

Sun Day schedule

With luck, the sun will be visible tonight as Lakota Nation spiritual leader Deviere Eastman salutes the sunset on Skinner's Butte, in the Native American tradition.

At the University, Emily Ashworth will speak at noon, Dan Knapp from the Lane County Office of Appropriate Technology will speak at 12:30 and a Craft Faire will be on display in the EMU courtyard.

Other Sun Day activities include solar home tours and energy conservation tours, a Eugene Downtown Mall Faire with speakers Jim Weaver, Jerry Rust and Emily Ashworth, and displays of solar information equipment.

An art show is on display at the Atrium and Centre Court, a free solar film festival is offered at the McDonald Theatre, and music on the mall by winners of Eugene's Battle of the Bands is scheduled.

More information is available from the Survival Center at 686-4356.

Dan Kaehn, physics department research assistant, examines a circular pyranometer which measures the sun's rays from atop Science 1. The lower collector is designed for maximum efficiency in summer weather while the upper collector is more efficient for the winter collection of...

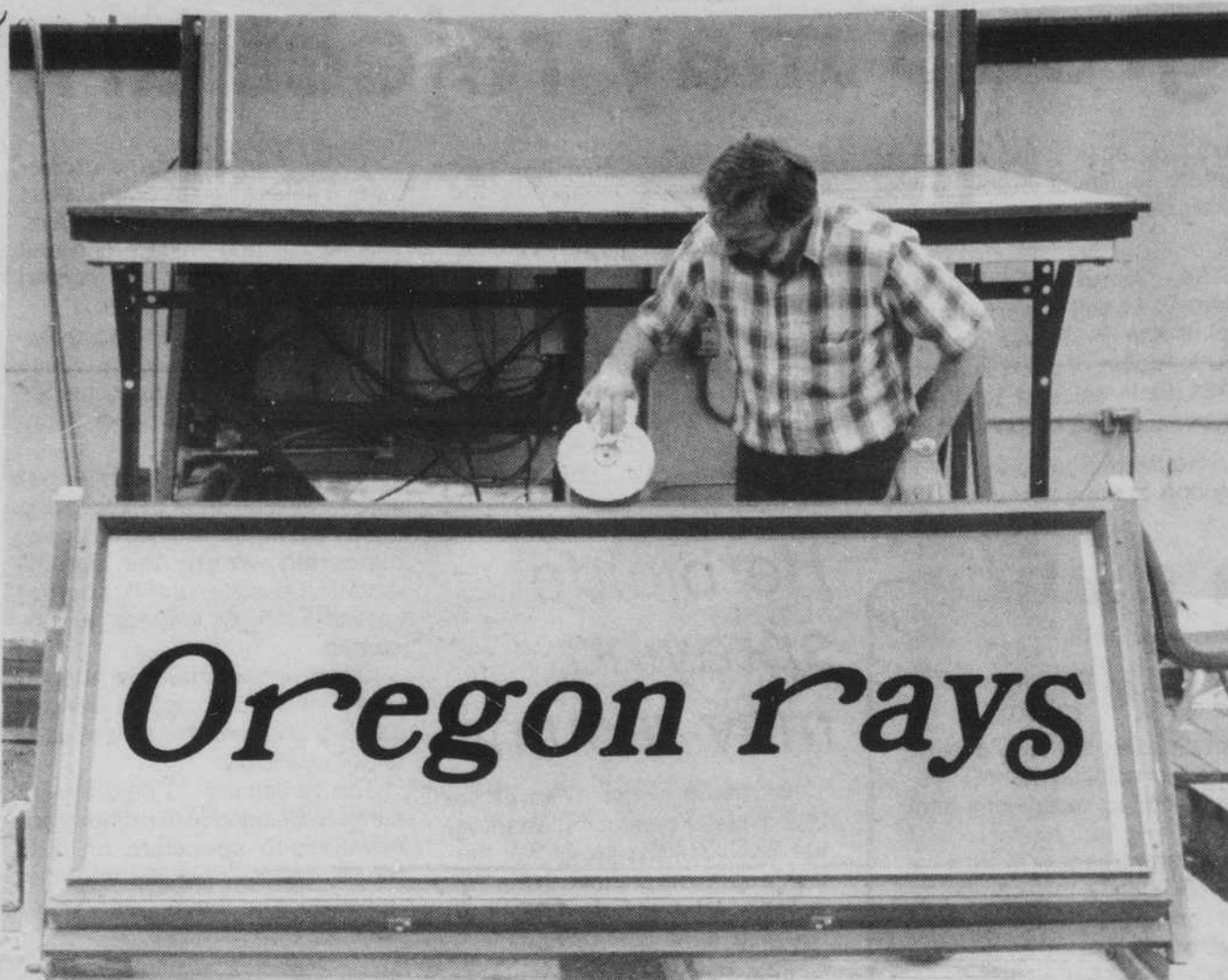


Photo by Steve Dodge

Prof supports 'soft' energy systems

By STEVE DODGE
Of the Emerald

It will take "a political education process and a political movement" on the local and national level to implement alternative or "soft" energy systems including solar power says Dan Goldrich, University political science professor.

"Sun Day ought to help," he says.

"Soft" energy, paths as opposed to their "hard" nuclear and coal counterparts, focus on renewable energy sources like the sun, including "heavy commitments to conservation" and environmental considerations.

He says soft energy also includes "tech-

nological tinkering" to improve existing alternative systems.

Goldrich is confident that "a huge number of new jobs" would open in the field of retrofitting buildings with solar and other alternative energy equipment, as energy-conservation efforts intensify.

Soft energy paths, he says, are "very labor intensive" (involving a large number of workers), while nuclear and coal electrical generating facilities require very few workers.

The very nature of soft energy systems, he says, allows them to be applied, understood and controlled on a local level.

That, he says, contrasts with a nuclear or coal-generating plant, which is concentrated in a central location and requires highly technical knowledge to understand.

One of the other advantages of the soft path, according to Goldrich, is the cost factor — compared to nuclear and coal plant, solar and other alternatives are relatively cheap.

In addition, soft energy doesn't require the security that nuclear plants use, which contributes to "the further centralization of government."

The large investments required for hard systems may preclude further development

of the alternatives, he says, because there is a strong lobby of big utilities, banks and profiteers who put out scare stories threatening brown-outs and loss of jobs.

Goldrich fears if the energy complex succeeds in building a network of nuclear and coal plants, the people will be forced to buy the power and encouraged to waste it.

Basically, he says, soft energy systems offer a strong alternative to the problem-ridden hard systems and foster a "strong movement towards local self-reliance and community development."

He recommends that people mobilize and pressure officials on every level for a sound energy policy.

Prof says Oregon's solar potential sunny

By STEVE DODGE
Of the Emerald

Solar collectors can now cut home electrical costs by up to one-half. In the future, collectors in Eastern Oregon may provide as much energy as the Trojan nuclear power plant, says physics professor David McDaniels.

The most practical solar application to date in Oregon is the installation of \$1,000-worth of flat-plate collectors for use in heating a home's hot water, McDaniels says. The collectors allow a savings of from 10 to 15 percent on the monthly heating bill, depending on the amount of water used.

McDaniels and research assistant Dan Kaehn have been working with other members of the physics department and architecture school since 1976 on an experimental project on the Science 1 roof.

Beginning with grants from two utilities and the Graduate Studies Center, the University solar project now operates on grants from a governor's commission and the Department of Energy.

One of the primary foci is study of the angle at which the sun strikes the solar plates. McDaniels says two different kinds of plates are in place on the roof — one is apparently more efficient for Oregon's cloudy weather.

McDaniels says the solar movement is "exciting and really moving." He cites "ball park" estimates which show no funding for solar energy projects and research in 1970, \$4 million in 1973 and \$300 million in 1978 as "impressive" figures that illustrate a growing interest.

"Solar energy is the way to go in the future," McDaniels says. "It's environmentally benign...that's the beauty of it."

Eastern Oregon, where sunlight is less obstructed by clouds, may be the next focus of interest. In a report submitted to the U.S. Department of Energy, McDaniels states that there are about 1,200 square miles of land in Eastern Oregon suitable for solar electric sites.

With solar collectors placed on about 40 percent of a 10 square mile parcel, McDaniels says energy equivalent to the Trojan's capacity could be generated.

As with most solar applications, cost is the big drawback, McDaniels says. It now costs between \$10,000 and \$15,000 to completely convert a home to solar heat. As Dan Kaehn says: "The question isn't can solar energy be done, but can it be done economically?"

Solar heat: will it warm up Eugene?

By LAURY MASHER
Of the Emerald

Are solar heating systems feasible in a location that receives as much rainfall as the city of Eugene?

Eight local businesses involved with solar power claim that is a question often asked by residents of the Eugene area. The answer is not simple.

In an area that receives consistent rainfall, it's logical for a homeowner to question whether the installation cost of a solar heating system would exceed its benefits.

- According to Bob Lorenzen of the Solar Energy Center, there is enough intermittent sunshine to make a solar heating system worthwhile.

What people don't understand is that Eugene has a nine to 10-month heating season, as opposed to a five to six-month heating season in the east, he says.

"People can start heating a home as early as September," says Lorenzen. "There is a balancing point."

Mark Baker, also of the Solar Energy Center, explains there are several different types of solar heating units.

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Students organize solar info service

By JOHN RIMEL
Of the Emerald

Nestled in the old married student housing on Agate Street across from Hayward Field stands a building that sticks out from the rest.

Along the ridge of the roof, a vertical wall rises six feet high and 24-feet long. Adjoining the house on the south side is a 10 by 10-foot addition, which serves as a greenhouse. This is the home of the Student Solar Information Service.

Formerly known as the Solar Energy Resource Center, the service began in 1975 when a group of architecture students asked the University for one of the empty old married student housing buildings. The building was retrofitted with an active solar heating system in December 1975.

The Solar system uses a 144-square foot water type collector through which a mixture of water and anti-freeze flows in a closed loop. The collector rises vertically from the roof ridge and receives not only direct sunlight but reflected light from the south portion of the roof which is overlaid with aluminum offset printing plates and serves as a reflector. The water is stored in a 1,000-gallon, reinforced, concrete septic tank. The tank is insulated with six to eight inches of foam. To heat the rooms, air is forced by a radiator through which hot water from the storage tank is pumped.

Unfortunately, the system is not currently operational. According to Bill Randall, project leader, one of the pumps is not working properly and the electronic control box which regulates when water is pumped up through the panels of collectors is malfunctioning. He says he hopes the system will be working again by summer.

When the system is working it will serve as a good demonstration model for the public — most solar homes in the area are private residences and not always open to the public, he adds.

The service, staffed entirely by students, is much more than just a demonstration model. It is also a public resource center for information about solar energy. Randall estimates that about 90 percent of the work is as a resource center. The center has a library of reference materials on solar energy, available to be read at the center.

Randall adds that they need volunteers to help staff the office and to help repair the solar heating system. Credit is available through the architecture school.

The service is open Tuesday mornings from 9 to 10:15 and Wednesday evenings from 6:30 to 9:30.