DOE/RA/50076--TI

NEVADA GEOTHERMAL COMMERCIALIZATION PLANNING

Quarterly Progress Report

MASTER

January 1, 1980 - March 31, 1980

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Work performed under contract No. DE-FC03-80RA5007A
U.S. Department of Energy

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Task 1 - Area Development Plans

The Nevada Department of Energy (NDOE) currently has nine Area Development Plans in the preparation process. Most background information has been collected and developed into the first section of the various plans. This background information includes:

1. Physical Characteristics of the Geothermal Resource Area
 - a. Location and Relief
 - b. Climatic Conditions
 - c. Geological Setting
 - d. Hydrology
2. Land Ownership and Land Use
3. Population
4. Transportation Facilities
5. Design Information

Economic base and energy use information is still being collected and should be incorporated into the documents during the next quarter. Following the preparation of all background information, each geothermal resource area will be analyzed separately to evaluate the major potential for geothermal development.

Task 2 - Site Specific Development Plans

Two Site Specific Development Plans have been initiated by the NDOE: Caliente district heating; Winnemucca ethanol production.

Caliente

Caliente appears to have much potential for geothermal development. At present it has a 50 space trailer park that has already been converted to geothermal heating with an Appropriate Technology Grant in 1978. Another Appropriate Technology Grant has been awarded to the Grover C. Dils Medical Center to convert the heating system to use geothermal energy.

The City of Caliente is interested in the feasibility of installing a district heating system or using the available resources to attract industry to create new jobs. To support this

interest the NDOE has organized and assisted in a joint effort with the Nevada Bureau of Mines and Geology (NBMG) and Oregon Institute of Technology (OIT) to help the city determine the quality of the geothermal resource and the engineering and economic feasibility of constructing a district heating system. Reports concerning the findings of the two supporting agencies have been received by the NDOE and are currently in the evaluation process.

The NDOE has contacted the Department of Housing and Urban Development (HUD) regarding the applicability of UDAG funding to develop the district space heating system. Results of this contact were negative. Additionally, the NDOE has supplied the City of Caliente with information about HUD's Innovative Grants for Community Energy Conservation.

The NDOE is currently assisting the City of Caliente in preparing an application to the USDOE for the funding to drill two production wells so that flow tests can be performed to assess the quality of the geothermal resource available. The NDOE will also assist the community in various financial and institutional investigations.

Winnemucca

Nevada is liquid fuel poor state. Because of this, the NDOE has been searching for alternate supplies based on renewable geothermal or solar resources. The Chamber of Commerce, City Council, County Commission, and Potatoe Growers Association in the Winnemucca area have expressed great interest in the development of an ethanol production facility in the area using known geothermal resources to produce ethanol from locally grown culled potatoes.

There are two phases to this project. Phase 1 include; an assessing the geothermal resource; performing studies of the market for feedstock, waste stream and alcohol; evaluating environmental issues, and designing the facility. Phase 2 will include construction and operation of the facility.

To further the development of this project the NDOE and the Desert Research Institute has prepared grant applications to the Four Corners Regional Commission (FCRC) and the Nevada Interim Finance Committee to assist in the development of this project. A grant of \$25,000 was requested from FCRC and \$142,300 was requested from the Interim Finance Committee. The Interim Finance Committee has recently approved this application.

To initiate Phase 1 of this project, the NDOE is currently working on a joint proposal with Wright Energy Corporation to the USDOE.

Task 3 - Outreach

The following outreach activities have occurred:

1. Completion of Nevada' geothermal pamphlet.
2. Personal or telephone contact with about 25 parties interested in geothermal redevelopment. Range of requests ran from individual space heating applications to greenhousing to hot water preheat at a Reno hospital. Depending on the nature of the request, the party was referred to local private consultants, given either direct assistance from this office, or referred to the NBMG for resource assessment work or to OIT for engineering or economic studies.
3. Initial development of well-drilling workshop:
 - A. Topics to be covered have been developed
 - B. Audience has been identified
4. Distribute geothermal energy information at the Nevada Energy Exposition in Reno.
5. Reviewed and made suggestions for improvement of J.K. Lessor's slide/tape presentation about geothermal energy in Nevada.
6. Presented information regarding the utilization of geothermal and economic development to two different marketing groups.

7. Began initial organizing work to establish Nevada Chapter of the Geothermal Resource Council.

Task 4 - Institutional Analysis and Update

1. NDOE staff is completing a rewrite and update of Nevada's Institutional Handbook. Final document should be completed after receipt of additional information from the Department of Conservation and Natural Resources.

2. NDOE staff appeared before the Nevada Legislative Commission to Study Geothermal Issues. Recommendations made to this group include:

1. Enact legislation that limits needed water appropriation to consumptive uses only.
2. Enact legislation that defines the geothermal resources and clearly delineates burden of proof vis a vis ground water system.
3. Consider enactment of legislation that will provide a safeguard to those who are engaged in non-consumptive geothermal uses (i.e., closed loop space heating systems).
4. Enact legislation that expands existing property tax allowance to commercial and industrial applications.
5. Enact legislation which exempts the cost of renewable resource systems from sales taxes.
6. Enact legislation which provides for a property tax credit for renewable resource systems (dependent upon approval of proposed constitutional amendment).
7. Enact legislation which requires Public Service Commission to allow utilities to include construction work in progress in rate base on an incremental basis for geothermal electric generation facilities.

8. Enact legislation which allows public utilities to expense reasonable geothermal exploration and development costs.
9. Enact legislation authorizing amortization of the cost of constructing and developing geothermal facilities whose useful life is shortened because of reservoir or technical problems. (Of course, such legislation must include requirements that utilities take adequate safeguards including reservoir insurance, adequate pre-construction exploration activities, etc).
10. Enact legislation requiring utilities to justify non-use of geothermal for new electric generation projects.
11. Enact legislation exempting or restricting Public Service Commission regulation of steam or hot water sales. One option is to exempt sales to five or less customers from any regulation.
12. Enact legislation requiring state and local governmental entities to review feasibility of utilizing geothermal and other renewable resources in new projects.

Task 5 - Impediment Analysis and Update

The NDOE has been involved in a number of activities in this area. The agency has reviewed Environmental Protection Agency environmental regulations and Internal Revenue Service's temperature limitations for tax credits and has made appropriate comment to the decision makers in each agency. The NDOE has also addressed the problem of a backlog of applications for water use permits from the State Water Engineer's Office and will be having meeting with that agency to evaluate methods of overcoming this problem.

Task 6 - Administrative Activities

1. Preparation of the 1979 Nevada Geothermal Commercialization Planning Annual Report
2. Development of 1980 Geothermal Commercialization Grant Proposal
3. Development of 1980 Object Budget
4. Development of 1980 Grant Milestone Plan
5. Development of 1980 Grant Cost Plan
6. Preparation of:
 - a. Cost Management Report
 - b. Contract Management Summary Report
 - c. Cost Variance Report
7. Attendance at Salt Lake Planning Conference