

U.S. DEPARTMENT OF ENERGY
memorandum

DATE: April 18, 1979

REPLY TO
ATTN OF:

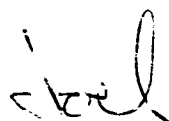
SUBJECT: Revisions to the 10 MWe Central Receiver Pilot Plant Project Charter

TO: Distribution

Attached is a copy of the subject document containing certain revisions to assure consistency between this document and the approved Project Plan and Project Management Plan. These revisions are identified by the note Rev. 4/18/79 located in the margin next to the underlined modified item.

Please replace your file copy with this latest revised issue.

Thank you.



Joel P. Zingesser
Project Officer
10 MWe Pilot Plant
Division of Central Solar Technology

Attachment

Distribution

D. Campbell, ETS ✓
B. Thomas, ETS
G. Kaplan, CST
G. Braun, CST
H. Coleman, CST
M. Adams, ETS
B. Miller, ETS
R. Cochran, ETO
D. Kerr, ET
J. Deutch, ET

DOE FILE COPY

PROJECT CHARTER 10 MWe SOLAR THERMAL CENTRAL RECEIVER PILOT PLANT

I. Authorizing Documentation

Under Public Law 94-187, Title 1 - Authorization of Appropriations for Fiscal Year 1976, the 10 MWe Solar Thermal Central Receiver Pilot Plant was designated a line item construction project number 76-2-b. Authorizations of \$5.0 million and \$1.25 million were given by Congress in FY'76 and the Transition Quarter respectively. In FY'77 an appropriation of \$2.5 million was received. The Authorization of \$41.0 million was given in FY'78 and \$28.0 million in FY 79.

II. Purpose of the Project

The Department of Energy (DOE), through its Division of Central Solar Technology (CST), is engaged in an effort to develop and demonstrate the technology for the practical and economic conversion of sunlight into electricity. The objective of the Solar Power System Program is to establish the technical readiness of cost competitive solar thermal power systems for both dispersed and bulk energy production applications.

For bulk energy production, DOE has selected the central receiver configuration for early large scale research, development, and demonstration. A central receiver solar thermal power plant incorporates a number of subsystems. The collector subsystem is a field of mirrors (heliostats), which are controlled in such a way as to continuously redirect incident sunlight to a common focus. The receiver subsystem includes a tower-mounted absorber located in the focal zone, in which the concentrated solar radiation is converted into thermal energy for transfer into a working fluid (water steam). In the turbine-generator subsystem, the working fluid is used to drive a turbine-generator set for production of electricity. Alternatively, the collected energy may be held as sensible heat in the thermal storage subsystem, and subsequently extracted to operate the turbine-generator when the incoming solar energy is insufficient to meet the demand load. The collector, receiver, storage, and turbine-generator are operated by a master control system, which provides optimum matching of solar input to demand and minimizes the adverse effects of internal and external transients.

The Project will be the first integration of hardware and software into a functional power generation plant whose performance and reliability may be assessed in a utility operational context. Following final design, construction integration, and checkout, the Plant is to be operated for a period of at least five years

to exercise all of the potential operating modes and to obtain essential data on system, subsystem, and component lifetimes, reliability factors, and operating and maintenance requirements. The operational test and evaluation period will also provide an opportunity for demonstration and transfer of central receiver solar thermal power generation technology to other utilities, public and private agencies, and to the public at large.

III. Project Objectives and Goals

A. Programmatic Objectives

1. To establish the technical feasibility of a solar thermal power plant of the central receiver type, including collection of data for retrofit applications of solar boilers to existing power plants fueled by oil or natural gas.
2. To obtain sufficient development, production, and operating data to indicate the potential economic operation of commercial power plants of similar designs, including retrofit applications on a comparable scale.
3. To determine the environmental impact of solar thermal central receiver plants.
4. To gather operational data that can be analyzed to determine system stability and safety characteristics.
5. To develop both utility and commercial acceptance of solar thermal central receiver systems.
6. To stimulate industry to develop and manufacture solar energy systems.
7. To enhance public acceptance and familiarity with solar energy systems.

To achieve these objectives, extensive collection of cost and technical data is planned. A chart of accounts consistent with FERC requirements for utilities has been established to collect construction costs. Production, operation and maintenance, environmental and life cycle costs will also be collected. These data will be used by electric utilities and industrial firms in determining their participation in the commercialization of this promising technology.

It is not anticipated that this Plant will be economically competitive with present power generation systems on either a capital or energy cost basis, nor is it anticipated that the system will be optimized for performance at the 10 MWe level.

This Plant is considered to be the first step towards development of commercial plants that will produce power economically competitive with other types of intermediate capacity power plants.

B. Related R&D

The Conceptual design studies and Subsystem Research Experiments recently completed by DOE have a total cost of about \$20M. No additional R&D is anticipated as a prerequisite to construction. Significant outputs of concurrent R&D and testing efforts, particularly those from the Central Receiver-Solar Thermal Test Facility (CR-STTF), will assist in verification of the detailed design phase. This information will be coordinated by the Large Power Systems Section of the Solar Thermal Power Systems Branch and the Headquarters Program Manager (Project Officer) to assure proper and timely input of any pertinent data to the project.

C. Technical Objectives

The Plant is intended to bridge the gap between the Subsystem Research Experiments (SRE's) conducted with models/modules of subsystem components by the DOE conceptual design contractors and fully functional plants of demonstration (25-100 MWe) or commercial (100-300 MWe) scale which are planned for the mid-to-late 1980's. The Plant itself will be representative of such a larger plant or a module thereof. It will be designed and operated in such a way as to provide information on the behavior of larger solar power plants in an electric utility network.

Water-steam has been selected as the working fluid for the Plant because of the vast utility and industrial experience with this technology. Performance objectives are as follows:

1. The Plant is sized to deliver 10 MWe net to the utility grid for a minimum of 4 hours on winter solstice and at least 8 hours on summer solstice.
2. The Plant is required to deliver 28 megawatt hours at a maximum of 7 MWe net 60-Hertz busbar power when operating solely from the thermal storage subsystem, and to be capable of simultaneous operation, at intermediate power levels, from sunlight augmented by storage.

D. Schedule Objectives

1. Relationship with DOE's Program Schedule:

- a. DOE's Central Receiver Program Schedule is shown in Figure 1.
- b. This Project Charter covers the first 10 MWe Pilot Plant.
- c. DOE has constructed, as part of the Solar Thermal Power Systems a 5 MWt Solar Thermal Test Facility (CR-STTF) located at Sandia Laboratories, Albuquerque, New Mexico. The test facility allows for testing of receiver concepts, characterization of materials and processing studies. The facility operated at an interim 1 MW thermal level in May 1977 and the full 5 MWt capacity will be applied to experimental receivers in March 1979. This facility will be utilized to test components and subsystems in support of the Plant design activities.

2. Major Milestones

ENGINEERING DEVELOPMENT PHASE

Site and Utility Partner Selected	January 1977
Construction Manager Selected	July 1977
Plant Conceptual Design Approach Selected	August 1977
Environmental Report and Assessment Submitted	November 1977
DOE/Associate Cooperative Agreement Signed	May 1978
Solar Facility Design Contractor(s) Selected	August 1978
On-Site Construction Started	April 1979
SFDI Preliminary Design Proposal Approved	October 1979
Collector Production Phase Contractor (s) Selected	October 1979
Solar Facility Designs Completed	March 1980
Turbine-Generator Facility Designs Completed	April 1980

Subsystems Checkouts Completed	April 1981
Operating Date	September 1981

DEMONSTRATION PHASE

Key Decision 3 (Proceed with operational test and evaluation activity)	October 1981
Completion of Operational Test and Evaluation	October 1986

E. Cost Objective

The total project cost including all DOE prerequisite R&D and operations and all costs by the utility partners is estimated to be \$167.8 million (see Table I).

The DOE portion of the Project is being funded with both Line Item appropriations in accordance with funding request requirements (Schedule 44) and with operating funds, as part of the Solar Thermal Power Systems Program.

DOE will provide and be responsible for the Solar Facilities, basically comprising the collector, receiver, and thermal storage subsystems and the plant master control subsystem. The Associates (see page 6, paragraph 2) will fund, provide and be responsible for the Turbine-Generator Facilities as well as the plant site, connections to the Southern California Edison electrical transmission network, and necessary support facilities. DOE will coordinate the design of the plant master control subsystem with consultation by the Associates.

Plant costs will be accumulated to enable comparison with DOE's Schedule 44 estimate and to provide data, which can be used by the Government, utilities, an industry, for the assessment of the potential economics of commercial power plants of similar design.

During the 5 years of plant operation, an operation test program will be conducted. The cost for operations and normal maintenance during this period will be shared between DOE and the Associates as defined in the Cooperative Agreement. The Associates will reimburse DOE for the net cost benefit derived from the power delivered to the transmission system from the Plant discounting the value of their financial contribution to its construction, as set forth in the Cooperative Agreement. At the end of the cooperative operations period, further Plant activities will be determined as set forth in the Cooperative Agreement.

IV. Organization

The responsible DOE managing office is the San Francisco Operations Office (SAN), with the dedicated project office known as the Solar Ten Megawatt Project Office (STMPO). The Project Office is located in El Monte, California.

The Project Manager (Project Director), Richard N. Schweinberg, was designated in July, 1977.

Accomplishment of the Project requires execution of the assigned agreed upon roles and responsibilities of key participants carried out in a cooperative and understanding environment. To introduce the key elements, the project organization chart (Figure II) shows the project management interrelationships.

In January, 1977, DOE selected a team, known as the Associates, headed by Southern California Edison (SCE), with participation by the Los Angeles Department of Water and Power, and the California Energy Resources Conservation and Development Commission.

In May, 1978, a Cooperative Agreement was executed between DOE and the Associates stipulating areas and degrees of responsibilities and authorities in the project development and execution.

The project responsibilities of DOE and the Associates, as defined in the Cooperative Agreement are summarized below:

A. DOE -

- (1) Design, construction, and checkout of the Solar Facilities, including collectors, storage, receiver, and plant master control.
- (2) Integration of the Solar and Turbine-Generator Facilities.

B. Associates -

- (1) Pilot plant site.
- (2) Design, construction, and checkout of the Turbine-Generator Facilities, including electric network tie-in and steam turbine-generator.

C. Joint -

- (1) Operations and Maintenance
- (2) Technology Transfer

V. Project Management

The San Francisco Operations Office (SAN), has primary responsibility for the management and administration of the project. The Manager of SAN is responsible for providing contract and technical administration to the project. The SAN Project Manager will report to the Manager of SAN through the Assistant Manager for projects.

SAN maintains the responsibility for overall management, administration, and performance of all DOE project activities, but has delegated major authorities and responsibilities for day-to-day DOE activities to the Project Office. SAN will provide administrative support for DOE activities as required and also retains the following functions:

- A. Approves actions in excess of contract authority delegated to the Project Manager, (including approval of contracts, subcontract and purchase orders, and modifications thereto.)
- B. Establishes or authorizes Contract Evaluation Boards.
- C. Staffs Source Evaluation Boards (SEB's) delegated to SAN.
- D. Reviews and consolidates budget submissions, issues sub-allotments and financial plans; consolidates and reports financial information.
- E. Provides all legal and patent services activities.
- F. Provides policy and procedures assistance and approvals in the areas of property management, industrial relations, labor relations, contractor personnel, EEO, public relations, security, and small business.
- G. Provides procurement services support activities.
- H. Through the Office of Management Review and Audit, provides for on-going management audit (including reviews of project management controls, business policies/practices/procedures) and financial audit of cost type activities.
- I. Provides assistance and/or performs cost and pricing data reviews.
- J. Provides assistance in the areas of safety, maintenance, quality assurance, environment and technical information.
- K. Reviews and takes approval action prior to changes in the technical objectives, funding levels required and schedule milestones.

Detailed arrangements for DOE management of the project during the operational test and evaluation phase will be developed between CST and the SAN Manager.

The Project Manager has the responsibility for the day-to-day planning, direction, execution, and control of the project within the approved technical objectives, cost estimates, and schedule milestones. The Project Manager is the primary interface for all technical, administrative and contractual matters between DOE, its contractors and the Associates related to the Project. The Project Manager will provide the coordination and utilize the resources of SAN, CST, and other DOE elements and the Associates as required. Responsibilities will include:

- A. Implement the technical objectives, cost estimates and schedule milestones as agreed to between DOE-HQ and SAN.
- B. Implement the Management Plan. Initiate revisions to the Plan as necessary during the project.
- C. Provide project control within the established technical objective, funding levels and schedule milestones, including a formal change control procedure.
- D. Perform cost, schedule, and technical performance reviews, including identification of problems and resolution follow through.
- E. Provide overall management, administration, and performance evaluation of contractors.
- F. Assure safe and environmentally sound practices are used and applicable standards and policies are applied.
- G. Prepare and issue periodic reports.
- H. Manage interfaces between the Solar Facilities and the Turbine-Generator Facilities.
- I. Lead the selection and negotiation of contracts.*(See Note)
- J. Approve purchases, subcontracts (including extensions, modifications, and terminations) within delegated authority.
- K. Approve work to be performed by contractors.
- L. Monitor contractor activities in the areas of industrial relations, labor relations, EEO, small business, and public relations.
- M. Assure implementation of site security measures.
- N. Approve and monitor implementation of the construction, test, QA, maintenance and procurement plans.

- O. Coordinate release of public information.
- P. Assure Project data is accumulated and disseminated to provide maximum benefit toward solar electric commercialization.
- Q. Establish acceptance criteria and accept completed facilities.
- R. Concur in plant start-up procedures prepared by the Associates.
- S. Prepare construction completion and final cost reports.
- T. Support the operational test and evaluation activities during the transition from construction to operations.

* Note: The Project Manager's responsibilities for construction procurement shall be as follows:

- 1) STMPO will
 - a. Receive the Technical Information (TI) from the A-E/SFDI.
 - b. Initiate the Procurement Request.
 - c. Announce the Request for Proposals (RFP) or Invitation for Bids (IFB).
 - d. Conduct preproposal conference. (If required)
 - e. Conduct public bid opening.
 - f. Review and evaluate bids/proposals, recommend selection.
 - g. Prepare package for approval by SAN Contracting Officer.
 - h. Receive approved package and issue Notice to Proceed.

Membership in the Project Office will consist of personnel from both DOE and the Associates. Each party will have primary responsibility for management of work funded solely by it, but overall Project responsibility and authority within the Project Office will be vested with the DOE Project Manager. Each party's Project responsibilities will be discharged in recognition of mutual interest of both parties. Each party's staff will report administratively to their organization respectively.

The Project Office staff includes full time specialists in finance/procurement, cost/schedule control, solar system design, and construction and clerical personnel.

VI. Project Assistance

Technical: On a case-by-case basis, the Project Office is expected to require the assistance of advisors who will be drawn from DOE-HQ, DOE contractors, National Laboratories, Field Offices, and the Associates. The Project Manager will plan for these needs, request and coordinate with the organizations involved.

Commercialization: Assistance will be provided to the Project Manager to assure that maximum benefit is derived from the 10 MWe Plant towards solar electric commercialization and acceptance by utilities, industry government regulatory agencies, the public, etc. This assistance may be obtained by the Project Manager from DOE, the Associate, other utility organizations, industry, etc.

VII. Reporting Channels and Requirements

The Project Manager will report to the Manager of the San Francisco Operations Office through the Assistant Manager for Projects. Direct communication between the Project Manager and the HQ Program Manager is authorized and encouraged for discussion of general programmatic guidance and for coordination with those authorities reserved to the Director of Central Solar Technology, Program Director for Solar, Geothermal, Electric and Storage Systems and the Assistant Secretary for Energy Technology.

Formal project reporting has been initiated and meets the following reporting requirements:

A. DOE Project Cost, Schedule, and Technical Progress Reports

The Project Manager's responsibility for reporting to DOE/HQ and the Associates Management will be accomplished by monthly and quarterly reports based upon assessment of input to the Project Office from DOE prime contractors and the Associates.

1. Project Status Report

The STMPO report conforming to UCRG will be provided by the 20th calendar day of the month following the reported month and quarterly as scheduled by HQ. This report will summarize for the Solar and Turbine-Generator Facilities the following:

- a. Problems being worked on; the nature and potential impact of the problem, the action being taken and the need for any assistance.
- b. Project Accomplishments during the reporting period.

- c. Planned Activities during the next reporting period (including dates for awards of major contracts.)
- d. Technical Status describing briefly the technical achievements and issues being worked on.

2. Contingency Status Report

This report will be provided on a monthly cycle as part of the STMPO project status. For each major baseline category, it will provide the original baseline cost, the current approved baseline, the costs to date, outstanding commitments, forecasts to complete, and current cost estimate total. Contingency analysis will also be provided.

3. A-E Performance Reports

The DOE Project Office staff will prepare, review, approve and distribute A-E performance reports for efforts under prime SAN contracts as required by DOE Manual Chapter 0701.

4. Completion and Cost Closing Reports

The construction completion and cost closing reports will be issued by the DOE Project Office staff at completion on the project.

5. DOE Contractors

DOE Contractors will report to the Project Manager in keeping with the DOE Uniform Contractor Reporting Guidelines.

B. Formal Project Meetings

1. Managment Level

- a. Monthly Project Management meetings will be conducted by the DOE Project Office personnel with the Solar Facility contractors. They will cover project problem areas, resolutions, commitments, costs, schedule and technical status. Joint DOE/Associates Bi-Weekly meetings will be held to cover for Solar and T-G Facilities. Attendance at these meetings may include representatives of DOE-SAN, DOE-HQ, and Associates Management.

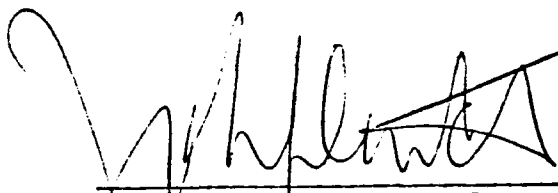
- b. Semi-Annual Review meetings will be held to brief DOE-HQ, Associates, SAN and management from other participating organization of the project status.
- c. The SAN Project Manager will be reporting weekly to the HQ Program Manager (Project Officer), monthly to the SAN Manager and quarterly to ASET.
- d. The HQ Program Manager (Project Officer) will be reporting weekly to the Division Director CST, Program Director ETS and Deputy ASET, monthly to the ASET and Program Director ETO.

VIII. Transition to Operations/Termination Plan

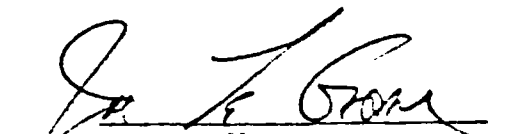
The Project Office shall participate in the transition from the construction phase to the start-up and operation phase. The start-up and operation plan shall be prepared by DOE. The administration of the projected five year project operations shall be under the responsibility of the Associates, under the terms of the Cooperative Agreement. During the last year of the project's operational test and evaluation phase, SAN and the Associates shall jointly prepare a plan for termination of the project, transfer of the project to the Associates or transition to the operations phase (Key Decision 4) as a DOE Facility in accordance with the provisions of the Cooperative Agreement.

IX. Project Management Plan

The Project Management Plan has been written and approved. The plan will be periodically updated.

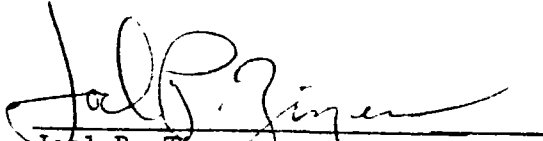


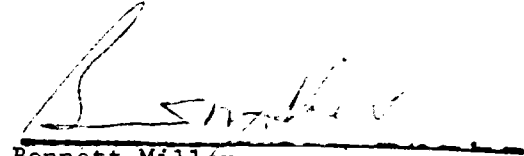
Acting Assistant Secretary for
Energy Technology

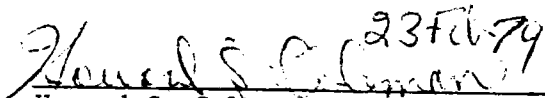


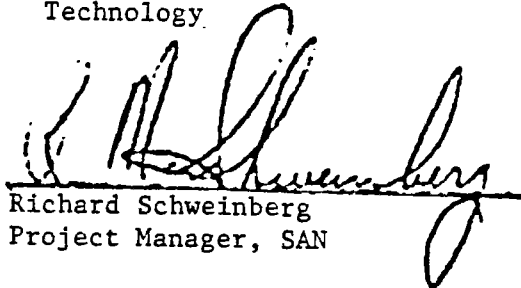
Manager,
San Francisco Operations
Office

PROJECT CHARTER APPROVAL



Joel P. Zingesser
Program Manager, HQ

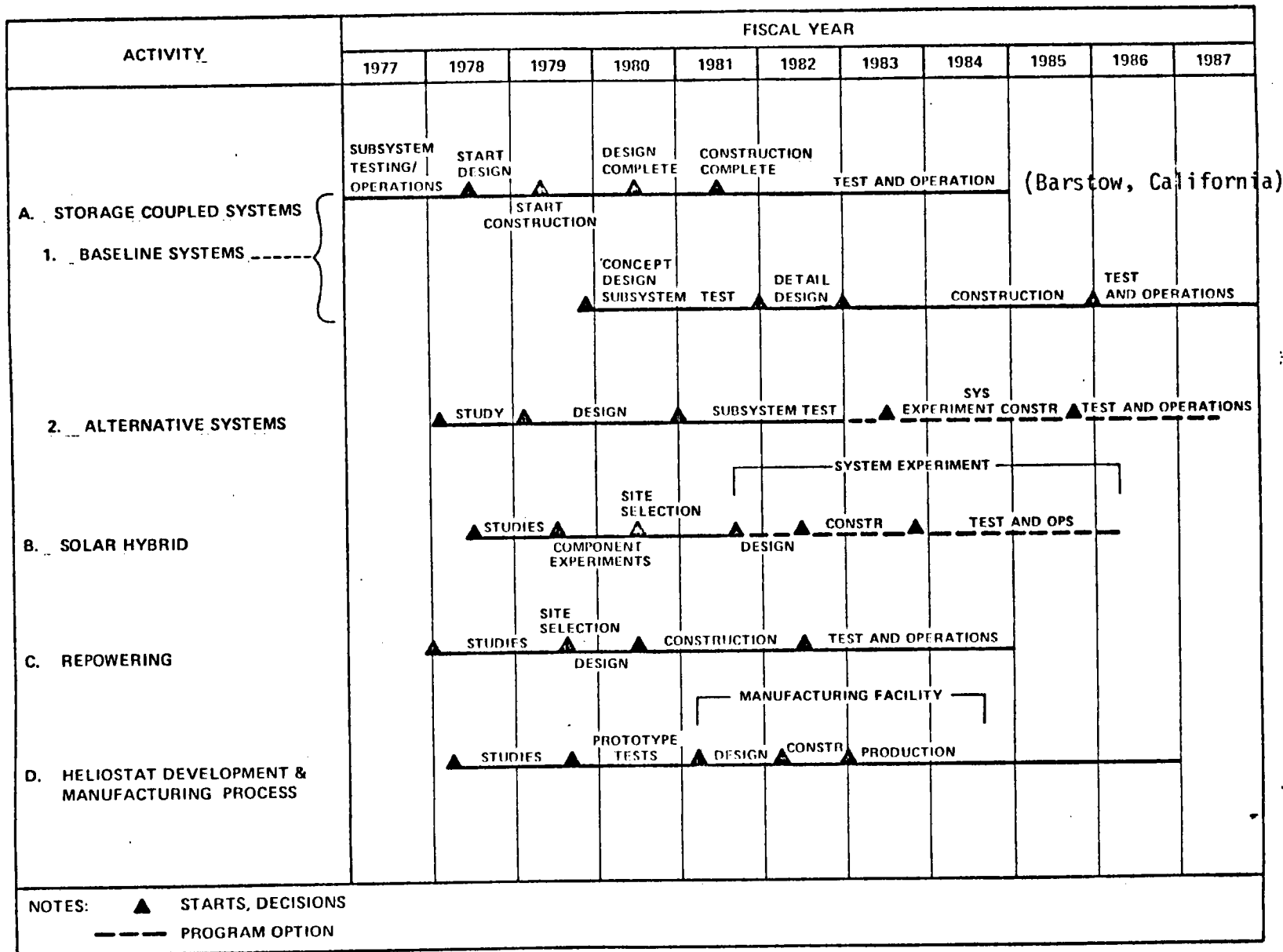

Bennett Miller
Program Director for
Solar, Geothermal, Electric
and Storage Systems


Howard S. Coleman, Director
Division of Central Solar
Technology


Richard Schweinberg
Project Manager, SAN

CONCUR:


Ronald W. Cochran
Acting Director
Office of Field Operations
Management



Central Power Applications Milestones
Figure I

FIGURE II

10 MWE SOLAR THERMAL CENTRAL RECEIVER PILOT PLANT
PROJECT ORGANIZATION CHART

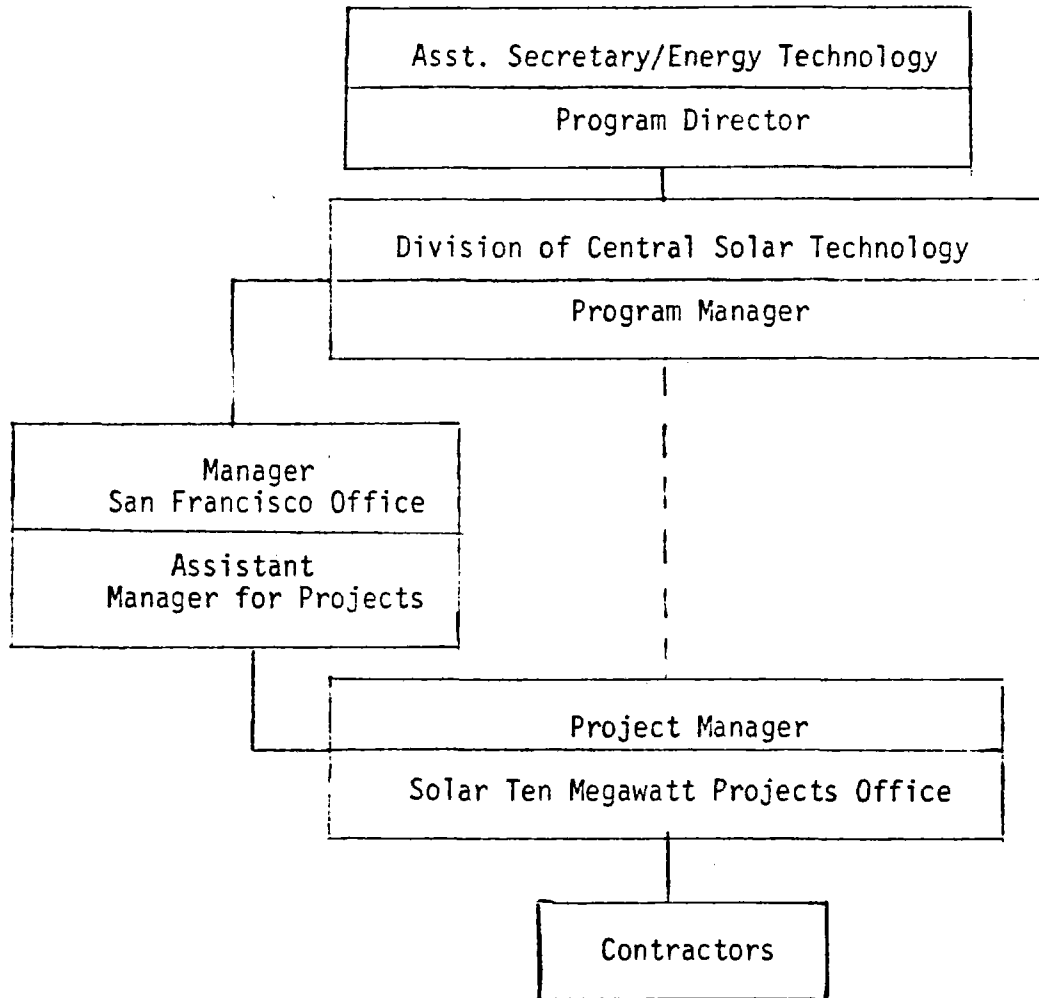


TABLE I

TOTAL PROJECT COST
(dollars in millions)

<u>Activity</u>	<u>DOE</u>	<u>Associates</u>	<u>Total</u>
Design and Construction	108.00 TEC	13.75	121.75
R&D	30.68	---	30.68
Capital Equipment	---	---	---
Operations	9.50	5.87	15.37
<hr/>			
TOTAL	148.18	19.62	167.80

U.S. DEPARTMENT OF ENERGY
memorandum

DATE **APR 18 1984**

REF ID: A77000
ATTN OF S. D. Elliott, Jr., Director, DOE Solar One Project Office

SUBJECT Submission of Four Planning/Project Definition Documents from the Solar Ten Megawatt Project Office for OPC Patent Review and TIC/NTIS Archiving/Announcement

TO: Roger Gaither, DOE/SAN (OPC)
William D. Matheny, DOE/TIC (Document Control)

Enclosed are four planning and Project design definition documents prepared by the DOE/SCE Solar Ten-Megawatt Project Office, under Cooperative Agreement DE-FC03-77SF10501:

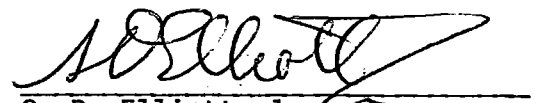
<u>Primary Document No.</u>	<u>Secondary No.</u>	<u>Brief Title</u>
DOE/SF/10501-009	(STMP0-053)	"..Overall Plant Design Definition.."
DOE/SF/10501-010	(STMP0-055)	"Project Charter..."
DOE/SF/10501-012	(STMP0-059)	"..Project Management Plan"
DOE/SF/10501-013	(STMP0-061)	"..Operational Test Management Plan"

Each of these documents represents the final or latest revision of the subject document, under its respective title. The Overall Plant Design Description was subsequently replaced by the "Station Manual (3 Vols.)", catalogued under Contract DE-AC03-79SF10499 as MDC-G-8544, following selection of McDonnell Douglas as Solar Facilities Design Integrator for the Project; the copy provided here is for historical description of the Plant design basis only. The Project Management Plan was the management document for the Project design and construction phases; it was replaced by the Operational Test Management Plan for the startup and Test Operations phases of the Project.

One copy of each document, accompanied by a completed SAN Form 70, is provided for SAN/OPC patent review and clearance. Please return the feedback copy of the Form 70's to the Project Office; the documents themselves may be delivered to Mr. Mike Lopez at SAN/FGS.

Two copies of each document, accompanied by a completed DOE Form RA-426, are provided for processing, archiving and announcement by the DOE Technical Information Center, and for forwarding to the National Technical Information Service.

Encls.: 4 Documents, w/Transmittal Forms


S. D. Elliott, Jr.

cc: M. Lopez, DOE/SAN (FGS)
D. Holz, DOE/SAN (ISEA)
M. Soderstrum, Burns & McDonnell



DEPARTMENT OF ENERGY
SAN FRANCISCO OPERATIONS OFFICE

CONTRACTOR REQUEST FOR PATENT CLEARANCE
FOR RELEASE OF UNCLASSIFIED DOCUMENT

Roger S. Gaither, Asst. Chief for Prosecution
Office of Patent Counsel/Livermore Office
P.O. Box 808, L-376
Livermore, California 94550

FROM: DOE Solar One Project Office
Post Office Box 366
Daggett, CA 92327

Prime Contract No. DE-FC03-77SF10501
Subcontract No. (N/A)
Report No. DOE/SF/10501-010 (STMPO-055)
Date of Report April, 1979
Name & Phone No. of DOE Technical Representative S. D. Elliott, Jr. (619) 254-2672

- Document Title:
"PROJECT CHARTER: 10-MWe SOLAR THERMAL CENTRAL RECEIVER PILOT PLANT"
- Type of Document: Technical Report, Conference Paper, Journal Article, Abstract or Summary,
 Copy of Oral Presentation, Other (please specify): Planning Document
- In order to meet a publication schedule or submission deadline, patent clearance by (routine)
would be desired.

SENDER IS TO CHECK BOX #4 OR #5 BELOW.

4. I have reviewed (or have had reviewed by technically knowledgeable personnel) this document for possible inventive subject matter (Subject Inventions) and that no inventions or discoveries (Subject Inventions) are deemed to be disclosed in this document except as stated below:
- Attention should be directed to pages _____ of this document.
 - This document describes matter relating to an invention:
 - Contractor Invention Docket No. _____
 - A disclosure of the invention was submitted to DOE on _____ (date)
 - A disclosure of the invention will be submitted shortly _____ (approximate date)
 - A waiver of DOE's patent rights to the contractor:
 has been granted, has been applied for; or will be applied for _____ (date)

5. This document is being submitted, but no review has been made of this document for possible inventive subject matter.

6. Remarks: Return feedback copy of Form 70 to address above; document to M. Lopez, SAN/FGS

Reviewing/Submitting Official: Name (Print/Type) S. D. Elliott, Jr., Director
Title DOE Solar One Project Office
Signature *S. D. Elliott, Jr.* Date 18 April, 1984

TO: INITIATOR OF REQUEST

FROM: ASSISTANT CHIEF FOR PROSECUTION
Office of Patent Counsel/Livermore Office

- No patent objection to above-identified release.
- Please defer release until advised by this office.

Signed _____ Date Mailed _____

DOE AND MAJOR CONTRACTOR RECOMMENDATIONS FOR
ANNOUNCEMENT AND DISTRIBUTION OF DOCUMENTS

See Instructions on Reverse Side

1. DOE Report No. DOE/SF/10501-010 (STMPO-055)	2. Contract No. DE-FC03-77SF10501	3. Subject Category No. UC-62
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4. Title "PROJECT CHARTER: 10-MWe SOLAR THERMAL CENTRAL RECEIVER PILOT PLANT"

5. Type of Document ("x" one)

a. Scientific and technical report

b. Conference paper: Title of conference _____

_____ Date of conference _____

Exact location of conference _____ Sponsoring organization _____

c. Other (specify planning, educational, impact, market, social, economic, thesis, translations, journal article manuscript, etc.) **Planning**

6. Copies Transmitted ("x" one or more)

a. Copies being transmitted for standard distribution by DOE-TIC.

b. Copies being transmitted for special distribution per attached complete address list.

c. Two completely legible, reproducible copies being transmitted to DOE-TIC. (Classified documents, see instructions)

d. Twenty-seven copies being transmitted to DOE-TIC for TIC processing and NTIS sales.

7. Recommended Distribution ("x" one)

a. Normal handling (after patent clearance): no restraints on distribution except as may be required by the security classification.

Make available only b. To U.S. Government agencies and their contractors. c. within DOE and to DOE contractors.

d. within DOE. e. to those listed in item 13 below.

f. Other (Specify) **Archive/issue on request; initial distribution made by Project Office**

8. Recommended Announcement ("x" one)

a. Normal procedure may be followed. b. Recommend the following announcement limitations:

9. Reason for Restrictions Recommended in 7 or 8 above.

a. Preliminary information. b. Prepared primarily for internal use. c. Other (Explain)

10. Patent, Copyright and Proprietary Information

Does this information product disclose any new equipment, process or material? No Yes If so, identify page nos. _____

Has an invention disclosure been submitted to DOE covering any aspect of this information product? No Yes

If so, identify the DOE (or other) disclosure number and to whom the disclosure was submitted.

Are there any patent-related objections to the release of this information product? No Yes If so, state these objections.

Does this information product contain copyrighted material? No Yes

If so, identify the page number _____ and attach the license or other authority for the government to reproduce.

Does this information product contain proprietary information? No Yes If so, identify the page numbers _____

("x" one a. DOE patent clearance has been granted by responsible DOE patent group.

b. Document has been sent to responsible DOE patent group for clearance.

11. National Security Information (For classified document only; "x" one)

Document a. does b. does not contain national security information


12. Copy Reproduction and Distribution

Total number of copies reproduced 25 Number of copies distributed outside originating organization 15

13. Additional Information or Remarks (Continue on separate sheet, if necessary)

14. Submitted by (Name and Position) (Please print or type)
S. D. Elliott, Jr., Director, DOE Solar One Project Office

Organization
Post Office Box 366, Daggett, CA 92327 (619) 254-2672

Signature  Date **APR 18 1984**



DEPARTMENT OF ENERGY
SAN FRANCISCO OPERATIONS OFFICE

CONTRACTOR REQUEST FOR PATENT CLEARANCE
FOR RELEASE OF UNCLASSIFIED DOCUMENT

Prime Contract No. DE-FC03-77SF10501
Subcontract No. (N/A)
Report No. DOE/SF/10501-010 (STMPO-055)
Date of Report April, 1979
Name & Phone No. of DOE Technical Representative S. D. Elliott, Jr. (619) 254-2672

TO: Roger S. Gaither, Asst. Chief for Prosecution
Office of Patent Counsel/Livermore Office
P.O. Box 808, L-376
Livermore, California 94550

FROM: DOE Solar One Project Office
Post Office Box 366
Daggett, CA 92327

- Document Title:
"PROJECT CHARTER: 10-MWe SOLAR THERMAL CENTRAL RECEIVER PILOT PLANT"
- Type of Document: Technical Report, Conference Paper, Journal Article, Abstract or Summary,
 Copy of Oral Presentation, Other (please specify): Planning Document
- In order to meet a publication schedule or submission deadline, patent clearance by (routine) would be desired.

SENDER IS TO CHECK BOX #4 OR #5 BELOW.

4. I have reviewed (or have had reviewed by technically knowledgeable personnel) this document for possible inventive subject matter (Subject Inventions) and that no inventions or discoveries (Subject Inventions) are deemed to be disclosed in this document except as stated below:

- Attention should be directed to pages _____ of this document.
- This document describes matter relating to an invention:
 - Contractor Invention Docket No. _____
 - A disclosure of the invention was submitted to DOE on _____ (date)
 - A disclosure of the invention will be submitted shortly _____ (approximate date)
 - A waiver of DOE's patent rights to the contractor:
 has been granted, has been applied for; or will be applied for _____ (date)

5. This document is being submitted, but no review has been made of this document for possible inventive subject matter.

6. Remarks: Return feedback copy of Form 70 to address above; document to M. Lopez, SAN/FGS

Reviewing/Submitting Official: Name (Print/Type) S. D. Elliott, Jr., Director
 Title DOE Solar One Project Office
 Signature [Signature] Date 18 April, 1984

TO: INITIATOR OF REQUEST
FROM: ASSISTANT CHIEF FOR PROSECUTION
Office of Patent Counsel/Livermore Office

M. Lopez SAN/FGS

- No patent objection to above-identified release.
- Please defer release until advised by this office.

Signed [Signature] Date Mailed 4/25/84