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HOW CEQA HAS STREAMLINED THE NEPA PROCESS FOR THE DOE GEOTHERMAL LOAN GUARANTY PROGRAM

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ABSTRACT

During the past decade, the U.S. Department of Energy (DOE) has contributed to the development of the nation's geothermal resources by (1) funding geothermal research and development, (2) cost-sharing with private industry in commercial-scale geothermal demonstration power plant projects, and (3) guarantying loans to wholly or partially finance electric power generation and direct heat projects.

Geothermal loan guaranties have been granted for nine projects located in the western United States, most of them in California where certain state and/or local agency actions are subject to environmental review under the California Environmental Quality Act (CEQA) of 1970. Similarly, the federal action of granting a geothermal loan guaranty must be reviewed pursuant to the National Environmental Policy Act (NEPA) of 1969 to determine its impacts to the quality of the human environment.

This paper traces the evolution of the relationship between the CEQA and NEPA environmental review processes, and focuses on the manner in which CEQA has streamlined the NEPA review for the DOE geothermal loan guaranty program. Two recently-prepared DOE environmental assessments are highlighted to describe the incorporation of CEQA analyses and documents into NEPA documents.

INTRODUCTION

In June 1975, the U.S. Energy Research and Development Administration [ERDA, now the Department of Energy (DOE)] formulated a National Plan for Energy Research, Development and Demonstration[1] that was designed to explore numerous options to meet the nation's escalating energy needs. The objectives were (1) to decrease domestic dependence on oil and natural gas, (2) to increase domestic use of energy produced by coal, nuclear (fission and fusion), geothermal and solar resources, and (3) to reduce domestic energy demand by encouraging conservation. The development of the United States' geothermal resource base, estimated at 3.4×10^7 quads,[2] became the goal of legislation enacted by Congress later that year--the Geothermal Energy Research, Development and Demonstration Act.[3] Under the Act, the federal government was authorized to encourage and assist the private sector in developing geothermal energy resources in an environmentally-acceptable manner. In the past decade, this assistance has been provided by: financial support of geothermal research and development and resource assessment; cost-sharing with private industry in the design, construction and operation of commercial-scale geothermal demonstration power plants; and direct financial assistance to private industry in the form of federal loan guaranties for geothermal electric power generation and direct heat projects.

The Geothermal Loan Guaranty Program of the Department of Energy, authorized by Title 10, Code of Federal Regulations, Part 790, is intended to encourage private industrial development of geothermal resources for electric power generation and direct heat applications. The loan guaranty by the federal government minimizes financial risk to the lender in geothermal ventures. Since 1976, the DOE has reviewed approximately 20 projects seeking loan guarantees, and has approved 8 of these for a commitment of roughly $244.4 million. Presently, a ninth project has approval pending for a $45 million loan guaranty.[4]

All nine loan guaranties have been granted for geothermal projects located in the western United States--six of these in California, where certain state and/or local agency actions, for example, the issuance of a Conditional Use Permit required prior to geothermal development, are subject to environmental review under the California Environmental Quality Act (CEQA) of 1970. Similarly, the federal action of granting a geothermal loan guaranty must be reviewed pursuant to the National Environmental Policy Act (NEPA) of 1969 to determine if impacts to the quality of the human environment will result. Both laws are intended to ensure that an environmental review is performed prior to a decision to proceed with an action.

The coordination of the CEQA and NEPA processes has always been an important consideration during DOE's review of geothermal loan guaranty applications. Because of DOE's rapid processing requirements, time has historically been the most significant constraint to complete integration of the two processes.[5] Since 1982, changes in both the DOE and CEQA approach to environmental

assessment of geothermal projects have resulted in a streamlined NEPA process for the Geothermal Loan Guaranty Program.

The objective of this paper is to briefly trace the evolution of the relationship between the CEQA and NEPA environmental review processes and to focus on the manner in which DOE's NEPA review has been streamlined for geothermal loan guaranty projects. Two recently-prepared DOE environmental assessments are highlighted to illustrate the incorporation of CEQA analyses and documents into NEPA documents. This paper is meant to provide public officials, geothermal developers, and environmental consultants with an example of the successful interaction among those who implement state and federal environmental laws.

CEQA AND NEPA: THE EVOLUTIONARY PROCESS

The Basics of Both Laws

Both CEQA and NEPA are intended to legally ensure that the quality of the environment will be primary consideration in the decision-making for proposed state, local, and federal agency actions. Implicit in their intent is the need to demonstrate to a frequently-apprehensive citizenry that the agency has indeed analyzed and considered the implications of its action(s) as it(they) may affect the public. Although the laws are equal in intent, the policies governing their implementation and the procedures followed in the preparation of environmental review documents differ. A brief summary of the basics of the CEQA and NEPA processes is given in Table 1.

CEQA and NEPA As Related to Geothermal Loan Guaranty Projects

From Table 1, it is evident that the California CEQA process closely parallels the NEPA process. One major difference between the two is that, if there is a potential for significant impacts, a federal agency may choose to prepare either an EA or an EIS, while a California agency must prepare an EIR. (An EIS is most often prepared when significant impacts or issues are known to be likely.) Preparation of a NEPA EA does not necessitate public scoping and comment periods as do a NEPA EIS and a CEQA EIR, thus time and cost requirements are usually less than for an EIS/EIR.

Table 1. The basics of the CEQA and NEPA environmental review processes.

	CEQA [6]	NEPA [7]
Application of the laws	Applicable to California state or local agencies that plan to carry out or approve an action, unless specifically exempted	Applicable to major actions undertaken by or supported wholly or partly by a federal agency, unless specifically exempted
Type of environmental documentation	No significant impacts expected: prepare a Negative Declaration	No significant impacts expected: prepare a Memorandum-to-File
	Potential for significant impacts: prepare an Environmental Impact Report (EIR)	Potential for significant impacts: prepare an Environmental Assessment (EA) or an Environmental Impact Statement (EIS), depending on level and type of potential impacts
Document preparation process	o Initial Study (checklist of potential issues and impacts)	o Scoping the issues (public meeting required for EIS)
	o Notice of Preparation	o Notice of Intent (EIS only)
	o Comment period --- 45 days	o Comment period (length varies among agencies)
	o Prepare and issue Draft EIR	o Prepare and issue Draft EA/EIS (public review required for EIS only)
	o Notice of Completion	
	o Comment period --- not <30 or >90 days	o Comment period (length varies among agencies)
	o Respond to comments, issue Final EIR	o Respond to comments, issue Final EA/EIR
	o Publish findings (if there are one or more significant impacts)	o Notice of Availability
Basis for decision-making	Notice of Determination (filed with State Secretary for Resources)	EA: Finding of No Significant Impact (FONSI); EIS: Record of Decision (Published in Federal Register or other media)

In the specific application of the NEPA process to DOE geothermal loan guaranty projects, EAs have most often been the level of documentation used as the basis for decision-making. Since 1976, the DOE has published thirteen EAs for proposed loan guaranty projects, and has cooperated with other federal agencies in the preparation of three more assessments. CEQA EIRs were also prepared for many of the same projects since permits or other approvals to be granted by state or local agencies triggered such review. None of the analyses of the proposed loan guaranty projects indicated the potential for significant environmental impacts that could not be mitigated.

The DOE has traditionally prepared geothermal loan guaranty EAs using applicant-supplied environmental and project information in addition to CEQA EIRs or NEPA documents prepared for the proposed project or other projects in the vicinity. This approach is in keeping with the recommendations of both the Council on Environmental Quality Regulations for the Implementation of the Procedural Provisions of NEPA [40 CFR 1506.2(c)] and CEQA (Sects. 21083.5, 21083.6, and 21083.7) which call for the minimization of duplicate efforts between state and federal agencies in their environmental review processes.

Prior to 1982, NEPA documents for geothermal loan guaranty projects were prepared totally independent of the corresponding CEQA EIRs, that is, information from CEQA documents was incorporated in the NEPA EAs only by reference. At that time, the extent of DOE's adoption of information contained in the EIRs was dependent on (1) the scope of the proposed action, (2) the degree of DOE involvement in scoping and analysis, (3) the adequacy of impact assessment, and (4) timing.[5] Timing and the degree of DOE involvement have historically been the constraints that preclude blanket adoption of the CEQA EIRs by DOE to achieve NEPA compliance.

The DOE's pre-1982 technical, financial, managerial, and environmental reviews of geothermal loan guaranty applications were on a fast track; rapid processing encouraged decision-making four months from receipt of an application.[5] At the time of the DOE review of an application, three CEQA scenarios are possible:

(1) an EIR has already been completed for the proposed project;
(2) an EIR is in preparation; or
(3) an EIR is planned.

If either scenarios (1) and (2) are the case, then the degree of DOE involvement in scoping of the document will be zero. Likewise, for scenario (1), DOE's involvement in impact analysis would be nonexistent. If an EIR is in preparation, DOE could conceivably contribute to the impact analysis, but this is unlikely, again because of time constraints. If scenario (3) is the case when the DOE initiates its loan guaranty review, then all would seem to be well, since the federal and state environmental review processes could be carried out simultaneously. In the past, however, all has not been well under scenario (3) because of the incompatibility of the 4-month processing requirements of DOE with the time required for preparation of a CEQA EIR. Preparation of CEQA documents usually takes between nine months to one year and in some cases, prior to the state's imposition of a one-year time limit, as much as two years was required. So, in order for DOE to have an EA available for timely decision-making, a separate NEPA document has usually been prepared.

How Things Have Changed

Both subtle and obvious changes have enabled DOE to adopt CEQA EIRs in toto for two recent loan guaranty projects. First, DOE's review of loan guaranty applications is no longer imperatively a fast-track item. Although DOE continues to strive to process applications within four months, the cost savings realized by blanket adoption of CEQA EIRs (about 40% less than if an independent NEPA EA were prepared) have injected a tolerance for delay into the loan guaranty NEPA process. Additionally, a one-year time limit on the preparation of EIRs that was imposed in the late 1970's has reduced the once-lengthy CEQA process to a level compatible with DOE's NEPA process. Second, during the last decade, experiences with geothermal exploration, drilling and testing, and small-scale power plant operation have provided data that corroborate predictions of environmental impacts made in CEQA and NEPA documents. Thus, the scoping of issues for geothermal loan guaranty projects has been facilitated for all but unique projects, i.e., the potential issues are well known and the need for certain impact analyses is well established.

Two examples of how DOE has incorporated CEQA analyses into NEPA documents for geothermal loan guaranties are the Niland and South Brawley projects in Imperial County, California. Both involve well field development and construction and operation of a 49 MW (net) geothermal power plant. Following is a brief summary of the coordination between DOE and Imperial County in the environmental reviews of these projects.

In June 1982, DOE met with representatives of: MCR Geothermal Inc., applicant for the South Brawley loan guaranty; Republic Geothermal, Inc., applicant for the Niland loan guaranty; and Imperial County, lead agency for preparation of the CEQA EIR, to discuss the CEQA and NEPA reviews for the two projects. Initially, it was hoped that one document could be prepared to satisfy compliance with both laws. This was nearly accomplished; however, the need for a discussion of the proposed DOE action and alternatives and for DOE consultation with agencies resulted in the preparation of a hybrid NEPA EA for each of the projects. The hybrid EAs consisted of the CEQA EIR, wholly adopted by DOE and appended to the EA, and a "mini-EA" (~30 pages) that covered areas unique to DOE's involvement. These documents

differed from earlier NEPA EAs of geothermal loan guaranty projects in that they contained the entire CEQA EIR, rather than only excerpted, referenced text.

Cooperation among the loan guaranty applicants, Imperial County, and DOE satisfied the four critical factors for DOE's blanket adoption of the CEQA EIRs as follows:

(1) the scope of the proposed action

Early consultation between DOE and Imperial County ensured that the proposed action to be analyzed in the CEQA EIR corresponded to the proposed action that would result if the geothermal loan guaranty was granted.

(2) the degree of DOE involvement in scoping and analysis

DOE participated in the County-held scoping meetings for the Niland and Brawley projects and offered input as to potential issues. Applicant-supplied project and environmental information was reviewed by DOE and the Oak Ridge National Laboratory (ORNL) (at DOE's request) to identify data and information needs. DOE and ORNL subsequently reviewed and commented on the Preliminary Draft EIR and the Draft EIR issued by Imperial County for each project.

(3) the adequacy of impact assessment

Imperial County responded to comments from DOE on the PDEIR and DEIR concerning the adequacy of impact assessment. In only a few cases, additional analysis was conducted by DOE and presented in the mini-EAs to which the EIRs were appended.

(4) timing

Preparation of both the Niland and Brawley EIRs required about one year, as measured from the scoping meeting to the publication of the final document. Coincidentally, circumstances unrelated to the environmental review of each project extended DOE's processing of the applications beyond one year. As a result, DOE was able to adopt the Niland and Brawley EIRs and prepare the mini-EAs within a time frame compatible with decision-making.

The Bottom Line

A change in DOE's approach to the preparation of NEPA compliance documents for geothermal loan guaranty projects has increased the time required for the environmental review process and thus, the processing time of the loan guaranty applications, but this has been offset by savings realized as a result of reduced manpower requirements for impact analyses and decreased technical publications costs. The NEPA process has been streamlined by the active participation of DOE in the preparation of a CEQA EIR that addresses the geothermal project for which the loan guaranty has been requested. In this paper, the example of the successful interaction between DOE and Imperial County in their compliance with NEPA and CEQA, respectively, indicates the potential for similar success in future environmental reviews undertaken by various federal, state and local agencies.

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