

# Public needs better education to help county save energy

**EDITOR'S NOTE:** This is the sixth of seven articles on the Energy Future Santa Cruz Advisory Board plan to reduce energy use in Santa Cruz by up to 35 percent. The plan was prepared under a grant from the National Science Foundation

By GREG GARRY  
Sentinel Staff Writer

How can the public's energy education be improved? Where will the dollars for energy investment come from? What will the new energy-related jobs be?

Energy Future Santa Cruz, in the education and economic development section of its report, tries to come up with the answers to these questions.

The report recognizes the importance of education in the energy picture. New technologies and policies are very important elements to the development of an energy efficient community, states the report. It quickly adds, however, that these technologies and policies will be meaningless without competent people for implementation and support from the general public.

Energy Future's report says that Project SERVE, a local non-profit organization, has found that its energy programs in schools have a measurable influence on the ways young people perceive and act towards energy.

The report points eastward to Massachusetts for an example of energy education. In the Franklin County

Massachusetts Youth Energy Conservation Education Program, public school students in grades six through 12, took part in a hands-on project installing low-cost/no-cost energy conservation measures, according to the report.

School districts, including some in Alameda County, have begun to implement energy-related, according to Energy Future. Under a state grant, Alameda recently developed four energy guidebooks to be used at all grade levels.

Cabrillo College is also involved in the energy education process, states the report. During 1981, a "School Energy Fair" was held at Cabrillo for all grade levels. The fair had more than 300 entries and 1,000 persons attending, including 500 young people, according to Energy Future.

What kinds of energy education do students now receive? Scott Munro, of Santa Cruz Energy News, says, "right now the energy education is piecemeal." It is up to the individual teacher to decide what he wants to fill his students in on, adds Munro.

The ideal, he says, is to have energy information integrated countywide. "It's not just turning off a light or driving 55," says Munro. He says students must improve their energy habits and must also become aware of energy limitations.

One example Munro offers for energy education is to have students do a "lightweight" general audit to see how energy is used in their schools. In order to

achieve this, he says, the students should work with the plant services people in the schools.

These types of programs fit in with the suggestions in Energy Future's report. The report says that local school districts should be encouraged to develop energy-related curricula for their students. Energy Future also suggests that driver training courses should include techniques for auto energy efficiency.

The report also suggests energy-related curricula for adult education programs. Curricula should include the following: Mini courses that provide the students with hands-on energy saving techniques, construction courses that teach the fabrication of renewable energy systems such as solar water heating and wind generation systems, evening or Saturday seminars that teach energy efficiency techniques in driving, and vocational training courses that prepare individuals for a career in an energy-related field.

Munro points to Cabrillo College, which, he says, has a good program in photovoltaic cells. Energy Future's report offers this definition of a photovoltaic cell: A solid-state device that converts the sun's energy directly into electricity.

Munro stresses the importance of weekend seminars for adult education. He says the Energy Center has been conducting a workshop for seven years, but, "they need some support from Cabrillo or adult education."

He says it is also important to have plant services people energy trained and

to get teachers the equipment that they need. "You need a person to serve as a catalyst," says Munro. The person needed, he says, would be an energy education specialist. "He might save as much as he earns from the school district in the same year," says Munro, a member of the Energy Future Advisory board.

Dave Van Dusen, also a member of the advisory board and a member of the executive board of the Central Labor Council, points to the role of organized labor in energy adult education. He says that organized labor, mostly in the building trades, has an apprenticeship program in cooperation with community colleges.

The apprenticeship program is paid for mainly by the employer, says Van Dusen, who adds that the pipe trades have a course in solar installation. As far as new energy technologies are concerned, Van Dusen says, "There are people that are willing to commit themselves to do this. Each installation takes the technology that much further."

How can low-cost financing of energy conservation and renewable energy for the public and private sectors be developed? Energy Future suggests the establishment of a joint powers authority or some other type of structure that would cut across jurisdictions to achieve this end.

Munro describes this as the concept of an energy services corporation. He says this type of a setup would make it possible for people to purchase energy equipment. The agency would also, according to Munro, serve to get private investment for solar heating systems. He says after

getting the needed equipment, the agency could lease it to the buyer.

Munro mentions the city of Oceanside, Calif., as an example of what can be accomplished along these lines. He says Oceanside raised about \$7 million from private investors for its program. The use of private investment would also play a part in the Santa Cruz proposal, says Munro.

Van Dusen also points to Oceanside as an example. He says the equipment is leased for two years, and, "it is a money maker and it is working out well as far as it has gone."

Energy Future's report also offers suggestions of possible capital sources for use in the development of an equitable, low-cost financing program for energy conservation and renewable energy technologies.

Among the suggestions are, tax exempt financing, an energy tax, leasing, the use of county or municipal reserve funds, and industrial development bonds.

What about the relationship between energy and future employment possibilities? According to Energy Future's report, a local study, conducted by Energy Action of Santa Cruz titled "Energy and Employment: The Future for Santa Cruz County" estimated that 520 local jobs could be created over a 10-year period, through the installation of energy conservation measures and solar water heating for 40 percent of the homes in Santa Cruz County.

Energy Action's study also compared the skills of the existing labor pool to those

skills that would be needed to develop energy conservation and renewable energy sources on a local level. The occupational categories examined included professional and technical, managers and administrators, sales workers, craftworkers and semi-skilled laborers.

The study found that most of the workers in these occupational categories would require only one to three months of additional job skills training in order to adapt their employment experience to the energy field.

In its report, Energy Future says the energy job market should be allowed to rise before actions are taken to develop more employment training programs. How can the energy job market be stimulated?

Van Dusen says the development of the energy job market and industry will be determined by consumer demand. "The contractors are in the business to make money, so if the demand goes up, they will become involved," he says.

Munro says the effect of PG&E's Zero Interest Program could also provide a push in this direction. He also points to one solar installation company that he knows of which hired 20 canvassers to tell the public about the possible savings. Munro does admit that some people have been disappointed in the slow growth of the solar energy job market. He says the growth is there, but it is slow.