



# The TREIA Newsletter

Texas Renewable Energy Industries Association

March 1988

## TREIA Update

TREIA was formed in 1985 to establish a forum for renewable industries to make their views known to state and national elected officials and other bureaus and agencies.

At the same time TREIA has undertaken to develop a set of ethical standards for member industries and associated individuals to govern themselves by. Through our cooperation with Solar Energy Industries Association (SEIA) we have kept abreast of matters of national interest in Washington while contributing to the dialogue when appropriate.

TREIA has recently completed recommendations for renewable related programs to be funded from the Exxon oil overcharge funds for the Governor's Energy Management Center. Closely monitoring disposition of these funds and keeping our members informed will be a major priority in 1988.

TREIA will be concentrating on preparations for the 1989 legislative session; developing plans for increasing exposure of member companies to markets through Association participation in trade shows; expanding membership through follow up on the *Emerging Energy Technology in Texas* conference; and building toward the annual meeting this fall.

This first quarterly newsletter will bring current members up to date on other members and give prospective members an idea of some of the kinds of interchange that goes on among the members.

## Member Update

At our January 16 meeting the re-election of the entire slate of standing officers was confirmed. The officers

are: **Bob Walters**, President; **Kevin Conlin**, Vice-President; **Bob Batho**, Treasurer; **Jim Rowan**, Secretary. All of the officers have spent much time working on projects for the Association. Bob Walters worked espe-

cially hard for the Exxon overcharge refund hearings. At the meeting the other Directors committed themselves to assist the officers in any way possible to try and reduce the time they have to be away from their normal jobs.

Although **Mike Osborne**, our immediate past President, has his hands full as the owner/manager of historic Scholz Garten in downtown Austin, he remains active in renewables through his interest in wind farms in the Panhandle and through his photovoltaic business in Elgin.

**Russel Smith**, our Executive Director, is also Executive Director of the Texas Solar Energy Society and has been active in renewables since 1976. Russel has spent well over a year coordinating the *Emerging Energy Technology in Texas* conference. He has recently completed coordinating a contract for the PUC to study renewable energy curriculum in Texas Schools. He has also been responsible for various state and national level renewable energy projects. TREIA is fortunate to have someone with Russel's dedication to renewables as it's Executive Director. He spends a lot of time with state agency and legislative contacts promoting the cause of renewables.

**Ken Robinson** of **Rainmaker Cooling** has been involved in both TREIA and TXSES since 1983. Although he is not currently commercially involved in renewables, his business focuses on conservation. Rainmaker markets evaporative roof cooling systems and do commercial solar film installations. They recently completed a study with Texas A&M showing an 80% reduction in the heat gain of the roof on a single story building.

**Chris Higgs**, although no longer active in the solar thermal business, is available for consulting. As a Board member of TREIA and President of TXSES he remains keenly interested in renewables and conservation and has high hopes to return to the industry when the economy improves and interest in renewables rises.

**Jim Rowan** was formerly chief engineer at Windmaster and at the wind division of Capco Financial Services. He is not currently professionally active in the renew-



able energy field but is available for consulting. He is now a senior associate programmer at IBM, in the advanced engineering systems group in Austin. He remains concerned about the environment and the role renewables play in its protection, and looks forward to future involvement in renewable energy.

**Enerquip** continues to sell replacement components and parts for domestic hot water systems, with an occasional order for a complete system. Customers are widely scattered all over Central, Northern, and Eastern Texas. Pat Fitzgerald reports that Enerquip is negotiating a North American distribution agreement for a wood powered engine that will generate power in isolated locations such as saw mills. They are also negotiating for the rights to a burn-anything steam generator and engine set. It is designed to satisfy a wide range of power requirements from electricity generation to water pumping. Both types of equipment are made in Brazil.

**National Private Power** in Richardson is a part of American Private Power in Los Angeles. They specialize in co-generation systems for hotels, convenience stores, small hospitals, and nursing homes. They currently have eight systems in operation, at sites which include Sheraton Hotels at South Padre Island and Denton and the Queen Mary in Long Beach. By the end of the second quarter of 1988 they expect to have seven more installations including The Ultimate Sports Bar in Houston. Ed Borray provides this information from his office in Los Angeles.

**Solar Services of Texas** is our newest member. They do service work in the Houston/Galveston area on all "orphan" DHW and pool systems. They also install new systems. Marcus McGarry is the owner/manager.

**Universal Technical Institute** in Houston offers trade schooling for large numbers of students. One of the courses they offer is their 36 week HVAC course, which currently has about 350 students enrolled. These students get three weeks of DHW solar training during their sessions. This includes installation, repair and maintenance. UTI has solar systems installed on site and the students get hands on experience. Dennis Rohloff is UTI's representative for TREIA.

Steve Pomroy tells us that things are looking up at **The Energy Connection**. They continue distribution and representation of US Solar and Sunglo products. They have also recently started a solar repair and maintenance operation and have expanded it to include Amcor Thermosyphon and Fafco as well as other orphan systems.

Robert Faulkner used to operate **Solar Systems, Inc.** in Tyler. They produced an evacuated flat plate collector called Solar-Vac which is a very efficient way of heating

water. The technical success was not followed by commercial success and Bob says that SSI is now a "lame duck" supporting the systems they installed which are still in service. Bob supports renewables and looks forward to the time that interest is rekindled.

**Bob King** is the director of the Office of Natural Resources at the Texas Department of Agriculture. The DOA has recently published "Low Cost Energy for Agriculture" to help farmers and ranchers reduce the energy related costs of agriculture. This publication focuses primarily on energy conservation and load management. They also co-published *Ecology and Economy: Energy Analysis and Public Policy in Texas* with the LBJ School of Public Affairs. It explains energy systems analysis and the results of a year-long graduate student seminar which attempted to apply the systems approach to larger policy questions. Among the conclusions of the analysis were the following: natural gas contributes sixteen times its cost to the economy; Highway department budgets can be reduced if car size is reduced; Farm windmills allow broader grazing patterns which allow energy to be brought into the economy.

**Solar Kinetics** in Dallas is active in the development and sales of solar concentrators. They have broad experience in line focus, point focus, and central receiver technology and are among the leaders in stretched membrane mirror technology. SKI has designed, installed and operated the world's largest 24 hour solar industrial heat process system. They are currently involved in large mirror research for terrestrial and space power applications. In addition to industrial process heat SKI systems are used in dish electric and central receiver electric applications. Gus Hutchison is their Chief Executive Officer. Gus is also active in SEIA.

**Carter Wind Systems** is rebuilding after the 1987 fire that destroyed their plant. They have taken the opportunity to redesign their wind machine and all the production tooling. The blade diameter is increased from 67 1/2 to 75 feet which will make it more cost effective. CWS has recently received financing from DITT of France and MANN of Germany. These deals also involve technology transfer. The fire has delayed a proposal to SWPS in Amarillo which involves a large wind farm in the Amarillo/Dalhart area. The energy produced would be wheeled to South Texas. Hopefully this project can be revived; it would be the beginning toward utilizing the tremendous wind energy potential of Northwest Texas. Understandably, both Jay Carter Sr. and Jay Carter Jr. have had very little time to devote to anything but the rebuilding.

One of our members from the Panhandle is **Bobby Duke** of Darrouzett. Bobby's interest in renewables comes from his ownership of a 25KW Carter wind generator.



He has a net billing arrangement with his utility and he buys very little power from them. The wind machine furnishes most of the electricity for his 3700 sq. ft. home, including three 3/4 HP motors to run his gas fired air conditioning system, workshops, and two submersible pumps that furnish water for 150 cows and calves. In addition to backup from the grid, he has a 7 1/2 KW welder and a 30 KW PTO powered generator as standby power sources. Bobby tells us he will consider renewables for future applications.

Bob Walters, President of TREIA, is Vice President of **Entech, Inc.**, a privately held corporation that designs, fabricates, and installs linear and point focusing fresnel lens concentrating systems for industrial and utility applications. Entech has recently been awarded a patent for an optical device that increases the sunlight-to-electricity conversion efficiency of a solar cell by 10% to 30%. This new cell cover will be used in the 300 KW PV systems they will be installing at the new 3M Center on the west side of Austin. Entech has various R&D projects under way that are funded internally and by the U.S. Department of Energy, Sandia National Laboratories, NASA, Solar Energy Research Institute, and the SDI organization.

The **Alternate Energy Institute** in Canyon has two courses related to renewable energy. Vaughn Nelson, AEI's representative at TREIA is teaching these courses this semester. AEI is currently involved in research on the elastic twist and atmospheric test of the new thin airfoils projects funded by SERI. AEI has also received a subcontract funded by SERI through Bergey Wind Systems to study wind powered electric water pumping.

Although **Cole Solar** has had to diversify because of the state of the DHW industry they continue to market and install DHW and pool systems. Warren Cole, President, remains firmly dedicated to the principals of solar and renewable energy.

Bob Batho's architectural firm is currently acting as energy consultant for the Street of Dreams project. Street of Dreams is a national organization that puts together showcase display home projects for groups of builders,

with a large percentage of their profits going to charity. **Batho Architects** have done widespread energy consultation from Santa Monica, CA in the west to Stone Mtn, GA. in the east. They have also independently developed Thermal Channel insulation/radiant barrier, selling 600,000 sq. ft. of it in 1987.

Kevin Conlin is Vice President of **Solar Sign Age**, producers of architectural type solar signs, billboard lighting SunPack solar generators, unitized solar power systems for general use and for export, a standard line of battery enclosures, and other solar powered lighting and security products. They recently installed solar powered signs for a Houston hotel and have delivered their first solar powered billboards and a solar powered gate opener in Louisiana. They also specialize in unitized power for remote locations and offshore oil and gas platforms.

**Mac Holder's** group was recently featured in the January 24 issue of the *Austin American Statesman* as one of the leaders and innovators in passive solar design. They are extending passive solar design from custom homes to commercial applications such as strip centers, gas stations, and office complexes. They continue to work with the Governor's Energy Office to evaluate the energy efficiency of schools in the state. They won an award for their energy efficient design of affordable housing for the City of Austin.

**Ron Radke's Custom Designers and Builders** is in the process of completing their first stand alone home north of Fruitvale. Because the potable water well was deeper than expected they had to do some innovating on the water system. A 24VDC, 20 amp jack pump raises water from about 180 feet into a 40 foot tank, holding 1500 gallons. This tank pressurizes the house system to conserve water and power. Flow restrictors, low-flow shower heads, 1.1 gallon water closets, and other water saving equipment is used throughout. Non-potable rain water is collected in two 500 gallon tanks and is used through a dual water system to flush the toilets when there is rain water available. Eventually gray water may be used to flush the toilets. Power for the house is furnished from photovoltaics on the roof.