The original documents are located in Box 33, folder "Solar Energy" of the James M. Cannon Files at the Gerald R. Ford Presidential Library.

Solar Energy

REQUEST

THE WHITE HOUSE

WASHINGTON

October 15, 1975

MEMORANDUM FOR: JIM CANNON

FROM: GLENN SCHLEEDE

SUBJECT: ADMINISTRATION POSITION AND ACTION ON SOLAR ENERGY

Dick Livingston has developed the attached summary of indicators of Administration policy and actions with respect to solar energy.

Will this satisfy the request you had in mind when you called me earlier today? If not, please let me know and we will change it as necessary.

Pat -
Wanted you to see
a copy of June '75
report - 155 pages, bottom page

SOLAR ENERGY - ADMINISTRATION POLICY AND ACTIONS

Policy

. "My vision is of dramatic action to produce oil and gas from coal, safe and clear nuclear and coal-generated electric power, harness the energy of the sun and the natural heat within the earth and build numerous other energy facilities."

President's September 22, 1975 address to the AFL-CIO Construction Trades meeting in San Francisco -- announcing plans for an Energy Independence Agency

. "Inclusion of the solar electric approach among the 'inexhaustible' resource technologies to be given high priority."

"The technologies for producing essentially inexhaustible supplies of electric power from solar energy will be given priority comparable to fusion and the breeder reactor."

One of five major changes in the nation's Energy R&D priorities identified in ERDA's "National Plan for Energy R&D" (ERDA-48), June 28, 1975

Actions Taken or Planned

. The President's 1976 Budget contemplated obligations of $76 million for Federally sponsored solar energy research and development and demonstration activities. This compares with $15 million in 1974.

. In June, 1975, ERDA submitted to the President and the Congress a report outlining the Federal portion of a "National Solar Energy Research, Development and Demonstration Program" which described current and

prospective Federally-funded programs in the areas of solar heating and cooling, solar electric systems, wind power and ocean thermal power and fuels from biomass. (ERDA-49).

- In October, 1975 ERDA submitted to the President and the Congress a report outlining the Federal portion of a National Program for Solar Heating and Cooling (for residential and commercial applications) which describes programs underway or contemplated. The use of solar energy for heating and cooling is the most nearly economic application at this time.

- The General Services Administration has under construction two buildings (one in Manchester, N.H.; the other in Saginaw, Michigan) which are designed to demonstrate energy conservation and which also will include large solar collectors, scheduled for completion in 1976. In addition, GSA is exploring the feasibility of installing solar collectors on new Federal buildings (e.g., Federal Home Loan Bank Board in downtown Washington) and retrofitting existing Federal buildings with solar collectors.

- The Department of Defense is installing solar hot water and space heating on a demonstration basis in 15 existing and 35 new Department of Defense-owned residential housing units.

- ERDA is authorized to establish a Solar Energy Research Institute (SERI) and work is now underway to develop criteria and specifications that will provide the basis for soliciting proposals from interested parties around the Nation. Organizations in more than 20 states are expected to submit proposals.

- The Department of Housing and Urban Development and National Bureau of Standards have issued interim standards for residential solar heating and cooling units which must be met to qualify for solar demonstration grants that will be available through HUD.

Subj
Solar Energy

THE WHITE HOUSE

WASHINGTON

July 10, 1975

Dear Bob:

Thank you very much for sending me the additional material on Arizona's proposal for a solar energy research institute. The Energy Research and Development Administration has confirmed that your understanding is correct concerning the schedule for reaching a decision on the proposed legislation. I have instructed my staff to follow this matter closely and to keep me informed of any new developments.

Thanks for the information and I appreciate very much the opportunity of hearing your views.

Sincerely,

James M. Cannon
Assistant to the President
for Domestic Affairs

Mr. Robert A. McConnell
Attorney At Law
2721 North Central Ave., Suite 802
Phoenix, Arizona 85004

THE WHITE HOUSE

WASHINGTON

Date June 13, 1975

TO: JIM CANNON

FROM: JIM CAVANAUGH

X FYI

_____ For appropriate action

COMMENTS

The report, and a copy of McConnell's letter, have been sent to Glenn Schleede with the request that he prepare a reply for your signature.

ROBERT A. MCCONNELL
ATTORNEY AT LAW
2721 NORTH CENTRAL AVENUE, SUITE 802
PHOENIX, ARIZONA 85004
(602) 277-4474

June 10, 1975

James M. Cannon, Executive Director
Domestic Council
The White House
Washington, D.C. 20500

Re: National Solar Energy Research Institute

Dear Jim:

The opportunity to meet you in Congressman Rhodes' office last Wednesday was very greatly appreciated.

Although we discussed it briefly, a restatement here of the basic Energy Research and Development Administration timetable may provide you with a convenient reference.

ERDA contracted with the National Academy of Sciences to develop the character and role of the Institute, the scope of its research, the site selection criteria and other fundamental determinations. An ERDA in-house study team is undertaking a parallel effort that will be reviewed in conjunction with the Academy's independent conclusions prior to final determinations being reached by the Administration.

The Academy's preliminary report was submitted to ERDA on June 2. The Academy has now solicited comments from a wide variety of sources.

In late July and early August, the Academy will conduct a workshop at the Scripps' Institute in La Jolla, California. That workshop is intended to crystallize the Academy's thinking.

The final Academy and in-house reports are to be submitted by September 30th. Subsequently, ERDA will request proposals for the Institute be submitted by the various states and other interested entities.

Site visitations are intended to be conducted in November and December with final site selection expected by the first of the year.

ROBERT A. MCCONNELL
ATTORNEY AT LAW

Pursuant to your request, you will find enclosed a copy of the Arizona Congressional Delegation's October 15, 1974, letter to the President highlighting some of the reasons why the Institute should be located in Arizona.

Also enclosed for your information is a copy of a preliminary Arizona presentation requested by the head of ERDA's in-house study team. This presentation was submitted to ERDA on June 6, 1975. This presentation responds to questions ERDA earlier addressed to the National Academy of Sciences. The preliminary dialogue you will find is a technique used to show the reasons for the conclusions reached in the body of the document. The imaginary dialogue participants are Dr. John Teem, Acting Administrator for Solar, Geothermal and Advanced Energy Systems and Dr. John E. Mock, Dr. Teem's Technical Advisor.

Your assistance in keeping us informed as to the White House activities in regards to the National Solar Energy Research Institute is appreciated. If I can provide you with any additional information or assist you in any way, please contact me either at my Phoenix office or through Congressman Rhodes' Capitol Hill office.

Best personal regards.

Yours sincerely,

Bob

Robert A. McConnell

RAM/st

Enclosures

United States Senate
COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
WASHINGTON, D.C. 20510

October 16, 1974

The President
White House
Washington, D. C.

Dear Mr. President:

The United States Congress has now shown its commitment to the development of solar energy by the enactment of major legislation to assist heating and cooling technology and most recently to establish the Solar Energy Coordination and Management Project, under the new Energy Research and Development Administration.

The Executive branch already has shown its concern for this alternate energy source through demonstration and research projects under eight separate agencies. Even individual States are beginning to devote their resources to solar development through newly-established state energy offices. For this reason, Federal assistance must be invested where success has the greatest opportunity.

Though it is obvious to the casual observer that Arizona has tremendous solar development potential, and though solar success has been demonstrated there in various forms since 1901, we would like to highlight some additional reasons for locating the Solar Energy Research Institute in our State.

1) Phoenix and Tucson have more hours of sunshine per year than any other major city in the United States. The intensity of this source is also maximum due to the latitude and desert climate of the Southwest. Where there are maximum solar resources, maximum testing hours can be compiled.

2) With its fast-growing population and accompanying new construction, Arizona affords considerable opportunity for the equipment of solar systems to new residential units.

3) Arizona is virtually a non-producing State with respect to oil and gas. Being a heavy net-importer of fuel, the State has comparitively high fuel costs; thus

solar energy could be commercially competitive earlier in the Southwest setting. Installation and maintenance experience can be gained on both a private and public level; as heating systems are already being sold by private concerns.

4) Arizona State University currently houses the International Solar Society's extensive library. The University has also offered office space, faculty services and secretarial assistance to the Society which is currently located in Australia.

5) The Arizona State Legislature has enacted tax incentives for the procurement and installation of solar systems by private individuals. Also, a recently approved State office building is being designed to utilize the most advanced solar heating and cooling technology available.

6) There is an abundance of Federal land in Arizona and extensive undeveloped areas, offering many desirable sites for the Institute of our interest.

7) Arizona encompasses a wide variation in climate, with record temperatures being recorded in Yuma at the highest extremes, and record low temperatures being recorded at Maverick, Arizona.

8) Currently the University of Arizona is performing extensive work in the field of optical sciences. These facilities and their solar-related technological devices could enhance the capacity of the Institute.

9) Solar air-conditioning development requires the cooperation of additional industries, particularly cooling equipment manufacturers. There is hardly a more extensive collection of cooling experience than that of the Valley of the Sun.

10) Finally, this country's balance of trade and balance of payments has been substantially predicated on our ability to develop, license and sell high technology items. Countries which have already developed commercially competitive solar systems are beginning to consider product

export to the United States. Thus, it is imperative that we move quickly to develop our own commercially viable solar components.

Solar scientists and major corporations are already heavily involved in the development of solar cells, solar power farms, solar heating and cooling equipment and solar architecture in the State ofAArizona. The establishment of the Institute in this State would allow further exploration of all solar energy uses under peak conditions.

For these many reasons, we encourage your careful consideration of Arizona as the location for the Institute we established in recent solar legislation. We can move forward much faster on solar development under ideal conditions.

With kindest personal regards,

Paul Fannin

Barry Goldwater

Sam Steiger

John Rhodes

Morris Udall

John Conlan

QUESTION 1. What should be the charter and role of the Solar Energy Research Institute? How should its mission be defined within the framework of the national solar energy program? What should be its scope of research? For example, should the programs of the Institute cover all facets of solar-related research -- including electrical and thermal applications, photovoltaic conversion, wind power, ocean-thermal power, heating and cooling of buildings -- or should its charter be limited?

ANSWER: The mission of ERDA's Division of Solar Energy Research is to establish solar energy as a major source of energy as rapidly as possible.

The charter and role of NSERI should be to provide the necessary high level technical expertise for ERDA so that it can most effectively accomplish its work of planning, running, evaluating, updating and administering a credible U.S. Solar Energy Program. This can be accomplished by conceiving and promoting basic and applied research, establishing priorities of research programs, assisting in technological transfer of suggested research and development, establishing close working relationships with universities and other educational institutions, and advancing the scientific and technological foundations in solar energy.

There should be a highly qualified staff of scientists and engineers that would be able to serve as solar experts to the Federal Government.

Centralization of mission management and decentralization of program execution is recommended because of the variety of major influences involving solar energy usage. Having integral roles in the success of the direct use of solar energy will be consumers, builders and architects, component manufacturers, testing and certification laboratories, weights and measures departments of each state, university researchers, insurance and businessmen and utilities.

In particular, the Charter of NSERI should be goal oriented to implement solar energy utilization. The role of NSERI should be to identify the reasons why solar energy is not being used and act to overcome the impediments and thus establish solar energy as a credible source. The research emphasis should be placed on bridging the gap that exists between the Universities' basic research orientation and the Industrial emphasis on applied product engineering. Another key element to the research is large-scale systems analysis (economic/technical) in which the impact of solar developments on the National Energy system can be assessed, including all applicable sources and end uses of energy. NSERI should identify

areas of research that are not currently being addressed, so that appropriate modifications to the National Plan can be initiated by ERDA.

A key function of NSERI would be the operation and maintenance of solar research and test facilities and an extensive research library. The contents of the library should be made available to all researchers in this country and abroad.

Potentially, the programs of the Institute should cover all facets of solar-related research -- including electrical and thermal applications, photovoltaic conversion, wind power, ocean-thermal power, heating and cooling of buildings, and biomass-conversion.

However, in meeting the needs of the National program. NSERI should place the majority of its emphasis on those programs that are defined as most probable to meet the urgent needs. Specific goals should be established to demonstrate in a timely manner that solar energy is a current and credible energy supplement, as well as a long-term future resource.

QUESTION 2. How should its program be appropriately balanced between basic and applied research or development programs?

How should the Institute relate administratively and/or pragmatically to other ERDA solar energy research, either at national laboratories or by off-site contractors? What fraction of the ERDA solar energy research program should be carried on within the Institute?

ANSWER: Research and development performed by NSERI should have commercial orientation and goal, keeping in mind that the ultimate objective is the creation, at an accelerated pace, of a solar components/systems industry capable of providing goods and services to a large number of customers. Hence, the NSERI efforts should be designed to "Seed"the creation of practical products and systems. This will involve both basic and applied research. Large scale demonstrations should continue to be funded directly by ERDA. However, NSERI should be closely involved and should have a cognizant scientific, consultative and evaluative role in the demonstrations.

The ratio of basic to applied research should vary according to the application (for example, photovoltaics will require a greater ratio of basic to applied research than other areas -- building heating and cooling related research will be predominatly applied). Basic funds should be applied to those areas that appear to be impediments to long-range goals.

All long-term basic and applied research that can be performed within NSERI, or under its jurisdiction, should be NSERI's reponsibility. Short-term research and research not within the capability of NSERI should be performed by other ERDA divisions, by other government agencies, or by industry.

QUESTION 3. Would multiple sites for the Institute be more advantageous than a single location? If so, how should the individual centers relate to the central Institute management? How should individual centers relate to local institutions with which facilities, i.e., computers, libraries, central shop facilities, etc., are shared? What types of relation should the Institute(s) have with universities, industry, ERDA national laboratories, etc?

ANSWER: The financial and contractual control of the Institute will undoubtedly be the province of ERDA in Washington, D. C. The urgency of the energy problem and the welfare of the nation demand that major research thrusts begin immediately. This can be accomplished best by having multiple facilities of the Institute throughout the United States, utilizing existing governmental laboratories, and awarding contracts, research grants, and training grants to universities, non-profit laboratories, and industry.

A major new facility of the Institute should be established. This new facility would be a focal point for basic and applied research in solar energy. It should be placed in an area of the United States with optimal climate and topography, established universities, availability of state and federal land, support facilities, and a proven scientific technical and industrial base. Satellite or regional facilities should also be established throughout the United States as required by climatological and geographical considerations. These regional application centers should be placed in areas that represent diversified climatic zones within the United States (Pacific Coast, Rocky Mountains, Southwestern, North Central, South Central, Northeast and Southeast). The energy problem is a national problem that can only be solved by looking at local needs. Solutions for Phoenix, Arizona, differ considerably from those for Boston, Massachusetts.

QUESTION 4. What criteria would be appropriate for choosing a location of the Institute, or of the individual centers? If multiple centers are desirable, what criteria would be appropriate for choosing a location for the central Institute management?

ANSWER: The selection of a location for the Solar Energy Research Institute is extremely important, as a favorable site will materially contribute to the success of the Institute in terms of its potential interactions with the adjacent university centers, its ability to attract and hold the high caliber personnel so critical to its success, its ability to use large tracts of land with minimum environmental impact, and be in close proximity to a concentration of user industry to easily transfer its research and technological developments into useful products and services. It should also be in a location with long periods of intense sunshine and a wide range of climatic conditions necessary to test solar energy systems for reliability, economy, and general utility. While direct sunshine is not required for every aspect of the Institute's work, it is vital to practical results and should not be sacrificed. The following is a list of suggested criteria. The Institute should be located:

A. In close proximity to a strong university or university system having established programs, expertise and staff active in solar energy and related areas. It would be highly desirable for the institute to relate closely to such institutions, including use of shared facilities, joint appointments, and training graduate students.

B. Where adequate industry exists in the vicinity to support the new Institute in terms of goods and services, developmental shops, test capabilities, skilled personnel reservoirs, etc., and to carry out development and demonstration programs in which the Institute may be involved as a technical consultant.

C. Where there is a concentration of industry skilled in the art of solar energy utilization to transfer the new technology produced by the Institute into useful goods and services for the country.

D. Where there is a good transportation and communications network providing ready access to the rest of the country and the world. This is especially important where commercialization is a vital objective of the work.

E. In an area having long periods of intense sunlight, but also having a range of climatic conditions representative of the areas of the country where solar energy can be effectively utilized.

F. Where the required land can be easily provided.

G. In an area of attractive cultural and living conditions offered by the surrounding community, in order to attract and retain highly qualified personnel.

H. Where there is availability of a ready market for solar energy to allow new systems to be tested by the general population and accepted by them.

Satellite facilities should be located where regional

institutions are needed. For example, a satellite institution might be needed to develop and test certain aspects of ocean thermal power generation, and in this case it might be located near the area where the tests are being conducted, say, on an island or seacoast.

QUESTION 5. What should be the management structure connecting the Institute with ERDA and particularly with the Office of the Assistant Administrator for Solar, Geothermal, and Advanced Energy Systems?

ANSWER: The Division of Solar Research, in the Office of the Assistant Administrator for Solar, Geothermal and Advanced Energy Systems, has responsibility for the overall planning, budgeting and administering of solar projects; for policy making and general supervision. The National Solar Energy Research Institute should report to the Division of Solar Research. In this way, the R&D activities carried out by the Institute can be closely coordinated with the ongoing contract programs (R&D, demonstrations, etc.) directed by the Division. The Institute should fund limited special purpose contracts on its own, and serve as a technical advisory, consultative, evaluative role in the large contracting effort maintained by the Division.

QUESTION 6. What are the advantages and disadvantages of locating individual centers of the Institute at existing national laboratories and/or educational institutions.

ANSWER: Advantages:

1. Use of existing facilities could result in lower initial capital costs. However, over a 5-year period this advantage will disappear.

2. Use of a portion of the existing staff to reduce recruitment and relocation efforts.

3. Opportunities for exchanges with other disciplines.

4. Possibly a better load factor might result for existing facilities.

5. Shared use of certain central facilities (e.g. model shops, computers, library) can give lower initial operating costs. However, as the Institute grows, this differential will become small.

Disadvantages:

1. Existing facilities may not have proper environment and facilities for solar research activities.

2. Solar Energy Work will have to compete with military, nuclear, space, etc. interests for facilities, staff, etc., in the case of existing federal laboratories. (This need not be the case with an educational institution.)

3. A mixed federal laboratory/Institute location will not have strong public image impact and the public and technical community may be suspicious of the findings of the Institute, if it is associated with other interests which compete with it for federal funds -- particularly in the energy area.

4. Administration of the existing facility may not be compatible with the interests of the Institute.

5. Multimission laboratory (solar and nuclear/NASA, etc.) will not have the forms and dedication of a single mission laboratory.

The establishment of a major new facility for the Institute would be in the best interests of the nation. It would help bring public attention to the energy problem; the act itself would have social impact. There are disadvantages of placing the programs of the Institute in existing national laboratories and universities. These institutions have other research programs. The staff of these institutions are usually fully committed to the existing programs, which may or may not be related to solar energy. Experience has shown that it is not always possible or economical to convert personnel and facilities to new programs. There is need for a fresh start! Recruiting creative scientists and engineers and placing them in a new solar energy facility would be catalytic. The establishment of a new

facility would also demonstrate that the United States is committed on a long-term basis (25-50 years) to support solar energy programs.

Solar energy programs should not be overshadowed in existing laboratories with other commitments. There is merit in a new beginning, with scientists and engineers selected for the task to be assembled in one location. They would then become identified with their mission, exclusive of past prejudices and competing or conflicting activities. However, a portion of the solar energy programs should be conducted at universities and existing laboratories by allocation of budget, or under contract based on specific contracted obligations.

The Institute, as a dedicated solar organization could be operated directly by the federal government, or under a contract arrangement with a nonconflicting public institution such as a university. Examples of both exist.

QUESTION 7. What funding and staffing levels would be desirable during the start-up period and the first five years of the Institute's existence?

ANSWER: The Institute needs to be established in the immediate future. Extreme care should be taken in the staffing of the Institute. Decisions made at the beginning will

shape the destiny of the Institute. The criteria of selection must include creativity, productivity, and dedication. A nucleus staff of between 50 and 100 scientific personnel should be selected with care. This staff would then determine the direction of the Institute for the next five years. The Institute might grow to approximately 450 scientific personnel by 1981. Assuming that the National Solar Program will reach the vicinity of $300 million per year, the Institute should be planned for an annual (steady state) payroll of about $25 million, with a total budget in the area of $60 million per year. A possible staffing schedule could be as follows:

Year	No. of Scientific Personnel
1976	50
1977	100
1978	150
1979	250
1980	375
1981	450

Support staff is expected to fall in the range of 1 to 2 per professional in common with similar federal and industrial laboratories.

June 5, 1975

Dr. John E. Mock
Office of Solar, Geothermal and Advanced Energy Systems
Energy Research and Development Administration
Washington, D.C. 20545

RE: ERDA's In-House Study on National Solar Energy Research Institute

Dear Dr. Mock:

You earlier requested Arizona input relative to the concept of the National Solar Energy Research Institute.

Pursuant to that request you will find a preliminary technical study group report from Arizona's Solar Energy Research Commission.

Hopefully this presentation and subsequent reports will be of assistance to your in-house study efforts.

Yours sincerely,

Bob Handy

Robert M. Handy
Executive Director
Arizona Solar Energy
Research Commission

THE

NATIONAL SOLAR ENERGY RESEARCH INSTITUTE

Comments

Opinions

Questions

Answers

The conversation reported on the following pages is both imaginary and real....imaginary in the sense that the two characters who speak are fictional....real in the sense that their words convey the essense of real debates being held now in many parts of our country by informed scientists and engineers concerned about the national solar energy development effort. We hope that you will find these inputs useful in your deliberations.

John: Good morning, Ted.....I'm glad I ran into you....
I've been wanting to ask you how your study committee session on the National Institute went yesterday...

Ted: It was a stormy session...there are strongly held positions on both sides of the issue....have you got a few minutes?... I'd like to fill you in on some of the debate and give you a synopsis of our preliminary findings.

John: Great! Let's do it before I get trapped in today's round of meetings; come on into my office and we'll make time right now. I'm very interested....have a seat.

Ted: Thanks.....

John: Well, what kind of a national solar energy research institute did the study group think we should have? Should we put up a new center, or convert one of our existing ones, or.....

Ted: Well, let me back up here to the beginning... the debate started out on a much more fundamental level.....the question was immediately raised, particularly by the non-governmental representatives, as to whether we even needed a national solar research institute at all!.....As they put it, ...

"the last thing in the world that we need is another federal laboratory."

John: Do they believe that our existing federal laboratories are a waste of money?

Ted: No, not at all....they completely agreed that our existing federal laboratories have made significant scientific contributions, but they make two points:

First, for solar energy to make a significant contribution to our energy supply, the necessary products must be commercialized as rapidly as possible, and

Second, our existing national laboratories.....

John: (Interrupting)...have never been very successful in terms of developing commercial products.

Ted: Yes, that's their point.

John: Ah yes, that's a significant observation. But, our federal laboratories have been productive. After all, they made major contributions to our nuclear development, our weapons programs.....look at what NASA accomplished.....

Ted: Yes, of course, no one disputes the fact that the national labs have done an excellent job of developing things which the government has needed and purchased. Their comment refers simply to the laboratories' ability to develop things which must go into widespread production in the civilian sector....they have little to show in that respect.

John: How was this ....."not another Federal Laboratory..." point of view greeted by the other members of the panel?

Ted: With howls of disagreement....that's when the controversy started, because on the face of it, this seemed to be a denial of the need for research in the solar energy program.

John: They didn't mean that, did they?

Ted: Of course not, the observations concerning the federal laboratory were not a denial of the need for research, but a statement of belief that the existing system of federal laboratories was not a very good model for getting our solar energy job done.....

John: I see....could you compress the discussion a little bit and tell me where they ended up.

Ted: Certainly. There was general agreement among all of the participants that an extensive research and development program was a necessary part of the solar energy effort, that part of it should be carried out by government, part by universities, and part by industry.... but, because of the need for rapid commercialization, we should not use the existing federal laboratory system as a model for the governmental portion of this effort.....

John: Well, what did they recommend?

Ted: It's outlined in the preliminary position paper you will be getting shortly, but to put it in a nutshell, they believe that the federal effort should be highly mission-oriented, and that it should report directly to the Division of Solar Energy Research, rather than being a separate entity in the ERDA structure.

John: Okay.....that sounds reasonable....thinking about it.... actually, that makes it fairly easy. If you consider all of the solar research programs we have underway now at universities, industry and existing federal laboratories, we practically have the whole institute function already in operation, at least in substance, if not in name....if we set up a headquarters operation here, give it responsibility for overseeing the programs already underway, and call it the National Solar Energy Research Institute..... that would about cover the definition you have given me...

Ted: That possibility was discussed, but eventually rejected for a number of reasons.

John: How so?

Ted: 1. Solar energy development at the moment suffers from an excess of zeal and lack of credibility.

2. The federal effort is, at the moment, highly fractionated. In order to get things moving rapidly, we have programs spread out all over the country, many of them somewhat duplicatory. Nearly all of these programs are being carried on in organizations that have other functions and responsibilities.....there was great concern expressed that solar energy development may be playing second fiddle to the main businesses of these.....

John: (Interrupting)....I know what you mean....ERDA is still being accused of being the AEC in disguise.

Ted: You're right, there are certainly those in the study group who believe that solar energy applications will not really advance on a broad front until we create a center dedicated exclusively to the problem, especially something on a scale comparable to some of the nuclear effort....there is considerable merit to their arguments.

John: I would like to avoid new bricks and mortar. Building laboratories is an expensive business...couldn't we accomplish that objective by converting one of our existing federal laboratories?

Ted: That's a good point, and was discussed at length at the committee session. First of all, it was observed.....and I believe correctly....that people are far more important to the success of the effort than bricks and mortar. The development and commercialization of solar energy products is a new problem, unlike any that the government has faced before and there were strong arguments presented that we should assemble a new team to tackle it rather than try to retread an established NASA or nuclear laboratory.

John: You try to explain that to OMB.....besides, I'm not sure that I agree with that position....it seems to me that the basic engineering science skills required have a lot in common. For example, thermodynamics, solid state physics, materials studies, mechanical engineering, fluid mechanics testing, etc.....

Ted: Yes, of course.....the basic science skills are the same. That is true of almost any program you can imagine. But that isn't the point.....the NASA and nuclear groups have been trained through many years of activity to service the needs of the federal government, or to put it another way, to serve one customer and one market....Uncle Sam. For the solar

energy program to be successful, however, we have to anticipate the needs of a million customers ranging all the way from the utilities, to builders, to the individual householder.

John: Yes, that's a crucial point, but if it is a more expensive approach I don't believe OMB or congress will buy it.

Ted: The OMB part, I believe, will turn out to be fairly simple. We haven't run the details yet, but I suspect that when we integrate the bricks and mortar costs over five to ten years, we will find that there is hardly any difference at all between the incremental cost of modifying and converting one of our existing facilities to starting from scratch. It's nice to have all the fancy machine shops and testing laboratories you find in a typical nuclear or NASA facility, but I'm not sure how vital they're going to be to a development operation that has to be as commercially oriented as the solar energy work.....But we have only touched on the highlights here. There's a lot more coming that will give you details as to how we think the institute should function and how it should be organized.

John: Okay, I'll look forward to it. But let me play the record back and see if I have picked up your major points:

1. ERDA should commission a national solar energy research institute, but along lines significantly different from the existing federal laboratories.

2. The purpose of this institute should be among others to:

   A. Do R&D work requiring skills and facilities not available elsewhere.

   B. Provide a built-in core of technical experts working actively in the field so that we can tell the good guys from the bad guys.....that is, evaluate, monitor and manage the technical aspects of the external programs, demonstrations and development projects which we must continue to sponsor.

3. In organizing the institute, we should see to it....

   A. That the programs of this institute have a highly commercial flavor and orientation because that is the nature of the problem that we have been called upon to solve.

   B. That we utilize this institute to pull together, at least organizationally, the fractionated efforts that we currently have....necessitated by the desire to get a quick start.....into a cohesive, mission-oriented set of programs.

C. That we plan on setting up at least the core effort and perhaps others as separate operations so that they can have the proper identification and focus on solar energy to the exclusion of other competing activities.....and that the operations, and the personnel chosen to staff the institute....have a highly commercial orientation.....

You didn't mention it explicitly, but I would presume from your remarks that there is no reason why an existing federal laboratory could not contribute to the work of the institute, if that was appropriate.

Ted: That is absolutely right...but their activities must not be independent, or we get back into the fractionization problem. Their work must be under the central control and direction of the institute and its staff. As a matter of fact, the concept evolved by the committee was centralization of mission management and de-centralization of program execution.....this is essential just to handle some of the climato-logical requirements which are vital to certain aspects of the solar energy work. For example, ocean thermal, wind, central power stations, etc.

John: Well, to let me finish up my summary.....I assume that you would also include in this institute function the central technical information collection and dissemination responsibility...the library function. It would also be a logical place to handle our international exchange programs, as well.

Ted: Yes, that's right.

John: Very good. I appreciate the briefing, and I suppose that I can look forward to a write-up from the committee fairly soon.

Ted: I have a rough draft of some of the answers to the key questions that we proposed to the academy with me now, which you can have, and we will have additional details for you in a couple of weeks.

B Z Z Z Z Z

John: That's Millie buzzing in to remind me that I have to get started with my morning meeting....but, I appreciate the briefing. Keep up the good work, and I'll read your draft tonight.

THE WHITE HOUSE

WASHINGTON

Monday, 10/18/ 5:50

MEMO TO: JMC

FROM: CAMERON

SUB: Schleede Telephone Conversation
Solar Energy -- NY State

Per my phone conversation with Schleede:

1. ERDA indicates that they never received a proposal to locate SERI in the State of New York.

2. NY officials tried to join with the New England consortion with the idea of locating the institute at Brookhaven, Long Island. The New England coalition rejected it.

3. ERDA put out a press release earlier this afternoon on the delay in the selection process.

Energy — Solar

J - Cavanaugh 9/3/76

Bob Seamans says he will review everything before any state is eliminated.

August 31, 1976 - POTENTIAL PROBLEM AHEAD

NOTE TO JIM CANNON

SUBJECT: ERDA DECISION NARROWING THE FIELD IN THE COMPETITION TO CREATE THE SOLAR ENERGY RESEARCH INSTITUTE(SERI) -- TO BECOME PUBLIC SHORTLY AFTER LABOR DAY

Jerri

You undoubtedly recall that ERDA issued in March 1976 a request for proposals (to arrive by July 15) from organizations wishing to create the Solar Energy Research Institute(SERI). At that time,ERDA indicated that the selection would be made in early December 1976.

ERDA received twenty(20) proposals -- and the desire to win is intense.

I just learned earlier today that ERDA's normal selection process results in the narrowing of the field before the most rigorous stages of evaluation (e.g., including site visits) begins. A public announcement is made identifying those that have met and those that have failed the first cut.

The first stage cut and the public announcement are now scheduled for next week (week of September 5) with the expectation that about 8 will survive. This means that there will be 12 unhappy competitors (with supporters) sometime next week.

In accordance with past practice, I'm seeking more information on:

- the specific timing of the selection and announcement.
- the full list of 20 competitors (but not the identity of survivors).

I have also asked the Assistant Administrator involved (Bob Hirsch) to suggest to Bob Seamans that he plan to notify you personally of the decision sufficiently in advance to prepare for adverse reactions. I will follow up on this with Seamans or his Executive Assistant.

Please let me know if you want additional information or action.

cc: Cavanaugh
Schleede

Energy

THE WHITE HOUSE

WASHINGTON

INFORMATION

1976 OCT 7 PM 2 34

October 5, 1976

MEMORANDUM FOR: JIM CANNON

FROM: STEVE McCONAHEY SGM

SUBJECT: Solar Energy Research Center Location

Throughout my travels, I have been approached by numerous governors, mayors and other officials on the question of where the Federal Government will locate the solar energy research center. These states are lobbying very strongly for this project and if a decision is made prior to November 2, it would be viewed very much in terms of Presidential politics. I do not know where the decision stands but wanted to alert you to its potential impact.

I should note that Governor Milliken is concerned that his state may be adversely considered merely because of it being the home state of the President and the desire to avoid any appearance of favoritism.

I suggest that Glenn Schleede keep you posted on the progress of this decision, in that it may be only with prior White House review.

cc: Glenn Schleede

Steve
NO decision until Dec.
Jim

10071

Schleede

THE WHITE HOUSE

WASHINGTON

INFORMATION

October 13, 1976

MEMORANDUM FOR: JIM CANNON

FROM: GLENN SCHLEEDE

SUBJECT: SERI SELECTION (Solar Energy Research Institute)

Please note the attached Q&A on SERI which indicates that ERDA will be announcing this Friday that 19 of 20 proposals will be evaluated further -- but that the final selection will slip from December 1976 until March 1977.

Attachment.

7-14 Why emphasis this now?

Schleede Energy

THE WHITE HOUSE

WASHINGTON

INFORMATION

October 13, 1976

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Attachment.

I-NY Why emphasis this now?

10/3/6

SOLAR ENERGY RESEARCH INSTITUTE (SERI)
(NOTE: Date for Selection has been Postponed)

Q. What are the chances of our getting the Solar Energy Research Institute that ERDA is setting up?

A. I wish that it would be possible to put a Solar Energy Research Institute in each state that wants one, but that would be unrealistic.

I am told by Bob Seamans, Administrator of the Energy Research and Development Administration (ERDA), that he has received 20 proposals from organizations wanting to serve as the manager-operator for the proposed new SERI, including the one that is undoubtedly of interest to you.

We all recognize that there is a great deal of expertise in this area -- both in the universities and in private industry -- that could help in achieving our goal of developing economical solar energy. But the responsibility for making the selection from among the 20 proposals rests with Dr. Seamans and ERDA.

I understand that ERDA planned to make a selection in December but has found that more time is needed to evaluate proposals -- with the result that a first selection won't be made until the spring of 1977.

BACKGROUND

- NOTE: ERDA will be announcing October 15 that 19 of the 20 proposals will be given further consideration -- and because of this large number -- the date for final selection has been slipped from December 1976 to March 1977.

- One of the two proposals from New Mexico is being dropped because it did not meet even the minimum ERDA requirements.

- Proposals have been received by ERDA for locating SERI in:

Arizona	Colorado
California	Michigan
Georgia	Washington, D.C.
New Mexico (2)	Minnesota
Pennsylvania (2)	New Jersey
Utah	Nebraska
Indiana	New England States
Florida	Texas (2)
Alabama	

GRS
10/13/76