermal mass storage. 6 1/5 HP fans supply the heated air across 2800 recycled one gallon plastic containers filled with water which make up the subfloor heat exchanger. A separate room fan air loop crosses through the exchanger in a cross flow configuration to supply heat to the building.

Auxiliary/Back-up System: Gas fired central air furnace

System Cost: \$11,870. in materials

Funding Source: Texas Energy Advisory Council (TEAC), Comprehensive Education & Training Act (CETA), Methodist Board of Global Ministers, and local businesses.

Monitoring Equipment:

40 channel data logger system by Solar Dynamics

Performance Data Available?: June 30, 1980

Installation Available for Prearranged Tour?: Yes

Best Person/Persons for Operating Experience Detail: Janna Starr, director Southside Community Center, San Marcos, Texas 392-9964

TX-SES CASE STUDY NUMBER 2

System Type: Solar Greenhouse

Location: Dallas - Extreme
west end of Danieldale Rd.
Climatic Data:

Latitude:

Owner: Greenhills Center
(Fox & Jacobs, Inc.)

Building Type:
Triangular

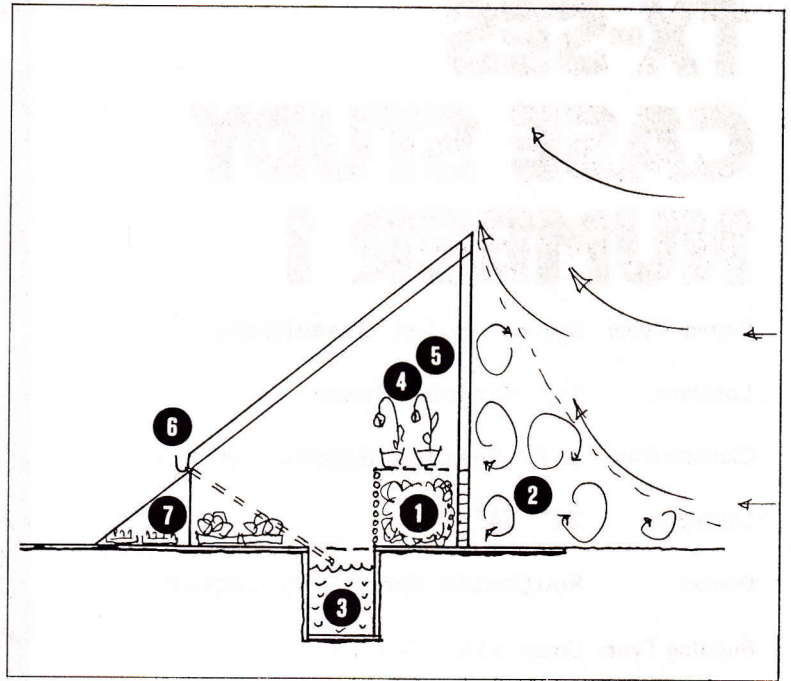
System Sized For: Any: modular

System Designed By: Dr. Geoffrey Stanford, Juan Chapa

System Installed By: Juan Chapa

Building Design By: Dr. Geoggrey Stanford, Juan Chapa

Solar System Manufacturer:



System Description: 1) Large compost bins generate heat all through the winter; 2) the north wall is vertical and creates its own insulating pocket against "blue northers"; 3) the large water tank stores more heat than does rock; 4) the compost keeps the air moist, which plants want; 5) the compost releases CO_2 , which the plants need on sunny days; 6) the tank stores rainwater, which is better for plants-- our well water is too salty; 7) the lowest part of the greenhouse, too small to work under, is a cold-frame worked from the outside. It helps to insulate the south wall.

Auxiliary/Back-up System: Immersion electric heater in water tank (maintains humidity)

System Cost:

Funding Source: Fox & Jacobs, Inc.

Monitoring Equipment: Thermometers, Hygrometers

Performance Data Available?: Not yet

Installation Available for Prearranged Tour?: Not yet

Best Person/Persons for Operating Experience Detail: Juan Chapa

Note: Since the printing of this publication in 1978, two major solar tax-related initiatives have been passed. On the Federal level, the Solar Income Tax Credits, and on the State level, the Property Tax Exemption (Proposition 4). Details on both can be found in the TX-SES News Vol. 2, Numbers 3 and 4.

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SOLAR BRIEFS

A new planned community near Newport Beach, California, Rancho San Clemente, will rely on passive solar air conditioning in nearly 2000 homes. All the commercial, industrial, and institutional buildings in the 2000-acre development will also be equipped for solar utilization.

E-Systems Energy Technology Center of Garland, TX was one of nine firms selected by the U.S. Department of Energy to install and test a solar total energy system. The installation at the Dallas-Ft. Worth airport central utility plant consists of a linear Fresnel lens concentrator in conjunction with silicon photovoltaic cells. Electrical output will be inverted to AC and used to power lights and small motors. Thermal output will be used as a preheat to boiler feedwater. Since the solar outputs of the system are well below the base energy load of the plant, no electrical or tunnel storage is required.

The Appropriate Technology Small Grants Program recently received an overwhelming turnout from the five-state Southwestern region. The 1653 applicants was the largest response of any region in the nation. Texas contributed over 46% of the submissions. Early data analysis reports that about 33% of the applications related to solar energy, 20% to conservation, 10% to wind energy and 5% to geothermal. The winners will be announced August 1, 1979.

Wisps of Wind

A \$75 million project being undertaken by U.S. Windpower, Inc. of Massachusetts in a gusty California mountain valley will be the "biggest wind energy system going on the planet," according to Edward Terhaar of the State Department. Twenty 25-foot, 3-bladed windmills on 150-foot high towers will be located in Pacheco Pass, about 80 miles south of San Francisco. Each unit will be capable of generating a maximum of 50 kilowatts. If the initial units prove successful, expanse plans call for the construction of a total of 500 windmills in the Pacheco Pass area.

Biomass Briefs

The Bio-Energy Council is accepting proposals for small research projects in the field of bio-energy. A total of at least \$350,000 over the next two or three years will be distributed in grant awards in the range of \$10,000 to \$50,000. The program is sponsored and funded by the Andrew W. Mellon Foundation. Proposals should be submitted to: Research Grant Program
c/o Paul F. Berte, Jr.
The Bio-Energy Council
1625 I Street, N.W.
Suite 825A
Washington, DC 20006

A new process associated with bio-mass presently under research, is that of growing certain plants that

produce oil, rubber, and lubricants. The field, known as "petroculture" uses plants which require little water, including guayule, jojoba, and euphorbia.

SUNDIAL

- | | |
|----------------|--|
| June 11-13 | DEARBORN, MICHIGAN |
| July 15-17 | ORLANDO, FLORIDA |
| July 29-31 | PHILADELPHIA, PENN. |
| Aug 1-3 | LOS ANGELES, CALIF: <u>Department of Energy Regional Solar Update 1979</u> . Four regional conferences highlighting national commercial and residential solar demonstrations. For reservations write: Trinity University Continuing Education, 715 Stadium Drive, Box 79, San Antonio, TX 78284. Phone: 800/531-7180, X8311. In Texas phone: 512/736-8311. |
| July 6-8 | EL PASO: <u>Southwest Border States Conference</u> co-sponsored by the Arizona and New Mexico Solar Energy Associations and the Texas Solar Energy Society. Contact: Dennece Knight, El Paso Solar Energy Association, 1609 Charles Owens, El Paso, TX 79936, 915/592-3425 |
| Aug 1-2 | BROWNSVILLE |
| Aug 8-9 | CORPUS CHRISTI |
| Sep 12-13 | LUBBOCK |
| Sep 19-20 | EL PASO |
| Oct 17-18 | HOUSTON |
| Oct 24-25 | SAN ANTONIO |
| Nov 7-8 | DALLAS |
| Nov 14-15 | FT. WORTH: <u>Texas Solar Realities '79</u> , a series of workshops on passive and active solar systems sponsored by the Governor's Office of Energy Resources. Write: GOER, c/o Texas Solar Energy Society, 1007 South Congress, Suite 348, Austin, TX 78704. Phone: Daryl Janes, 512/443-2528 |
| Aug 16-19 | UNIVERSITY OF COLORADO AT BOULDER: <u>Second Annual National Citizens Solar Conference: A Convention for a Solar America</u> . Contact: 1028 Connecticut Ave., N.W., Washington, DC 20036, 202/466-6880. |
| Sep 24-30 | HELENA, MONTANA: <u>Soft Energy Path Explorations with Amory Lovins</u> . Registration fee includes meals and lodging for seven days. Write: Feathered Pipe Ranch, Box 1682, Helena, Montana 59601, 406/442-8196. |
| Oct 3-5 | JEFFERSON CITY, MISSOURI: <u>4th National Passive Solar Conference</u> . Write: P.O. Box 1643, Jefferson City, MO 65102. |
| Oct 29-31 | WASHINGTON, DC: <u>4th Biennial Conference and Workshop. Wind Energy Conversion Systems</u> . Contact: Dr. Theodore R. Kornreich, 1925 N. Lynn St., Suite 308, Arlington, VA 22209. |
| Mar 24-26 1980 | WASHINGTON, DC: <u>7th Energy Technology Conference and Exposition</u> . Write: 4733 Bethesda Ave., N.W., Washington, DC 20014. ACCEPTING PAPERS. |

WHERE TO LOOK

The first passive solar catalogue, 1978, David Bainbridge. The Passive Solar Institute, P.O. Box 722, Davis, CA 95616.

Introduction to Appropriate Technology: Toward A Simpler Life-Style, R.J. Congdon. Rodale Press, Emmaus, PA 18049.

Energy Future: Report of the Energy Project at the Harvard Business School. Discusses a six-year study on solar. Available from: Energy Future, P.O. Box 253, Cambridge, MA 02138.

Retrofitting: The Thermal Upgrading of Buildings. Serves as a tool for bolstering the energy efficiency of existing buildings. Write: Energy Department, Maine Audubon Society, 118 Old Route One, Falmouth, Maine 04105.

Solar energy education packet for elementary and secondary students. Write: Center for Renewable Resources, 1028 Connecticut Ave., N.W., Washington, DC 20036, 202/466-6880.

The Passive Solar Energy Book-- A complete guide to passive solar home, greenhouse and building design by Edward Mazria. Write: Rodale Books, 33 East Minor Street, Emmaus, PA 18049.

Solar Law Reporter-- publishings of recent legislation on solar technology. Write: Solar Energy Research Institute, 1536 Cole Boulevard, Golden, CO 80401, 303/231-1000.

Energy Planning by David Myrha. Gale Research Company, Book Tower, Detroit, MI 48226.

Energy Engineering Technology. AEE Energy Books, Dept. 1025, 464 Armour Circle, N.E., Atlanta, GA 30324.

Synerjy/A Directory of Energy Alternatives. Three editions: Solar, Thermal, and Wind. Write: Synerjy, P.O. Box 4790, Grand Central Station, New York 10017.

Solar Products Specification Guide. Write: Solar Age, Church Hill, Dept. SG9, Harrisville, NH 03450.

Solar Energy Perspectives for Public Power, a study by Neil H. Woodley. Write: Solar Energy Research Institute, 1536 Cole Boulevard, Golden, CO 80401.

Richard Earl Sims
109B Avenger Village
Sweetwater, TX 79556
915/235-4430
--solar energy mechanic--

John W. Wright
Petroleum Extension Service
Odessa College
P.O. Box 3752
College Box 40
Odessa, TX 79760
915/337-8042
--public relations--

James Allman
4801 Ave. G
Austin, TX 78751
512/459-6131
--residential and commercial
design with architectural
firm--



**COLE
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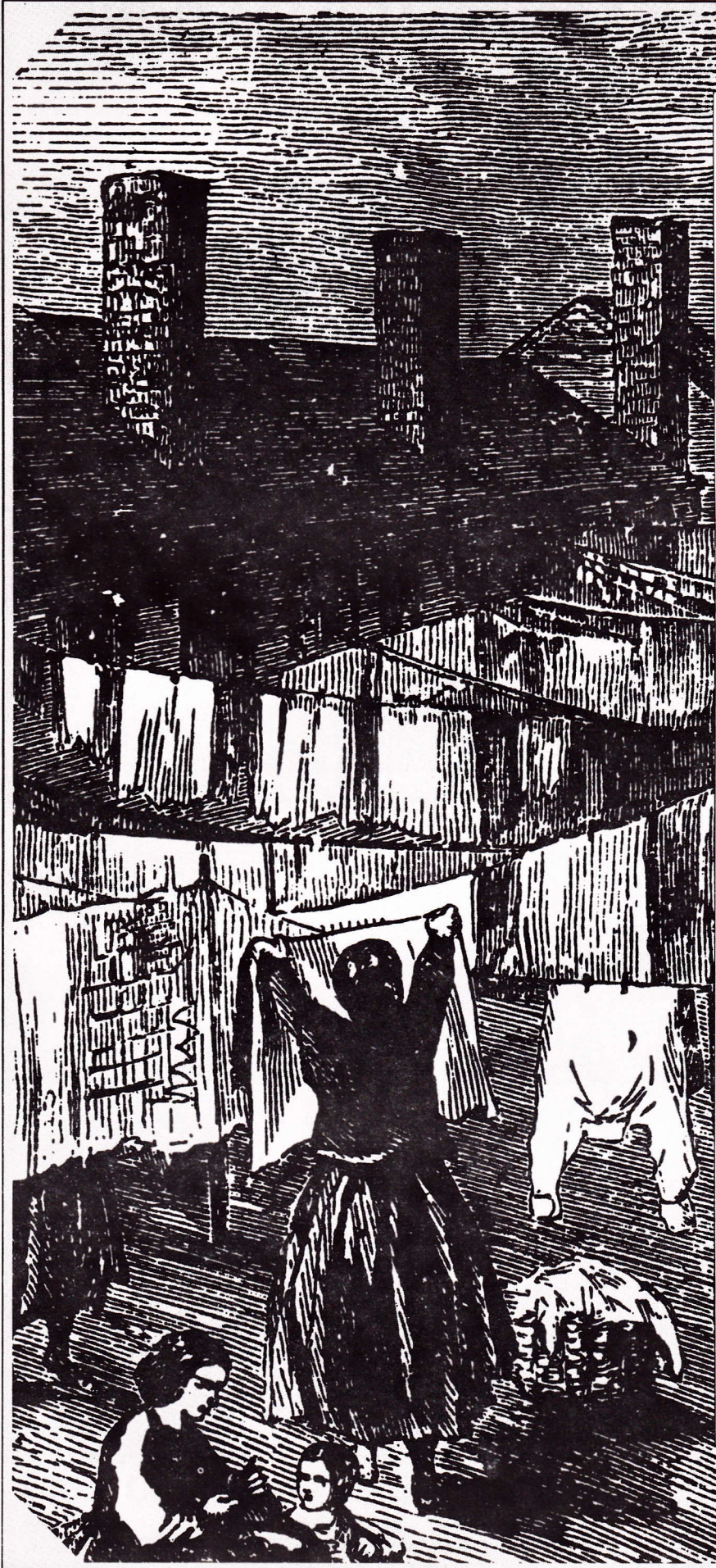
SOLAR POSITIONS SOUGHT

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5203 Ave. G
Austin, TX 78751
512/453-2786
--product development and research--

**Warren Cole
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440A E. ST. ELMO RD.
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Cheap and simple, right?

You probably don't have any questions about how it works. It works today just as it has since we first began to do the wash. But what about those "new-fangled" solar energy devices? Ever increasing numbers of Texans are putting into action ideas which draw upon this clean, renewable energy supply with which our state is so abundantly blessed.

If you are wondering how you can get the straight story on what is happening right now in solar energy, let us plug you in to our growing network of solar homeowners, builders, architects, engineers, entrepreneurs and interested citizens. We seek to gather and share accurate and timely information about solar related technologies through our newsletter and technical bulletin, workshops, conferences and personal communications.

The "Solar Age" has begun.
We intend to help it along!



The TX-SES is a private, non-profit educational organization, and a chapter of the American Section of the International Solar Energy Society. For subscription and membership information write or call:

Texas Solar Energy Society
1007 S. Congress, Suite 348
Austin, TX 78704
512/443-2528

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Name _____ New Member ☐
Employer _____ Renewal ☐
Position _____ Bus. Ph. _____ / _____
Home Ph. _____ / _____

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Member of AS/ISES? ☐ Can you open your solar home, etc. to tours?
Yes ☐ No ☐

Local Chapter Member? ☐ Chapter Name _____

Solar Involvement:

() Dealer () Inventor () Engineer () Builder
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() Solar Homeowner () Public Emp. () Interested () Do-it-yourselfer
() _____

The Texas Solar Energy Society is a Regional Chapter of the American Section of the International Solar Energy Society. It was founded in 1976 as a non-profit educational organization "to further the development of solar energy and related arts, sciences and technologies." Membership is open to the public. Your membership fee and/or cash donation will help keep the TX-SES office as a focal point for solar activities and educational programs in Texas. TX-SES Ongoing Programs for '79 include:

- * Information clearinghouse for public
- * Expert witnesses for public hearings, advice to public officials upon request
- * Southwest Border States Conference, July 6, 7, 8, El Paso
- * Governor's Office of Energy Resources/TX-SES Solar Realities '79 Workshop Series, 9 Texas cities
- * GOER Statewide Solar Conference, December 6, 7, 8, Austin
- * Solar Installations & Programs Documentation Project '79
- * Listing of solar homeowners

[As an IRS category 501(c)(3) organization, cash donations above and beyond membership dues, are tax deductible.] \$ _____ Donation Enclosed.

I wish to become an Affiliate Member (Non-voting, 1 year subscription to quarterly *TX-SES News, Technical Bulletin*) \$10.00 enclosed.

I wish to become a Full Member (Voting, 1 year subscription to quarterly *TX-SES News, Technical Bulletin*, special rate for subscription to *Solar Age*, reduced or free admission to Society conferences, Workshops, etc.) \$15.00 enclosed.

Please order at the Full Member special rate, a 1 year subscription to *Solar Age* (the official publication of the AS/ISES, normally \$20) in my name. \$15.00 additional enclosed.

I wish my company to become a Sustaining Member (2 individuals designated by company may attend TX-SES conferences, workshops at no charge; 5 copies of each issue of *TX-SES News, Technical Bulletin* to office address, reduced rate on *Solar Age*, listing in newsletter, conference agenda's, etc.) \$100 enclosed.

Make all checks payable to TX-SES and send them to: TX-SES, 1007 South Congress, Suite 348, Austin, TX 78704. 512/443-2528.

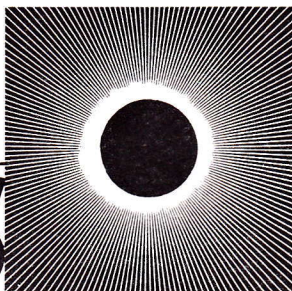
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All memberships extend for 1 year from month of joining.

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TX-SES

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