american national standards institute, inc.
1430 broadway, new york, n.y. 10018
(212) 354-3300

SCSE 52
May 2, 1980

MINUTES

ANSI Steering Committee on Solar Energy Standards Development

April 29, 1980

1. Call to Order

The meeting was called to order at 9:15 a.m. by Chairman Henry Wakabayashi at the Forrestal Building, Room GE-063, Washington, D.C. 20585. The Chairman requested those present to introduce themselves; the Secretary requested that attendance cards be filled out and returned to him.

Members Present

Representative	Representing
Berg, R.L.	IEEE
Bowen, J.C.	SEREF
Brown, P.G. (alt)	ASTM
Butt, S.H.	SEIA
Evans, R.J. (alt)	ARI
Fayed, John (alt)	NEMA
Gordon, H.T.	AIA
Higham. T.	IAPMO
Moore, D.C.	HUD
Newton, A.B.	ASHRAE
Pellish, D.M.	DOE
Reaves, F.	MCAA
Stratton, J.H.	SMACNA
Waksman, D. (alt)	NBS
Weinstein, A.	ARI

DISCLAIMER

Others Present

Block, D.L.	SPICC
Dunlop, J.R.	SPICC
Lund, K.G.	NRC of Canada
Millman, G.	NUS Corp.
Nuss, G.R.	SERI
Schroeder, J.R.	ASTM
Shorey, J.	CRR
Straub, F.C.	NSHCIC

Members Absent

Ashworth, R.A.	AGA
Moore, C.W.	ASME
Yazujian, A.D.	AAMA
MacKenzie, J.	CAN
Carter, T.H.	CABO
Gill, A.S.	GSA
Kirkpatrick, D.L.	ISES
Renault, Jr., G.E.	MHI
Hankins, J.D.	NASA
Schmitt, R.F.	NAHB
McGinnis, R.	PV Committee
Schram, C.B.	UL

2. Approval of Agenda for April 29, 1980 (SCSE 51)

The agenda was approved as submitted by the secretary.

3. Approval of Minutes of Jan. 29, 1980 (SCSE 50)

Mr. Waksman indicated that Mr. Dikkers had some comments on the minutes of the last meeting but had not written them down. Upon receipt they will be included herein as Attachment 1.

The minutes of the previous meeting were approved as submitted by the secretary.

4. Chairman's Remarks

4.1 The Chairman stated that he had planned to retire from NCSBCS in June of 1980. However, an arrangement is being made with the Board of Directors of NCSBCS to employ him on a consulting basis till the end of the year, permitting him to complete his term of office with the SCSE.

4.2 The need for reorganizing the SCSE has become more pressing recently. The issue will be explored more thoroughly under agenda item 9, New Business.

4.3 Because of activities at the state and local level, there is a need for acceleration of standards development in solar heating and cooling, photovoltaics, and solar thermal.

4.4 With the establishment of an ISO/TC on Solar (Attachment 2), the issue of the international activities of the SCSE comes to the fore. This will be discussed under agenda item 8.

At this point, the Chairman turned over the chair to the Secretary because of a hearing impairment.

5. Report of the Secretary

5.1 Membership Update

The Secretary reported the following changes since the last meeting:

Mark Menzer was appointed alternate for AGA.
Guy Wilcomb was appointed alternate for SEIA.
Dr. David Redfield was appointed alternate for PV Committee.
National Research Council of Canada is entered on the information mailing list (Robert Aldwinckle).
Canadian Standards Association is entered on the information mailing list (Zain Shah).

5.2 Correspondence

A letter was received from the Florida Solar Energy Center outlining the formation of a national coordinating group involving the states: Solar Public Interest Coordinating Committee (SPICC). This group requested participation on the Steering Committee (Attachment 3).

C.B. Schram wrote that UL1279 is under final review and looks forward to submittal to ANSI this year (Attachment 4).

The chair called on K.G. Lund (National Research Council of Canada) for a brief presentation on NRCC's interest in solar. Mr. Lund explained that NRCC is responsible for research on solar in Canada. This activity was initiated in 1978. They funded the drafting of a Solar Collector Standard by the Canadian Standards Association (CSA). A draft was published in Aug. 1979 and issued as a preliminary standard. There is a standard committee for solar domestic hot water and a technical committee on flat plate collectors. Mr. Lund is with us to learn of our activities so as to minimize or avoid incompatibilities between Canadian and American standards covering the same technical areas.

The chair then asked Dr. Block (Florida Solar Energy Center)to speak about the Solar Public Interest Coordination Committee (SPICC). Dr. Block stated that about one year ago, a number of state energy agencies decided to form an information exchange group. Florida had a solar activity going back 4 years, and California, 3 years. A number of other states also have energy and solar programs. Aside from information exchange, the group is interested in coordination of solar testing and certification programs and development of reciprocity agreements between state and non-federal agencies. Initial work focuses on solar collector and system testing, standards, and certification. Dr. Block provided 3 documents which describe SPICC and its recent activities:

a) Program Plan, Dec. 1979, of SPICC
b) Minutes of Meeting of SPICC, April 10-11, 1980
c) Mailing list of members

These are included herein as Attachment 5.

As part of its information and coordination objectives, Dr. Block requested membership on the Steering Committee.

It was moved and seconded, that:

The ANSI Steering Committee on Solar Energy Standards Development is in favor of the addition of the Solar Public Interest Coordinating Committee as a voting member of the Steering Committee and recommends that the ANSI Executive Standards Council approve of this addition.

The Motion was passed.

6. Report on Status of Solar Collector Rating Standard

Mr. Newton reported that the final draft of the standard is in the approval cycle of SEIA and ARI. Mr. Butt stated that the rating program will be administered by a separate corporation with members from SEIA and ARI (Attachment 5a). SPICC has requested membership on the Board of the proposed organization. A subcommittee of SPICC is presently reviewing the joint SEIA/ARI document. It is anticipated that incorporation will be accomplished after the ARI vote, about June, 1980. Mr. Pellish noted that with the achievement of a joint document and the formation of an administering body, a major breakthrough in the solar collector field had been accomplished. Compared to the situation one year ago, progress has been excellent. He stated that the voluntary system works well.

A number of comments were made:

- A single rating standard should be available in the third quarter 1980.
- Previously tested and approved collectors will probably be "grandfathered".

7. Report of the Subcommittee on International Activities

Mr. Fayed reported on the meeting of the subcommittee which took place on March 10, 1980 (minutes included herein as Attachment 6). While the subcommittee recommended that the U.S. seek the secretariat for the ISO Solar Technical Committee, ISO awarded the secretariat to Australia (see Attachment 2). As a consequence of detailed discussions, the subcommittee recommended its own disbandment and the reorganization of the SCSE to include two international subcommittees. This recommendation was embodied in a Draft Proposal included herein as Attachment 7, copies of which were distributed to everyone present.

Mr. Pellish stated it would be advantageous to retain an SCSE International Subcommittee to deal with all international matters and serve as the international activities coordination center for the Steering Committee. The Chairman tabled further discussion for a more thorough review of this issue under agenda item 9.

It was moved and seconded, that:

> The report and draft proposal of the Subcommittee on International Activities be accepted.
>
> The Motion was passed.

8. Reports

8.1 Standards Development Status Report

The Secretary noted that little new information on status of standards in development is being received. He suggested this issue to be considered in the SCSE reorganization. Notices will go out to the standards writing organizations to update information in the current status report. Mr. Waksman stated that an update of projects to be initiated is in order.

8.2 Model Solar Document

Mr. Pellish reported that the 3rd draft of the CABO Model Solar Document has been completed. This draft has been submitted for ANSI public review and comment. Comments from this review will then be considered and it is expected that the final draft will be finished in July 1980. Mr. Pellish and Mr. Newton congratulated CABO on this achievement.

Mr. Newton noted Mr. Pellish's special contribution to completion of the Model Solar Document. He also noted that Mr. Pellish has been promoted to another responsibility and indicated that the Steering Committee could ill afford to lose Mr. Pellish.

Mr. Newton moved, and he was seconded, that:

The ANSI Steering Committee on Solar Energy Standards Development request that the Department of Energy retain Mr. Pellish as its representative on the Committee and continue him in this area of responsibility.

The Motion was passed.

Mr. Newton offered to draft a letter on behalf of the Steering Committee.

8.3 Report on Consumer Participation

The Secretary reported that the ANSI Consumer Council had not completed action on this issue. Therefore, he had prepared a working paper for use by the Ad Hoc Committee on Consumer Representation to be used by them in developing recommendations to the Steering Committee. This working paper had been mailed out April 23 to members of the committee; the Secretary will be assisting the committee in its work.

Ms. Shorey reported that Susannah Lawrence was no longer with the Center for Renewable Resources and that she was taking Ms. Lawrence's place.

9. New Business

The Chairman asked Mr. Nuss to make a brief presentation on solar thermal activity at SERI. Mr. Nuss pointed out that this activity is funded by DOE. The present objective is to acquire information on codes and standards requirements for solar thermal and initiate standards development within the voluntary consensus system.

Mr. Millman (NUS Corp) reported on work in solar thermal contracted to NUS by SERI. The first objective is to identify and define solar thermal systems, subsystems, and components. The second objective is to identify standards requirements:

a. Presently applicable standards
b. Present standards that can be modified
c. New standards

Solar thermal design work, at the present time, is mainly done by aerospace people with little familiarity with design codes and standards, thus, the relevancy of the NUS project.

With this background on another solar technology, the Chairman opened discussion on the issue of reorganizing the SCSE. The Secretary distributed a working paper on a reorganization plan for the SCSE to those present (Attachment 8; see also Attachments 6 and 7). A number of comments were made:

a. Not all solar technologies should be considered for the Steering Committee. For example, biomass and bioconversion are probably not appropriate for this group.

b. We must avoid the danger of standardization running ahead of technology.

c. A question was raised concerning the function of the SCSE. The Answer: The ANSI/SCSE is concerned with domestic and international standards for defined solar technologies. ANSI/SCSE should be considered the central focus, information exchange, and coordination body for solar standards development in the United States.

Mr. Butt moved, and he was seconded, that:

The Chairman should appoint an Ad Hoc Committee to study reorganization of the ANSI Steering Committee on Solar Energy Standards Development with advice to the committee to consider subdivisions by solar technology and to consider measurement and certification standards.

Mr. Pellish moved an amendment, to Mr. Butt's motion, and he was seconded, that:

The Ad Hoc Committee also be advised to consider a single mechanism to deal with international activities for the SCSE as a whole and that the subdivisions mentioned by Mr. Butt be on a functional as well as a technical basis.

The amendment of Mr. Pellish was passed.

The Motion of Mr. Butt was passed.

In view of the time necessary for the Ad Hoc Committee on Reorganization to meet and complete its work, Mr. Butt moved and he was seconded, that:

With respect to the draft proposal submitted by Mr. Fayed on behalf of the Ad Hoc Committee on International Activities (Attachment 7); specific recommendations 1 and 2 be accepted on an interim basis, the Secretary carry out recommendations 3,4, and 5 as required, pending the report of the Ad Hoc Committee on Reorganization.

The Motion was passed.

The Chairman appointed the following to the Ad Hoc Committee on Reorganization:

David C. Moore, HUD, Chairman
John Fayed, NEMA
Gene A. Zerlaut, ASTM (DSET Laboratories)
Alvin Newton, ASHRAE
Gary R. Nuss, SERI

10. Date and Location of Next Meeting

The next meeting of the Steering Committee will take place on Wednesday, July 23, 1980 in Washington, D.C., probably at the Forrestal Building.

11. Adjournment

The Chairman adjourned the meeting at 11:45 a.m.

Respectfully submitted,

Irving G. Young
Secretary, SCSE

ATTACHMENT 1 TO SCSE 51

COMMENTS BY MR. DIKKERS ON THE LAST MINUTES (SCSE 50)

Mr. Dikkers had a number of comments on the "Status Report of Solar Standards" (SCSE SR-2, Feb. 20, 1980) included in the SCSE Minutes of Jan. 29, 1980 (SCSE 50) as Attachment 8. These comments were conveyed to the Secretary by phone (5/16/80) and are paraphrased here.

1. Status Summary: The SEIA standard is an approved standard and should be listed as such.

2. The column headed "STD's APPROVED" does not indicate which body approved the standard. It is recommended that there be two columns: 1) APPROVED BY SDO; 2) APPROVED BY ANSI.

3. It is recommended that a list be prepared of the staff contact (name, telephone number) for each SDO so that the status of each standard can be explored in detail with the staff or the working group chairman if necessary.

4. Provision should be made to update the original program plan (NBSIR 78-1143A, June 1978), especially the identification of new needed standards. It is suggested that a standing committee of SCSE be formed to take this on as a permanent responsibility.

TO SCSE 51 ATTACHMENT 2 to SCSE 52

PRESS RELEASE

27 March 1980
Ref. 443

New ISO technical committee : solar energy

A new technical committee on solar energy - and its thermal applications - will be established in ISO, the International Organization for Standardization.

Because of energy shortages and rising fuel costs, solar energy is the focus of attention from scientists and technologists all over the world. The rapid development of solar energy and the growth of the solar industry have created an extreme diversity in the type and the quality of solar products introduced on the market. Consequently, there is a need for standardization, at the international level.

The initiative for this new technical committee comes from the ISO member body for Australia (SAA, Standards Association of Australia); and SAA has also offered to take on the secretariat for the new committee.

- "Increased use of solar energy for heating, cooling and air conditioning offers the scope for worthwhile reductions in the rate of use of fossil fuels", notes SAA in its motivation for the new committee. "Both developed and developing countries are now pursuing development programmes related to solar heating etc., and some significant standards are already emerging. Preparation of ISO standards will minimize duplication of effort and encourage wider utilization of solar energy for these purposes."

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Postal address Case postale 56 | Office address 1, rue de Varembé | Telephone | Telex 23 887 ISO CH

A basic task for the new committee will be to develop standard test methods to determine thermal performance and "to enable equipment to be rated on a basis that will allow ready comparisons". This means, in practical terms, that customers will be able to compare products regardless of where they are produced or sold, all over the world.

The committee will also establish technical specifications for the design, construction and installation of solar equipment, related to safety and durability.

Enormous potential

The work of the new committee will be of immediate interest not only to the industrialized countries but also - and perhaps especially - to the developing world.

Most developing countries are more richly endowed with sunlight than their industrial counterparts. An example : if five percent only of the solar energy falling on Middle East and North African countries was made use of, this would give the equivalent of 800 billion barrels of oil every year.

Furthermore, the population in developing countries tend to be dispersed enough to facilitate the exploitation of decentralized energy resources. According to Mr. Denis Hayes, senior researcher with the Worldwatch Institute, Washington, USA, about half of the people in Latin America, 70 % in South Asia and 85 % in Africa still live in rural areas : "Without strong rural development programmes based on decentralized energy sources, urban migration will become torrential. Solar technologies could promote development in previously ignored rural areas where it is most needed."*

At least 30 countries

At least 30 countries are expected to participate in the new ISO committee on solar energy; among them all the major producers of equipment related to solar energy.

At present, the scope of the committee is restricted to thermal applications of solar energy. Non-thermal applications (electricity, water desalination) as well as high temperature applications (chemical reactions) are not included in the proposal, as these are not yet established on a commercial basis, being still largely at experimental stages. The technical committee may subsequently expand its scope to include these areas at some future date.

END

* "The solar short-cut", article in the Business Edition, Development Forum, United Nations, Geneva, Switzerland.

ATTACHMENT 3 To SCS
S2

FLORIDA SOLAR ENERGY CENTER

300 State Road 401, Cape Canaveral, Florida 32920, Telephone: (305) 783-0300

State University System of Florida

February 5, 1980

Mr. Henry S. Wakabayashi
ANSI Steering Committee on Solar Energy
Standards Development
ANSI
1430 Broadway
New York, NY 10018

Dear Mr. Wakabayashi:

As a result of discussions between representatives of various states and TVA, it was concluded that a national mechanism was needed to provide a forum to discuss various common issues among these groups.

These discussions have now finalized into the formation of a national coordinating group entitled: Solar Public Interest Coordination Committee (SPICC). The group held its initial meeting on January 31, 1980, at which representatives were present from the states of Alabama, Arizona, California, Colorado, Connecticut, Delaware, Florida, Maine, Massachussets, Michigan, Minnesota, New Mexico, New York, Tennessee, Texas and from TVA.

The general objective of the Solar Public Interest Coordination Committee is to establish a mechanism for voluntary exchange of information, coordination of solar testing and certification programs and development of reciprocity agreements between state and non-federal agencies. Initial work will focus on solar collector and solar system testing, standards and certification. Other programs affecting public agencies will be examined as required and needed by the SPICC.

At the initial meeting, the group discussed solar energy standards and their applicability to the state programs. From this discussion it was concluded that state and local government are the bodies that implement standards and, it would be very desirable if the SPICC could represent this group on the ANSI Steering Committee on Solar Energy Standards Development.

Thus, we were instructed to write you with the purpose of requesting our participation on your steering committe.

If you desire further information, please do not hestitate to contact either of us.

Sincerely yours,

David L. Block, Ph.D., P.E.,
Director
Florida Solar Energy Center

Ronald D. Doctor, Commissioner
California Energy Commission

DLB:NM:ca

cc: Solar Public Interest Coordination Committee Members

NCS BCS **National Conference of States on Building Codes and Standards, Inc.**
1970 Chain Bridge Road, McLean, Virginia 22102 (703) 790-5750

March 5, 1980

Dr. David L. Block
Director
Florida Solar Energy Center
300 State Road 401
Cape Canaveral, FL 32920

Dear David:

This is in response to your letter of February 5, 1980, cosigned by you and Dr. Ronald D. Doctor, advising us of the formation of a national coordinating group to be identified as the Solar Public Interest Coordination Committee. You also advised us of SPICC's desire to represent a coalition of states and TVA on the ANSI Steering Committee on Solar Standards Development.

It is my personal opinion that it would most certainly be in the best interest of the ANSI Steering Committee to have the Solar Public Interest Coordination Committee as an active member in dealing with public interest, consumer and small business issues as well as issues pertinent to various state and local jurisdictions concerning solar standards.

In view of the foregoing, the application for SPICC membership on the Steering Committee on Solar Energy Standards Development will be scheduled on the agenda for the next meeting. After approval by the members of the Steering Committee, the request for membership will be forwarded to the ANSI Executive Standards Council which approves the applicant as a full voting member.

I cordially invite you and Ron to our next meeting which will be held in Washington, D.C. on April 29, 1980. Details concerning the meeting location and the time will be sent to you if either or both of you can participate.

We appreciate your interest expressed in participating in the ANSI Solar Energy Steering Committee and

we look forward to hearing from you concerning your attendance at our upcoming April meeting.

Sincerely,

Henry S. Wakabayashi
Chairman
ANSI Steering Committee
on Solar Energy

HSW:nsf

cc: Dr. Irving Young
David Pellish

ATTACHMENT 4 to SCSE 5

UNDERWRITERS LABORATORIES INC.
333 PFINGSTEN ROAD · NORTHBROOK, ILLINOIS 60062

an independent, not-for-profit organization testing for public safety

April 7, 1980

Mr. Irving G. Young
American National
Standards Institute
1430 Broadway
New York, NY 10018

Subject: Meeting of Steering Committee on Solar Energy Standards Development

Dear Mr. Young:

I regret I will be unable to attend the April 29 meeting of the SCSE. That is the date for meetings of several of the UL Engineering Councils, just preceding our Annual Meeting, and these meetings will involve many of the UL staff, in addition to myself.

The comments received on the November, 1979 draft of the proposed UL Standard for Solar Collectors (UL1279) are being reviewed. I anticipate that a fourth (and hopefully final) draft will result. The fourth draft will be sent to those who reviewed the third draft, for further review. We still hope to be able to adopt and publish UL1279 this year, and plan to submit it promptly to an ANSI Canvass, for submittal to ANSI as soon as possible.

Very truly yours,

C. B. SCHRAM
Managing Engineer
Heating, Air-Conditioning
and Refrigeration Dept.

CBS:BEA

ATTACHMENT 5 to SCSE 52

SOLAR PUBLIC INTEREST CORRDINATION COMMITTEE

Program Plan
(DECEMBER 1979)

Introduction: In April 1979 a meeting was held in Washington D. C. between state representatives and a representative from TVA. These representatives reviewed various common issues among themselves which included solar collector testing and certification and solar system testing and certification. They concluded that a national mechanism was needed to provide a forum to discuss these issues and activities. Recognizing that initial funding for organization and for agency participation would be a problem, the Florida Solar Energy Center (FSEC) was selected by the group to prepare a proposal requesting funding assistance.

As a result, the Department of Energy has provided intitial funding assistance by contracting with FSEC for a project to develop a national coordination group entitled: Solar Public Interest Coordination Committee (SPICC). The principal investigators for the project are Dr. David L. Block, FSEC, and Dr. Ronald D. Doctor, Commissioner on the California Energy Commission.

General Objective: The general objective of the Solar Public Interest Coordination Committee is to establish a mechanism for voluntary exchange of information, coordination of solar testing and certification programs and development of reciprocity agreements between state and non-federal agencies. Initial work will focus on solar collector and solar system testing, standards and certification. Other programs affecting public agencies will be examined as required and needed by the SPICC.

Program Tasks:

I. Establish Solar Public Interest Coordination Committee

1. Conduct initial meeting of principal investigators (November 15, 1979, Washington, D. C.).

2. Establish Interim Planning and Organization Committee (November 15, 1979, Washington, D. C.).

3. Finalize initial meeting agenda and participants (December 11, 1979, Washington, D. C.).

4. Write letters to initial participants describing SPICC and its functions and requesting their participation (December 31, 1979).

5. Hold initial organization meeting on January 31, 1980 at the Florida Solar Energy Center, Cape Canaveral, Florida. Initial meeting will cover items on attached meeting agenda.

6. Set next meeting date and location and future plans of SPICC (Tentatively set for May 1980 and September 1980).

7. Plan future SPICC activities (June - September 1980).

II. Investigate and develop guidelines and/or reciprocal-type agreements for testing and certification of solar collectors.

1. Establish Ad Hoc Solar Collector Committee to perform work on task (November 15, 1979).

2. Designate lead people to draft guidleines and/or reciprocal agreements (November 15, 1979).

3. First meeting of Ad Hoc Committee to discuss draft and attempt consensus agreement (December 11, 1979).

4. Develop draft of consensus collector testing procedure using Florida and California requirements (December 1979 - January 1980).

5. Present consensus document to SPICC for initial review at its first meeting (January 31, 1980).

6. Discuss procedures for adoption of consensus agreement and allow for further investigation of problem areas (February 1980 - April 1980).

7. Present to SPICC for formal adoption (May 1980).

Note that items to be considered by the Ad Hoc Committee are:

1. Areas of agreement and disagreement between agency/state programs.

2. The cost and difficulty to manufacturers of complying with developed agreements.

3. Consensus test standards, (ASHRAE 93-77), etc), traceability and correlation of test results, qualification of test facilities and sampling procedures.

III. Investigate and develop guidelines and/or agreements for solar system testing and certification.

1. Establish Ad Hoc Solar System Committee (November 15, 1979 - December 11, 1979).

2. First meeting of Ad Hoc Committee to discuss concepts, programs, and make recommendations for further action (January 30, 1980).

3. Present initial committee finding to SPICC (January 31, 1980).

4. Hold second meeting of Ad Hoc Committee to continue deliberation. Set goals to be achieved (April 1980).

5. Present system goals to SPICC (May 1980).

6. Hold Ad Hoc Committee meetings or develop documents for SPICC (June - September 1980).

7. Present results to SPICC (September 1980).

IV. Investigate and begin development of other SPICC programs.

1. Define other programs to be addressed by SPICC (January 31, 1980).

2. Establish ad hoc committee(s) to investigate areas and make presentation to SPICC (February - May 1980).

3. Present inital findings to SPICC (May 1980).

4. Conduct committee on task force meetings. Define future activities (June 1980 - September 1980).

5. Present results to SPICC (September 1980).

Management Structure

This project will be administered by the Florida Solar Energy Center (FSEC). Principal investigators for the contract would be Dr. David L. Block, Director of FSEC, and Dr. Ronald Doctor, Commissioner of the California Energy Commission. Dr. Block will take responsibility for preparing all reporting required by DOE and will prepare the annual report of SPICC activities for the participating bodies and for DOE. Dr. Doctor will participate as co-principal investigator in organizing the SPICC activities, in determining the general course of action, and will review all reporting.

FSEC, as contract administrator, will manage the budget for the project which will include travel reimbursement of participants and the investigations by the ad hoc study committees as needed.

With regard to the ad hoc study committees, Dr. Doctor will be consulted as to participants and reimbursement for work performed.

All participants' travel paid by this contract will follow the rules for travel procedure established by the State of Florida.

TIME SCHEDULE

TASKS	1979 Nov.	Dec.	1980 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	1980 Sept.
I. Establish SPICC											
1. Conduct initial meeting	Δ										
2. Establish Interim Planning/ Organization Committee	Δ										
3. Finalize initial agenda/ participants		Δ									
4. Write letters		Δ									
5. Hold initial organization meeting			Δ								
6. Set next meeting date/location							Δ				Δ
7. Plan future SPICC activities								Δ———			Δ
II. Investigate/develop guidelines for testing/certification of solar collectors											
1. Establish Ad Hoc Solar Collector Committee	Δ										
2. Designate lead people	Δ										
3. Hold initial meeting		Δ									
4. Develop draft of testing procedure		Δ———	Δ								
5. Present consensus to SPICC			Δ								
6. Discuss procedures for adoption				Δ———		Δ					
7. Present results to SPICC							Δ				
III. Establish/develop guidelines/agreements for testing/certification of systems											
1. Establish Ad Hoc Solar System Comm.	Δ										
2. Hold initial meeting			Δ								
3. Present finding to SPICC			Δ								
4. Hold second meeting						Δ					
5. Present system goals to SPICC							Δ				
6. Hold ad hoc committee meetings or develop documents for SPICC								Δ———			Δ
7. Present results to SPICC											Δ

Time Schedule, Cont.

TASKS	1979 Nov.	Dec.	1980 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	1980 Sept.
IV. Investigate/begin development of other SPICC programs											
1. Define other programs			Δ								
2. Establish ad hoc committees to investigate areas & present to SPICC				Δ	———	———	Δ				
3. Present initial findings to SPICC							Δ				
4. Conduct committee meetings								Δ	———	———	Δ
5. Present results to SPICC											Δ

Donald S. Block

MINUTES

Meeting of

SOLAR PUBLIC INTEREST COORDINATION COMMITTEE

April 10 and 11, 1980
Jack Tar Hotel
San Francisco, California

1. Present:

SPICC Members

D. L. Block, Chairman	Florida Solar Energy Center
O. J. Nussbaum	Alabama Solar Energy Center
J. F. Warnock	Arizona Solar Energy Commission
Dale Trenschel	California Energy Commission
Greg Stutzman	California Energy Commission
Ron Doctor	California Energy Commission
Peggy Wrenn	Colorado Office of Energy Conservation
Michael Sartori	Connecticut Energy Division
John A. Mancus	Delaware Energy Office
James D. Roland	Florida Solar Energy Center
Rick McGinley	Maine Office of Energy Resources
Jeffrey M. Brauer	Massachusetts Executive Office Energy Resources
Tom G. Heck	Michigan Energy Administration
John R. Dunlop	Minnesota Energy Agency
Dennis M. O'Malley	New Jersey Department of Energy, Office of Alt. Tech.
Edward Lumsdaine	New Mexico Solar Energy Institute
John Paul Reese	New York Energy Office
Glen T. Chinery	Tennessee Valley Authority
Eugene W. Edmunds	Tennessee Energy Authority
John A. Carlson	Texas Energy Office
John J. Neville	Wisconsin Department of Industry

Guests

Sheldon H. Butt	SEIA
Robert J. Evans	ARI
David M. Pellish	DoE
Al Newton	ASHRAE/ANSI
Gary Nuss	SERI
Charles B. Schram	UL
Elmer Streed	NBS
Guy Wilcomb	SEIA

2. Meeting called to order by D. Block at 9:15 a.m. and guests introduced, along with two new members from states of New Jersey and Wisconsin.

3. An updated roster of members and additional agenda items were handed out.

4/2-4/80

4. Dave Block gave a report of activities since our last meeting, with the following major activities:

   - SPICC was invited to sit on ANSI steering committee on solar standards.
   - John Dunlop will represent SPICC on the ANSI Committee (no objections offered).
   - Dr. Fran Wessling will be SPICC representative to the Model Solar Building Committee.

5. Presentations and discussion included:

   - Sheldon Butt's presentation on SEIA's Rating Standard and Directory of Certified Collectors.
   - Bob Evans' presentation on ARI Solar Collector Certification Program (910-80).
   - Joint presentation on proposed joint program of ARI and SEIA, projected for completion this summer or fall.
   - Discussion of proposed application standard to augment ARI/SEIA certification program with additional information for system sizing in various geographic locations.
   - Extended discussion of differences in requirements, costs, etc., between SEIA, ARI, SEIA/ARI Joint Program, and California and Florida certification programs.
   - Elmer Streed presentation on NBS testing procedures and results (conclusions and recommendations given to David Block to reproduce and attach to minutes).
   - Chuck Schram's presentation on UL draft Solar Product Safety Standards (1279) now out for comment on the third draft (passed out copies to committee). UL 1279 is expected to be adopted by ANSI as an American National Standard, limited to manufactured collectors, primarily addressing safety and structural concerns.

6. A discussion of the draft documents which were quickly reviewed at the SPICC meeting in Orlando was next on the agenda. Dave Block supplied extra copies of these documents and the comments that had been submitted on them. He began the discussion with asking that the committee exclude rating from the discussion of these documents so as to simplify and speed up the process (rating discussion reserved for next day). Major conclusions reached in this discussion, by vote on each item, included:

   In the draft titled "Test Methods and Minimum Standards"

   -- Section 2(a) should call attention to need for safety provisions and the fact that UL is drafting such (also referenced in Model Solar Code Document).

   -- Section 3 should spell out acronyms and reference Section 7 where the address and phone numbers of organizations are listed.

-- Section 6.0 underwent major revisions to reflect the committee's feeling that pre-exposure thermal performance testing was unnecessary if adequate durability inspections were provided, including disassembly and final inspection of the collectors. These changes in the draft document are:

Drop (d) under 6.0.
Drop (b) under 6.0 and substitute a static pressure text.
Move (c) between (h) and (i).

Discussion of whether to add a freeze test for drain down and drain back and/or all types of collectors resulted in a decision to ask the Ad Hoc Collector Subcommittee to draw up a statement on freeze testing, based on or elaborating on ARI Winter Soak test.

-- Section 6.8 on disassembly and final inspection will be changed by the Ad Hoc Collector Committee upon receiving from Elmer Streed (NBS) a list of criteria and recommended additions/changes.

-- On Section 3.18, the Ad Hoc Collector Committee was directed to work on the problem of sizing criteria for defining "model" so minor changes in size won't require retesting; subcommittee should give some criteria like a 10% computer simulated deviation suggested by Ed Lumsdaine to provide for non-arbitrary decisions about what constitutes a new model.

7. The question of who does testing and certification was discussed at great length. Three options were identified:

1. Industry (SEIA/ARI) with state participation.
2. Federal government.
3. Some states (like California and Florida) with reciprocity between states.

A straw vote favored the first option with only one dissenting vote.

Respectfully submitted,

Peggy Wrenn

Peggy Wrenn

8. The Committee was called to order on April 11 at 09:15 by Chairperson David Block.

9. David Pellish Endorsement: Dave Pellish was requested to leave the meeting for a closed session of the committee. During his absence, the SPICC committee voted unanimously to adopt the following resolution:

"The Solar Public Interest Coordinating Committee has been very pleased with the support given to us by David Pellish, and would prefer to have him remain as the SPICC contact person within DOE."

10. States participation within SEIA/ARI was discussed.

(1) Items which need to be considered:

Form of Participation

Guidelines for Lab Accreditation

Acceptability of University Laboratories as Testing Laboratories

Fees (Fixed Fee, Annual Fee, Royalties)

Subsidies to Small Manufacturers

Labels (State, National, SEIA)

Site-built Systems

(2) The consensus of the Committee was clearly to not establish an independent non-profit organization created by the states to administer the certification program.

(3) Sheldon Butt discussed the role of the Technical Compliance Committee of SEIA. He announced that a non-profit organization was being established by SEIA and ARI to administer the Solar Certification Program. The committee felt that if SPICC is to participate in the SEIA/ARI certification procedure, SPICC membership on the board is mandatory. After considerable discussion, the following resolution was unanimously adopted:

"The Solar Public Interest Coordination Committee shall be represented on the board of the non-profit organization with as many members as those who represent industry."

11. (1) Certification Label: It was the feeling of the Committee that the use of a State label in addition to the original certification label should be an option for the states.

(2) The committee felt that the entire results of the thermal performance test report must be made available to the states.

(3) It was also felt that it is not necessary to be given the construction details in every case, but that the individual states should have access to that information. Perhaps a committee or member of SPICC can be appointed to distribute the construction details, in order to avoid duplicity of each individual state requesting the same information from the manufacturer.

(4) One issue which needs to be addressed is the fact that once a state agency receives the construction details, it is normally public information. Specific provisions need to be established to maintain the confidentiality of proprietary information.

12. Fee Schedule: Opinions on the fee schedule appeared to vary widely. Therefore, David Block suggested that members of the committee who had strong feelings about the fee structure should send their concerns in writing to him, and the comments would be summarized and distributed for further consideration at a later date.

13. Small Manufacturers: Though members of the committee were concerned about the effect of certification on small businesses, it was felt that other mechanisms, such as the Small Business Administration, should be used to assist those companies, and no special consideration needs to be made in the certification process itself.

14. Collector Rating

(1) Peggy Wrenn, as Chairperson of the Ad Hoc Rating Committee, collected samples of all known existing documents on solar collector rating procedures. A copy of her report was distributed to committee members. The need for a consensus on rating system is accentuated by the Residential Conservation Service (RCS), which also requires that a rating system be established. It is essential that the rating system adopted by all national concerns be consistent.

(2) Al Newton, as representative of ARI, reported on the development of the ARI/SEIA rating scheme. The main purpose of a rating system is to be able to communicate the comparative performance of a solar collector to the non-professional. It is therefore important to have the technical information in a form which can be compared directly with other collectors and the thermal requirements of the application itself. Al described some of the key features of the ARI/SEIA rating system.

(3) Rick McGinley asked that we clearly state that there is no direct correlation between the numbers in the collector rating with the annual heat output of a collector in a particular system.

(4) Peggy Wrenn re-emphasized the fact that RCS labels must use the same information in developing their rating statements. Therefore, the RCS needs the input of the SPICC position on rating systems.

(5) Sheldon Butt submitted that there are two required sets of numbers for the SEIA/ARI rating procedure: the results of the ASHRAE 93-77 testing; and a simple number to compare the ASHRAE data among collectors. He emphasized that the only purpose of the simple number was to protect the consumer from misrepresentation of the thermal performance of a collector. Peggy Wrenn indicated that the impact will be much broader, including financial institutions, government agencies, insurance companies, etc.

(6) Many members of the committee felt that a technical subcommittee needs to be created to evaluate the rating procedure. However, the Ad Hoc Rating Committee was left in its current form, with the mandate to continue to coordinate the study of rating issues.

(7) The following items were determined to be the responsibility of the rating committee for future operations:

a. Review/coordinate development of application manual.

b. Review ARI/SEIA rating method and technical backup calculations.

c. Review the activity of all states in the area of rating systems for RCS.

d. Identify any additional needs that the states may have in addition to the ARI/SEIA procedure.

e. Ed Lumsdaine will join the committee.

15. Application Manual: Al Newton reported on the progress of the Systems Application Manual being developed. The Systems Application Manual, when developed, will supply the link between the collector efficiency curve and the system output for a designer/engineer. The importance of this manual was stressed and a joint proposal of ARI/SPICC was suggested for possible funding from DOE in order to expedite the manual development. Al Newton/ Robert Evans/Dave Block/Ron Doctor will be responsible for follow up.

16. Site-built Collectors

(1) ARI indicated that they would not be able to certify site-built systems under their collector certification program.

(2) Many members clearly indicated that certification of site-built systems is essential, since many states make tax credits dependent upon certification, and site-built systems are one of the most sensible applications of solar energy.

(3) The consensus was that a site-built collector needed to be certified, though perhaps a somewhat different label might be applied to the site-built collector. A certification document might be provided for mounting adjacent to a site-built system.

(4) Consensus was also reached that the rating should be provided in terms of energy output per area of collector per day (J/m^2.day or Btu/ft^2.day).

(5) Consensus was reached that a sample of a collector needs to be tested in accordance with the ASHRAE standard. The definition of a model change with respect to site-built systems needs to be developed.

(6) Labels for site-built systems need disclaimer by the state agency, indicating that only a sample of the site-built system was tested.

(7) Jim Roland accepted appointment as the coordinator of information on site-built collector testing and rating systems. Information in this area should be sent directly to Jim for compilation and further analysis.

17. Laboratory Accreditation

(1) Sheldon Butt indicated that the SEIA document does not exclude non-private laboratories which meet the accreditation requirements. A SEIA accreditation committee will administer the laboratory accreditation process.

(2) Bob Evans said that ARI will not accredit non-private laboratories. They will accept only laboratories who are members of the American Council of Independent Laboratories (ACIL).

(3) The consensus of the committee was that the criteria for laboratory accreditation could be applied uniformly to all laboratories applying to become accredited. A distinction need not be made between private and non-private laboratories, since the quality of workmanship will be controlled by the accreditation criteria, and the three fee structures of the two groups of laboratories tend to be very similar.

(4) Though Federal participation in the establishment of accreditation criteria was suggested, Dave Pellish strongly encouraged the committee to resist seeking Federal funds for that purpose.

(5) Representation of SPICC on the Accreditation Committee was suggested. However, a consensus of the committee seemed to be that SPICC input to the laboratory accreditation process could be coordinated by the members on the Non-Profit Organization Board, since the Board must make the final approval of the laboratory accreditation procedure.

18. Future of the Solar Public Interest Coordination Committee

(1) Consensus was reached that if at all possible, SPICC should continue to receive funding from the Department of Energy to continue to develop the certification process. Indications from Dave Pellish are that funds through FY81 are probable. A proposal will be written by the co-chairpersons seeking funds to continue the SPICC activities through September 1981.

(2) Many members of the committee felt that SPICC needs to be a continuing body in order to maintain membership on the ANSI Solar Steering Committee and the ARI/SEIA Coordination Committee. Such goals for future existence imply, however, that the state's representatives need to seek long-term funding commitments from their respective states.

(3) A consensus was reached that one additional meeting during this fiscal year would be useful. However, there are insufficient funds in the SPICC budget to conduct such a meeting. Therefore, Dr. Block has formally requested sufficient additional FY80 funding from Dave Pellish and DOE for a meeting to be held in Washington, D. C., during August or September 1980. It is anticipated that representatives from all 50 states will be invited to participate in SPICC at that time.

19. ARI/SEIA Coordination Committee: Due to the importance of SPICC input to the ARI/SEIA certification program, the SPICC group unanimously endorsed the creation of an ARI/SEIA Coordination Committee for this purpose. The ARI/SEIA Coordination Committee members are:

Ed Lumsdaine, Chairman
Jeff Brauer
Greg Stutzman
James Warnock

D. Block and R. Doctor are to be ad hoc members.

With the creation of the ARI/SEIA Coordination Sub-Committee, there will be four standing sub-committees of SPICC. The other three are: Collector, System and Rating Sub-Committees.

20. Solar Systems

(1) Glen Chinery made a presentation of the TVA experiences with system certification and system performance in the field. He reviewed primarily "The Nashville 10k" Program, which began in November 1979. Details can be obtained from the document provided by Chinery. TVA uses a concept called an energy multiplier, equivalent in principle to a coefficient of performance (COP).

One of the conclusions of the testing was that F-chart is a poor indicator of system performance. There was virtually no correlation between measured data and the F-chart prediction. A draft of the report on the system testing will be sent to SPICC members when completed.

TVA also discovered that the majority of systems cannot heat water to the designed 140°F without a backup system, contrary to the design expectations. A major reason for discrepancy between the laboratory results and field results was that many contractors substituted alternatives for the specified component. Perhaps as high as one-half of the installation contractors had changed components.

TVA also concluded that it is mandatory that a manufacturer ship a system to the laboratory, not individual components for assembly at the lab. TVA will be releasing an additional PON between May 1 and 15.

TVA concludes from their experience that, though it may be possible to simulate the thermal performance of a system with a computer analysis, it is impossible to predict the existence of grossly erroneous components or component performance. Ed Lumsdaine will simulate the performance of the installed systems to assist in correlating the performance and component failure.

(2) Bob Evans from ARI explained the ARI system rating procedure.

(3) Al Newton discussed briefly the ASHRAE 95 test procedure, but declined to elaborate since the procedure is only in the proposal stage.

(4) The SPICC Ad Hoc Systems Committee is concentrating its efforts only on "packaged" systems, since more versatile systems are difficult to quantify. As with collector performance evaluation, it appears that the SPICC activity in systems performance will serve to facilitate communication between those groups who are developing systems evaluation procedures.

(5) A major question to be answered is whether it is preferable to evaluate systems through a systems test procedure or to simulate the performance of the system based upon the test data from individual components.

(6) The SPICC Systems Committee will review the ARI, ASHRAE and TVA system test documents and submit the results of their examination to SPICC at the August meeting.

21. Action Items

(1) Committee Members

a. Write letter to Dr. Thomas Stelson in support of SPICC and requesting that Dave Pellish remain our DOE contact person. (Address: Dr. Thomas Stelson, Assistant Secretary of Energy for Conservation and Solar Applications, Forrestal Building, 1000 Independence Avenue, Washington, D. C. 20585.)

b. Send comments on fee structure to Dave Block.

(2) Ad Hoc Collector Committee

a. Review written evaluations of the SPICC procedure and testing draft documents.

b. Incorporate written comments and decisions from the April SPICC meeting into the draft documents.

(3) Ad Hoc Rating Committee

a. Review Application Manual.

b. Review technical merit of ARI/SEIA rating method and support calculations.

c. Review actions taken by individual states and rating systems for the Residential Conservation Service.

d. Identify the needs of states in addition to the ARI/SEIA information.

e. Review ARI/SEIA proposal.

(4) Ad Hoc Systems Committee

a. Review ARI, ASHRAE and TVA documents.

b. Develop a chart highlighting the differences between the ARI and TVA systems evaluation procedures.

(5) ARI/SEIA Coordination Committee

Review and supply input into the ARI/SEIA solar collector certification program.

Respectfully submitted,

John Dunlop

John Dunlop III

Minutes reviewed and edited by David L. Block

NBS, ARI, SEIA, UL, ANSI-ASHRAE ATTENDEES

AT THE SPICC MEETING

SAN FRANCISCO, CALIFORNIA/APRIL 10-11, 1980

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nm
4/10/80

CONCLUSIONS

1. THERMAL PERFORMANCE CHANGES AFTER 30-DAY EXPOSURE IS WITHIN THE MEASUREMENT UNCERTAINTY AT ALL TEST SITES FOR THE EIGHT COLLECTORS STUDIED

2. SHORT-TERM EXPOSURE (30-DAYS) IS AN EFFECTIVE SCREENING TEST FOR CATASTROPHIC TYPE PROBLEMS (I.E. COVER BREAKAGE, LEAKS, SOLDER MELTING, EXCESSIVE OUTGASSING)

3. SOLAR SIMULATION EXPOSURE OF FULL SIZE COLLECTORS CAN BE PERFORMED WITH SIMULATORS MEETING RADIATION, TEMPERATURE AND RAIN SPRAY EXPOSURE REQUIREMENTS

CONCLUSIONS (CONTD.)

4. THERMAL PERFORMANCE MEASUREMENTS MADE AFTER 30-DAY EXPOSURE GENERALLY WILL NOT INDICATE LONG-TERM MATERIAL PROPERTY CHANGES

5. SEVERAL PLASTIC COVER AND SELECTIVE COATING MATERIALS ARE SEVERELY DEGRADED BY COMBINED MOISTURE AND TEMPERATURE (MATERIAL TESTS SHOULD BE CONDUCTED IN CONFORMANCE WITH PROPOSED ASTM TEST METHODS)

6. SELECTIVE ABSORBER EMITTANCE IS A MORE SENSITIVE INDICATOR OF CHANGE THAN SOLAR ABSORPTANCE

7. PHYSICAL PROPERTIES CAN OCCUR IN RELATIVELY SHORT TIMES WITHOUT OPTICAL PROPERTY CHANGE (TENSILE OR FLEXURAL TESTS ON FILMS SHOULD BE PERFORMED AFTER EXPOSURE)

RECOMMENDATIONS

1. THERMAL PERFORMANCE TESTS SHOULD BE PERFORMED AFTER 30-DAY EXPOSURE (PRE-EXPOSURE THERMAL PERFORMANCE TESTS PERFORMED ONLY IF CATASTROPHIC TYPE CHANGES NEED TO BE QUANTIFIED)

2. ASSEMBLED COLLECTOR SHORT-TERM DURABILITY TESTS SHOULD BE EXPOSED TO AT LEAST THIRTY (30) DAYS OR EQUIVALENT SIMULATOR CYCLES WITH DAILY SOLAR IRRADIATION EXCEEDS 1500 BTU/FT^2

3. WATER SPRAY TESTS SHOULD BE CONDUCTED IN CONJUNCTION WITH FULL SCALE SHORT-TERM TESTS (30 DAYS). ALL COLLECTORS SHOULD MEET THERMAL SHOCK REQUIREMENT AND TESTS PERFORMED ON POTENTIALLY SUSCEPTIBLE DESIGNS (I.E. BRITTLE MATERIALS)

RECOMMENDATIONS (CONTD.)

4. ALL COLLECTORS SHOULD BE DISASSEMBLED AFTER EXPOSURE TO DURABILITY TEST AND INSPECTED FOR EVIDENCE OF FAILURES OR POTENTIAL MATERIAL DEGRADATION

5. COLLECTOR COMPONENT MATERIAL TESTS SHOULD CONSIST OF AT LEAST TWO YEAR OUTDOOR EXPOSURE OR EQUIVALENT LABORATORY TESTS WITH EXPOSURES INCLUDING THE MOST SEVERE COMBINATIONS OF TEMPERATURE, MOISTURE AND SOLAR ULTRAVIOLET RADIATION EXPECTED IN ACTUAL COLLECTOR USE

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ATTACHMENT 5a to SCSE 52

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SEIA

Reply To:
Olin Brass
Olin Corporation
East Alton, Illinois 62024

April 30, 1980

Mr. I. G. Young
American National Standards Institute
1430 Broadway
New York, New York 10018

Dear Irv:

As discussed at the April 29 meeting of the Solar Steering Committee, I am enclosing a copy of my letter of April 21 to Drs. Block and Doctor confirming my understanding of the preliminary agreements reached with the Solar Public Interest Coordinating Committee at their meeting April 10-11 in San Francisco. This provides more detail concerning this subject as discussed at the April 29 Steering Committee Meeting.

Accordingly, and as discussed with you, please provide all members of the Steering Committee with a copy of my April 21 letter.

Cordially,

S. H. BUTT, President
Solar Energy Industries Association

/crc
enc.

SOLAR ENERGY INDUSTRIES ASSOCIATION Suite 800 1001 Connecticut Avenue, NW Washington, DC 20036 202 293 2

SEIA

Reply To:
Olin Brass
Olin Corporation
East Alton, Illinois 62024

April 21, 1980

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300 State Road 401
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Dr. Ronald D. Doctor,
Commissioner
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1111 Howe Avenue
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Gentlemen:

I believe that the actions taken at the April 10-11 meeting of the S.P.I.C.C. in San Francisco represented great progress towards the goal of a single national program for rating, labeling and certification of solar collectors and later, for similar activities relating to solar systems.

Since returning from the meeting, I have reviewed the events which transpired with the Executive Committee of the S.E.I.A. Board (acting for the S.E.I.A. Board) and with officials of A.R.I. (It must be noted that the governing body of A.R.I.'s solar activity has not as yet had an opportunity to review and discuss the content of the April 10-11 meeting.)

It has been and is the joint purpose of A.R.I. and S.E.I.A. to form a separate corporation whose function will be that of rating, labeling and certification of solar products. This corporation will be a not for profit organization. It was initially intended that the governing body of the new corporation (its Board of Directors) would consist of an equal number of individuals nominated by S.E.I.A. and by A.R.I. with at least one additional individual being nominated by another organization.

Prior to the April 10-11 meeting, the decision concerning additional members of the Board of the new organization had not been finalized.

In principle, the S.E.I.A. Executive Committee is agreeable to accepting designation of additional Board Members for the new corporation by the S.P.I.C.C. The details of participation by the representatives of S.P.I.C.C. on the Board of the new corporation are now to be negotiated with a Negotiating Committee to be chosen by S.P.I.C.C.

In order to implement S.P.I.C.C. participation on a continuing basis, S.P.I.C.C. will need to constitute itself as a permanent body ongoing beyond the conclusion of the present D.O.E. contract. It is my understanding that the action taken by S.P.I.C.C. at the April 10-11 meeting will assure such continuity.

S.E.I.A. and A.R.I. have jointly developed a methodology for calculation of consumer collector ratings based upon the results of collector performance testing to ASHRAE 93. (ASHRAE 93-77 is a national consensus standard.) This rating methodology incorporates the basic principle of all day performance calculations developed originally in the S.E.R.E.F. (Solar Energy Research and Education Foundation) program. We understand that an S.P.I.C.C. Subcommittee will now review the details of this consumer rating methodology.

It should be noted that both A.R.I. and S.E.I.A. have always been in agreement that the basic information to be used by design professionals in calculating system performance, performing system sizing calculations, etc., is the data provided by ASHRAE 93-77.

At the time of the April 10-11 meeting, D.O.E., as represented by Mr. David Pellish, offered to fund development of an "application standard" which would fall somewhere between the basic consumer ratings and the detailed ASHRAE 93 data. This is encouraging and will be helpful.

We are in agreement that participation in the testing activities required by the program will be open to all laboratories who shall have been accredited upon the basis of their physical facilities, technical capability, freedom from conflict of interest and financial responsibility. This specifically includes test laboratories meeting the accreditation criteria who are independent private sector laboratories and those which are affiliated with state universities or other educational institutions. S.E.I.A.'s PCS 1-79 Standard includes a section on laboratory accreditation which we recommend for study to S.P.I.C.C.

I want to emphasize that accurate and consistent thermal performance testing is at the heart of any successful rating program and thus,

laboratory accreditation procedures are of very great importance. However, the laboratory accreditation procedures to be followed by the new organization (in which A.R.I., S.E.I.A. and S.P.I.C.C. all participate) can either be developed prior to formation of the joint organization or immediately thereafter. The initial sequence of tests agreed to at the April 10-11 meeting is as follows:

a. Receiving inspection.

b. Static pressure test.

c. Thirty day exposure test.

d. Thermal shock/water spray.

e. Thermal shock/cold fill.

f. Collector time constant determination test.

g. Static pressure test.

h. Post exposure thermal performance test.

i. Incident angle modifier test.

j. Disassembly and final inspection.

Since the April 10-11 meeting, the S.E.I.A. Executive Committee has agreed to this test sequence. I am confident that A.R.I.'s governing body will also agree.

With these agreements and subject to final negotiations with the S.P.I.C.C. Negotiating Committee, S.P.I.C.C., with one dissenting vote, voted April 10 to go forward with a single national rating, labeling and certification program to which the various states will subscribe through the mechanism of the joint private sector organization to be governed jointly by individuals chosen by A.R.I., S.E.I.A. and S.P.I.C.C.

I believe that it is of great importance that arrangements for the new organization to come into existence and initiate its activities be completed as soon as possible. Accordingly, we and A.R.I. will proceed as quickly as possible to finalize the details of incorporating the new organization (with provision for S.P.I.C.C. participation on its Board of Directors). S.P.I.C.C. should proceed promptly with the appointment of a Negotiating Committee to finalize details for incorporation in the Bylaws and Operating Procedures of the new organization and should proceed as quickly as possible with the review of the rating method and the laboratory accreditation procedure.

As indicated previously, the new corporation will be a not for profit corporation. Practically, this means that monies will have to be advanced to the new corporation from S.E.I.A. and A.R.I. to provide for operation during the initial period when the new corporation will not be self-sustaining. We also intend to seek D.O.E. assistance. Ultimately, the various rating, labeling and certification programs undertaken by the new organization will be self-sustaining. This means that, from time to time, the Board of Directors of the new organization should establish and adjust fee schedules for participation in the program by manufacturers and others.

It should also be noted that the new jointly A.R.I./S.E.I.A./ S.P.I.C.C. managed organization will, from time to time, require the services of Technical Committees comprised of available technical experts who shall be appointed by the new corporation's Board of Directors from amongst those available in the industry, from state organizations, from state universities and other academic institutions and from other sources. The nature and composition of these technical committees for now should be left to the discretion of the Board of the new organization.

SUMMARY

I believe that all of the foregoing, as well as the intent and purpose of all parties expressed at the April 10-11 meeting, may be summarized quite briefly as follows:

S.P.I.C.C., A.R.I. and S.E.I.A. are agreed that the best interests of consumers, other users, contractors, manufacturers, design professionals, etc., can best be served through the establishment of solar product rating, labeling and certification programs administered by a new corporation whose governing body includes representation from A.R.I., S.E.I.A. and S.P.I.C.C.

Cordially,

S. H. BUTT, President
Solar Energy Industries Association

/crc

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ATTACHMENT 6 TO SCSE

american national standards institute, inc · 1430 broadway, new york, n.y. 10018 · (212) 354-3300

Cable: Standards, New York International Telex: 42 42 96 ANSI UI

March 26, 1980

REPORT ON MEETING OF THE ANSI SCSE SUBCOMMITTEE ON INTERNATIONAL ACTIVITY

March 10, 1980

NEMA Headquarters

The Chairman, John Fayed, called the meeting to order at 10:30 a.m. Drs. Leonard Magid and Irving Young, Messrs. Gary Nuss, Robert Evans and Alvin Lai were in attendance. Two members, Dr. Gene Zerlaut and Mr. Sheldon Butt were unable to attend.

Chairman Fayed reported that he had been advised by Dr. Young that the USA and Greece are officially seeking the Secretariat of the ISO TC on Solar Energy. Detailed information of the result of the ISO Central Secretariat mailing of the proposal, for the formation of the TC on Solar Energy, to the ISO members are attached. ISO Central Secretariat is asking ISO PLACO to decide on the allocation of the TC Secretariat and to recommend to ISO Council the establishment of a new TC for Solar Energy.

PLACO met on March 12, 1980 in Geneva, Switzerland. Mr. Daniel Smith, ANSI Director of International Activities is seeking the assurance of the ANSI SCSE via the ANSI Subcommittee on International Activity that the USA desires the TC Secretariat and will have the needed funds to support it. The Subcommittee advised Dr. Young to advise Mr. Smith that the SCSE had made the decision to have the USA seek the TC Secretariat. Dr. Young sent a telex to Mr. Smith in Geneva from NEMA Headquarters, directing him to seek the TC Secretariat for the USA as directed by the ANSI SCSE.

International Solar Photovoltaics (PV) Standards Development was discussed due to the concern of the Subcommittee members for the formation of an International Technical Committee on Solar PV in the future. Solar PV is developing rapidly in several foreign countries and a need will soon arise for a Solar PV International project, especially since the ISO will have a TC on Solar Energy soon. It was the feeling of the members that Solar PV International Standards Development be in the IEC and not under the

ISO TC on Solar Energy. The reasons for this was discussed at great length. The difference in the way the ISO and IEC are organized, and the way its membership is organized, were discussed. Also, the differences in the organization of the Technical Committee activities and how it develops standards were thoroughly reviewed.

The Subcommittee will recommend that it be disbanded by the SCSE and two separate functioning International Subcommittees (one for PV and one for Thermal Applications) be established in its place. The PV International Subcommittee is to be responsible to the PV Committee and its area of expertise will be the I.E.C. The International Subcommittee for Thermal Applications will be responsible to the SCSE until such time that a separate Thermal Committee similar in scope and responsibility to the PV Committee is established; its area of expertise will be the ISO.

The rationale for this proposal are:

1. There are unique problems, policies and procedures in each of the International Standardization Bodies (IEC & ISO).

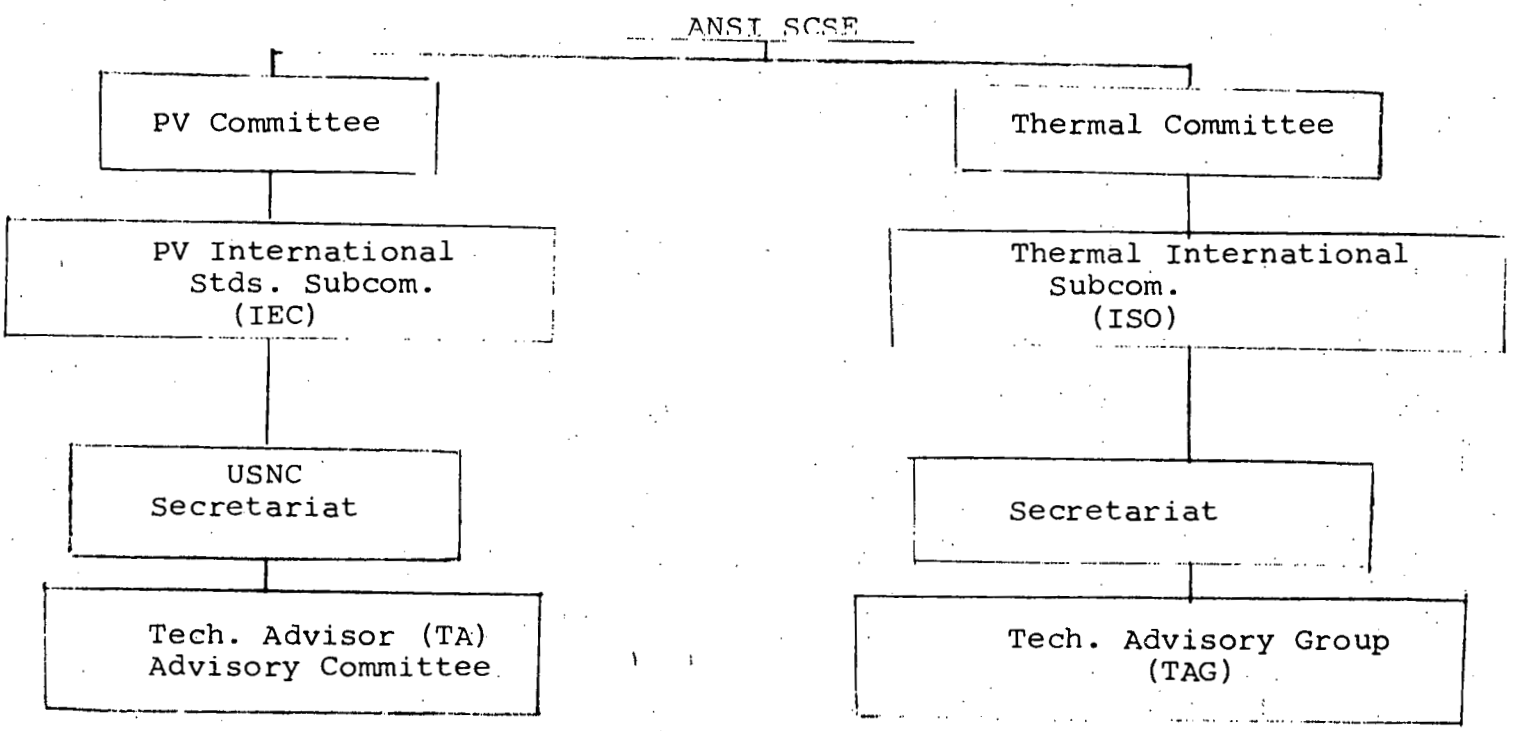
2. There exist major differences in technologies and interests between the thermal and photovoltaic areas.

3. The proposed arrangement facilitates the establishment, management and proceedings of the respective Secretariats, Technical Advisory Groups, Interested Parties, Distribution Lists, etc.

4. The separate subcommittees will be more responsive to the needs of the affected parties.

5. The proposed arrangement affords greater flexibility.

The recommended ANSI Organization Structure is as follows:



The Chairman then appointed A. Lai of ANSI to be the Secretary of this Subcommittee.

Note: 5 letters concerning the above are attached for your information.

ATTACHMENT 7 TO SCSE 52

american national standards institute, inc · 1430 broadway, new york, n.y. 10018 · (212) 354-3300

Cable: Standards, New York International Telex: 42 42 96 ANSI UI

April 14, 1980

DRAFT PROPOSAL

DATE: April 11, 1980

TO: Ad Hoc Subcommittee on International Activities

FROM: J.J. Fayed, A. Lai

SUBJECT: Draft Proposal on Solar International Activities to ANSI/SCSE

RECOMMENDATION-GENERAL

The Ad Hoc Subcommittee on International Activities recommends that it be disbanded by the SCSE and two separate functioning International Subcommittees (one for PV and one for Thermal Applications) be established in its place. The PV International Subcommittee is to be responsible to the PV Committee and its area of expertise will be the I.E.C. The International Subcommittee for Thermal Applications will be responsible to the SCSE until such time that a separate Thermal Committee similar in scope and responsibility to the PV Committee is established; its area of expertise will be the ISO.

RATIONALE

1. There are unique problems, policies and procedures in each of the International Standardization Bodies (IEC & ISO).

2. There exist major differences in technologies and interests between the thermal and photovoltaic areas.

3. The proposed arrangement facilitates the establishment, management and proceedings of the respective Secretariats, Technical Advisory Groups, Interested Parties, Distribution Lists, etc.

4. The separate subcommittees will be more responsive to the needs of the affected parties.

5. The proposed arrangement affords greater flexibility.

RECOMMENDATIONS - SPECIFIC

1. Interim chairmanships of the International Subcommittees should be established at the April 29th meeting of the SCSE. Once the International Subcommittees are formally organized, the Subcommittee can then elect a permanent Chairman and Vice Chairman from its membership.

The Ad Hoc Subcommittee recommends the following individuals as interim chairmen:

A. P.V. International Subcommittee - John J. Fayed

B. Thermal Application International Subcommittee - Gene Zerlaut

2. Secretaries for each International Subcommittee should be Standards Developing Organizations Staff individuals. These individuals should be familiar with the policies, procedures and operations of the respective International Committee (ISO - IEC).

The Ad Hoc Subcommittee recommends the following individuals as interim secretaries.

A. P.V. International Subcommittee - Alvin Lai

B. Thermal Applications Subcommittee - I.G. Young

3. The SCSE should issue a questionnaire to all parties represented on or known to be interested in the solar standards area. This questionnaire's purpose is to ascertain the response to two fundamental questions:

   a. Is that organization or interested party interested in participating on an International Subcommittee?

   b. If so, who is to be the designated representative to serve on that Subcommittee?

   This questionnaire should be distributed as soon as possible and responses requested within 30 days.

4. An attempt should be made to hold organizational meetings of the Subcommittees prior to or in conjunction with the next meeting of the SCSE.

5. The Ad Hoc Subcommittee strongly recommends that a seminar or similar presentation be included in the organizational meetings for the purpose of acquainting the participants with the policies, procedures and operational realities involved in participating in the ISO and IEC.

OBSERVATIONS

1. We would suggest that serious consideration be given to a reorganization of the SCSE to insure that the SCSE is structured in such a way as to be responsible to the needs of the existing technologies, and also anticipate an expansion of the solar activities to include related technologies i.e. wind, geothermal, ocean thermal energy conversion, Biomass/ Biogas, etc.

   The present structure is adequate for and suitable to responding to the thermal applications area but serious problems can be anticipated when the Committee attempts to cover other areas.

2. Participation in the International Standards arena must be recognized as a long term commitment that requires considerable expenditure of resources - both of finances and personnel. To embark on such activities with an incomplete understanding of the scope or with unrealistic expectations is folly. If participation is to be "half hearted", it is better not to participate at all.

ATTACHMENT 8 to SCSE 52
3-13-80

WORKING PAPER

REORGANIZATION PLAN FOR THE STEERING COMMITTEE ON SOLAR ENERGY STANDARDS DEVELOPMENT (SCSE)

SCOPE AND PURPOSE

Without engaging in standards-writing activities, the SCSE shall:

1) identify needs and formulate specific tasks leading to the development of national consensus standards for the utilization of solar energy;

2) assign standards development projects to competent standards-writing organizations and maintain a continuous overview of their activities in order to assure the orderly and timely development of needed standards, minimizing or avoiding entirely, duplication of effort and conflicting standards.

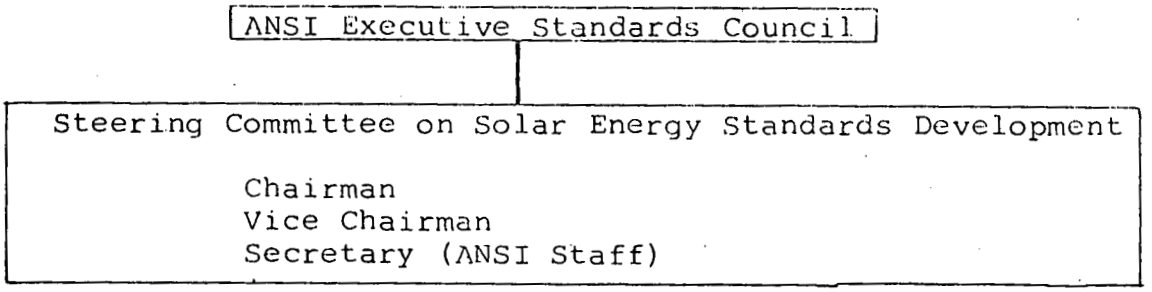
BACKGROUND

The scope of the Committee is not confined to a specific technique or application, such as solar collectors for heating and cooling, but encompasses standards development in the various technologies for the conversion of solar radiation directly to usable energy forms. The SCSE is most actively concerned at the present time with standards for solar collectors and photovoltaic devices. We can expect other solar energy conversion technologies to become of interest and, therefore, the subject of standardization efforts in the near future. Among those which appear to be undergoing significant development at this time are:

Solar Thermal Electric Conversion
Wind Energy Conversion
Biomass and Bioconversion

Thus, the SCSE, as planner and overseer of solar energy standards development, should provide for the input and coordination of those interests and groups representing the technologies cited so that the purposes outlined in the scope statement are most efficiently and fairly carried out. As the specific area of technology approaches the stage where standardization activities become important, it should have representatives on the SCSE.

The following structure is proposed.



Members of SCSE: Standards Development Organizations
Technical and Scientific Societies
Manufacturers of Solar Equipment and Industry
Solar Trade Organizations
Architects
Building and Code Officials
Consumer Organizations
Small business, solar
Federal and local government agencies

Permanent Standing Committees reporting back to SCSE

Subcommittee on Solar Heating and Cooling
ISO/TAG on Solar
Subcommittee on Photovoltaics
IEC/TAG on Photovoltaics
Subcommittee on Technology A
Subcommittee on Technology B
Subcommittee on Technology C
Subcommittee on Technology D

PRESENT MEMBERS OF ICSE BY TYPE OF ORGANIZATION

Technical and Professional Societies

ASHRAE
AIA
ASME
ASTM
CABO
IEEE
UL
ISES

Trade and Industry Associations

AGA
AAMA
ARI
MHA
SMACNA
SEIA
Wind Society
Solar Thermal Society, etc.
MCAA
NAHB
NEMA
PV Society

Consumer Organizations

CAN
CRR
NCL

Code and Building Officials

CABO
IAPMO
NCSBCS

Federal Government Agencies

DOE
HUD
GSA
NASA
NBS
NSHCIC
SERI

State Organizations

SPICC (Solar Public Interest Coordinating Commission)
Florida
California
Arizona