

GEOTHERMAL ENERGY PROGRAM  
PROGRAM RESEARCH AND DEVELOPMENT ANNOUNCEMENT  
PRDA 03-79-ET-27004

GL03837

ENGINEERING AND ECONOMIC STUDIES  
FOR DIRECT APPLICATIONS OF GEOTHERMAL ENERGY

DEPARTMENT OF ENERGY  
DIVISION OF GEOTHERMAL ENERGY  
SAN FRANCISCO OPERATIONS OFFICE

Closing Date: January 16, 1979



Department of Energy  
San Francisco Operations Office  
1333 Broadway  
Oakland, California 94612

NOV 9 1978

Prospective Offerors

Subject: PROGRAM RESEARCH AND DEVELOPMENT ANNOUNCEMENT - ENGINEERING  
AND ECONOMIC STUDIES FOR DIRECT APPLICATION OF GEOTHERMAL  
ENERGY - PRDA 03-79-ET-27004

The Department of Energy (DOE), Geothermal Energy Division, San Francisco Operations Office, desires to receive and consider for support proposals for engineering and economic studies of applications for direct heat utilization of hydrothermal resources. Primary interest under this Program Research and Development Announcement (PRDA) is for site specific studies dealing with industrial and agricultural processing, mineral extraction, and space/water heating and cooling for commercial and residential buildings.

Individuals, corporations, companies, educational institutions, non-profit and not-for-profit institutions, and others, individually or as proposed project teams, who wish to have their hydrothermal direct utilization study considered for DOE support should respond to this PRDA. Proposals from Federal agencies and/or laboratories owned, operated, or under the cognizance of the Federal Government cannot be considered for selection.

This PRDA, which is part of a coordinated national geothermal energy research, development, and demonstration program, is issued pursuant to ERDA Procurement Regulations, Part 9-4, Specific Types and Methods of Procurement, Subpart 9-4.58, Procurement Research and Development Announcement, dated September 26, 1977.

There will not be a preproposal conference; however, written questions will be considered if submitted to DOE by close of business November 29, 1978. Written responses to all questions will be provided to all recipients of the PRDA as soon as possible. Questions must be mailed to Gerald Katz, address as shown below. Telephone inquiries will not be accepted.

Prospective Offerors

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Proposals must be prepared in accordance with the instructions in Section III - Proposal Preparation Instructions. Fifteen (15) copies of the proposal must be sent to:

Gerald Katz  
Department of Energy  
San Francisco Operations Office  
ATTN: PRDA Control - Mailroom, 6th Floor  
1333 Broadway  
Oakland, California 94612

Proposals must be received by 10:00 a.m., local time, January 16, 1979. To facilitate handling, please mark on the outside envelope containing your proposal or other matters related to this solicitation:

"Engineering and Economic Studies for  
Direct Applications of Geothermal  
Energy" - PRDA 03-78-ET-27004

"To Be Opened By Addressee Only"

Sincerely,

A handwritten signature in cursive script that reads "Mark Barnes".

Mark Barnes  
Procurement Division

DEPARTMENT OF ENERGY  
DIVISION OF GEOTHERMAL ENERGY  
SAN FRANCISCO OPERATIONS OFFICE

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ANNOUNCEMENT  
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Engineering and Economic Studies For Direct  
Applications of Geothermal Energy

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#### AUTHORITY

This PRDA is issued pursuant to ERDA Procurement Regulations, Part 9-4, Special Types and Methods of Procurement, Subpart 9-4.58, Program Research and Development Announcements, dated September 16, 1977, and printed in the Energy Reorganization Act of 1974 (P.O. 93-438) and the Federal Nonnuclear Research and Development Act of 1974 (P.L. 93-577).

#### ABSTRACT

This PRDA solicits proposals for engineering and economic studies to determine the feasibility of utilizing hydrothermal fluids for direct purposes for industrial and agricultural processing, mineral extraction, and space/water heating and cooling for commercial and residential buildings. Proposals must be site-specific and may be for single or multi-purpose applications. These studies are directed toward an understanding of the engineering, economic, and institutional factors associated with specific applications of heat from specific reservoirs and will add to the data base which is evolving from contracts awarded under PRDA DGE-76-1, and PRDA DGE/SAN EG-77-D-03-1487. The extent of known information or source of information concerning the reservoir must be described.

This solicitation is a part of DOE's national geothermal energy program plan which places emphasis on the near-term commercialization by the private sector of hydrothermal resources for direct purposes.

## SECTION I - PRDA CONSIDERATIONS

### A. PURPOSE

The purpose of this Program Research and Development Announcement (PRDA) is to provide an opportunity for interested parties to propose engineering and economic feasibility studies of direct applications of geothermal heat using hydrothermal resources. DOE's primary interest under this PRDA is for studies covering a detailed analysis of engineering, economic, and institutional factors associated with single-purpose or multiple usage of geothermal heat in application areas, such as industrial and agricultural processing, mineral extraction and space/water heating and cooling for commercial building complexes and residential development. In addition, consideration will be given to other proposed studies which represent an intensive use of geothermal energy or offer the potential for significant savings of conventional fuels. Proposals selected for support will aid DOE in evaluating the potential for increased use of low to moderate temperature hydrothermal resources; establishing a data bank of technical, environmental, institutional, and economic information pertinent to direct applications of geothermal energy; and disseminating information related to the potential market for geothermal heat in various commercial sectors and geographical regions. Results of these studies are expected to aid in selecting the location and design of possible follow-on applications experiments, help to identify impediments to commercialization, and directly stimulate private development of direct applications of geothermal energy.

Proposals shall be for site specific study(ies), that is, analysis of use of a specific geothermal reservoir for a single-purpose application or multiple-use application. Offerors desiring to propose a study for more than one site must submit a separate proposal for each such case.

Evaluation of each proposal will be made according to the criteria set forth in Section IV of this PRDA. To be eligible for contract award, proposals must be for new study starts. Continuation and/or extension of existing or previous DOE- or ERDA-funded studies is specifically excluded from consideration under this procurement activity.

B. REQUIREMENTS

To be considered for support pursuant to this PRDA, proposers must demonstrate their total capability to carry out the proposed project through completion. The proposers (individual organizations or combinations of organizations) must be familiar with the economics, energy utilization technology, and institutional requirements of the various representative direct applications.

If the proposer is a team of organizations, one member organization must be designated as the proposed contractor and an individual member of the contractor organization must be designated as Principal Investigator. Any contract arising from the proposal will be made with the proposed contractor, and the Principal Investigator will be identified as the representative of the Contractor having primary responsibility for execution of the contract effort. Other member organizations will be considered participants on a subcontract basis. Also, all consultants to the Contractor and the nature and extent of their efforts in relation to the proposed study must be clearly explained. In addition, the proposal shall outline, in detail, the plan and schedule for conduct of the proposed study. See Appendix A of this PRDA for details on DOE Reporting Requirements. Proposals must contain current, accurate, and complete information as required in said Appendix A.

C. CONDITIONS FOR CONSIDERATION

A Government panel shall evaluate proposals in accordance with the ERDA Procurement Regulations, dated September 26, 1977, and the criteria and considerations set forth in Section IV of this PRDA. In conducting this evaluation, the Government may utilize technical assistance and advice from qualified professional and scientific personnel both within and outside the Government. In light of the possibility of DOE going outside the Government for evaluation assistance, proposers are requested to include the consent statement on the the cover sheet of their proposals (Appendix B) to allow "outside Government" individuals to have access to their proposals. The proposer is advised that DOE may be unable to give full consideration to a proposal submitted without such consent. Information contained in the proposals shall be treated in accordance with the policies and procedures set forth in paragraph 9-3.150 of the ERDA Procurement Regulations, dated September 26, 1977.



Proposals may request full cost reimbursement. Proposed levels of cost sharing (ERDA Procurement Regulations, 9-4.590), contractual or grant arrangements, and fees, if appropriate, will be considered in evaluations and will be the subject of negotiations. Educational institutions, non-profit or not-for-profit organizations may be eligible for a grant under DOE's grant policy. Respondents should allow 90 days for evaluation after the closing date and approximately 60 days for contract negotiation before contract award. If a contract award is made, the awardee must accept the standard terms and conditions utilized by DOE pursuant to the Federal Procurement Regulations and the ERDA Procurement Regulations. A phased contractual arrangement may be desirable with authorization of subsequent phases or options to be contingent on results of work under earlier phase(s), the potential value of the proposed extension of work, DOE's overall program needs and plans, availability of funding, etc.

Upon completion of the initial evaluation of the proposals, DOE may request that proposals be clarified or supplemented either through additional written submission or oral presentations. All proposers will be notified in writing of the action taken on their proposals.

Proposals must be valid for not less than 150 days from the closing date and shall be signed by an official of the proposing organization authorized to obligate the organization.

D. NUMBER AND VALUE OF AWARDS

As a result of this PRDA, to the extent acceptable proposals are received, DOE intends to support several studies. In general, it is anticipated that the cost and time duration for individual projects will range up to \$125,000 for a 6 to 12-month effort.

The Government, however, is not obligated to make any particular number of awards or any awards at all, nor is it obligated to make awards totaling any particular aggregate sum. Contracts, grants, or cooperative agreements may be used to execute the award and obligate Government funding. The Government reserves the right to employ incremental funding.

E. SMALL/MINORITY BUSINESS PARTICIPATION:

The United States Department of Energy desires small/minority business participation in its programs and in this PRDA. To encourage this participation, additional consideration will be given to the support of projects in which small/minority business participants conduct the project in its entirety or are substantially involved as the prime contractor, or subcontractor, in any proposed project. (See Program Policy Factors, Section IV.C.) Definitions of small and minority businesses can be found in Executive Order 11625 and Federal Procurement Regulations 1-1.7 and 1-1.13.

F. SUBMISSION OF PROPOSALS

Fifteen (15) copies of each proposal must be submitted to the following address on or before 10:00 a.m. local time on the closing date, January 16, 1979.

Gerald Katz  
Department of Energy  
San Francisco Operations Office  
ATTN: PRDA Control - Mailroom, 6th Floor  
1333 Broadway  
Oakland, California 94612

Proposals may be mailed or handcarried to the above address. The outside envelope of proposals and correspondence related to this PRDA shall have the following marking:

"To Be Opened by Addressee Only - PRDA 03-79-ET-27004"

G. LATE PROPOSALS, MODIFICATION OF PROPOSALS, AND WITHDRAWALS OF PROPOSALS

- (a) Any proposal received at the office designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made, and:

- (1) It was sent by registered or certified mail not later than the fifth calendar day prior to the date specified for receipt of proposals (e.g., a proposal submitted in response to a solicitation requiring receipt of proposals by the 20th day of the month must have been mailed by the 15th or earlier);
  - (2) It was sent by mail (or telegram if authorized) and it is determined by the Government that the late receipt was due solely to mishandling by the Government after receipt at the Government installation; or
- (b) Any modification of a proposal, except a modification resulting from the Contracting Officer's request for "best and final" offer is subject to the same conditions as in (a)(1) and (a)(2) of this provision.
- (c) A modification resulting from the Contracting Officer's request for "best and final" offer received after the time and date specified in the request will not be considered unless received before award and the late receipt is due solely to mishandling by the Government after receipt at the Government installation.
- (d) The only acceptable evidence to establish:
- (1) The date of mailing of a late proposal or modification sent either by registered or certified mail is the U. S. Postal Service postmark on the wrapper or on the original receipt from the U. S. Postal Service. If neither postmark show a legible date, the proposal or modification shall be deemed to have been mailed late. (The term "postmark" means a printed, stamped, or otherwise placed impression that is readily identifiable without further action as having been supplied and affixed on the date of mailing by employees at the U. S. Postal Service.)
  - (2) The time of receipt at the Government installation is the time-date stamp of such installation on the proposal wrapper or other documentary evidence of receipt maintained by the installation.

- (e) Notwithstanding (a), (b), and (c), of this provision, a late modification of an otherwise successful proposal which makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.
- (f) Proposals may be withdrawn by written or telegraphic notice received at any time prior to award. Proposals may be withdrawn in person by an offeror or his authorized representative, provided his identity is made known and he signs a receipt for the proposal prior to award.

NOTE: The term "telegrams" includes mailgrams.

## SECTION II - PROGRAM INTERESTS AND REQUIREMENTS

A. BACKGROUND

The objective of the DOE Geothermal Energy Development Program is to work with industry, state and local governments, the academic community, and other concerned groups, to provide the Nation with an economically and environmentally acceptable energy resource to be substituted for and supplement present energy sources. This will permit the timely exploitation of our Nation's substantial geothermal energy resources. An integral part of this consists of the early development of a viable and growing geothermal industry. To provide early momentum to this industry, DOE has initiated several research, development, and demonstration-type efforts to stimulate rapid exploitation of liquid-dominated hydrothermal resources. This class of geothermal energy resources is considered most likely to make a significant impact on the national energy problem in the near-to-intermediate time frame.

In general, high temperature geothermal resources are expected to be used primarily for generating electric power. However, the quantity of such high-quality resources is expected to be somewhat limited. The vast majority of hydrothermal resources are at temperatures more suited for nonelectric applications (i.e., use of geothermal heat directly for industrial processing, district heating and cooling and agriculture processing). In order to achieve the desired growth rate in commercial use of geothermal energy, utilization of the low to moderate temperature hydrothermal resources will be necessary.

B. PROGRAMMATIC NEED

Before becoming part of DOE, ERDA sponsored 17 engineering and economic studies for direct uses of geothermal energy. These studies, funded as a result of PRDA DGE 76-1, included 12 on industrial processing, four on commercial and residential space and water heating, and five on agribusiness uses. DOE is presently sponsoring six direct geothermal studies, including one on industrial processing, four on commercial and residential space and water heating, and one on agribusiness uses, funded as a result of PRDA DGE/SAN EG-77-D-03-1487. (Four of the previously funded ERDA studies and nearly all of the presently funded DOE studies concern more than one application sector.) In addition, several of the ERDA studies and all of the DOE studies are site-specific.

Since DOE's aim is to develop and commercialize the nation's geothermal resources, the present PRDA is again concentrating on site-specific engineering and economic studies so that the results may lead to development of these sites.

C. SCOPE OF ENGINEERING AND ECONOMIC STUDIES

The engineering and economic studies of interest under the PRDA shall address single-purpose or multiple-use applications of the geothermal heat relating to one or more of the following industry sectors:

- o Industrial - Process steam and moderate to low temperature heat for industrial plant.
- o Agricultural - Space, water, and soil heating for greenhouses; grain-drying; irrigation pumping; and extraction of chemicals from agricultural products (starches, acetic acid, acetone/ butanol, ethanol, etc.).
- o Space/Water Heating and Cooling - Space heating and cooling, water heating (especially district heating and/or cooling systems) for commercial-sized buildings or business complexes and residential developments.
- o Mineral Extraction - Process steam and moderate to low temperature heat for ore concentrating, leaching, flotation processes, etc.

Site-specific studies involving detailed analysis of engineering, economic, and institutional factors associated with selected direct applications are being solicited by this PRDA.

The contents of each proposal must contain a detailed description of study objectives, program plan including technical approach, scope of work, work schedule, and project milestones for producing the kinds of information required as the final product of the individual engineering and economic study.

The subject to be addressed during the course of each study shall include, but not be limited to, the following and will deal with the use of a specific site for a specific single-purpose or multiple-use application of geothermal heat.

1. Engineering Factors: Each study must examine the technical feasibility of adopting geothermal energy for the proposed direct application. If the characteristics of a selected geothermal reservoir are known, its proximity to the selected site and the methods of piping and handling must be presented. Primary consideration will be given to sites proposed that have reservoir data available for analysis. If such data is available, it must be examined with respect to the nature of the selected site and the proposed geothermal application.

If reservoir data sufficient to perform the study is not presently available, a task to develop a reservoir confirmation plan must be included in the project. The principles of operation involved in the proposed application and their sensitivity to reasonable changes in the parameters of the geothermal reservoir shall also be investigated. Although the study must give first consideration to commercially-available "off-the-shelf" hardware for a proposed application(s), the R&D requirements, if the application is not state-of-the-art, must be outlined. Additionally, the state-of-the-art technology for environmental control, the environmental load and the net energy ratio must be determined to show that a positive net energy utilization will result from this application. Finally, a program schedule showing the important milestones, decision points, critical paths, and contingency plans shall be developed for possible follow-on field experiments which may be required to demonstrate the technical viability of the proposed application. At the discretion of the contractor, discussions of the transferability of the application technology to other use, the possibility of retrofit applications, and the acceptable tolerances in the geothermal reservoir performance may also be included.

2. Economic Factors: The study shall assess the economic viability of using geothermal energy as an alternate energy source for the representative direct application activity. Special emphasis must be placed on estimating the cost of energy both when supplied in conventional forms and when supplied by the specific geothermal reservoir over a 30-year life. These costs shall take into account possible future price escalations and availability of conventional energy forms which are representative of the region containing the proposed site of the direct use application. Additionally,

new costs introduced by converting to a geothermal energy source (e.g., new operation and maintenance costs, change in costs of transportation both for the raw material and products, and other cost items associated with moving the industrial activity to a site near the geothermal reservoir) and the resulting impact on product cost must be determined.

In addition, at the discretion of the contractor, a discussion of the size of the industry, its projected growth, its product value, the effect of the output of the new process/plant on the regional market and highlights of the effects of taxation and other policies in economics may also be included.

3. Institutional Factors: Relevant social, financial (including lending institutions), environmental, legal, and regulatory institutional relationships must be explored. Manpower requirements and impacts on community services must be discussed. The study shall discuss the acceptance of the proposed application by the community including the public, existing industries, and local and state governments. Should social, financial, environmental, or legal barriers to the proposed application exist, the study shall explore ways to eliminate or reduce these barriers. Any patents involved and the rights of the contractor, user group, and energy supplier, as well as those of the government shall be clearly delineated. The educational value of the project and its effect on supporting industries may be included.

#### D. REPORTING OF STUDY OUTPUT

Explanations for those reports identified on the checklist appear in Appendix A and in the DOE Uniform Contractor Reporting Systems (UCRS) Guidelines, Volume I. A copy of the guidelines is available upon request from:

U.S. Department of Energy  
Uniform Contractor Reporting System  
Distribution  
Office of Administrative Services  
Washington, D.C. 20545



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U.S. Department of Energy  
Uniform Contractor Reporting System  
Distribution  
Office of Administrative Services  
Washington, D.C. 20545

## SECTION III PROPOSAL PREPARATION INSTRUCTIONS

A. CONTENT

Each proposal must indicate its specific study objective. Although a proposer may submit proposals on more than one study objective, a separate proposal must be submitted for each.

B. FORMAT

In order to facilitate the formal review of proposals, responders are requested to follow the format given below, using the same titles for the different sections of the proposal. The total number of pages in the proposal body (exclusive of Cover Sheet, Abstract, Table of Contents, Budget and Completion Forms), must not exceed 70 (double space, 8-1/2" by 11") pages. Short, concise proposals are preferred.

The format is as follows:

1. Cover Sheet: The cover sheet shall be prepared in accordance with the sample in Appendix B of this PRDA.
2. Abstract: A concise abstract of about 250 words stating clearly the objectives of the proposed study must be included at the beginning of each proposal.
3. Table of Contents: Proposals shall include a table of contents to facilitate locating the elements outlined in these guidelines.
4. Technical Discussion: This section shall include a concise narrative in the following format:
  - (a) Study Objectives - Enumerate the specific objectives of the study, including specification of the questions that will be addressed.
  - (b) Background - Explain the rationale for the chosen approach. Outline the plans for the transfer of study results to potential users and outline the policy decisions which might be affected by the research identified. Include a discussion of related research and appropriate

literature citations to show that the researchers are thoroughly familiar with the state-of-the-art and with current and prior research in the pertinent fields.

- (c) Study Plan - Closely and carefully link the plan to the objectives that will be addressed. Clearly state the technical objectives of the project and describe in detail (with appropriate references) the methods for the attainment of each. Clearly describe the sequence of planned tasks and the engineering and economic methodologies to be employed when conducting the study. (If a body of law or practice severely limits the options available to deal with particular aspects of the problem or subject matter under study, these limitations shall be indicated.)

A graphic schedule of activities and events, including key decision points, must be supplied. This schedule is necessary for meaningful periodic progress reporting and may be included in contract documents. A variety of formats may be used, but the duration and sequence of activities and time (in weeks from the award date) of principal events shall be shown. List tasks according to their relevance to the study.

- (d) Statement of Work - Provide a concise and definitive, proposed Statement of Work for inclusion into any resulting contract, grant, or cooperative agreement (as appropriate). The individual tasks of work must be listed in logical sequence and each must be accompanied by a thorough and concise description of the work to be performed.
- (e) Implementation Plan - Discuss the work to be done (major task areas), the interim and final report submission dates, and the milestone chart which will be incorporated into the contract documents. Identify major milestone events and relate them as appropriate, to specific tasks. Describe the allocation of financial and manpower resources to each task.

Additionally, the plan shall provide for at least semi-annual review on the programmatic, administrative, and financial management status of the project.

5. Organization and Management Plan: In this section, proposers shall provide an organization chart and accompanying narrative which delineates:
- (a) Proposed contractor
  - (b) Principal Investigator - This individual is normally a representative of the proposed contractor, is the single point of management control and is responsible for planning, coordinating, supervising and integrating the study effort. (Offerors proposing different arrangements must explain the rationale for the change.)
  - (c) All participants in the proposed study effort (including subcontractors, consultants, and those for whom no funds are sought).
  - (d) The roles, responsibilities and communication lines of all team members. Describe also the methods to be used for coordinating and integrating the efforts of all participants.
  - (e) Time commitments of all participants and contractual arrangements between the contractor and any subcontractors and/or consultants.
6. Personnel: Identify the Principal Investigator and provide a brief statement on the relevant background of all key personnel (including subcontractors, consultants and those for whom no funds are sought), indicating:
- (a) Prior management and technical experience of the principal investigator and other personnel in related or comparable projects. Resumes, including lists of publications, of the principal investigator and key personnel shall be included to indicate competence and experience in their subject fields. These should be brief and to the point.
  - (b) Satisfactory evidence of the project team's ability to perform the proposed effort successfully.

- (c) Fraction of individual time each person will devote to the project. In addition, all current research support received for related projects and associated commitment of time shall be identified for the principal investigator and key personnel.

This section shall also include resumes of persons who will work on the project but for whom no funds are sought.

If students are to be involved as part of their educational program, identify the amount and nature of the participation.

7. Proposing Organization(s): Describe the proposing entity (or entities), including size, type of business, financial data (including latest financial statement), history, relevant experience, names of those with financial non-participating interests in the proposed projects, if any, and descriptions of any contributions to the project by the proposer, including money, manpower, equipment, technology, patents, etc., including the estimated monetary value and basis for establishment of value of such contributions.
8. Related Programs: Indicate the interest and strength of support of the parent organization (its subcontractors and consultants) and the role of research in its continuing activities. Include a brief description of existing or planned research programs or unique related capabilities of the organization that parallel or lend strength to the proposed study effort.
9. Applications to Other Potential Sponsors: Specify other Federal agencies or private programs to which this proposal or similar application has been or is being made, including results of such applications. If preferred, this information may be provided in a cover letter rather than in the proposal.
10. Pricing Proposal: To be considered for award, offerors must provide cost or pricing data submitted on the enclosed Optional Form 60 (Appendix C). Your attention is specifically directed to the "Instructions to Offerors" and "Footnotes" set forth on Page 3 of the Optional Form 60. Offerors may provide lower levels of cost breakdowns (Optional Form 60) relative to each Task, if they believe this level of clarity is desirable.

- (a) Direct Labor - Set forth the hours by labor category, the rate per hour, and the total and discuss the basis for the rates; i.e., actuals of individuals, category averages, midpoint of effort, etc. Explain any escalation factors used.
- (b) Overhead - This generally encompasses indirect costs which because of their incurrence for common or joint objectives are not readily subject to treatment as direct costs. Provide details of any current Government approval of proposed rates. If Government approval has not been obtained, furnish previous fiscal year burden cost by pool and base for each burden center and cost and base for proposed rates. Offerors should indicate if they operate under the "Negotiated Overhead Rates" system with the Government.
- (c) Direct Materials - Provide unit cost of each item to be used, the basis for the cost, i.e., make, model, size, capacity, vendor quotes, engineering estimates, previous purchase, etc.
- (d) Other Direct Costs - This includes such items as reports and presentations, travel, and computer rental costs. Travel costs must be supported with the detailed information on what the offeror used in arriving at the estimate. Computer rental costs should show type of computer, number of hours, and hourly rates if known. Other items of cost in this category must include similar details.
- (e) Subcontracts - Pursuant to FPR 1-3.814-3, a separate cost breakdown, in a format consistent with the format, shall be furnished on any subcontract which exceeds \$100,000. The type of subcontract and name and address of the proposed subcontractor shall be furnished, if known.
- (f) General and Administrative Expense - Include same type of information requested in b. above. Composite rates should be broken out separately to explain composition and basis.
- (g) Profit/Fee - Provide rationale for proposed amount.

11. Completion of Forms: Representations and Certifications composing Appendix D to this PRDA must be completed by the proposer and submitted as part of the proposal.

C. TREATMENT OF PROPOSAL INFORMATION

1. Proprietary Data and Withholding Certification

- (a) The section solicitation sets forth DOE's known requirements for technical data. There is, however, a built-in limitation on the kind of technical data which may be required. This limitation is found in paragraph (e) of the Rights in Technical Data clause as set forth in 41 CFR 9-9.202-3 which provides that the contractor may withhold delivery of proprietary data.

Accordingly, it is necessary that your proposal state that the work to be performed and the known requirements for technical data as set forth in the solicitation have been reviewed, and either state that to the best of your knowledge, no data will be withheld, or submit a list identifying the proprietary data, in sufficient detail to identify that proposed to be withheld, which to the best of your knowledge will likely be used in the contract performance and will be withheld. Appendix E should be utilized for this purpose.

- (b) Offerors and prospective contractors with applicable statutes and DOE Regulations (41 CFR 9-9.109-6) have the right to request in advance of or within 30 days after the effective date of contracting a waiver of all or any part of the rights of the United States in subject inventions.

2. Technical and Other Data

The following paragraph provides specific information concerning technical and other proposal data which the Offeror may not wish to have generally disclosed:



- a. A proposal may include technical data and other data, including trade secrets and/or privileged or confidential commercial or financial information, which the proposer does not want disclosed to the public or used by the Government for any purpose other than proposal evaluation. To protect such data the proposer should specifically identify each page including each line or paragraph thereof containing the data to be protected and mark the cover sheet of the proposal with the following notice.

#### NOTICE

The data contained in pages \_\_\_\_ of this proposal have been submitted in confidence and contain trade secrets and/or privileged or confidential commercial or financial information, and such data shall be used or disclosed only for evaluation purposes, provided that if a contract is awarded to this proposer as a result of or in connection with the submission of this proposal, the Government shall have the right to use or disclose the data herein to the extent provided in the contract. This restriction does not limit the Government's right to use or disclose data obtained without restriction from any source, including the proposer.

References to the above notice on the cover sheet should be placed on each page to which the notice applies. Data, or abstracts of data, marked with this notice will be retained in confidence and used by DOE or its designated representative(s), including Government contractors and consultants, as set forth in ERDAPR Section 9-3.150.4, solely for the purpose of evaluating the proposal. The data so marked will not otherwise be disclosed or used without proposer's prior written permission except to the extent provided in any resulting contract, or to the extent required by law. Proposers should be aware of the provisions of ERDAPR Section 9-3.105-4 if they desire

to modify the above notice or otherwise seek to limit the evaluation to the Government only. The restriction contained in the notice does not limit the Government's right to use or disclose any data contained in the proposal if it is obtainable from any source, including the proposer, without restriction. Although it is DOE's policy to treat all proposals as confidential, the Government assumes no liability for disclosure or use of unmarked data for any purpose. See FPR 1-3.103(b) regarding disclosure to other offerors.

- b. Should a contract be awarded based on a proposal submitted in response to this request, it is policy, in consideration of the award, to obtain unlimited rights for the Government in the technical data contained in the proposal unless the prospective contractor marks those portions of the technical information which he asserts as "proprietary data", or specified those portions of such technical data which are not directly related to or will not be utilized in the work to be funded under the contract. "Proprietary data" is defined in ERDAPR 9-9.201(b) as technical data which embody a trade secret developed at private expense, such as design procedures or techniques, chemical composition of material, or manufacturing methods, processes, or treatments, including minor modifications thereof, provided that such data: (1) are not generally known or available from other sources without obligation concerning their confidentiality; (2) have not been made available by the owner to others without obligation concerning their confidentiality; and (3) are not already available to the Government without obligation concerning their confidentiality. A proposer who receives a contract award will be required to mark the data identified as proprietary by specifying the appropriate proposal page numbers to be inserted in the Rights to Proposal Data clause specified below, which clause shall be included in the contract. Subject to the concurrence of the Contracting Officer, information unrelated to the contract may be deleted from the proposal by the contractor. The responsibility, however, of identifying technical data as proprietary or deleting it as unrelated rests with the prospective contractor.

This clause is intended to apply only to technical data and not to other data, such as privileged or confidential commercial or financial information.

#### RIGHTS TO PROPOSAL DATA

Except for technical data contained on pages \_\_\_\_\_ of the 'contractors' proposal, dated \_\_\_\_\_, which are asserted by the contractor as being proprietary data, it is agreed that as a condition of the award of this contract, and notwithstanding the provisions of any notice appearing on the proposal, the Government shall have the right to use, duplicate, and disclose and have others do so for any purpose whatsoever, the technical data contained in the proposal upon which this contract is based.

- c. Under the Freedom of Information Act (5 USCA 552), the Government may be required to release your proposal in whole or in part to any requestor as provided in that Act. You are, therefore, cautioned to identify and mark those specific materials in your proposal which you consider to be information or data that is exempt from disclosure under 5 USCA 552.

#### D. PROPOSAL PREPARATION COSTS

This PRDA does not commit the Government to pay any costs incurred in the submission of a proposal or in making necessary studies or designs for the preparations thereof.

#### E. UNNECESSARILY ELABORATE PROPOSALS

Unnecessarily elaborate brochures or other presentations beyond those sufficient to present a complete and effective proposal are not desired and may be construed as an indication of the Offeror's lack of cost consciousness. Elaborate art work, expensive paper and bindings, and expensive visual and other presentation aids are neither necessary nor desired.

F. REGULATIONS

Copies of the Federal Procurement Regulations (Code of Federal Regulations, Title 41, Chapter 1) and the ERDA Procurement Regulations (CFR, Title 41, Chapter 9) may be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, at a price of \$5.70 and \$3.90, respectively.

## SECTION IV - PROPOSAL EVALUATION

Proposals shall be evaluated and selected as provided for in this section. Only the highest quality proposals will be eligible for award and DOE has no commitment to make any particular number of awards or to make awards which aggregate to any particular sum.

A. METHOD

Proposals shall undergo a Preliminary Review and a Comprehensive Review as described below. The Preliminary Review shall be conducted from a technical and business standpoint to determine whether the proposal: (1) contains sufficient cost, technical, management, and other information to permit a meaningful, comprehensive evaluation; (2) has been signed by a responsible official of the proposing organization or a person authorized to obligate such organization; (3) provides a proposed site which could be available for commercial exploitation; (4) contains a letter from facility owners assuring contractor access to study area; (5) is valid for at least 150 days; and (6) clearly addresses the purpose of this PRDA. If the proposal does not meet these requirements, DOE will discontinue evaluation and the offeror will be notified in writing.

Proposals which pass the preliminary review shall undergo a comprehensive review which shall categorize the proposals according to: (1) type of application (single-purpose or multi-purpose applications), and (2) industry sector (industrial processing, and space/water heating and cooling, etc.). This review shall rate proposals according to the established evaluation criteria described below. The review shall be conducted by a Government Evaluation Panel composed of government personnel, and, as necessary, supplemented with technical advisors from DOE laboratories and/or DOE consultants. The panel will make recommendations to the Assistant Manager for Programs, DOE, San Francisco Operations Office, who is the Selection Official. The consent statement appearing on the proposal cover-sheet (Appendix B) must be completed to allow other-than-Government review of the proposal.

B. EVALUATION CRITERIA

The criteria described below shall be used as the primary basis for rating proposals. Offerors must address all of the criteria using the proposal format described in Section III. The alpha numeric designations following each criterion refer to the section of this PRDA which provide guidance to Offerors.

1. Quality of the technical plan, including discussion of study objectives, background, study plan for producing the information required as the final product of the effort, statement of work and implementation plan. (Section III-B-4)
2. Adequacy of the proposed organizational structure and project management plan, including provisions for financial control. (III-B-5)
3. The capabilities, related experience and facilities which the proposer offers and which are considered to be integral factors for achieving the objectives of the proposal, including the qualifications, capabilities and experience of the project manager and other key personnel. (III-B-6)

Criteria 1 is approximately three times the weighted value of Criteria 2 and 3 each, which are approximately equal.

It is important for proposers to note that selection for negotiations will be made entirely on the basis of the proposals submitted. Proposers should, therefore, specifically address the factors mentioned in the Evaluation Criteria and not depend on the reviewer's background knowledge of the proposer's expertise or prior geothermal energy work.

#### C. PROGRAM POLICY FACTORS

In conjunction with the evaluation results and rankings of individual proposals, the Government will select proposals for negotiations and planned awards in order to optimize the mix of supported applications in each of the Federal geothermal regions, Pacific, Intermountain and Eastern. The selection process will also be influenced by DOE's budgetary restrictions for this PRDA as well as its programmatic objectives. To this end, the Source Selection Official will consider the following programmatic factors to determine which of the ranked proposals shall be selected for contract negotiation:

1. Maximizing the prospects and/or commitments for a large number of follow-on geothermal direct use applications by the private sector;
2. Maximizing the number of studies which offer the greatest potential savings of nonrenewable energy sources;

3. Estimated cost of the study to the Government;
4. Maximizing the number of high ranked proposals selected consistent with the program objective of enhancing the near-term, widespread development of direct use applications of geothermal energy both geographically and by type of application. Appendix F contains a summary of the work previously supported by DOE's Geothermal Direct Use Program by site and application.
5. Maximizing Small/Minority Business participation when proposals are considered equal in all other respects.
6. Maximizing the number of studies which offers a new or expanded use of geothermal energy.

## REPORTING REQUIREMENTS SUMMARY

All projects supported by awards resulting from this PRDA will be made part of the DOE Geothermal Energy Program, and analyzed along with the other research efforts supported by the DOE Division of Geothermal Energy. This project will require Contractor preparation of the following reports (for which cost and schedule allowance should be made in the proposal):

1. Contract Management Summary Report - a single-page graphic representation of integrated cost, major milestones, and manpower for rapid visual analysis and trend forecasting.
2. Technical Status Report - a narrative assessment of progress toward achieving the objectives and requirements of the contract, used by DOE management to monitor contract status and provide early recognition of potential problem areas.
3. Cost Management Report (Short Form) - a single-page periodic report of cost status versus cost plan for an ongoing contract.
4. Technical Progress Report - a formal, structured technical report, submitted quarterly to communicate project results for dissemination to Government agencies, the scientific, technical and industrial communities, and the public. The Technical Progress Report for the final reporting period of the contract is replaced by the final Technical Report.
5. Final Technical Report - at the conclusion of the study effort a final technical report shall be prepared and shall include:
  - a) an examination of the technical feasibility of adopting geothermal energy for the proposed direct use application;
  - b) an assessment of the economic viability of using geothermal energy as an alternate energy source for the selected application area; and
  - c) a discussion of the relevant social, environmental, and legal relationships; as well as changes resulting from the review process.

In addition, a draft final report shall be submitted to the DOE project manager sixty days prior to the conclusion of the contract for review and comment. Once the comments are received, the Contractor may prepare the final report.

Formats for these reports will be provided upon award. Quantities and distribution of reports shall be in accordance with the accompanying Report Distribution List.





CONTRACT NO.

PRDA- Engineering and Economic  
Studies in Direct Applications  
Program

- Management Plan
- Milestone Plan and Management R
- Cost Plan
- Manpower Plan
- Contract Management Summary Rep
- Major Milestone Status Plot
- Technical Status Report
- Cost Management Status Report
- Manpower Management Report
- Funds Reconciliation Report
- Conference Reconciliation Report
- Hot Line Record
- PMS (Earned Value)
- Energy Report
- Technical Report
- Topical Progress - In Progress
- Final Report
- Travel Report
- Others
- Draft Final Report

Addressees:

No. of Report Copies

Instruction

DOE/SAN  
1333 Broadway  
Oakland, CA 94612

DOE/DGE  
Washington, D. C. 20545

- A. DOE/SAN  
Geothermal Energy Division
- B. Program Manager, DOE/DGE
- C. Finance Division, DOE/SAN
- D. Plans & Budget Division,  
DOE/SAN
- E. Office of Patent Counsel  
DOE/SAN
- F. Procurement Division,  
DOE/SAN

Addressees:	No. of Report Copies										Instruction	
DOE/SAN 1333 Broadway Oakland, CA 94612												
DOE/DGE Washington, D. C. 20545												
A. DOE/SAN Geothermal Energy Division	4	4			1	1		10	20		5	
B. Program Manager, DOE/DGE	2	2						5	10			
C. Finance Division, DOE/SAN	1		1									
D. Plans & Budget Division, DOE/SAN	1											
E. Office of Patent Counsel DOE/SAN								1	1			
F. Procurement Division, DOE/SAN						1			1			

(APPENDIX B)

(SAMPLE DOE PROPOSAL COVER SHEET)

Research Proposal Submitted to the Department of Energy  
in Response to PRDA 03-79-ET-27004

DIVISION OF GEOTHERMAL ENERGY  
PROGRAM RESEARCH AND DEVELOPMENT ANNOUNCEMENT

Direct Utilization of Geothermal Energy

\_\_\_\_\_  
Name of Organization (including branch, title, if any, and congressional dist.)

\_\_\_\_\_  
Organizational Classification(s)

\_\_\_\_\_  
Address of Organization

\_\_\_\_\_  
Title of Proposed Project

Amount requested \_\_\_\_\_ Proposed Duration \_\_\_\_\_ Requested Starting Date \_\_\_\_\_

Name of Principal Investigator \_\_\_\_\_

Position and Title \_\_\_\_\_

Address and Zip Code \_\_\_\_\_

Telephone (w/area code) \_\_\_\_\_

Signature \_\_\_\_\_

<u>Endorsements</u>	Name	Title	Date	Signature
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Department Head (Educational Institutional only	_____	_____	_____	_____
---	-------	-------	-------	-------

Official Authorized to Obligate Proposer	_____	_____	_____	_____
---	-------	-------	-------	-------

Official Authorized to Negotiate for the Proposer	_____	_____	_____	_____
---	-------	-------	-------	-------

Application Type \_\_\_\_\_

Proposal Submission Date \_\_\_\_\_ Proposal Expiration Date \_\_\_\_\_

Consent Statement

For PRDA evaluation purposes only, consent is given for other-than-government review of the proposal.

Consent is not given for other-than-government review of the proposal.

**CONTRACT PRICING PROPOSAL**  
*(RESEARCH AND DEVELOPMENT)* **APPENDIX C**

Office of Management and Budget  
Approval No. 29-RO184

This form is for use when (i) submission of cost or pricing data (see FPR 1-3.807-3) is required and (ii) substitution for the Optional Form 59 is authorized by the contracting officer.

PAGE NO.

NO. OF PAGES

NAME OF OFFEROR	SUPPLIES AND/OR SERVICES TO BE FURNISHED	
HOME OFFICE ADDRESS		
DIVISION(S) AND LOCATION(S) WHERE WORK IS TO BE PERFORMED	TOTAL AMOUNT OF PROPOSAL \$	GOV'T SOLICITATION NO.

**DETAIL DESCRIPTION OF COST ELEMENTS**

1. DIRECT MATERIAL <i>(Itemize on Exhibit A)</i>	EST COST (\$)	TOTAL EST COST <sup>1</sup>	REFER-ENCE <sup>2</sup>
<i>a. PURCHASED PARTS</i>			
<i>b. SUBCONTRACTED ITEMS</i>			
<i>c. OTHER—(1) RAW MATERIAL</i>			
<i>(2) YOUR STANDARD COMMERCIAL ITEMS</i>			
<i>(3) INTERDIVISIONAL TRANSFERS (At other than cost)</i>			
<i>TOTAL DIRECT MATERIAL</i>			
2. MATERIAL OVERHEAD <sup>1</sup> <i>(Rate %X\$ base=)</i>			
3. DIRECT LABOR <i>(Specify)</i>	ESTIMATED HOURS	RATE/HOUR	EST COST (\$)
<i>TOTAL DIRECT LABOR</i>			
4. LABOR OVERHEAD <i>(Specify Department or Cost Center)<sup>3</sup></i>	O.H. RATE	X BASE =	EST COST (\$)
<i>TOTAL LABOR OVERHEAD</i>			
5. SPECIAL TESTING <i>(Including field work at Government installations)</i>	EST COST (\$)		
<i>TOTAL SPECIAL TESTING</i>			
6. SPECIAL EQUIPMENT <i>(If direct charge) (Itemize on Exhibit A)</i>	EST COST (\$)		
7. TRAVEL <i>(If direct charge) (Give details on attached Schedule)</i>	EST COST (\$)		
<i>a. TRANSPORTATION</i>			
<i>b. PER DIEM OR SUBSISTENCE</i>			
<i>TOTAL TRAVEL</i>			
8. CONSULTANTS <i>(Identify—purpose—rate)</i>	EST COST (\$)		
<i>TOTAL CONSULTANTS</i>			
9. OTHER DIRECT COSTS <i>(Itemize on Exhibit A)</i>	EST COST (\$)		
10. <i>TOTAL DIRECT COST AND OVERHEAD</i>			
11. GENERAL AND ADMINISTRATIVE EXPENSE <i>(Rate % of cost element Nos. )<sup>1</sup></i>			
ROYALTIES <sup>4</sup>			
<i>TOTAL ESTIMATED COST</i>			
14. FEE OR PROFIT			
15. <i>TOTAL ESTIMATED COST AND FEE OR PROFIT</i>			



## INSTRUCTIONS TO OFFERORS

1. The purpose of this form is to provide a standard format by which the offeror submits to the Government a summary of incurred and estimated costs (and attached supporting information) suitable for detailed review and analysis. Prior to the award of a contract resulting from this proposal the offeror shall, under the conditions stated in FPR 1-3.807-3 be required to submit a Certificate of Current Cost or Pricing Data (See FPR 1-3.807-3(h) and 1-3.807-4).

2. In addition to the specific information required by this form, the offeror is expected, in good faith, to incorporate in and submit with this form any additional data, supporting schedules, or substantiation which are reasonably required for the conduct of an appropriate review and analysis in the light of the specific facts of this procurement. For effective negotiations, it is essential that there be a clear understanding of:

- a. The existing, verifiable data.
- b. The judgmental factors applied in projecting from known data to the estimate, and
- c. The contingencies used by the offeror in his proposed price.

In short, the offeror's estimating process itself needs to be disclosed.

3. When attachment of supporting cost or pricing data to this form is impracticable, the data will be described (with schedules as appropriate), and made available to the contracting officer or his representative upon request.

4. The formats for the "Cost Elements" and the "Proposed Contract Estimate" are not intended as rigid requirements. These may be presented in different format with the prior approval of the Contracting Officer if required for more effective and efficient presentation. In all other respects this form will be completed and submitted without change.

5. By submission of this proposal the offeror grants to the Contracting Officer, or his authorized representative, the right to examine, for the purpose of verifying the cost or pricing data submitted, those books, records, documents and other supporting data which will permit adequate evaluation of such cost or pricing data, along with the computations and projections used therein. This right may be exercised in connection with any negotiations prior to contract award.

## FOOTNOTES

1 Enter in this column those necessary and reasonable costs which in the judgment of the offeror will properly be incurred in the efficient performance of the contract. When any of the costs in this column have already been incurred (e.g., on a letter contract or change order), describe them on an attached supporting schedule. Identify all sales and transfers between your plants, divisions, or organizations under a common control, which are included at other than the lower of cost to the original transferee or current market price.

2 When space in addition to that available in Exhibit A is required, attach separate pages as necessary and identify in this "Reference" column the attachment in which the information supporting the specific cost element may be found. No standard format is prescribed; however, the cost or pricing data must be accurate, complete and current, and the judgment factors used in projecting from the data to the estimates must be stated in sufficient detail to enable the Contracting Officer to evaluate the proposal. For example, provide the basis used for pricing materials such as by vendor quotations, shop estimates, or invoice prices; the reason for use of overhead rates which depart significantly from experienced rates (reduced volume, a planned major re-arrangement, etc.); or justification for an increase in labor rates (anticipated wage and salary increases, etc.). Identify and explain any contingencies which are included in the proposed price, such as anticipated costs of rejects and defective work, or anticipated technical difficulties.

3 Indicate the rates used and provide an appropriate explanation. Where agreement has been reached with Government representatives on the use of forward pricing rates, describe the nature of the agreement. Provide the method of computation and application of your overhead expense, including cost breakdown and showing trends and budgetary data as necessary to provide a basis for evaluation of the reasonableness of proposed rates.

4 If the total cost entered here is in excess of \$250, provide on a separate page the following information on each separate item of royalty or license fee: name and address of licensor; date of license agreement; patent numbers, patent application serial numbers, or other basis on which the royalty is payable; brief description, including any part or model numbers of each contract item or component on which the royalty is payable; percentage or dollar rate of royalty per unit; unit price of contract item; number of units; and total dollar amount of royalties. In addition, if specifically requested by the contracting officer, a copy of the current license agreement and identification of applicable claims of specific patents shall be provided.

5 Provide a list of principal items within each category indicating known or anticipated source, quantity, unit price, competition obtained, and basis of establishing source and reasonableness of cost.

CONTINUATION OF EXHIBIT A—SUPPORTING SCHEDULE AND REPLIES TO QUESTIONS II AND V.



REPRESENTATIONS AND CERTIFICATIONS      **APPENDIX D**

Contract No.	Supplemental Agreement No.	Synopsis No.	Request For Proposal No.
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Instructions: Check or complete all appropriate boxes or blanks.

The proposer makes the following representations and certifications:

1. SMALL BUSINESS

He ( ) is, ( ) is not, a small business concern. (For this purpose, a small business concern is a business concern, including its affiliates, which (a) is independently owned and operated, (b) is not dominant in the field of operation in which it is bidding on Government contracts, and (c) can further qualify under the criteria concerning number of employees, average annual receipts, or other criteria as prescribed by the Small Business Administration. For additional information see governing regulations of the Small Business Administration (13 CFR Part 121).)

2. PUBLIC OR PRIVATE ORGANIZATIONS FOR THE HANDICAPPED OR HANDICAPPED INDIVIDUALS

(Execute if a small business set-aside is involved and the offeror deems himself to be eligible.)

He is ( ) a public or private organization for the handicapped or a handicapped individual, as provided in the Small Business Act, as amended, and the regulations of the Small Business Administration.

The term "public or private organization" is one "\* \* \* (i) which is organized under the laws of the United States or of any State, operated in the interest of handicapped individuals, the net income of which does not inure in whole or in part to the benefit of any shareholder or other individual; (ii) which complies with any applicable occupational health and safety standard prescribed by the Secretary of Labor; and (iii) which, in the production of commodities and in the provision of services during any fiscal year in which it receives financial assistance under this subsection, employs handicapped individuals for not less than 75 per centum of the man-hours required for the production or provision of the commodities or services\* \* \*" (15 U.S.C. 636h(1)(A)).



The term "handicapped individual" means a " \* \* \* person who has a physical, mental, or emotional impairment, defect, ailment, disease, or disability of a permanent nature which in any way limits the selection of any type of employment for which the person would otherwise be qualified or qualifiable \* \* \*" (13 CFR 118.2(f)).

3. CONTINGENT FEE

(a) He ( ) has, ( ) has not, employed or retained any company or person (other than a full-time bona fide employee working solely for the bidder) to solicit or secure this contract, and (b) he ( ) has, ( ) has not, paid or agreed to pay any company or person (other than a full-time bona fide employee working solely for the bidder) any fee, commission, percentage or brokerage fee, contingent upon or resulting from the award of this contract; and agrees to furnish information relating to (a) and (b) above as requested by the Contracting Officer. (For interpretation of the representation, including the term "bona fide employee," see Code of Federal Regulations, Title 41, Subpart 1-1.5.)

4. TYPE OF ORGANIZATION

He operates as an ( ) individual, ( ) partnership, ( ) joint venture, ( ) corporation, incorporated in the State of \_\_\_\_\_.

5. EQUAL OPPORTUNITY

He ( ) has, ( ) has not, participated in a previous contract or subcontract subject to the Equal Opportunity Clause herein, the clause originally contained in Section 301 of Executive Order No. 10925, or the clause contained in Section 201 of Executive Order No. 11114; he ( ) has, ( ) has not, filed all required compliance reports; and representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained prior to subcontract awards.

## 6. AFFIRMATIVE ACTION COMPLIANCE PROGRAM

The offeror represents that (a) he ( ) has developed and has on file, ( ) has not developed and does not have on file, at each establishment an affirmative action program as required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or (b) he ( ) has not previously had contracts subject to written affirmative action program requirements of the rules and regulations of the Secretary of Labor because (check as applicable):

\_\_\_\_\_ offeror does not have 50 or more employees

\_\_\_\_\_ offeror has not had a Government prime contract or subcontract of \$50,000 or more, or

\_\_\_\_\_ offeror is exempt under 41 CFR 60-1 (list exemption)  
\_\_\_\_\_.

## 7. EQUAL OPPORTUNITY COMPLIANCE

[Applicable to proposals exceeding \$1,000,000]

The offeror represents --

- a. That a full compliance review of the offeror's employment practices ( ) has, ( ) has not, been conducted by an agency of the Federal Government.
- b. If a full compliance review has been conducted by an agency of the Federal Government, the most recent compliance review was conducted on \_\_\_\_\_ by \_\_\_\_\_.  
(Date) (Federal Agency)
- c. The proposed first-tier subcontractors which will be awarded subcontracts of \$1,000,000 or more are \_\_\_\_\_.

Any offeror and his known first-tier subcontractors which will be awarded subcontracts of \$1,000,000 or more will be subject to full, preaward equal opportunity compliance reviews before the award of the contract for the purpose of determining whether the proposer and his subcontractors are able to comply with the provisions of the equal opportunity article.

## 8. CERTIFICATION OF NONSEGREGATED FACILITIES

By the submission of this proposal, the offeror, applicant, or subcontractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The offeror, applicant, or subcontractor agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. He further agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause; that he will retain such certifications in his files; and that he will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

### NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR CERTIFICATION OF NONSEGREGATED FACILITIES

A Certification of Nonsegregated Facilities must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semi-annually, or annually).

## 9. PARENT COMPANY AND EMPLOYER IDENTIFICATION NUMBER

Each proposer shall furnish the following information by filling in the appropriate blocks.

- a. Is the proposer owned or controlled by a parent company as described below? ( ) Yes ( ) No. (For the purpose of this proposal, a parent company is defined as one which either owns or controls the activities and basic business policies of the proposer. To own another company means the parent company must own at least a majority (more than 50 percent) of the voting rights in that company. To control another company, such ownership is not required; if another company is able to formulate, determine or veto basic business policy decisions of the proposer, such other company is considered the parent company of the proposer. This control may be exercised through the use of dominant minority voting rights, use of proxy voting, contractual arrangements, or otherwise.)
- b. If the answer to a. above is "Yes", proposer shall insert in the space below the name and main office address of the parent company.

Name of Parent Company

Main Office Address (No., Street, City, State, and Zip Code)

- c. Proposer shall insert in the applicable space below, if he has no parent company, his own Employer's Identification Number (E.I. No.) (Federal Social Security Number used on Employer's Quarterly Federal Tax Return, U. S. Treasury Department Form 941), or if he has a parent company, the E.I. No. of his parent company.

Employer Identification Number or that of Parent Company: \_\_\_\_\_

10. COST ACCOUNTING STANDARDS CERTIFICATION - NONDEFENSE  
APPLICABILITY

Any negotiated contract in excess of \$100,000 resulting from this solicitation shall be subject to the requirements of the clauses entitled Cost Accounting Standards - Nondefense Contract (FPR sec. 1-3.1204-2(a)) and Administration of Cost Accounting Standards (FPR sec. 1-3.1204-1(b)) if it is awarded to a contractor's business unit that is performing a national defense contract or subcontract which is subject to cost accounting standards pursuant to 4 CFR 331 at the time of award, except contracts which are otherwise exempt (see FPR sec. 1-3.1203-2(a) and (c)(4)). Otherwise, an award resulting from this solicitation shall be subject to the requirements of the clauses entitled Consistency of Cost Accounting Practices - Nondefense Contract (FPR sec. 1-3.1204-2(b)) and Administration of Cost Accounting Standards (FPR sec. 1-3.1204-1(b)) if the award is (i) the first negotiated contract over \$500,000 in the event the award is to a contractor's business unit that is not performing under any CAS covered national defense or nondefense contract or subcontract, or (ii) a negotiated contract over \$100,000 in the event the award is to a contractor's business unit that is performing under any CAS covered national defense or nondefense contract or subcontract, except contracts which are otherwise exempt (see FPR sec. 1-3.1203-2(a) and (c)(4)). This solicitation notice is not applicable to small business concerns.

Certificate of CAS Applicability

The offeror hereby certifies that:

- a.  It is currently performing a negotiated national defense contract or subcontract that contains a Cost Accounting Standards Clause (4 CFR 331), and it is currently required to accept that clause in any new negotiated national defense contracts it receives that are subject to cost accounting standards.
- b.  It is currently performing a negotiated national defense or nondefense contract or subcontract that contains a cost accounting standards clause required by 4 CFR 331 or 332 or by FPR Subpart 1-3.12, but

it is not required to accept the 4 CFR 331 clause in new negotiated national defense contracts or subcontracts which it receives that are subject to cost accounting standards.

- c.  It is not performing any CAS covered national defense or nondefense contract or subcontract. The offeror further certifies that it will immediately notify the Contracting Officer in writing in the event that it is awarded any negotiated national defense or nondefense contract or subcontract containing any cost accounting standards clause subsequent to the date of this certificate but prior to the date of the award of a contract resulting from this solicitation.
- d.  It is an educational institution receiving contract awards subject to FPR Subpart 1-15.3 (FMC 73-8, OMB Circular A-21).
- e.  It is a State or local government receiving contract awards subject to FPR Subpart 1-15.7 (FMC 74-4, OMB Circular A-87).
- f.  It is a hospital.

Note: Certain firm fixed price negotiated nondefense contracts awarded on the basis of price competition may be determined by the Contracting Officer (at the time of award) to be exempt from cost accounting standards (FPR sec. 1-3.1203-2(c)(4)(iv)).

Additional Certification - CAS Applicable Offerors

- g.  The offeror, subject to cost accounting standards but not certifying under d, e, or f above, further certifies that practices used in estimating costs in pricing this proposal are consistent with the practices disclosed in the Disclosure Statement(s) where they have been submitted pursuant to CASB regulations (4 CFR 351).

## DATA REQUIRED - CAS COVERED OFFERORS

The Offeror certifying under a or b above but not under d, e, or f above, is required to furnish the name, address (including agency or department component), and telephone number of the cognizant Contracting Officer administering the offeror's CAS covered contracts. If a above is checked, the offeror will also identify those currently effective cost accounting standards, if any, which upon award of the next negotiated national defense contract or subcontract will become effective upon the offeror.

Name of CO: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Standards not yet applicable: \_\_\_\_\_

Cost Accounting Standards Eligibility for Modified Coverage -  
Consistency of Cost Accounting Practices - Nondefense Contract

- h.  The offeror hereby certifies that an award resulting from this solicitation is (i) the first negotiated contract over \$500,000 in the event the award is to a contractor's business unit that is not performing under any CAS covered national defense or nondefense contract or subcontract or (ii) a negotiated contract over \$100,000 in the event the award is to a contractor's business unit that is performing under any CAS covered national defense or nondefense contract or subcontract and elects to be subject to the clause entitled "Consistency of Cost Accounting Practices - Nondefense Contract".

11. COST ACCOUNTING STANDARDS - EXEMPTION FOR CONTRACTS OF \$500,000 OR LESS

If this proposal is expected to result in the award of a contract of \$500,000 or less, the offeror shall indicate whether the exemption to the Cost Accounting Standards clause under the provisions of 4 CFR 331.30(b)(8) is claimed. Failure to check the box below shall mean that the resultant contract is subject to the Cost Accounting Standards clause or that the offeror elects to comply with such clause.

The offeror hereby claims an exemption from the Cost Accounting Standards clause under the provisions of 4 CFR 331.30(b)(8) and certifies that he has received notification of final acceptance of all deliverable items on (i) all prime contracts or subcontracts in excess of \$500,000 which contain the Cost Accounting Standards clause, and (ii) any prime contracts or subcontracts of \$500,000 or less awarded after January 1, 1975, which contain the Cost Accounting Standards clause. The offeror further certifies he will immediately notify the Contracting Officer in writing in the event he is awarded any other contract or subcontract containing the Cost Accounting Standards clause subsequent to the date of this certificate but prior to the date of any award resulting from this proposal.

12. MINORITY BUSINESS ENTERPRISE

The offeror represents that he ( ) is, ( ) is not, a minority business enterprise. A minority business enterprise is defined as a "business, at least 50 percent of which is owned by minority group members or, in case of publicly owned businesses, at least 51 percent of the stock of which is owned by minority group members." For the purpose of this definition, minority group members are Negroes, Spanish-speaking American persons, American-Orientals, American-Eskimos, and American Aleuts.

13. INSURANCE ON GOVERNMENT PROPERTY (Applicable to Fixed Price Proposal(s))

The Offeror represents that the quoted price ( ) does, ( ) does not, include a charge or reserve for insurance (including self-insurance) covering damage to Government property (a) caused by any peril while the property is in transit off the Contractor's premises, or (b) caused by any of the excepted perils enumerated in the terms and conditions attached to this Request for Proposal.

14. CERTIFICATE OF INDEPENDENT PRICE DETERMINATION

- a. By submission of this proposal, each offeror certifies, and in the case of a joint proposal each party thereto certifies as to its own organization, that in connection with this procurement:



- (1) The prices in the proposal have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other offeror or with any competitor;
- (2) Unless otherwise required by law, the prices which have been quoted in this proposal have not been knowingly disclosed by the offeror and will not knowingly be disclosed by the offeror prior to award directly or indirectly to any other offeror or to any competitor; and
- (3) No attempt has been made or will be made by the offeror to induce any other person or firm to submit or not to submit a proposal for the purpose of restricting competition.

b. Each person signing this proposal certifies that:

- (1) He is the person in the offeror's organization responsible within the organization for the decision as to the prices being offered herein and that he has not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above; or
- (2) (i) He is not the person in the offeror's organization responsible within that organization for the decision as to the prices being offered herein but that he has been authorized in writing to act as agent for the persons responsible for such decision in certifying that such persons have not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above, and as their agent does hereby so certify; and (ii) he has not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above.

c. This certification is not applicable to a foreign offeror submitting a proposal for a contract which requires performance or delivery outside the United States, its possessions, and Puerto Rico.

- d. A proposal will not be considered for award where (a)(1), (a)(3), or (b) above has been deleted or modified. Where (a)(2) above has been deleted or modified, the proposal will not be considered for award unless the offeror furnishes with the proposal a signed statement which sets forth in detail the circumstances of the disclosure and the head of the agency, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

15. BUY AMERICAN CERTIFICATE

The offeror hereby certifies that each end product, except the end products listed below is a domestic source end product (as defined in the clause entitled "Buy American Act"); and that components of unknown origin have been considered to have been mined, produced, or manufactured outside the United States.

Excluded End Products	Country of Origin
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16. CLEAN AIR AND WATER CLAUSE

(Applicable if the bid or offer exceeds \$100,000, or the Contracting Officer has determined that orders under an indefinite quantity contract in any year will exceed \$100,000, or a facility to be used has been the subject of a conviction under the Clean Air Act (42 U.S.C. 1857c-8(c)(1)) or the Federal Water Pollution Control Act (33 U.S.C. 1319(c)) and is listed by EPA, or is not otherwise exempt.)

The bidder or offeror certifies as follows:

(a) Any facility to be utilized in the performance of this proposed contract has [ ], has not [ ], been listed on the Environmental Protection Agency List of violating facilities.

(b) He will promptly notify the Contracting Officer, prior to award of the receipt of any communication from the Director, Office of Federal Activities, U.S. Environmental Protection Agency, indicating that any facility which he proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities.

(c) He will include substantially this certification, including this paragraph (c), in every nonexempt subcontract.



APPENDIX E  
PROPRIETARY DATA CERTIFICATION

Subject: PRDA ET-03-79-ET-27004

\_\_\_\_\_ hereby states that

The work to be performed and the known requirements for technical data as set forth in the solicitation has been reviewed and

choose  To the best of my knowledge, none of such technical data  
one will be withheld pursuant to paragraph (e) of the Rights  
in Technical Data clause.

The attached list of Technical Data will be withheld pursuant  
to paragraph (e) of the Rights in Technical Data clause.

By \_\_\_\_\_  
Signature of Authorized Individual

\_\_\_\_\_  
Typed Name

Title \_\_\_\_\_

Date \_\_\_\_\_

APPENDIX F

PROJECTS PREVIOUSLY FUNDED BY DOE  
PON EG-77-N-03-1553

(Demonstrations)

<u>Project Location</u>	<u>Primary Application</u>
Ontario, Oregon	Industrial Processing
Klamath Falls, Oregon	District Heating
Marlin, Texas	Space/Water Heating
Monroe City, Utah	District Heating
Rapid City, South Dakota	{Space/Water heating {Grain Drying
Box Elder, South Dakota	Space Heating
Haakon, South Dakota	Space Heating
Pierre, South Dakota	Space Heating

(Studies)

PRDA DGE/SAN EG-77-D-03-1487

Susanville, California	District Heating
El Centro, California	District heating
Puna District, Hawaii	Industrial Processing
San Luis, Colorado	Space/Water Heating and Cooling
Edgemont, South Dakota	Space Heating
Mountain Home, Idaho	Agribusiness

<u>Project Location</u>	<u>Primary Application</u>
Alaska	Aquaculture
San Luis Valley, Colorado	Sugar Beet and Barley Processing
Western U.S.	Industrial Processing
New Orleans, Louisiana	Food Processing
Western U.S.	Crop/Food Drying
Oregon-Idaho	Food Processing
Alaska	Space Heating
South Dakota	Space/Water Heating
Brawley, California	Sugar Refining
Mammoth Lakes, California	Space Heating
Lassen County, California	Livestock Production
El Centro, California	Fertilizer Production
Lake County, California	Agribusiness
Desert Hot Springs, California	Space Conditioning
Lake County, California	Food Production and Processing
Western U.S.	Absorption Refrigeration
Western U.S.	Evaporation and Crystallization