

POCKET NUMBER  
PROD. & UTIL. FAC. 50-289

June 24, 1981



Mr. Joseph Hendrie  
Chairman U. S. Nuclear Regulatory  
Commission  
Washington, D. C.

Dear Sir:

Do you remember those exciting days at 3-Mile Island (March 28, 1979) to be exact? I do. I remember the great fear I had of a radioactive wasteland in the heart of our country. (Shades of George Washington!) I remember the compassion I had and still have for the people faced with an invisible foe which still threatens them and I read there has been a high infant mortality rate since then.

I remember the disorganization, the conflicting reports, on Governor Thornberg's face a look of shock as though he's seen a ghost-- whether to evacuate or not--the hydrogen bubble --and surely it was through Divine intervention we were saved from our own ignorance.

No one has seen the reactor core, perhaps it's heating up again. This accident is surely proof of Murphy's law that whatever can happen will happen. It really sounds just like a movie scenario where perhaps our movie actor president, Ronald Reagan is trying to win an Academy Award over Robert Redford in the China Syndrome. I sometimes wonder if he can distinguish between fantasy and real life. What I can't understand is why you want to replay the same part in this dismal scenario where everyone loses and no one wants to finance or insure the nuclear industry, least of all the customers!

Is this free enterprise? No. Is it cost-effective? Emphatically no! The clean-up costs are phenomenal not to mention future law suits! Is it dangerous? Deadly dangerous! Is it Government interference with private industry? Yes, just what this administration is against. Is it putting industry on welfare? Yes, just what this administration is opposed to! Is it inflationary? Very! Do we need it? No, studies show that the need for electricity is going down nationwide. Are there safer, cleaner more cost effective forms of energy that will create more jobs? Yes. There is/wind power (See enclosures) geothermal, solar ponds, small hydro, tidal, methanol, ethanol and now hot water from the volcanic fields near Susanville, California. Many of these forms of energy are beginning to be established by people like our pioneer ancestors and others who don't live in the past. Again, California is leading the nation!

Mr. Hendrie, for God's sake let's avert the disaster that has not yet happened!

Sincerely - *Maxine King*

Copies: Mark Hatfield, Appropriations  
Committee & members, Senate  
James McClure, Energy & National  
Resources & Committee members  
Robt. Dole, Finance & Committee  
James Whitten, Appropriations  
Committee & members - House

Fernand St. Germain, Banking, Finance  
& Urban Affairs & members House  
John Dingell, Energy & Commerce &  
members - House  
Don Fuqua, Science & Technology, House  
Dan Rostenkowski, Ways & Means &  
Committee, House  
Government Operations, Jack Brooks & Committee, House

B107080171 B10624  
PDR ADCK 05000289  
PDR  
*Governor Brown*  
*ator Cronston*

DS03  
3  
1/1

*A genius of our age -*



8/11/79

# ASK

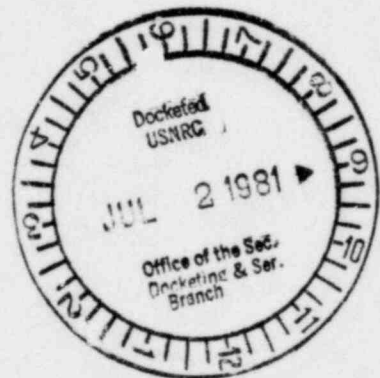
Send the question, on a postcard, to "Ask," Family  
We'll pay \$5 for published questions

**FOR R. BUCKMINSTER FULLER**, geometrician, educator, architect, designer

If you were in charge of the energy program, what would be the first thing you'd do? — J.I., Anderson, S.C.

*He would harvest the sun for energy.*

● The first thing to do to solve our energy and gasoline problems is to emulate the Germans in WW II. The Allies cut off the German petroleum supply. The German scientists immediately undertook to employ the natural-energy income from the sun as harvested photosynthetically by the trees and all other vegetation. The German scientists then produced four kinds of alcohol, and from those alcohols they produced the synthetic rubber, all their high octane gas for their airplanes, all animal foods and plastics in general. Though full records are held by the American intelligence of this operation, none of this is being referred to in the present emergency.



## How A Nuclear Power Plant Dies . . .

It starts to die the day it goes to work. As a succession of atomic fuel cores is inserted, used, and extracted from the plant, the radiation level in the plant structure begins to rise.

This is no accident, but a normal part of the operation of the plant.

After approximately 30 years, the plant must be closed. Every nuclear plant suffers the same fate. It must be closed and sealed or dismantled.

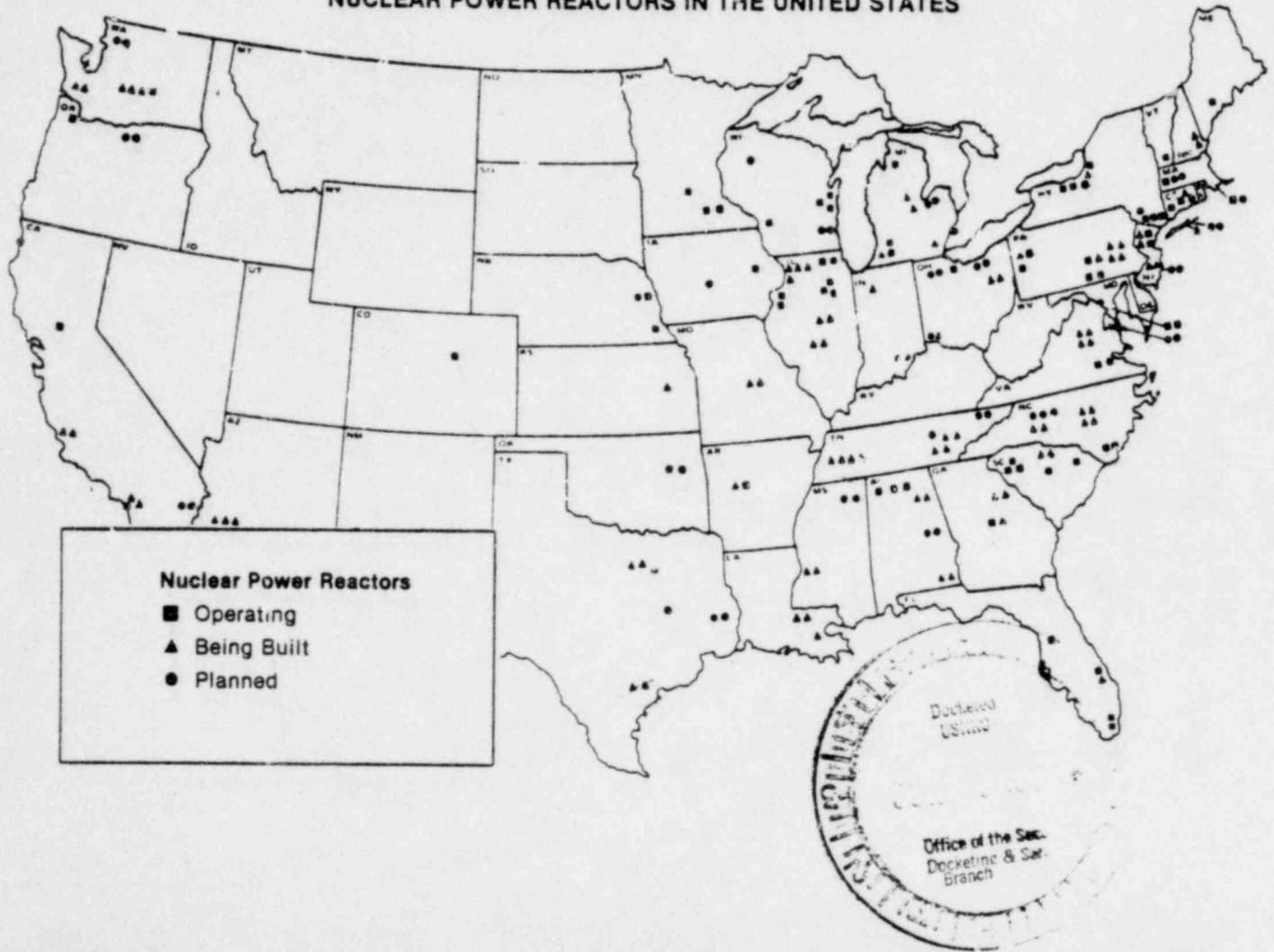
And guarded. Because scientists estimate that the poisoned structure will be a threat for at least 200 years, if not much longer. These inoperable plants cannot be dismantled and moved without great expense and enormous risk of exposure to surrounding areas, due to the thousands of tons of steel and concrete permeated with intense levels of radiation.

Sometimes the mothballing of a reactor isn't so easy. The Marcoule, France reactor, which produced plutonium for French nuclear weapons, was shut down ten years ago and placed under guard. But it has already developed cracks and is leaking radiation. It will have to be dismantled completely and entombed in concrete. Even then, the guards will have to stay, alert for radiation.

With only a 30-year lifespan, the problem of "dead but dangerous" nuclear plants cannot be put off until later. Fifteen plants in the U.S. have already been closed, and their disposal is a major problem today.

Where are nuclear plants located? The answer is simple: all over. Take a look at this map provided by the U. S. government . . .

NUCLEAR POWER REACTORS IN THE UNITED STATES



# U.S. Report Details Strategy To Cut Energy Use by 25%

By Robert D. Hershhey Jr.  
New York Times

Washington

The United States could cut its energy consumption almost 25 percent by the end of the century without sacrificing economic growth, according to an unpublished study conducted for the Department of Energy.

The proposed strategy, based on heavy investments in energy efficiency and the use of renewable resources, could nearly eliminate the need to import oil, the authors of the study wrote.

Although there have been roughly similar assertions, a draft of the new study is beginning to attract attention because it was commissioned by the government and carried out at a federally financed laboratory.

The findings are also seemingly at odds with the production-oriented energy policy of the administration of President Reagan, which has been accused by Representative Richard L. Ottinger, D-N.Y., who heads a House energy subcommittee, of trying to suppress the report.

It was understood that the Energy Department sent a copy of the report to Ottinger last week.

The study says that no technological breakthroughs are required to meet its goal and that there is no need for "draconian" interference by the government in the market. Perhaps the greatest advantage, the authors say, is that the report's flexible strategy offers protection against the "surprise and uncertainty" that is expected to dominate the nation's energy future.

The study was carried out by the Solar Energy Research Institute in Golden, Colo., which is the government's primary solar research installation, at the request of John C. Sawhill, deputy energy secretary in the Carter administration.

"This is the first government-sponsored study specifically related to conservation and it is also the first to look at both conservation and solar together," said Karl Gawell, a senior official of the institute.

"The results indicate," the study said, "that it is possible to construct a plausible, practical and economically attractive sequence

productivity of the average American worker to increase as fast as it has in the past 27 years, the achievement of a 'full employment' economy — and consequently a rapid increase in national income — by reducing national consumption of energy by nearly 25 percent. Energy from renewable resources could supply 20 to 30 percent of the remaining energy demand."

The researchers concluded that the equivalent of about 5.9 million barrels of oil a day, the current level of imports, could be "produced" in existing buildings and those constructed in the next 20 years at about half the cost of

providing them with electricity, oil or gas from conventional sources.

Accomplishing this would involve improving construction methods and installing insulation, storm windows and efficient furnaces and air conditioning.

The study said the nation could save almost 3 million barrels of oil a day by raising the gas mileage of the average automobile to 30 miles a gallon from today's 17. Alcohol fuels made from such sources as grain or wood could provide 25 to 45 percent of the fuel required to operate national transportation by the year 2000, the study said.

Mon., Mar. 16, 1981

★

San Francisco Chronicle 3





*Oil - Coal - nuclear The unholy trinity!*

# Herblock's world

*Oil*



"The Gods are angry"



# Interest picking up in windmills as alternate energy source

By Mario Dianda

Examiner Correspondent

GREEN VALLEY, Solano County — Strong gusts of wind that blow up the Carquinez Strait and over the ridges around Fairfield cast a strange spell on the PG&E meter at Bill and Betty Maher's ranch-style house:

Each time the Mahers switch on a light or heat up a room, the wind-bewitched meter eerily subtracts numbers.

The magic lies in a quietly humming windmill that towers 77 feet high just outside the couple's living room.

On a day when the winds are blowing at 25 mph, the windmill's single, 11-foot-long wooden blade churns up 10 kilowatt hours of electricity through a small generator at its base.

"A lot of people move out here and complain about the wind, but it never did bother me," says Bill Maher, a soft-spoken, semi-retired Vallejo contractor who has invested \$22,000 in the "Jacobs Wind Machine," manufactured by Power Towers Inc. of Pleasant Hill.

What drove Maher to have the windmill erected several weeks ago, besides a desire to cut soaring electric bills, was the challenge.

"I wanted to prove something, to find out for myself if the winds can be used," he said.

Should he learn that they can, Maher plans to have another windmill erected to power the irrigation pumps on his 437-acre ranch. Operation of the pumps runs up a monthly bill of \$275 during the summer.

Although Maher is among the first Solano County residents to take windmills seriously, he is not alone.

Having long recognized the wind-whipped area between Fairfield and Benicia as a potential hub of windmill-produced energy, the City of Fairfield and PG&E now are cautiously getting into the act.

By the middle of this month, the city's 50-foot demonstration windmill will take 20 to 25 mph winds and use them to generate 25 kilowatt hours of electricity — enough power to serve five homes. The windmill, perched on the Red Top Dairy hill just west of Interstate 80, overlooks Cordelia Junction.

Within five years if the demonstration project proves successful, Fairfield might establish a windmill farm that could generate 10 megawatts of electricity. A megawatt equals 1,000 kilowatts.

And PG&E, the eventual purchaser of that energy, this summer will erect its own demonstration windmill — a 200-foot model capable of producing 2,500 kilowatt hours in 27 mph winds. The windmill is to go on a small section of the 1,300-acre ranch PG&E owns a few miles south of I-80.

Last Friday, PG&E announced it would buy electricity from the biggest windmill farm in the world to be built in the area. The project calls for Windmill Ltd., a San Francisco firm, to build 148 wind turbine generators, which in turn will produce enough electricity for 150,000 homes by 1989. It is also contemplated that energy from the project would be used to power the State Water Project.

The Fairfield-Benicia area is one of four regions identified by the California Energy Commission as "high wind" centers. The others are the San Geronio Pass near Palm Springs, Altamont Pass just east of Livermore and the state's southeastern desert.

More than \$1 million has been spent by the state on "wind prospecting," says Leon Vann, manager of the commission's



HARNESSING WINDS IN SOLANO COUNTY  
Bill Maher put in a windmill to cut his bills



*Clean, safe energy*

3/25/81



RACE CAR DRIVER BOBBY UNSER  
He said alcohol is 'a lot safer'

### Reagan Cuts Hit

## Alcohol Fuel Lauded At Senate Hearing

Washington

Senator Charles Percy drove to work in an alcohol-powered automobile yesterday, and race car driver Bobby Unser praised alcohol as a fuel and then lambasted President Reagan's cuts in alcohol fuel funds.

Percy, R-Ill., chairman of a Senate government operations subcommittee on energy, opened a hearing on international alcohol fuels by announcing that he had driven to the Senate in a Brazilian-made car that runs on alcohol.

"The car drove perfectly, and I am not a very good driver," he said.

Unser, a champion auto racer from Albuquerque, N.M., showed the subcommittee films of the 1980 Indianapolis 500 automobile race, in which two drivers died in a flaming crash of gasoline-fueled cars, and a race 10 years later in Phoenix in which Unser survived a bad crash of his alcohol-fueled car with serious injuries but no burns.

He said alcohol not only produces more power than gasoline, but is "a lot safer, a lot nicer, a lot easier to work with." He said it gets poorer mileage, but this could be improved by blending.

Percy likened Reagan's budget cuts in the alcohol fuels program to the actions of a new corporate executive making a showing by reducing funds for research.

ALCOHOL IS 30 percent cheaper than gasoline in Brazil. Alcohol-powered cars are all over the place there. With another 20,000 added to the traffic every month.



"All he is doing is cutting his company's heart out," he said. "There is no future for this country if we keep doing things like that."

Reagan has proposed reducing financial support for domestic alcohol fuels production and dismantling the Office of Alcohol Fuels in the Energy Department.

Senator John Glenn, D-Ohio, called the president's proposal preposterous.

"It may be penny wise for this year's budget, but it is sure pound foolish in 1982 and '87 and beyond," he said.

Glenn spotted Gordon Cooper, like himself a former astronaut, standing near the door of the crowded hearing room and told the panel that Cooper had flown from California in an alcohol-fueled airplane.

Cooper said mechanics checked the airplane after the flight and "the cylinders were like brand new."

Unser and Ray McMahon, a race car engineer, told the panel that since 1966 only methanol, a form of alcohol, has been allowed as a fuel in the annual 500-mile race at the Indianapolis Motor Speedway. Unser said this decision was made because of the fatal crash in 1964.

"What about just everyday driving such as I did this morning?" asked Percy. "Do you think methanol is the best?"

Unser said he did, although it might be desirable to blend it with other fuel.

Gasohol, now available at many service stations, is a mixture of from 10 to 15 percent ethanol — another form of alcohol — and the rest gasoline.



*This idea is now going into operation in California*

5/79

## Solar pond project approved by panel

SACRAMENTO (AP) — A \$100,000 study of developing the Salton Sea into a giant electricity-producing "solar pond" was approved Thursday by the California Energy Commission.

Commission chairman Richard Maullin told members of the commission he was "anxious to experiment with this novel source of energy," and Ronald Doctor, another commission member, said similar experiments have operated in Israel.

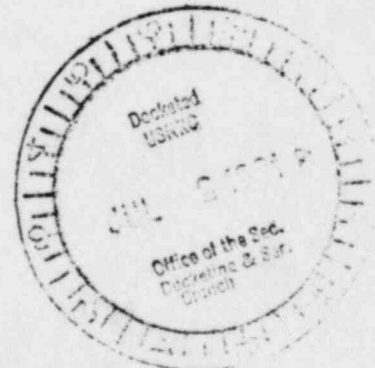
The study grant for Southern California Edison was approved on a 5-0 commission vote.

The action Thursday does not specify who would pay for a full-scale solar generating plant if the study finds such a project feasible. But commissioners said federal and state funds might be available to assist in development by a private utility such as Edison.

The experimental procedure depends on heat variations at different levels of the lake to generate electricity, said the commission's executive director, James Walker.

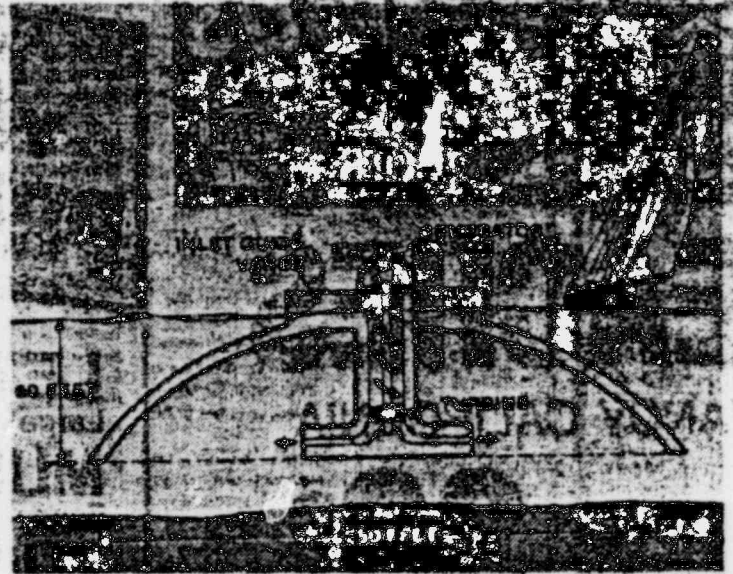
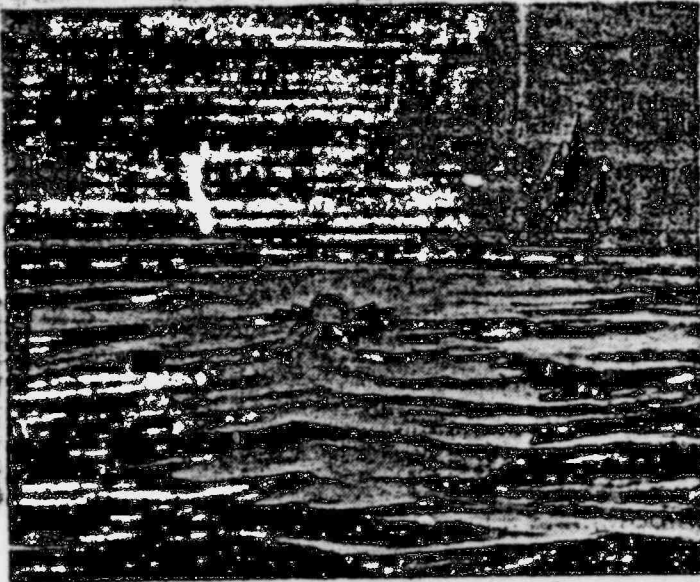
Eventually, state officials say, about 15 percent of the Salton Sea in Riverside and Imperial counties could be used to generate about 600 megawatts of electricity, enough for a city of more than half a million people.

But this study would involve design of only a five-megawatt plant, Walker said. He said if the complete project was ever built, sea walls would cut off the area involved and generators would be located on the shore around the pond area.





May 1979



Artist's concepts of how 'dam-atolls' will make waves work for man

Multiple uses for mankind

## Harnessing the ocean's waves

By Mark Stevens

Christian Science Monitor News Service

LOS ANGELES—An ancient observation coupled with more recent—but simple—technology could generate a new source of electricity from the massive energy contained in the world's oceans.

The recently patented "dam-atoll," developed by two scientists at Lockheed-California Co., takes advantage of a phenomenon noticed by ancient Polynesian navigators: when waves approach a small, ring-shaped island known as an atoll, they are naturally brought toward the center in spiral paths.

Leslie S. Wirt and Duane L. Morrow are proposing that a submerged, concrete, dome-shaped structure, some 250 feet in diameter, could re-create the effect of an atoll. Ocean waves would break across the top of the dome, form the natural spiral, and slosh into a series of vanes, just at the water's surface, in the center of the structure.

Like a flywheel, the vanes would direct the water down inside a tube, 30

feet in diameter and 60 feet high, and concentrate the broad energy from the surrounding ocean into a form of kinetic energy that could more easily be tapped.

At the bottom of the tube would be the key component and the only moving part, a turbine. The turbine would be connected to a generator at the top of the dome, which would in turn be connected with onshore electrical grids and power other functions that Wirt and Morrow have in mind for the dam-atoll.

One dome unit, the scientists estimate, could generate between one and two megawatts. In theory, they say, a string of 500 to 1,000 units situated in oceans with a high degree of wave activity could match the generating capacity of Hoover Dam.

Construction costs might be three times that of a nuclear or coal-burning power plant when calculated for the net cost of each kilowatt-hour. But with an inexhaustible fuel supply—waves—the scientists believe their proposal is economically sound.

More important, electricity would not

be the sole product. Desalination equipment atop the dome, with its pumps powered by the unit, would be more practical than the diesel fuels being used now.

And since the unit draws water from the surface, the dam-atoll would also be an effective means of helping to clean up oil spills, which would be drawn into the unit and collected.

In addition, a series of the units a few miles out at sea would have the effect of calming the ocean surface closer to shore—creating larger and safer harbors for unloading dangerous cargoes.

The scientists say that ecologically minded people have examined the dam-atoll and found no serious flaws that would mean harm to the environment. Wirt and Morrow both acknowledge that site selection would be a key to the unit's success, because possible disruption of the sometimes-necessary effects of beach erosion would need to be weighed.

Several years of development remain, they say, before possible construction of a full-scale unit could begin.