

# Energy has taken on many new and costly meanings

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

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Energy. As defined by Webster's New World Dictionary, the word means the capacity for action and for doing work.

Since the mid-1970s, however, the word energy has come to mean more — much more. It stirs images of costly visits to the gas station, backbreaking utility bills, higher prices at the supermarket, bluejeans that cost \$40 — the greenback hit list goes on and on.

Solutions to the problem of rising energy costs have been as scarce as

parking spots near the beach on summer weekends. However, Energy Future Santa Cruz, a local grass-roots organization, has a plan which it believes can reduce energy use in the county by up to 35 percent.

The 100-page-plan, which was released two months ago, is broken down into seven separate programs, beginning with a residential program.

According to Energy Future statistics, residential buildings account for approximately 32 percent of all energy used in Santa Cruz County. The organization's report places the county's housing stock at about 76,000 households.

The local organization asserts that energy efficiency is easier to incorporate into new homes than existing homes. The report cites information from the California Energy Commission stressing the importance of proper design for new homes. Energy

efficiency can be increased by up to 70 percent as the result of proper design, but the commission says that only 5 percent of all new homes meet this ideal.

Why? The commission says that since most home builders are not the consumers who will pay the monthly utility bills they don't have the incentive to build the best possible energy efficient homes.

Enter Title-24 Standards. These standards, developed by the state, serve as energy requirements for new residential construction. County Supervisor Joe Cucchiara, who is also a member of the Energy Future Advisory Board, says the original standards, which have been in effect for about two years, recently were revised.

He says the new revised standards will become effective Jan. 1, 1983. Title-24, as originally written, was described in Energy Future's report

as complex and difficult to enforce. The original problems, according to Cucchiara, were due to a lack of education.

He says the state in the last year has decided to develop seminars for building officials and plan checkers. Cucchiara says he has talked to Solar-Cal and state officials in Sacramento, as they are in the process of putting together another education program for Title-24, which will begin, probably in September or October.

Opposition to the new standards, he says, will dissipate after a period of time. "I think the resistance is part of the newness," says Cucchiara. "The builders that are really astute are emphasizing energy efficiency."

One of the policies called for in Energy Future's report is to encourage state and local budgetary actions that will support the implementation of Title-24 for new residential construction.

Cucchiara says he doesn't see any real problems with budget considerations. He says the heyday for federal and state subsidies for local energy improvements came in the mid to late '70s.

Now, because that time has passed, "we've got to go it alone," he explains. "The longer we delay in making improvements," the more difficult it will be to do so in the future.

Energy Future's report, calls for, as one of its actions, education workshops on Title-24, which fit in with Cucchiara's comments about upcoming education programs. The report also calls for the development of a simple brochure that explains Title-24.

Another part of the plan deals with

the problem of existing housing. As the plan points out, only 12 percent of the county's 76,000 homes have been built since the new energy efficiency standards went into effect.

Many of these homes, says Energy Future, lack adequate insulation, weatherstripping and caulking and proper solar orientation. The report says that all-electric-homes, which make up 20 percent of the county's housing stock, are the largest energy consumers. High energy losses involved in producing and transmitting electricity is the culprit, states the report.

What can be done to save to save energy in existing structures? The report points to the Energy Action conservation package. The package for homes heated by natural gas would cost \$1,100 and save 34 percent of the energy normally consumed, states the report.

The payback period for purchase and installation of the options is estimated at five years. The conservation package for all-electric-homes has a projected cost of \$1,300, producing a 31 percent savings in energy consumption and carries a payback period of about 2.5 years.

How to ensure that these changes are made will be taken care of by a time-of-sale retrofit ordinance, says Energy Future. The report says the ordinance would call for the home buyer to pick up the cost of the energy improvements because the buyer will be the beneficiary.

A specific period of time should be set in ordinances after which all homes should be brought up to some minimum standards, states the report. Penalties for failure to comply

would also be used.

Rental properties present a different set of problems which Energy Future suggests solutions for. These include wrapping the water heater with an insulating blanket, covering windows with thermal curtains, and heating rooms selectively.

An added feature of these improvements, says the report, is the fact that they can be taken with the renters when they move. Where can renters get the money for these improvements? Energy Future says that PG&E provides a loan program for conservation known as ZIP (Zero Interest Program).

The report also suggests an energy conservation handbook for renters and landlords, including step-by-step instructions for the renter on how to carry out energy saving measures.

How many energy dollars go down the drain and what to do about the problem is dealt with in the residential water conservation section of the report. Energy Future calls for establishing a countywide water planning body as part of the solution.

Low-flow showerheads and sink-flow restrictors will also play a role, according to the report. Establishing a fair quota of household water use and charging more for water used above that level is another part of the solution, says Energy Future.

Energy Future Advisory Board Member Cucchiara says he believes this program to be unique in that it came up from the community, rather than trickling down from government. "The amount of attendance at neighborhood meetings indicates to me that this community is ready to make a change."