

Sun, Wind, and Water

A quiet revolution in renewable energy



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By Barbara C. Farhar

The electricity and oil price spikes of the past 18 months have affected attitudes toward energy and environmental policy. California's energy problems riveted national attention, as did marked gasoline price increases nationwide. These events reawakened US anxieties about the nation's energy situation.

Just after California began its experiment in utility deregulation, the state's electricity prices skyrocketed to three and four times their prior-year levels. In a January 2001 poll conducted by the Charlton Research Company for the Congressional Institute, 86% of respondents indicated they'd heard of

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California's energy shortages. Two-thirds of respondents in several other polls said they had followed the California energy crisis "very closely" or "fairly closely." In February and May, a plurality of around 40% blamed the state government for California's energy situation; 28 to 32% blamed the electric utilities, and 10 to 19% blamed consumers themselves. Responses to other polls suggest that a share of the blame also went to deregulation in general, the federal government, out of state power companies, government regulators, environmentalists, and "all of the above."

Majorities also believed that energy problems such as those facing California could affect their own communities.

In the wake of the California situation and their own rising fuel prices, most Americans believe the US is facing a major energy problem, if not an actual crisis. Fifty-nine percent of respondents to a May Gallup poll thought

that the nation had major problems with the cost and availability of electricity, gasoline, natural gas, and other forms of energy. Similarly, majorities of 54 to 60% told NBC News/*Wall Street Journal* in March, April, and June that the energy situation was a problem but not a crisis, while 25 to 35% said it was a crisis. Only 8 to 13% indicated they had experienced "no problem." Other polls reported more of the same.

The public also foresees problems in the near future. On three occasions in 2001, majorities in ABC News/*Washington Post* polls said they thought the United States is heading into an energy crisis. Similarly, 60% in a March Gallup poll said the United States is likely to face a critical energy shortage during the next five years.

By early 2001, majorities of Americans were reporting financial impacts of the price increases on their own households (see Figure 1). In February, 56% told Gallup that the cost of electricity,

gasoline, and natural gas had caused them financial hardship. Substantial pluralities of 36 to 48% indicated that gasoline prices caused them to drive less (although majorities said they did not). Asked in five separate Gallup polls whether gasoline price increases alone had caused hardship, approximately two in five said they had, although majorities of up to 64% said they had not.

In January, 88% reported to NBC News/*Wall Street Journal* that they had been affected by the price of gasoline, with 41% saying they had been affected a great deal, while 21% were affected quite a bit and 26% just some; only 12% said they were not affected at all. In an April ABC News poll, 52% said they were affected by gas price increases, but not seriously.

What do Americans think are viable solutions to these problems? Unfortunately, most policy proposals recently under debate seem to necessitate making extremely hard choices. One such tradeoff is between protecting the environment and developing more energy supplies. Pluralities to majorities of the public tend to prefer environmental protection, although large minorities call for developing more energy production capability.

Addressing the dilemma in more specific terms, 13 questions posed by various polling organizations (11 of them in 2001) measured favorability toward drilling for oil in the Alaska National Wildlife Refuge. Without exception, majorities opposed or strongly opposed drilling in the Wildlife Refuge.

Another question is whether energy policy should emphasize in-

creases in supply or reductions in demand. Despite variations in question wordings, virtually all polls found that pluralities to majorities preferred reducing demand. A substantial minority indicated that *both* approaches are needed.

Nevertheless, when Gallup asked in May whether we should invest in new power generating plants, 83% favored this, 69% favored investing in more transmission lines, and 64% favored investing in more gas pipelines. In June 2001, three-quarters of respondents to a Fox News poll said Americans take energy supplies for granted, while 25% said that Americans do think about trying to conserve energy.

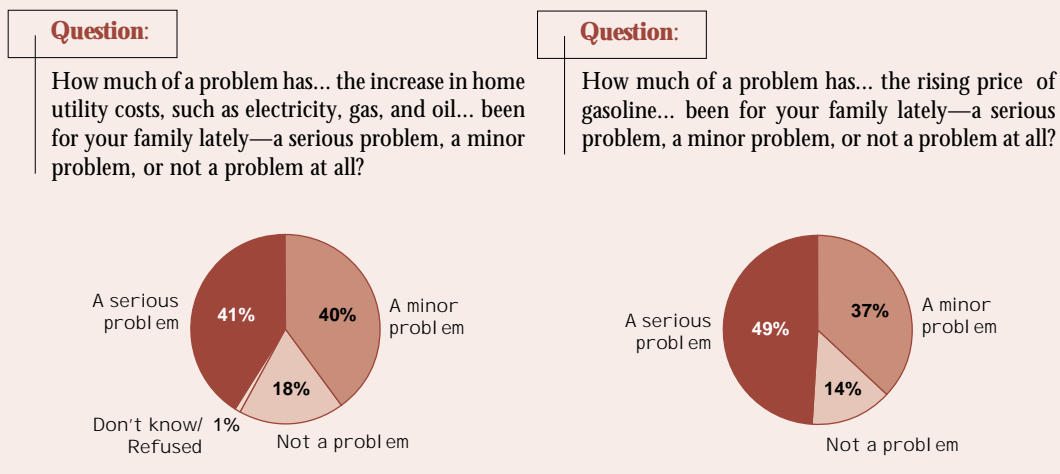
Judging by the headlines, one would think that the solution to the nation's energy problems revolves solely around these questions. During recent months, the news about energy policy has been dominated by the National Energy Plan, the proposal to drill for oil in the Alaska National Wildlife Refuge, the search for politically acceptable ways to decrease greenhouse gas emissions contributing to global warming, and proposals to begin building more power plants to meet projected energy demands.

But less well publicized has been a revolution occurring in the world of energy efficiency and renewable energy. Prior reviews of opinion data have shown that majorities prefer renewable energy and energy efficiency over other alternatives (such as fossil fuels and nuclear power) when cost or price are not mentioned, a consistent trend since 1979. Recent data bear out the extension and even intensification of this trend.

In a February 2000 poll by the Nuclear Energy Institute of college graduates who are registered voters, 95% said solar energy is a "fuel of the future" and "important for future generations." When asked in a June 2001 ABC News/*Washington Post* poll whether they would support or oppose a number of policies to address the country's energy needs, 91% of the public favored encouragement of more energy conservation by business and industry; 90% favored more energy conservation by "consumers like yourself" and 90% favored the development of more solar and wind power.

Respondents were also asked which energy action should be the federal government's highest priority. The three most preferred actions were to develop more solar and wind power, to require car manufacturers to improve the fuel

Figure 1
Rising Fuel Prices Hit the Pocketbook



Source: Survey by Princeton Survey Research Associates for the Pew Research Center, May 15-20, 2001.

efficiency of vehicles sold in this country, and to encourage more energy conservation by businesses and industries.

Also in June, NBC News/*Wall Street Journal* found that 85% of Americans favored a policy of creating financial incentives for businesses and consumers to conserve energy to help solve the nation's energy problems; however, 79% favored increased spending on finding ways to burn coal cleanly, 48% favored building additional nuclear power plants, and 43% favored drilling for oil and gas in the Wildlife Refuge. A September 1998 poll conducted by Research/Strategy/Management for the Sustainable Energy Coalition presented five options for dealing with "the pollution that causes climate change." Virtually everyone favored increased use of both new technologies to improve fuel efficiency and conserve energy and of renewable energy such as solar, wind, geothermal, biomass, and hydroelectric power. Ninety-one percent of respondents in a May Gallup poll favored investments in new sources of power such as solar and wind energy and fuel cells.

Prior to 2000, poll data had shown that majorities favored using the nuclear power plants we then had but opposed building new ones. In a major shift in opinion, pluralities of nearly half of respondents in 2001 favored building more nuclear power plants to meet the nation's future energy needs. Opposition toward building more plants is apparently moderating owing to perceived electricity shortages and concerns about global climate change.

The public is apparently willing to direct its money toward such solutions, too. Approximately three-quarters of respondents in several polls indicated a willingness

to pay slightly higher utility prices to help power companies fund the development of electricity from renewable resources like solar and wind energy; only one-quarter were not willing.

In an August 1997 poll conducted by the Mellman Group for the World Wildlife Fund, 44% of the public said they were very willing and 36% responded they were somewhat willing to pay \$5 more a month to buy "environmentally clean energy such as solar and wind power" from their electric utility. Seventy-two percent said they were very or somewhat willing to pay \$10 a month more, and 61% said they were very or somewhat willing to pay \$20 a month more.

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Similarly, majorities of people indicated they would be willing to pay an incremental cost of up to \$30 a month more for electricity and fuels that produce less air pollution. As in other polls, approximately one-quarter said they were not willing to pay anything more.

However, stated willingness to pay does not necessarily translate into actual participation in green-pricing programs, in which power companies give customers the option to pay more for electricity from renewable resources. Presently, participation rates in these programs, now offered by more than 85 companies in 29 states, range from less than 1% to more than 7% in the first few years of operation. According to Blair Swezey and Lori Bird in *Utility Green Pricing Programs: What Defines Success?*, participation largely depends on how utilities define and market their green-pricing

programs. In an April 2000 Electric Power Research Institute poll of US electricity consumers, for instance, 30 to 40% stated they were willing to pay more for electricity if companies offered high-quality personal contact, involvement with the local community, customized billing, and renewable energy products.

For the past decade, the costs of renewable energy sources have declined steadily. During the last few years, more than 85 utility companies have begun offering electricity generated from wind and solar power to their residential and business customers. Highly efficient homes are becoming more widely accepted among builders. In a phenomenon that begins to decentralize the electricity supply, reciprocating engines, solar electric systems that convert sunlight directly into electricity, and other decentralized power sources are being installed in homes and commercial buildings. As the nation looks for top-down energy solutions, such as building more power plants, businesses, communities, and homeowners are quietly installing small, on-site generators for reliable power and environmental benefits.

Attitudes toward energy seem to be changing. The perception of energy-related events and the development of technology are contributing to the beginning emergence of an energy landscape quite different from the centralized "invisible energy" model we have held to in the past.

This article was in preparation on September 11, 2001—the date of the terrorist attacks on New York City and Washington. The data reported here were collected through June 2001. Opinions about energy and environmental policies discussed could change in unpredictable ways as a result of the tragedies.

Data from the Roper Center follow on pages 41-45