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GLD91187-1



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M E M O R A N D U M

To: B. C. Lunis, EG&G

From: G. A. Freund, SAI *gaf*

Subject: PLAN FOR 1980 REVISION OF BASELINE DOCUMENTS - GAF-8-79

This memo outlines plans for revising baseline documents for the following thirteen states during FY-1980:

AR (Arkansas)	NM (New Mexico)
CO (Colorado)	ND (North Dakota)
ID (Idaho)	SD (South Dakota)
KS (Kansas)	TX (Texas)
LA (Louisiana)	UT (Utah)
MT (Montana)	WY (Wyoming)
NB (Nebraska)	

It reflects: (a) discussions among principal contributors, and (b) comments from state team reviews of the first editions. It also formalizes methods of doing business which evolved during the past several months. The basic thrust of the effort is to make the books more interesting to those not directly involved in the geothermal program and a more useful reference to those in the program.

Attachment

cc: Western Energy Planners (2)

UURI - ESL (2)

J. A. Hanny - EG&G

R. J. Schultz - EG&G

TITLE

COMMERCIALIZING GEOTHERMAL ENERGY IN (NEW MEXICO) FACT BOOK 1980 EDITION

AUDIENCE

The audience will be primarily decision-makers in the governmental sectors-- local, state, and Federal--in both the legislative and executive branches. The executive summary will be aimed at top level general decision-makers, while the remainder of the document will be appropriate to those involved in day-to-day decisions on the geothermal development program. Together with the institutional handbook being prepared by each state, the document will also provide a good introduction to a state's activity for those in the private sector interested in participating in the state's geothermal development.

In addition to the present distribution, the document should find its way by the most appropriate means to the state's Congressional delegation and to interested members of the public. One obvious way for the latter is to send copies to university libraries and to regional public libraries.

OVERALL FORMAT AND RESPONSIBILITIES

The reorganized baseline document will consist of seven sections listed below. Responsibilities for the individual sections (as also listed) are consistent with broader responsibilities within the program:

- (1) Western Energy Planners - coordination with state commercialization teams;
- (2) UURI - coordination with state resource assessment teams;
- (3) SAI - coordination of inputs by EG&G and other contractors and of total baseline document.

The seven sections and primary responsibilities are:

- I. Introduction and Summary - SAI
- II. Basic State Data - SAI
- III. State Institutional Procedures - WEP
- IV. Resource Assessment - UURI
- V. Commercialization Planning - WEP & SAI
- VI. Commercialization Activities - SAI & WEP
- VII. References and Bibliography - SAI

An annotated outline for each section is included in the appendix.

PROPOSED SCHEDULE

Draft documents for the thirteen states are planned on the schedule listed below. One month will be allowed after completion of the draft for review and issuance of the final document. The first updating of all thirteen states is to be completed by July 1, 1980.

CO	11/16/79	ND	03/14/80
ID	12/07/79	TX	03/28/80
NM	01/04/80	AR	04/11/80
UT	01/18/80	LA	04/25/80
WY	02/01/80	NB	05/09/80
MT	02/15/80	KS	05/23/80
SD	02/29/80		

The order of states is generally based on the original order of issuance. (Idaho was placed second instead of first because of uncertainty regarding which DOE entity will manage the Idaho program during FY-1980.) Target dates can be rearranged to accommodate unavoidable conflicts.

COORDINATION OF DRAFT MATERIAL

SAI (G. A. Freund) will prepare a checklist of needed revisions, updates, and changes for each state document in advance of the due date for the draft material to ensure that someone is responsible for a draft on each new or

revised item. Rough drafts should reach Idaho Falls by phone (tape) or mail no later than two weeks before the scheduled issue date for the draft. SAI will coordinate preparation of draft copies, using EG&G illustration, typing, and printing services.

Draft copies will be sent by EG&G to UURI, WEP, and the state teams for their review. Review comments will be due in Idaho Falls by phone (tape) or mail no later than three weeks after draft copies are mailed from Idaho Falls. WEP and UURI will be responsible for monitoring and coordinating review comments from state planning and resource teams, respectively. SAI will resolve review comments and coordinate preparation of final copies. The EG&G Program Office and EG&G Technical Editing will also review at this time.

APPENDIX - ANNOTATED OUTLINE

This outline presents the proposed revisions to the baseline documents. Reference is made to existing sections in the first edition. Some general guidelines on content and format, applicable to the entire document are given below.

- (1) It has been agreed not to be as rigorous on identical formats between states as in the first issue. Whenever possible information should be prepared to coincide with the established format of the document. However, useful existing information should not be left out because it does not follow the established format or because it provides greater detail than is available for other states.
- (2) Since the EG&G charter from DOE is limited to the hydrothermal resource, coverage of other geothermal resources, such as geopressured and hot dry rock, within a state will of necessity be less complete than hydrothermal information. Every reasonable effort should be made to include existing information on these resources.
- (3) Regarding funding, dollar amounts of government contracts or other assistance will be included whenever available since this information is considered public.

I. INTRODUCTION AND SUMMARY

The objective of this section is to present both an executive summary for senior officials and a roadmap to the rest of the document for those interested in more detail. It will combine the introduction (Section I) with the commercialization highlights section (4.A). A brief summary of Resource Assessment (new Section IV) will also be included. The statistical summary (now in 2.B) will be a table in this section. The emphasis will be to show the role of both state and Federal government (and funds) in attempting to foster orderly development of geothermal energy. (A brief summary table of state-assisted activities may be included here.)

II. BASIC STATE DATA

Three types of information will be covered in this section:
(a) demographic, (b) employment, and (c) energy.

II.A Demographic Summary

This subsection will provide a brief description of geographic and demographic features of the important regions of the state, such as would be synopsized from an encyclopedia write-up. It will be illustrated by a version of the basic state counties map with as much detail on communities and transportation networks (highways and railroads) as can be reasonably fitted on an 8½-by-11 sheet. Another version of the map will show major ownership blocks of state and Federal lands superimposed on a gross township and range grid.

II.B Employment

This subsection will provide a broad summary of present employment in those industries whose process heat requirements make them appropriate candidates for geothermal direct use applications. The main item will be a summary table of employment by county and SIC category. The details of how to sum and/or select SIC categories and employment figures can be worked out with each state team, and will depend in part on the status of data bases at EG&G and NMEI. For example, one might list only those SIC categories which contribute significantly to a county's employment.

II.C Energy

This subsection will cover the material now in Section 7 of the current baseline document. Unless additional work has specifically been done in this area by a state team, the only upgrading will be the following:

- (a) More clearly relate energy consumption figures to locale on energy usage map (now Fig 7.2).
- (b) Update Table 7.2 on energy process requirements based on a more recent SERI publication.
- (c) Add a version of the basic state counties map showing energy transportation networks (pipe and powerlines).

Any upgraded pie-charts, growth curves, should be in the same format as current figures.

III. STATE INSTITUTIONAL PROCEDURES

This section will provide a broad overview of institutional procedures within the state as they affect geothermal development. Details on how to cope with these procedures on individual projects will be reserved for the institutional handbook.

The format for this section will be based on the revised outline developed by Western Energy Planners for Section 8 of the Baseline Document, as amplified by related materials now in other sections. WEP used their outline first on states outside the RMB&R region.

III.A General

This subsection provides a statement of major state legislative acts relating specifically to geothermal energy including resource definition. It will include Act and Provision titles.

III.B Principal State Agencies

This subsection will list the name of the agency and briefly describe its functions as they relate to geothermal energy. The table of state agencies,

personnel, legislators, and state geothermal teams (now Section 2.A) will be included in this subsection. (Phone numbers and addresses of these people will be included.)

III.C Leasing of Surface Land and Resources

This subsection will provide: (a) responsible agency, (b) statutory authority and provisions, (c) rules and regulations, and (d) other relevant information.

III.D Exploration and Drilling

This subsection will cover the same information as in (III.C) except for exploration and drilling.

III.E Development and Commercialization

This subsection will deal with the PUC, PSC, or other agency having jurisdiction over electrical power generation and energy transmission (power-lines and pipelines). In a like manner, it will cover any agency having jurisdiction over the development of direct thermal applications.

III.F Municipal and County Authorities

This subsection will deal with agencies at the municipal and county level, their charter, responsibilities, and regulations related to geothermal energy.

III.G State and Local Taxation

This section will describe the tax structure as it affects geothermal development.

III.H NCSL Program

The assistance program of the National Conference of State Legislatures (now in Section 6.D) will be described, together with its specific impact on the state's geothermal legislation.

IV. RESOURCE ASSESSMENT

The material for this section is currently scattered throughout the report (Sections 3, 4 and 6). The topics to be covered are as follows.

- A. Geologic setting (now 3.A) - Accompanied by the province map (Fig. 3.1) and if possible, by general geologic map of the state.
- B. Overview on reservoirs and prospects (now 3.B and 3.C) - The locations of these reservoirs and prospects should be identified on the resource map (Fig. 3.2).
- C. Table on springs and wells (now Table 3.1) - Springs and wells should be deleted from resource map (which they tend to clutter). Reference should be made to ownership map in Section II (and to state-coupled program map for those who need more detail), or a separate springs and wells map should be included.
- D. Exploratory activity (now Table 4.7) - Related to a description of the state-coupled program. The table will show, by asterisk(s), those items funded under the state-coupled program.
- E. Resource confirmation test wells (now Table 4.8) - Should be related to descriptions of the state- and industry-coupled programs. Again, the table will show by asterisk(s) items funded under these programs. If possible, other types of wells (wildcat, etc.) as reported by PI newsletter and others, should be included.

V. COMMERCIALIZATION PLANNING

This section will cover the following topics:

- A. A description of the planning process (now in Section 5.A).
- B. A list of plans in progress (now in Table 5.1).
- C. Fact sheets on completed plans (format to be developed by WEP).
- D. State map of counties showing planning areas and sites.

- E. Description of PRDA process (and related processes resulting from omnibus geothermal bill). PRDA process is now briefly described in 6.B.
- F. Fact sheets on completed PRDA's.
- G. Appropriate state-funded activities not described elsewhere.
- H. Technical assistance program (now 6.H).
- I. More detailed market penetration analyses, such as now underway at NMEI for some states.

VI. COMMERCIALIZATION ACTIVITIES

This section will cover the specific activities undertaken by the private sector (sometimes with government support) to implement and complete specific geothermal projects. A state counties map showing location of major developments and operational systems will be included.

VI.A Leasing

The leasing subsection will continue to follow the format now in 4.B, Fig. 4-1, and Tables 4.1 to 4.5. Input will continue to come from USGS data base for Federal leases. State teams will be asked to supply state lease data. Feedback to USGS will be initiated to correct any inconsistencies between their various data formats.

VI.B Demonstration Projects and Major Active Developments

This subsection will describe various active projects within the states, including PON's and GLGP's. These projects are now covered in various parts of Sections 4 and 6. Criteria for inclusion (amount of energy consumption, firmness of commitment, etc.) can be negotiated on a state-by-state basis. Any criteria will be clearly stated. A summary table will list all projects in a manner similar to the development summaries we just prepared for DOE. It will serve as the basis for future exercises in firmly projected energy use. For any project with adequate available information, a separate fact sheet will be provided.

VI.C Operational Systems

This subsection will be based on operational systems as listed in the previously mentioned development summaries. Again, fact sheets for major systems will be provided.

VII. REFERENCES AND BIBLIOGRAPHY

The references for all sections of the document will be consolidated here. The references will be followed by a bibliography on geothermal work in the state--as complete as we can collectively muster.