

SECTION III
CONSERVATION OF ENERGY

Introduction

"Each year, the United States wastes more fuel than most of mankind uses. Our principal energy effort should be directed not at creating new energy production gadgetry, but rather at obtaining more from the fuel we are already consuming. Energy conservation does not mean going without; it means going farther with what we have. Increasingly the question "How Much Do We Have?" must be joined by the question "How Well Are We Using It?" In a world with ceilings a vigorous program of energy conservation must become an American imperative...energy conservation is already among the most widely supported goals of the country. The time has come to translate all those supportive words into supportive action."

Dennis Hayes, Opportunities for Energy Conservation¹³

More than three years after the Arab oil embargo signalled an end to the era of cheap and seemingly limitless energy, Bay Area consumers use more energy than ever and waste much of it. This continued increase in demand and waste of energy will result in higher than necessary costs to individuals and government in terms of environmental damage and eventual depletion of energy resources. Energy conservation could substantially ameliorate or postpone potential energy shortages and environmental damage by slowing the projected growth in demand. In doing so, it would also help protect our national security by reducing dependence on foreign energy supplies.

The future of energy conservation will involve not only governmental measures to implement the necessary changes, but the development of new technologies to increase the efficiency of energy use, and consumer willingness to change use patterns.

Conservation does not mean doing without many of the necessary functions that energy provides but using our limited energy to its fullest potential by reducing waste and improving efficiency in the production and use of power. Some experts estimate that one-third to one-half of the total energy consumed does no actual work and is lost to the environment as heat.²⁹ Although half of this loss is unavoidable due to physical limitations of efficiency, much of the remainder is simple waste.³¹

Whatever the potential for energy conservation, new energy sources must eventually be developed to replace the finite supplies of present fossil fuels. This transition from oil and gas to other energy sources will take time. "Switching from wood to coal to oil took sixty years," notes John Belding, director of conservation research for ERDA. In the interim, conservation can serve as an alternate energy 'source' to pull us through until new sources of power are found, tested, and implemented.