

## Commentary

# State's Energy Problem Has Roots Nationwide

By **BERTRAM WOLFE**  
and **CHAUNCEY STARR**

**W**hy is California now suffering from a lack of affordable electricity? The answer is that California and the nation have not looked responsibly to the future.

In the late 1960s and early '70s, the United States was doubling its electricity use every 10 years. To meet coming needs, utilities were placing major orders for new generating plants. In 1973 the situation changed. The Arab oil boycott and the resulting higher energy costs slowed the growth of electricity use to a doubling in 35 years. As a result, the new plants ordered before 1973 that were subsequently built led to a surplus of electrical supply.

That nationwide surplus, which is now gone, is what California officials were counting on when deregulation was approved in 1996—a robust, competitive market of wholesale electrical supply from generating companies outside the state. That expectation failed. Why?

Before 1973, the Sierra Club supported nuclear power. Since then, the influential "environmental" organizations have opposed oil, gas, coal and nuclear plants, as well as dams, and even geothermal plants. They argue for solar and wind power, which on a large scale are impractical because of their immense land use and their intermittent availability; indeed, on such a scale they are environmentally detrimental. However, with a surplus of energy supply, it didn't matter.

But, the electrical surplus has vanished. In the U.S. we now need new energy capacity to meet our present and future needs. On a world basis, population in the next 50 years is projected to increase from 6 billion to 10 billion. If the average per-person energy use reaches only one-third of that in the U.S. today, world energy use will triple. Thus, we now face both serious near-term national and coming world energy problems.

In this country we must decide how to meet our energy needs. The Energy Information Administration projects a continued U.S. increase of electricity needs of 40% in the next 20 years, and the needed replacement of 25% of our current capacity.

There are problems that must be addressed. The price of natural gas has quadrupled in the past year. New gas-fueled electricity plants, which were the least expensive source of electricity, are now the most expensive. Natural gas supply will remain tight for the foreseeable future, with accompanying price volatility depending on weather and import availability from Canada and Mexico. Oil is subject to serious overseas political problems, and costs that have gone up and down. Coal, which is among the most plentiful and least costly energy sources, has environmental problems: large emissions of CO<sub>2</sub> and other pollutants, including small particles.

Nuclear energy, which has no significant emissions, can also be among the low-cost energy sources, but it has political barriers to overcome. The 103 existing nuclear plants (ordered before 1973) remain a vital, safe, electricity source in California and in the U.S. But since 1973 it has taken an uneconomic 10 to 20 years to build the previously ordered nuclear plants in this country, whereas U.S. firms build nuclear plants abroad (and used to build them here) economically in four or five years. Similarly, antinuclear forces have unnecessarily delayed the construction of repositories for nuclear wastes.

The electricity trap in which California now finds itself is a consequence of the national trends coming together this winter. Weather has increased demand in the Western U.S., so California cannot depend on low-cost electricity purchases from neighboring states. The political response has so far been Band-Aid fixes, which do not tackle the root issue of making California a friendly state for long-term investment by electricity generators.

The recent electricity problems in California make it clear that we must take action to prevent future energy disasters. In the next few years our only means to provide the needed electricity is with an expansion of gas- and/or coal-powered plants, with their financial and environmental problems. We should demonstrate now that nuclear plants can be built here

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as efficiently as they can be built abroad and move to get our waste repositories moving. We need government commitment and action to ensure that we can meet our near-term and long-term energy needs in California and nationally.

The one available solution is a major increase in the utilization of nuclear energy. Nuclear energy can provide an essentially unlimited supply of energy economically. Antinuclear activists frighten the public about nuclear wastes thousands of years out. But the real concerns are fossil fuel environmental impacts and the lack of energy in the coming decades when oil and gas supplies are exhausted and, in the following century, when economic coal supplies are depleted. The near-term expansion of nuclear energy would allow us to mitigate global warming and to lengthen the availability of specially needed fossil fuels. Although long-term nuclear wastes can be safely accommodated, advanced nuclear plant designs will allow us to modify the nuclear wastes so that they lose their radioactivity in just a few hundred years.

Today we are having very disturbing, but relatively mild, energy problems due to our lack of preparation. We must work to solve this near-term problem. But we should also not wait for the future national and world energy disasters to occur before we act to mitigate—and hopefully eliminate—them.

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