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SOURCE OF INFORMATION, DISSEMINATION,
TECHNOLOGY TRANSFER AND
OUTREACH PROGRAM IN GEOTHERMAL ENERGY

Final Report

David N. Anderson
Executive Director

GEOTHERMAL ENERGY ASSOCIATION
2001 Second Street, Suite 5
Davis, CA 95616

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Geothermal Energy Association

Final Report for Tasks 1-15

TASKS 1 - 8

The Geothermal Energy Association listed eight tasks to be completed during this funding period. Paramount to the completion of the main tasks was the opening of a Washington, D.C. office and hiring of two to three persons to accomplish several outlined projects that had been budgeted and named tasks 1-8.

Several factors came into play during the start of this project. Delayed funding from DOE made it impossible to hire an Executive Director until the first part of 1995. Several persons were interviewed by a panel representing GEA. After a period of time, it was felt that an office should be opened and established before the hiring of the executive director. (Task #8)

Continuing with the GEA newsletter was important. (Task #6) As the office was not established, this function continued to be handled out of the west coast office. Several trips were made to Washington, D.C. for meetings of the organizing committee to coordinate the ongoing education of persons working on the hill and announce the benefits of developing and using geothermal energy. Consultants were hired to complete this process over several months. (Task #7) Without an established office in the Washington, D.C., a consulting firm was hired to have the telephone answered by announcing Geothermal Energy

Association and fielding questions from national individuals that needed immediate information on geothermal energy.

Outreach and congressional interaction was done by committee persons while attending senate hearings and functions in and around the Washington, D.C. area. In March of 1995 an Outreach Program

Manager was hired to help formulate the Washington, D.C. office and develop computer printouts to help the GEA members understand the geothermal placement in the energy mix of the U.S.

A subcontractor was hired to develop a video on geothermal energy that focused on education policy makers at the state and national level about the benefits of geothermal energy and the needs of the geothermal industry. A script was prepared to follow the video and enhance the audio portion. (Task #3)

Also, a subcontractor was hired to do a comparative economic and benefit study of electricity produced from geothermal resources in the state of Nevada. (Task #4) The produced report clearly delineates the merits of generating electric power from indigenous geothermal energy resources vs. fossil-fuel-based energy resources. The completed research will be used in the formulation of an econometrics model that will allow values to be placed on environmental externalities in order to assign appropriate benefits to environmentally "green" companies.

As a part of the Task #5 an environmental brochure was produced and distributed to all GEA members and interested geothermal industry persons. The brochure explained where geothermal energy came from, the temperatures generated and the benefits received from it. This is a valuable tool for introducing the energy source to persons not knowledgeable on renewables. A copy is included.

In conclusion, although we did not receive the funds in time to conduct all of the tasks as laid out, we did accomplish just about what we had planned. We did this with the aid of consultants not a fully staffed Washington, D.C. office.

Task 9 — Establishment of Washington, D.C. Office

In March 1995, the GEA hired Perle Dorr as the full-time Director of Outreach Programs for its new Washington, D.C. office. Her initial task was to set up the Washington office, including locating appropriate office space, selecting office furnishings and equipment, filing required papers to legally conduct business in the District of Columbia, and other necessary activities related to establishing and staffing an office. The GEA began operating from its new headquarters at 122 C Street, N.W., Suite 400, Washington, D.C. 20001 (phone: 202-383-2676; fax: 202-383-2678), in August 1995. The office is collocated with the U.S. Export Council for Renewable Energy and the other renewable energy trade associations and consists of two professional offices; some storage space; and the use of conference rooms, the reproduction room, and other facilities available to the other organizations. Requisite office furnishings and equipment were obtained for the Director of Outreach Programs and for the Director of Export Programs, Ann McKinney, who began employment in October 1995.

Task 10 — Outreach Program

The Director of Outreach Programs represented the GEA at meetings of the Sustainable Energy Coalition, a group of more than 40 environmental, business, governmental, and other energy policy organizations. Participation in these meetings gave us the opportunity to accurately describe the status and benefits of geothermal energy, resources, and technology; to report on the status of the U.S. geothermal industry and their projects throughout the world; and to provide the U.S. geothermal industry perspective on issues of importance to the members of the Sustainable Energy Coalition, including electric utility restructuring and

the Federal renewable energy research and development programs.

The GEA also participated in two renewable energy fairs that were open to the public and were attended by hundreds of people including state and Federal representatives, utility and regulatory personnel, energy and environmental supporters, employees of local businesses, and individuals interested in the environment and energy issues. The House Renewable Energy Expo 1996 was held in Washington, D.C. on 24 April 1996. Clean Power Day was held on 5 August 1996 in Sacramento, California. For both events, the GEA prepared appropriate graphics; staffed an exhibit booth; answered questions from attendees; and distributed brochures, pamphlets, fact sheets, posters, and other information on geothermal energy.

Task 11 — Educational Functions

The GEA hosted two educational events in the Washington, D.C. area in March 1996. One event was held in the GEA's headquarters office; the other in a public meeting room. Several dozen people attended each event. Invitees included representatives from government agencies, foreign embassies, financial institutions, environmental organizations, and renewable energy associations. Discussions included the status of the U.S. geothermal industry, the benefits of geothermal energy, and the potential for geothermal development throughout the world. Brochures, pamphlets, fact sheets and other information on geothermal energy were distributed.

The GEA also participated in two other educational events. For each of these activities, the GEA set up and staffed an exhibit booth. Graphic posters were prepared, tailored for each conference, and information was distributed to acquaint the attendees with geothermal energy and its status and benefits. The Fourth

World Renewable Energy Congress took place in Denver, Colorado from 15-21 June 1996. This was the first time this conference included geothermal energy on its program. Many of the conference participants were from developing countries throughout the world. By exhibiting at the International District Energy Association Annual Conference and Trade Show from 8-12 June 1996 in Washington, D.C., the GEA was able to provide information to meeting participants emphasizing geothermal district heating systems and other applications of geothermal energy using moderate- to low-temperature brines.

Task 12 — Data Base, Informational Materials, and Education

The GEA began compiling recent data and information on geothermal projects in the U.S. and overseas, as well as information on domestic and foreign companies involved in these developments. The data were obtained from the companies themselves and from various printed materials. This information was then used in responding to inquiries from government agencies, energy and environmental organizations, and the public, and in preparing summaries of geothermal energy. As part of this effort, several general posters for use in exhibits were developed and a fact sheet about geothermal energy was prepared and distributed at several trade shows held throughout the period.

Attendance by the Director of Outreach Programs at the DOE Geothermal Program Review XIV (8-10 April 1996) and the 1995 and 1996 Geothermal Resources Council Annual Meetings was also included in this task. The GEA sponsored a half-day seminar just prior to the Geothermal Program Review which was well attended by individuals registered for the DOE meeting. During this seminar, the Director of Outreach Programs presented a status of GEA's outreach activities. At both annual meetings of the GRC,

the Director of Outreach Programs prepared and staffed an exhibit booth where information about the activities of the GEA were distributed.

The Director of Outreach Programs assisted in facilitating several workshops conducted by the GEA at the request of the DOE's Office of Geothermal Technologies. The purpose of these workshops was to formulate R&D recommendations for presentation to the DOE by the GEA. An initial workshop was convened in the San Francisco, California area on 19-21 July 1995. Three follow-up workshops were then held on priority topics. The Drilling R&D Workshop was held 11-12 April 1996 in Berkeley, California. This was followed by the Permeability Detection and Mapping (3-4 June 1996) and Reservoir Production (5-6 June 1996) Workshops in Santa Rosa, California. The first day of each topic-specific workshop was devoted to presentations and discussions by participants from industry, the DOE, national laboratories, universities and other interested parties. On the second day, industry participants developed R&D recommendations for presentation to the DOE.

Task 13 — Export Program

Funding from Task 13 was used for administrative expenses to run the Export Program, including labor for the Director of Export Programs, fax, telephone, and mailings. The Director of Export Programs worked closely with the Committee on Renewable Energy, Commerce and Trade (CORECT), the United States Export Council for Renewable Energy (US/ECRE), and members of the geothermal community in many countries to promote the use of geothermal energy worldwide.

In addition, the Director of Outreach Programs organized several events involving the U.S. geothermal industry and Department of Energy Secretary Hazel O'Leary which were held on 25 May 1995 in Florence, Italy during the World Geothermal Congress. Prior to the events, the Director of Outreach Programs assisted the Secretary's staff by providing background information on the status of the U.S. geothermal industry, U.S. companies and their representatives expected to participate in the roundtable meeting, and potential U.S. and Italian exhibitors. The Director of Outreach Programs also made all meeting room arrangements and notified potential participants of the meeting time and location when Secretary O'Leary's schedule was finalized.

Task 14 — Continuation of Washington, D.C. Activities

This task enabled the Washington, D.C. office to continue its activities that were initiated in previous tasks under this grant. The Director of Outreach Programs continued to collect data about geothermal projects and companies and to respond to inquiries from government agencies, energy and environmental organizations and the public. The Director of Outreach Programs continued participation in meetings of the Sustainable Energy Coalition.

Task 15 — Geothermal Law in Latin America

Task 15 provided funding for the drafting of a piece entitled, *Unplugged*, which is about the restructuring of the electricity sector and the affects it will have on geothermal development overseas. This piece was written by John Armstrong, a lawyer who has worked with the geothermal industry for many years. John

Armstrong also participated in the workshop in Nicaragua entitled "Private Power: Renewable Energy" and spoke on developing a geothermal resource extraction law. On this task, John Armstrong and Julio Jimeno, consultant to the industry, traveled to Bolivia to meet with the Subsecretario de Electricidad to respond to their request to assist in the development of a geothermal resource extraction law.

Task 15 also provided travel funding for the Director of Export Programs to engage in market development activities to assist the geothermal industry in promoting the environmental and economic benefits of geothermal energy. This includes participation in the World Renewable Energy Congress in Denver, Colorado in June 1996 and US/ECRE-sponsored trade events including trade missions to the Philippines and Indonesia, Bolivia and Peru. During these meetings, the Director of Export Programs promoted geothermal energy through presentations and individual meetings with government officials and members of the private sector, and assisted members of the U.S. geothermal industry participating in the mission. She also worked with the government of Nicaragua to develop a seminar, "Private Power: Renewable Energy," and participated with some funding assistance from US/ECRE.

The Director of Export Programs also used travel funds for domestic trips, including meetings with industry members to develop the Export Program and to participate in the DOE Geothermal Program Review meetings. She also participated in a technical workshop sponsored by the Geothermal Resources Council on slim hole drilling in Reno, Nevada.