

THE CALIFORNIA ENERGY COMMISSION'S GEOTHERMAL ACTIVITIES

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Thank you for the invitation to participate in this distinguished gathering. I would like to briefly relate the interests of the California Energy Commission in geothermal energy. Geothermal energy is a basic component of many of our primary activities, and is expressly cited in our statutory authority, the Warren-Alquist Act (1974).

Our mandates affect the geothermal industry both directly and indirectly. The Commission is responsible for 5-, 12-, and 20-year forecasts of California electricity supply and demand. These forecasts are reported in our biennial Electricity Report. These forecasts are used in various official regulatory proceedings. The primary use is in the Commission's power plant siting authority. The forecasts establish the base used to determine the need for new capacity and energy in the current planning period. The forecasts are also used in other Commission activities as well as in proceedings at the Public Utilities Commission.

The 1990 Electricity Report represents a dramatic change in the way this agency balances the relative importance of price competition, environmental quality, demand management as a system resource, and the implications of continued reliance on natural gas. Generally, the Commission is grappling with the elusive and complex problems of quantifying the appropriate value to assign to external (i. e., non-market) environmental attributes of competing technologies. While we have not decisively established such values, we do believe that they do exist and that we are moving in the

right direction. The adopted policies have positive long term implications for geothermal and the other renewable technologies.

The Commission has been in existence since 1975 and during that time has seen the development of geothermal energy in several areas of the state. As a regulatory agency, we have authority over the construction of thermal electric plants over 50 megawatts (MW). To date the Commission has certified the construction of more than 1200 MW in the Geysers. This area is now experiencing a dramatic loss in productivity.

The Commission is engaged in a cooperative effort with the parties operating in the Geysers to address the problem of resource productivity. We held a hearing to examine the causes of the decline of the geothermal steam resources and its affect on electric energy supply. An outcome of the hearing was the establishment of a Technical Advisory Committee with the responsibility of providing the Commission projections of capacity and energy under the current rates of steam decline. The Committee was also charged with examining options on efficient resource management, including research and development, testing, and analyses regarding reservoir and power plant operations.

In addition to sharing Committee costs, the Commission is funding two county studies on the physical, economic, legal, and environmental constraints of developing new water sources for increased injection. The Commission has also joined with industry and the Department of Energy

in funding projects to ameliorate the problems at the Geysers.

Projects less than 50 MW are the jurisdiction of local authorities. For such projects, we have assisted local jurisdictions develop siting guidelines that are consistent with our certification in affordability, availability, reliability, and environmental acceptability.

Since 1981, the Commission has also offered grants and loans as well as technical assistance to cities, counties, special districts, Native American tribes, and municipal utilities. Two to three million dollars is available annually for this program. The funds can be used for geothermal related local planning and policy development, identification and mitigation of geothermal development impact, or resource exploration and development. The bulk of funding has been for resource assessment, exploration, and project development. Until recently, these efforts have focused on low temperature resource for direct application. The most prominent examples include district heating. Municipal projects in exploratory drilling for low temperature resources are in development stages.

The Commission is also interested in expanding the long term potential of geothermal resources. We are working with the Department of Energy on two research projects. A hot dry rock project conducted by Los Alamos National Laboratory is under way in the Geysers area, and a deep well project to extract heat from a magma body is being developed by Sandia National Laboratory in the North Eastern Sierra.

California has a strong geothermal industry. The Commission supports increasing the efficiency and competitiveness of the technology by cofunding innovative projects through the Energy Technology Advancement Program.

Further, the Commission serves as a liaison between industry and foreign governments which dominate overseas energy markets. We provide project opportunity information to California businesses and offer matching grants for feasibility studies. The Commission sponsors tours of geothermal areas for foreign visitors and provides opportunities to meet California vendors. These services are provided as part of a broader program which assists energy related businesses, the Energy Technology Export Program.

The State has the honor of being selected as the site of the headquarters of the next International Geothermal Association Secretariat. The Commission actively supported the effort to bring the IGA to California. The Commission encouraged and coordinated the Legislature's and the Governor's formal invitation. We look forward to this opportunity as a valuable focus for your Association. The Secretariat will provide facilities and resources at universities and the Commission for all IGA members.

The Commission has a commitment and continuing interest in this valuable and environmentally preferable indigenous resource. Thank you for inviting me and the Commission to participate in your prestigious activities.