

The Diablo Canyon nuclear power plant. (Courtesy of Pacific Gas and Electric Company.)

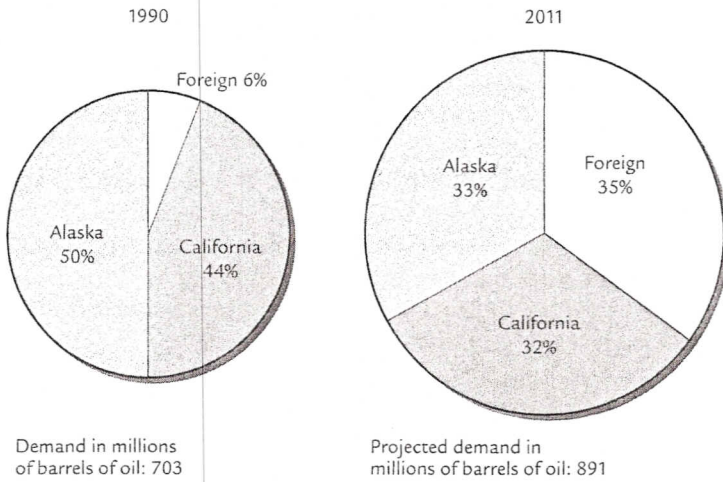
San Onofre and Diablo Canyon plants remained in operation; together they supplied about 16 percent of the state's electricity. Attitudes toward nuclear power, however, began to shift when some environmentalists endorsed it as a way to produce large amounts of energy without spewing global-warming greenhouse gases into the atmosphere. "There's no way that solar panels or windmills can do it themselves," observed one of the founders of Greenpeace in 2006.

### **Petroleum Dependency**

California made substantial progress in the development of alternative sources of energy for the production of electricity, but still unsolved was the state's dependence on petroleum as a fuel for transportation. Petroleum, of course, is a finite resource. Once it is used up, it cannot be replaced.

The proportion of California's total energy needs that were met by petroleum was one-fourth higher than that of the nation as a whole. California's higher level of oil dependency was due mainly to the state's huge transportation system, which was over 99 percent reliant on oil. Moreover, the state's demand for petroleum was likely to increase by a quarter or more between 2005 and 2020 as millions of additional vehicles crowded onto the state's streets and highways.

It was readily apparent that the use of petroleum could be reduced by increasing the efficiency of the transportation system and by developing alternative transportation fuels. The California Department of Transportation promoted a variety of projects—ride sharing, park-and-ride lots, exclusive bus and carpool lanes—to increase the energy efficiency of the state's highway system. Federal and state regulators mandated greater fuel efficiency for new vehicles and encouraged drivers



California's growing dependence on foreign sources of petroleum.  
 (Based on data from the California Energy Commission.)

to moderate their speed. Cars that averaged 25 miles per gallon (mpg) at 70 miles per hour (mph) could get 30 mpg at 55 mph. The California Energy Commission also began studying a variety of alternative transportation fuels, the most promising of which were hydrogen and methanol. Researchers at UC Berkeley concluded in 2005 that hydrogen "holds perhaps the greatest potential for replacing oil as the lifeblood of the world economy" but noted that its practical application probably was decades away. Clean-burning methanol was more immediately available from biomass, natural gas, oil, or coal. Major automakers developed prototype methanol-powered cars and the Energy Commission, in cooperation with private industry, put more than 6500 methanol-fueled vehicles into public and private transportation fleets.

In spite of such gains, California's dependence on petroleum for transportation remained undiminished, and its reliance on foreign sources (primarily from Iraq and Saudi Arabia) steadily increased. The Persian Gulf war in 1991 and the wars in Afghanistan and Iraq a decade later demonstrated the importance of reducing the nation's reliance on a vital resource from such a volatile region as the Middle East. The California Energy Commission predicted that the state's reliance on foreign sources of petroleum would rise from 6 percent in 1990 to 35 percent by 2011. The chairperson of the commission issued a dire warning: "The general public doesn't realize the relatively precarious nature of the energy supplies we rely on."

## The Electric Energy Crisis

The abundance of inexpensive supplies of fossil fuels in the 1980s and 1990s lulled many Californians into assuming the energy crisis was over. That assumption was challenged in 2000–2001 with the onset of a crisis in the supply and pricing of electricity.