

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION
SPONSORED PROJECT INITIATION

Date: 2/7/80

Project Title: Industrial Energy Extension Service

Project No: A-2546

Project Director: W. G. Moran

Sponsor: Georgia Office of Energy Resources

Agreement Period: From 1/1/80 Until 2/29/80

Type Agreement: unnumbered contract dated 1/1/80 (subcontr. under DOE Grant No.
DE FG44-77R41-0007)

Amount: \$73,718 (includes sub-projects E-27-685 \$5,397
E-19-606 \$5,875)

Reports Required: Monthly Financial and Progress Reports

Sponsor Contact Person (s):

Technical Matters

Contractual Matters
(thru OCA)

Mr. Ed Bistany
Georgia Office of energy Resources
270 Wahington Street
Atlanta, GA 30332

Defense Priority Rating: none

Assigned to: TAL/ECD (School/Laboratory)

COPIES TO:

Project Director
Division Chief (EES)
School/Laboratory Director
Dean/Director-EES
Accounting Office
Procurement Office
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Project Code (GTRI)
Other _____

GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION
SPONSORED PROJECT TERMINATION

Date: June 16, 1980

Project Title: Industrial Energy Extension Service

Project No: A-2546 (subprojects are E-19-606 and E-27-685)

Project Director: Bill Moran

Sponsor: Georgia Office of Energy Resources

Effective Termination Date: March 31, 1980

Clearance of Accounting Charges: March 31, 1980

Grant/Contract Closeout Actions Remaining:

- ☐ Final Invoice and Closing Documents
- ☐ Final Fiscal Report
- ☐ Final Report of Inventions
- ☐ Govt. Property Inventory & Related Certificate
- ☐ Classified Material Certificate
- ☒ Other Transfer any unexpended balances from E-19-606 and E-27-685 to A-2

Assigned to: TAL/EOD (~~XXXX~~/Laboratory)

COPIES TO:

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Other _____



Georgia Institute of Technology

ENGINEERING EXPERIMENT STATION

ATLANTA, GEORGIA 30332

April 7, 1980

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Mr. Ed Bistany
Georgia Office of Energy Resources
Trinity-Washington Building
270 Washington Street
Atlanta, Georgia

Subject: Industrial Energy Extension Program
Quarterly Progress Summary Report for
EES/GIT Research Project A-2546 for
Period, 1 January 1980 through
31 March 1980

Dear Mr. Bistany:

This summarizes activities on Research Project A-2546 for the first quarter of 1980.

Program Goals for the Quarter

1. Continue technical assistance program and industrial energy audits as requested.
2. Develop and document case studies and special reports on specific technology areas as scheduled.
3. Perform detailed planning for 1980 program.
4. Conduct Boiler Efficiency Workshop, Atlanta, March 4, 1980.
5. Print and mail January and March issues of the Conserver.
6. Continue work on computer programs for use in evaluating industrial energy conservation measures.
7. Coordinate efforts of ARC energy conservation project with IEES.

and title page? Imperfect volumes delay return of binding. Thanks.

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Accomplishments for the Quarter

1. Statistics for in-plant work by industrial groups:

	<u>General</u>	<u>Food</u>	<u>Textiles</u>	<u>Chemical</u>	<u>Stone</u>	<u>Total</u>
No. of industries con-						
tacted:	10	10	8	15	6	49
No. of plants visited	8	14	10	5	6	43
No. of new plants						
visited to which work						
has been initiated:	6	2	3	5	3	19
No. of unsolicited						
requests	8	1	2	3	4	18
No. of reports sent:	3	8	6	6	1	24
No. of case studies:	0	0	2	3	0	5
No. of complete audits:	2	3	1	1	1	8

2. Workshop statistics:

A. As per Table 1 attached

B. The following changes were made in the 1980 workshop program:

- One workshop on industrial waste heat recovery added. This workshop scheduled for April 3 in Atlanta.
- Two workshops on industrial energy conservation added. These were requested by the Albany and Thomasville Chamber of Commerce and will be presented later in the year.

3. January and March issues of Conserver mailed to approximately 6000 industries.

4. Coordinated tasks of ARC energy conservation project with IEES.

5. Continued planning for updating sections of the Industrial Energy Conservation Workshop manual.

6. One energy tip prepared for printing.

7. IEES engineers were involved in various presentations of results and promotional efforts including:

- Two papers written to be presented at Second Annual Conference on Industrial Energy Conservation Technology and Exhibition, Houston, Texas, in April.
- One paper presented to the Southeastern Section of the American Association of Textile Chemists and Colorists.

- One paper presented to the Finishers Energy Subcommittee of the American Textile Manufacturers Institute.
 - Two papers presented at Joint Textile Energy Conservation Conference at Clemson University.
 - One article written for Energy Management column of Textile World Magazine.
 - One article published in Southern Pulp and Paper magazine.
 - One energy tip published in Chemical Engineering Magazine.
 - IEES presentations made to the Rotary Clubs of St. Simons Island and Augusta.
8. Met with you and D.O.E. representatives concerning improvement of documentation of indirect technology transfer throughout the state. Use of the proposed new forms and procedures will be implemented next quarter. A program for evaluating the effect of other forms of technology transfer will be developed and implemented before the end of the year.

Milestones Met During the Quarter

1. Evaluated results of IEES program through the first quarter of 1980 (see attachment). Actual energy savings by Georgia industries added to the first quarter, 1980, was 6.72×10^{12} BTU.¹² This gives a cumulative total program savings of 41.1×10^{12} BTU and \$109.6 million (cumulative goal to date is 32.3×10^{12} BTU).
2. Presented one workshop and sent 24 reports to industry.

Major Activities

The major emphasis during this quarter was in three areas:

- workshops and technology transfer
- in-plant assistance and energy audits
- follow-up and evaluation of previous in-plant work.

We continue to see an encouraging increase in interest in IEES based on the number of unsolicited requests and workshop attendance. The program results to date have surpassed the established goals and we anticipate surpassing even the 1980 goals. Actual energy savings are just now being accrued on some of our earlier suggestions which required long lead times.

IEES personnel are incorporating the experience gained over the first two years of this program, as well as, input from Georgia industries into the 1980 program.

Respectfully submitted,

Walter A. Hendrix
Program Coordinator

William G. Moran
Division Chief

WGM/jv

Attachments

TABLE 1 - IEES Workshop Conducted and Evaluated

12/1/79 - 12/31/79 (4th Quarter 1979)

					¹ No. of Adjusted SIC Companies by Industry Group				
<u>Location</u>	<u>Workshop Date</u>	<u>Topic</u>	<u>No. of Attendees</u>	<u>Total No. of SIC Companies Represented</u>	<u>General</u>	<u>Food</u>	<u>Textiles</u>	<u>Chemicals</u>	<u>Stone , Clay & Glass</u>
Macon	12/4/79	Stone, Clay, and Glass Conservation Technology	23	7	1/1	-	-	-	4/2
Atlanta	12/4/79	Boiler Efficiency	78	22	8/3	-	4/2	2/1	-
Augusta	12/11/79	Chemical Industry Conservation Technology	18	6	1/1	-	-	2/1	-
Atlanta	12/13/79	Textile Continuous Processing Conservation Technology	39	20	-	-	10/5	-	-
TOTALS			158	55	10/5	0/0	14/7	4/2	4/2

¹Adjusted SIC Companies column excludes plants which have received IEES in-plant audits or technical assists.

²Convention adopted here is: No. of plants represented / No. of plants contacted by phone for survey.

Total 4 Workshop Attendance = 158

TABLE 2 - IEES ENERGY SAVINGS ESTIMATE

1/1/80 - 3/31/80 (1st Quarter 1980)

Actual Annual Savings (10^9 BTU's)

<u>Industry Group</u>	<u>Audits</u>	<u>Workshops</u>	<u>Basis</u>	<u>Expansion Factor</u> ¹	<u>Expanded Total</u> ²
General	0	0	0	7.233	0
Food	38.8	0	38.8	7.233	319.44
Textiles	118.0	259.7	377.7	7.233	3109.60
Chemicals	30.0	54.9	84.9	7.233	698.98
Stone, Clay & Glass	<u>61.8</u>	<u>253.5</u>	<u>315.3</u>	<u>7.233</u>	<u>2595.86</u>
TOTALS	248.6	586.1	816.7	-	6723.88

¹Expansion Factor = employment ratio x dilution factor. For this period, the employment ratio is 28.93 and the dilution factor is .25.

²Equals basis x (1 + expansion factor)

TABLE 3 - IEES Energy Savings Estimate

8/1/77 - 3/31/80

<u>Industry Group</u>	<u>Actual Annual Savings (10⁹ BTU's)</u>		
	<u>Estimate through 4th Quarter 1979¹</u>	<u>Estimated 1st Quarter 1980²</u>	<u>Cumulative Estimate Through 1st Quarter 1980</u>
General	15319.63	0	15319.63
Food	766.88	319.44	1086.32
Textiles	4216.47	3109.60	7326.07
Chemicals	7515.71	698.98	8214.69
Stone, Clay & Glass	<u>6606.68</u>	<u>2595.86</u>	<u>9202.54</u>
TOTALS	34425.37	6723.88	41149.25

1. Reported in December, 1979 memorandum from R. L. Moore to W. G. Moran

2. Shown in Table 2 of this report.

State of Georgia
Industrial Energy Extension Service
Program Highlights 8/1/77-3/31/80

- Plant Visits: 465
- Total Plant Contacts: 739
- Audits Completed: 187
- Workshops Conducted: 43
- Workshops Planned for the Remainder of 1980: 8
- Total Workshop Attendees: 1,395
- Mailing List: Approximately 6,000 Business and Industry Representatives
- Estimated Actual Energy Savings by Georgia Industry
During Program Existence: 41.1 trillion BTU's
- Estimated Actual Energy Cost Savings by Georgia Industry
During Program Existence: 109.6 million Dollars