

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION
SPONSORED PROJECT INITIATION

Date: June 5, 1979

Project Title: Assistance to Small Businesses in International Market Development
for Solar Thermal Technology

Project No: A-2146-003

Project Director: Mr. J. D. Walton

Sponsor: U. S. Department of Energy; Oak Ridge Operations; Oak Ridge, TN 37830

Agreement Period: From 4/15/79 Until 7/15/79

Type Agreement: Grant No. DE-FG05-79ET21068, dated 5/24/79

Amount: \$20,000

Reports Required: Management Plan; Cost Plan; Manpower Plan; Contract Management
Summary Report; Final Technical Report

Sponsor Contact Person (s):

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(thru OCA)

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Defense Priority Rating: n/a

Assigned to: ASL/ECSD (School/Laboratory)

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GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION
SPONSORED PROJECT TERMINATION

Date: September 21, 1979

Project Title: Assistance to Small Businesses in International Market Development
for Solar Thermal Technology

Project No: A-2146-003

Project Director: Mr. J. D. Walton

Sponsor: U. S. Dept. of Energy; Oak Ridge Operations; Oak Ridge, TN 37830

Effective Termination Date: 7/15/79

Clearance of Accounting Charges: 7/15/79

Grant/Contract Closeout Actions Remaining:

TERMINATED

- ☐ Final Invoice and Closing Documents
- ☒ Final ~~Final Report~~ Financial Status Rpt. (to be submitted by WHB)
- ☒ Final Report of Inventions
- ☐ Govt. Property Inventory & Related Certificate
- ☐ Classified Material Certificate
- ☐ Other _____

Assigned to: EE/ID (School/Laboratory)

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Library, Technical Reports Section
EES Information Office
Project File (OCA)
Project Code (GTRI)
Other Mr. W. H. Borchert/GTRI

ASSISTANCE TO SMALL BUSINESSES IN
INTERNATIONAL MARKET DEVELOPMENT FOR
SOLAR THERMAL TECHNOLOGY

MANAGEMENT PLAN

I. Project Objectives

To aid small businesses involved in manufacturing, distribution, installation and servicing of solar thermal power systems in the transfer of this technology to the international market place by assisting them in the display of their hardware, literature and other materials at the International Exhibition of the International Solar Energy Society during May 28 - June 1, 1979.

II. Management Structure

Operating through the Georgia Tech Research Institute and with the assistance of SERI, the Exhibition Committee and the Local Arrangements Committee for the 1979 International Congress of the International Solar Energy Society (ISES) will identify the overall business manufacturers of concentrating collector solar thermal systems in the United States. These businesses will be notified of the availability of small grants to assist them in exhibiting at the 1979 International Congress of ISES. From those expressing interest, at least five will be selected to receive grants.

III. Operating Plan

Individual grants will be awarded to the selected businesses on or before the close of the 1979 International Congress of ISES on June 1, 1979. Exhibit funds for exhibition spaces will be delivered to the Exhibit Committee on or before June 1, 1979.

CONTRACT DE-FG05-79ET21068

CONTRACT PERIOD: April 15, 1979 - July 15, 1979

A-dito 2nd

Lc

COST PLAN

1. Contract Identification Assistance to Small Businesses in International Market Development for Solar Thermal Technology																		2. Contract Number DE-FG05-79ET21068									
3. Contractor (name, address) Georgia Institute of Technology Atlanta, Georgia 30332																		4. Contract Start Date April 15, 1979									
																		5. Contract Completion Date July 15, 1979									
6. Identification Number	7. Reporting Category (e.g., contract line item or work breakdown structure element)	8. Planned Prior Fiscal Years	9. Actual Prior Fiscal Years	10. Planned Current Fiscal Year													11. Planned Future Fiscal Years					12. Planned Subsequent Fiscal Years to Completion	13. Total Planned Cost (Columns 9 through 12)				
				A	M	J	J									TOTAL	a	b	c	d	e						
1.0	Grants to Exhibitors	-0-	-0-			15.6											15.6						0	15.6			
2.0	Exhibition Space	-0-	-0-			4.4											4.4						0	4.4			
14. Total						20											20						0	20.0			
15. Remarks																		16. Dollars Expressed In: THOUSANDS					17. Cost Plan Date June 1, 1979				
18. Signature of Contractor's Project Manager and Date July 2, 1979						19. Signature of Contractor's Authorized Financial Representative and Date						20. Signature of Government Technical Representative and Date															

CONTRACT MANAGEMENT SUMMARY REPORT

A-2146-C03

1. Contract Identification Assistance to Small Businesses in International Market Development for Solar Thermal Technology	2. Reporting Period 4/15 through 7/15	3. Contract Number DE-FG05-79ET21068
4. Contractor (name and address) Georgia Institute of Technology Atlanta, Georgia 30332		5. Contract Start Date April 15, 1979 6. Contract Completion Date July 15, 1979

[illegible]

9. Cost Status									
a. DOLLARS (THOUSANDS)									e. Actual Costs Prior FYs -0-
									f. Planned Costs Prior FYs -0-
									g. Total Estimated Accrued Costs for Contract 20
									h. Total Contract Value 20
Accrued Costs	b. Planned c. Actual d. Variance	20 20 							

10. Manpower Status								
a.								e. Actual Manpower Prior FYs None
								f. Planned Manpower Prior FYs None
DOLLARS (THOUSANDS)								g. Total Estimated Manpower for Contract None
								h. Total Contract Manpower None
b. Planned								
c. Actual								
d. Variance								

11. Major Milestone Status		
a.		
b.		
c.		
d.		
e.		
f.		
g.		
h.		
i.		

12. Remarks	
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13. Signature of Contractor's Project Manager and Date <i>July 2, 1979</i>	14. Signature of Government Technical Representative and Date
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ASSISTANCE TO SMALL BUSINESSES IN
INTERNATIONAL MARKET DEVELOPMENT FOR
SOLAR THERMAL TECHNOLOGY

FINAL TECHNICAL REPORT
FOR THE PERIOD
15 APRIL 1979 - 15 JULY 1979

J. D. Walton, Jr.

June 1979

ENGINEERING EXPERIMENT STATION
GEORGIA INSTITUTE OF TECHNOLOGY
ATLANTA, GEORGIA 30332

PREPARED FOR THE
DEPARTMENT OF ENERGY
DIVISION OF SOLAR ENERGY
UNDER CONTRACT DE-FG05-79ET21068

ASSISTANCE TO SMALL BUSINESSES IN
INTERNATIONAL MARKET DEVELOPMENT FOR
SOLAR THERMAL TECHNOLOGY

FINAL TECHNICAL REPORT
FOR THE PERIOD
15 APRIL 1979 - 15 JULY 1979

J. D. Walton, Jr.

June 1979

Work Performed Under Contract DE-FG05-79ET21068

ENGINEERING EXPERIMENT STATION
GEORGIA INSTITUTE OF TECHNOLOGY
ATLANTA, GEORGIA 30332

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ASSISTANCE TO SMALL BUSINESSES IN
INTERNATIONAL MARKET DEVELOPMENT FOR
SOLAR THERMAL TECHNOLOGY

ABSTRACT

Grants were awarded to eight manufacturers of concentrating solar thermal collector systems. These grants were for the purpose of assisting small businesses in exhibiting solar thermal systems at the 1979 International Congress of the International Solar Energy Society (ISES).

PURPOSE

The purpose of this project was to aid small businesses involved in manufacturing, distribution, installation and servicing of solar thermal power systems in the transfer of this technology to the international market place by assisting them in the display of their hardware, literature and other materials at the International Exhibition of the International Solar Energy Society during May 28 - June 1, 1979.

INTRODUCTION

The world oil situation coupled with the complex energy/development relationship within the less developed as well as developing countries of the world has focused attention on alternative sources of energy. One of the most popular of these is solar energy. Although solar energy has its longest history of use within the less developed countries, it has never realized its potential. Recently, however, with increasing interest in solar energy among the developed countries, significant advances have been made in the development of more efficient, more reliable and more versatile solar powered systems. Such systems are capable of providing shaft power, and electrical power potentially competitive with existing mechanical and electrical power within many of the less developed and some of the developing countries of the world. This is beginning to bring about an emerging international market for at least experimental solar thermal power units. Although certain solar thermal power units have been marketed using flat plate collectors (namely solar water pump systems developed by SOFRETES), the low efficiency of such systems has all but precluded them from being economical. On the other hand, concentrating collectors with

their higher efficiency offer the possibility that solar thermal power systems using such collectors may in the near future be economically competitive under certain situations. Therefore, the current world market which appears to be developing will be primarily for concentrating collector systems.

Presently, in the United States a number of small companies are beginning to develop solar thermal power systems using concentrating collectors and these systems have the potential of competing in the international market place. Unfortunately, the international market is a difficult one for most small businesses to penetrate; principally because of the difficulty of obtaining visibility at the international level without a substantial investment of high risk capital. There was one way, however, in which small U.S. manufacturers could obtain a fair degree of international exposure within the United States at a relatively low investment. This was to exhibit at the 1979 International Congress and Exhibition of the International Solar Energy Society, at the Georgia World Congress Center in Atlanta, Georgia.

BACKGROUND

The International Solar Energy Society (ISES) holds its International Congress and Exhibition on a bi-annual basis. In 1979 it was at the Georgia World Congress Center in Atlanta, Georgia. This year is the 25th anniversary of ISES and this Silver Jubilee Congress attracted the largest international gathering of solar energy enthusiasts, researchers, technologists and state and local officials ever assembled. For the technical program more than 1200 abstracts were received from which 560 papers were selected for presentation. A total of about 2000 delegates attended with about 500 coming from more than 70 countries outside the United States. Clearly, this Congress was attended by more people interested and active in the field of solar energy from more countries around the world than any previous solar energy meeting.

The Exhibition, likewise, was international in its composition and in its appeal. Of the 188 exhibit spaces utilized, about half were occupied by French solar industries. Of particular interest was CETHEL's full scale operational heliostat (27 feet high and 33 feet wide) which is part of the French national solar thermal power program. In addition to the French, nine spaces were taken by three German groups and four spaces by one Japanese firm.

RESULTS

With the assistance of the Department of Energy and SERI, the Exhibition and Local Arrangements Committees of the 1979 International Congress of ISES identified small businesses involved in development, construction or distribution of concentrating collector systems for the production of solar thermal power. These businesses were contacted to determine their interest in participating in the ISES Silver Jubilee Exhibition. Fourteen requests for financial assistance were received and offers of assistance were made to 10 of these companies. Eight companies accepted grants. Each grant consisted in part of cash to the company to help defray shipping and set-up costs and in part to the Exhibition Committee to cover the direct cost of exhibit space. In order to assist the largest possible number of exhibitors and to meet their financial requirements, it was necessary to reduce the amount of the grant paid for exhibit space. The Exhibition Committee Chairman agreed to this reduction. The standard booth space cost was \$400 for a 10 ft x 10 ft booth. The eight exhibitors were provided with 29 spaces for a total grant of \$4,400 or an average of about \$152 per booth. A total of 15,600 was provided as cash grants to the eight exhibitors. The name of each exhibitor who received a grant together with the amount of his grant and the number of spaces is shown in the following table.

<u>Company</u>	<u>Grant</u>	<u>No. of Booth Spaces</u>
Omnium-G	\$ 8,800	6
Acurex-Aerotherm	1,500	4
Jacobs-Del Solar Systems, Inc.	1,500	4
Solar Kinetics, Inc.	1,300	6
Suntec Systems, Inc.	1,300	6
Solelectro-Thermo, Inc.	500	1
General Solar Systems	400	1
Whiteline, Inc.	<u>300</u>	<u>1</u>
TOTAL	\$ 15,600	29 for \$4,400

CONCLUSIONS

The Silver Jubilee Congress of ISES provided an excellent opportunity to expose the solar thermal products (primarily concentrating collectors and associated equipment) of U.S. small business to the widest possible international solar energy audience. The rapidly developing international solar energy market suggested that U.S. small businesses would benefit from the international exposure presented by the ISES Exhibition. Further, because of the national publicity which developed for this Congress and the strong local interest in solar energy, the exhibitors had broad exposure to a large domestic market as well.

A copy of the list of Exhibitors at the 1979 ISES Silver Jubilee International Solar Exhibition is attached.

PLANNED FUTURE ACTIVITIES

No future activities are planned under this contract.

DISTRIBUTION LIST

NO. COPIES

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