

In Mexico, a 75,000 kilowatt plant at Cerro Prieto began operating in 1973. This is just south of the border, near California's Imperial Valley, where drillers, utilities and the U.S. government are trying to tap the hot brine water for geothermal energy. If the corrosion and scaling problems associated with brine are overcome, many scientists feel the Imperial Valley could surpass The Geysers in total potential for electric generation.

The Philippines, Chile, Czechoslovakia, Hungary, El Salvador, Turkey and Nicaragua are currently investigating the feasibility of developing their geothermal resources.

Geothermal Pioneers

The companies associated with PG&E at The Geysers are pioneers in exploring for and developing natural heat from below. PG&E pioneered in putting this heat energy to work in large-scale electric generation facilities. Much of the technology of geothermal energy has been learned at The Geysers.

A Look Ahead

Society needs electric energy produced from all sources: coal, oil, nuclear, hydroelectric, solar—and geothermal. In the balanced energy mix PG&E utilizes in Northern and Central California, The Geysers plays a vital role in providing base-load power to the system.

Geothermal power at The Geysers has distinct environmental advantages. Unlike power plants fueled with coal, oil or natural gas, there are no combustion products emitted to contribute to smog. Fossil fuels are also in diminishing supply and are rapidly increasing in cost; The Geysers helps stretch these precious resources. Unlike hydroelectric power plants, geothermal plants do not require that rivers be dammed. Because condensed steam is recycled in the cooling process, the extra water is reinjected underground into the steam reservoir.

Geothermal resources are not the total answer to man's energy needs and geothermal power is not entirely free from pollution.

Almost all geothermal sources world-wide have the odor of hydrogen sulfide gas associated with them. PG&E is reducing this odor by installing special equipment at each of the generating units now in operation. All new units

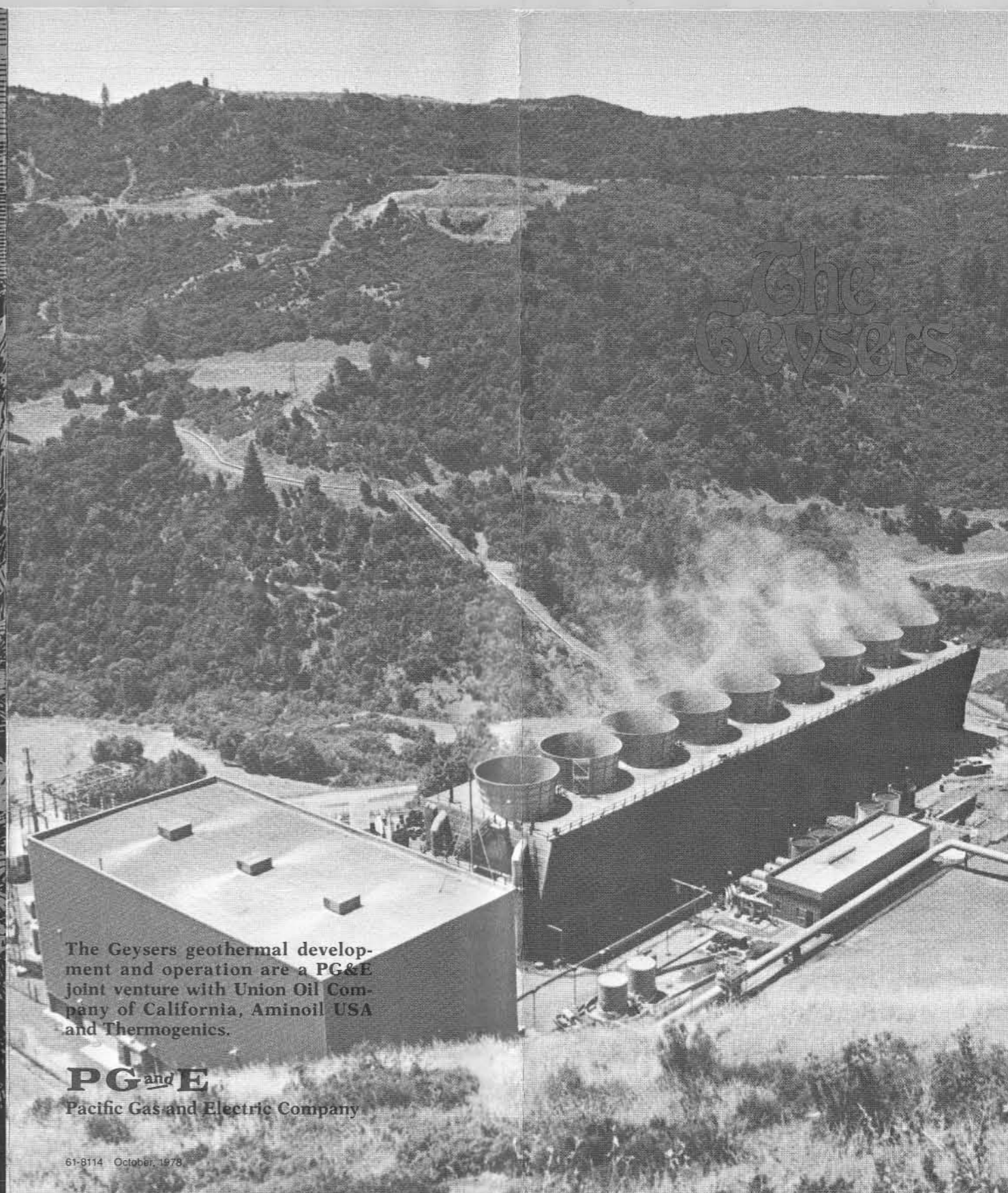
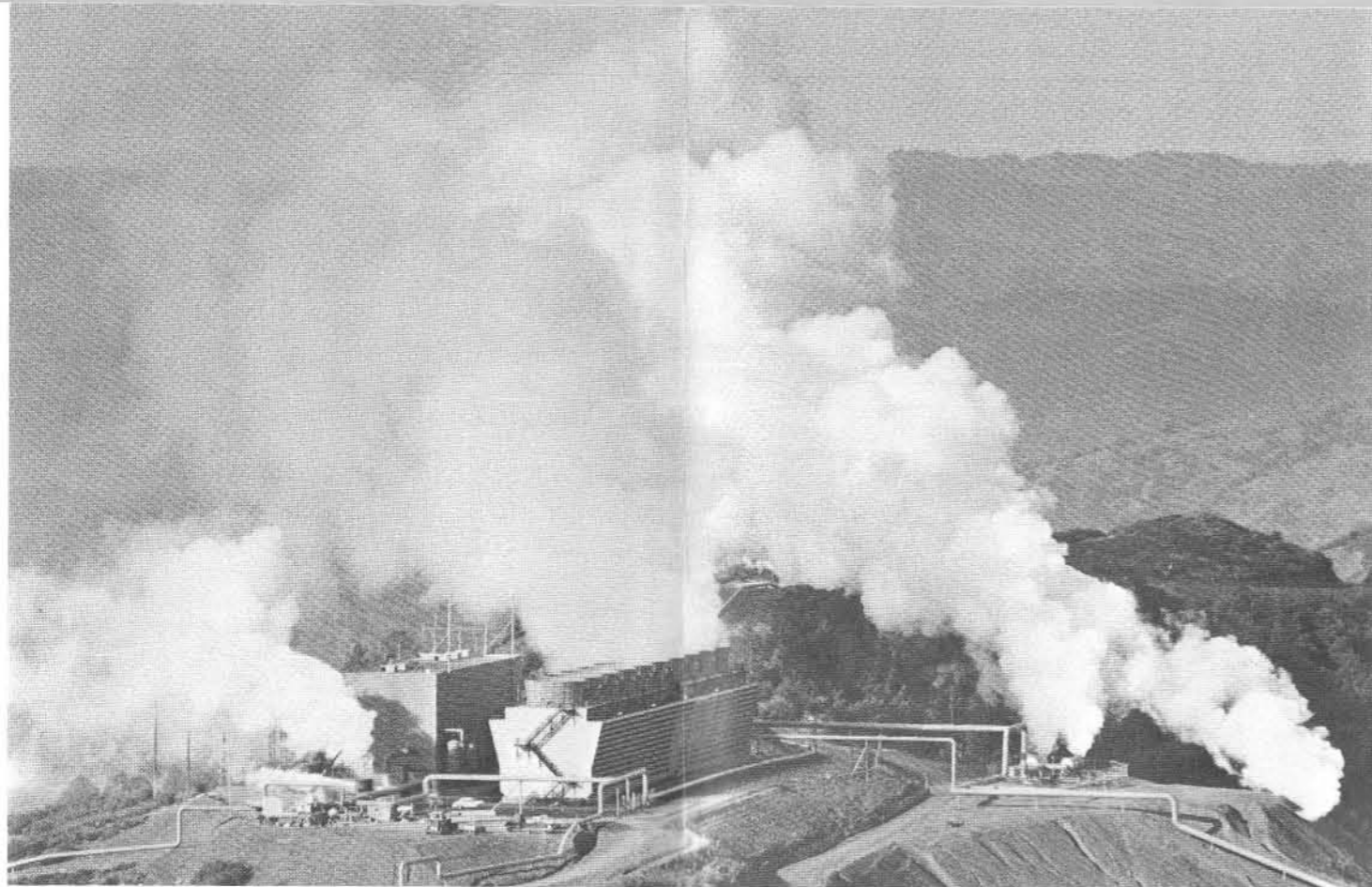
will have equipment designed to eliminate over 90 percent of the hydrogen sulfide in the steam.

Good environmental housekeeping is as essential for The Geysers as it is for other kinds of electric generation, and the operating companies in concert with PG&E are taking all practical steps to assure environmental protection and to maintain good neighbor status. Environmental studies have produced much research data for The Geysers, which is used to assure orderly and acceptable development.

Continued development at The Geysers will proceed as steam becomes available and as developing technology allows. While it is virtually impossible to give a definite estimate of the capacity that will ultimately be developed at The Geysers, PG&E believes it could approach two million kilowatts by 1990. This could account for as much as 10 percent of the total capacity of the PG&E system in future years.

Current technological and economic factors do not permit geothermal power systems to be developed everywhere, and at this time it is impossible to predict geothermal power's long-range share of America's total energy supply. However, it is presently a welcome supplement to traditional energy sources.

Former Interior Secretary Rogers Morton placed geothermal power in its proper perspective when he stated: "In this time of critically high energy requirements, the various fuels are not alternatives to each other. We need them all, including geothermal!"



The Geysers geothermal development and operation are a PG&E joint venture with Union Oil Company of California, Aminoil USA and Thermogenics.

PG&E
Pacific Gas and Electric Company