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**ENERGY CONSERVATION SERVICES PROGRAM:
First Quarterly Report, FY 1986
(10/1/85-12/31/85)**

Contract No. DAN-5728-C-00-3073-00

HBC Reference No. 86-150(9)

Prepared for:
**U.S. Agency for International Development
Office of Energy**

Washington, DC 20523

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SUMMARY

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The Energy Conservation Services Program (ECSP) provides a broad range of technical advisory services, training, and information dissemination activities to AID-assisted countries.* The objective of this 4-year program is to promote energy conservation in industry, transportation, electric power generation and transmission, and commercial and institutional building design and operation. On September 15, 1983, the U.S. Agency for International Development (AID) contracted with Hagler, Bailly & Company (prime contractor) and Reliance Energy Services (subcontractor) to provide technical and management assistance to the program. In November of 1984, Hagler, Bailly & Company became a subsidiary of RCG International. As part of this acquisition, the operations of Reliance Energy Services, another RCG subsidiary, were merged with Hagler, Bailly & Company.

In the first year of the contract, 18 separate activities were initiated and carried out from September 15, 1983 to September 28, 1984. During the second year of ECSP from October 1, 1984 to September 30, 1985, eight separate activities were initiated and carried out (see Exhibit 1** for a summary of all ECSP activities).

The first Quarterly Activity Report of the third year of ECSP covers the period October 1, 1985, through December 31, 1985. During the quarter, 12 separate activities were carried out, all of which were initiated in previous quarters. Emphasis during the quarter was placed on (1) the energy conservation demonstration program for the transportation sector in Costa Rica, (2) cogeneration and private sector power studies for Pakistan, Thailand, India and Indonesia, (3) technical assistance programs for Thailand and Indonesia, and (4) the completion of work on the Office of Energy Program Plan and Energy Conservation Strategy.

*This program is part of the Energy Policy Development and Conservation Project (Project No. 936-5728).

**All exhibits appear at the end of the Summary.

During this and the previous quarter an extensive review of the first 2-years of ECSP was conducted and used as a basis for preparing the Office of Energy Program Plan and Energy Conservation Strategy Paper. The lessons learned led to a careful selection of those ongoing activities, given renewed concerns for budget constraint, which should be completed and which will have the greatest impact in assisting individual countries and the widest potential for transfer to other countries.

All of the activities carried out in this quarter involved the application of proven programs and techniques developed in earlier ECSP initiatives, and all of the activities described in this quarterly report are continuing into the next quarter. Requests from USAID Missions and Bureaus for ECSP support continue to grow and exceed the resources currently obligated. Even though only ongoing activities will be continued, costs in excess of current obligated ECSP funding levels will be incurred to fulfill all of the outstanding commitments for ECSP services. A proposed budget - totalling approximately \$1 million -- to complete ongoing work has been submitted to the ECSP Contract Officer and is under review.

As the scope of activities under ECSP has grown and involved a widening circle of other AID projects, additional resources have become available to support energy conservation work. During the quarter, ECSP contractor staff, which had earlier conducted an evaluation of the Regional Industrial Energy Efficiency Project (see QARs 10/1/84-12/31/84 and 1/1/85-3/31/85), returned to Central America to conduct a second evaluation. While the first evaluation was jointly funded by ECSP and USAID/ROCAP, all funding for the second evaluation came from ICAITI, the principal regional organization implementing the project. The USAID Mission in Haiti indicated during the quarter that they would contribute \$30,000 to conservation work in small and medium size industries (see HBC Reference No. 173). Also during this quarter the Bureau for Asia and the Near East agreed to co-fund the Energy Conservation Promotion and Investment Workshop to be held in Bangkok later in 1986. See Exhibit 2 for a complete list of contributions to ECSP projects from Missions and Bureaus other than S&T.

During this quarter work continued on a program in Egypt similar to the TTEM project in the Philippines

(see QARs, 9/15/83-12/15/83 and 12/15/83-4/1/84); this activity as it moves forward will be supported by USAID/Cairo. There were discussions during the quarter with the Mission in Santo Domingo to conduct a second evaluation of the Industrial Energy Conservation Program (see QARs 10/1/84-12/31/84 and 1/1/85-3/31/85); this second evaluation would be completely funded by the Mission. Discussions have also been held with the head of COENER (the National Energy Commission of the Dominican Republic) to explore ways that additional ECSP activities can be carried out there.

A total of 12 professional person-weeks was spent in Costa Rica, Thailand, Indonesia, Pakistan and Sri Lanka (see individual reports for time spent in each country). Quarterly expenditures, as shown in Exhibit 3, were \$250,003 as compared with \$84,581 in the fourth quarter of the second year of the program (see Exhibits 4 and 5).

Exhibit 1

Summary of ECSP Activities
(Inception to date)

Activity	Period of performance	Budget	Cumulative expenditures (12/31/85) ¹
1. Program management and development, including preparation of in-country missions and program planning activities; preparation of <u>Update</u> progress report on ECSP activities; publication of descriptive brochure on ECSP; providing technical assistance to AID-, ESCAP-, and National Research Council-sponsored meetings; preparation of an international mailing list of individuals working on energy conservation in developing countries; planning for evaluations of AID projects in the Dominican Republic, Central America, and Djibouti (HBC reference 150/151)	9/15/83-ongoing	None	\$324,567
2. Organization, preparation, and presentation of 2-week energy demand management and conservation training course in Sri Lanka for Ministry of Power and Technology -- December 7-17, 1983 (HBC reference 152)	10/10/83-12/30/83	\$124,131	\$125,561
3. Support in preparation of Technology Transfer for Energy Management Project Paper with U.S. AID/Philippines and Ministry of Energy/Bureau of Energy Utilization (HBC reference 153)	9/15/83-4/30/84	None	\$ 88,638
4. Development of data base on AID-funded energy conservation initiatives (HBC reference 154)	10/8/83-5/11/84	\$ 14,451	\$ 13,312
5. Preparation of energy auditing manual for use in Sri Lanka (HBC reference 155)	10/21/83-2/27/84	\$ 36,465	\$ 43,715
6. Organization, preparation, and presentation of 4-week energy auditing course in Sri Lanka for Ministry of Power and Energy -- February 27-April 10, 1984 (HBC reference 156(a))	1/3/84-4/10/84	\$ 80,220	\$ 77,788
7. Completion of full audit reports and feasibility study of energy conservation projects for Sri Lanka Tyre Corporation and Thulhiriya Textile Mills (HBC reference 156(b))	3/15/84-8/15/84	\$ 69,061	\$ 71,017
8. Development of ECPIE: Energy Conservation Project Investment Evaluation Model and user manual (HBC reference 157)	1/3/84-8/30/84	\$ 23,805 ²	\$ 43,879
9. Preparation of monograph on innovative approaches to financing energy conservation investments in less developed countries (HBC reference 158)	1/3/84-9/10/84	\$ 7,500 ²	\$ 10,295
10. Completion of feasibility study of guide and directory of U.S. energy-efficient equipment for distribution to developing countries -- activity jointly sponsored with Office of Industrial Programs, U.S. Department of Energy (HBC reference 159)	1/3/84-7/12/84	\$ 25,000	\$ 26,059

¹Based on labor costs incurred and invoices received only.

²Scope of work was expanded subsequent to budget preparation.

Exhibit 1 (continued)

Summary of ECSP Activities
(Inception to date)

Activity	Period of performance	Budget	Cumulative expenditures (12/31/85) ¹
11. Missions to ASEAN countries to assist in the project planning for regional building energy conservation activities (HBC reference 160)	5/5/84-6/4/84	None	\$ 31,785
12. Mission to assess current energy situation in the transportation sector of Costa Rica and identify possible AID-funded activities to improve energy use efficiency; conducted in cooperation with Oak Ridge National Laboratory (HBC reference 161)	5/14/84-3/31/85	None	\$ 29,138
13. Planning and preparation for the Latin America/Caribbean Regional Energy Conservation Seminar (HBC reference 162)	5/14/84-6/30/85	\$102,000	\$111,419
14. Missions to Ecuador and Peru to assist in developing industrial energy conservation outreach services and programs (HBC reference 163)	5/14/84-3/31/85	None	\$ 19,769
15. Ecuador industrial energy conservation training, curriculum development, and audits (HBC reference 164)	7/14/84-3/31/84	\$104,157	\$ 97,286
16. Revision of training manual for energy demand management and conservation training course for industry and buildings (HBC reference 165)	7/14/84-3/31/85	\$ 10,675	\$ 13,431
17. Revision of industrial energy audit manual (HBC reference 166)	7/14/84-9/1/84	\$ 14,458	\$ 15,242
18. Evaluation of the IIE/TVA Conventional Energy Training Project (CETP) Course (HBC reference 167)	6/30/84-8/30/84	\$ 19,096	\$ 21,704
19. Organization and planning of the Pakistan National Energy Conservation Center (HBC reference 168)	9/8/84-ongoing	\$275,000	\$229,182
20. Industrial Energy Conservation Program (Dominican Republic) Evaluation (HBC reference 169)	10/1/84-2/28/85	\$ 20,000	\$ 23,817
21. Regional Industrial Energy Efficiency Project (Central America and Panama) Evaluation (HBC reference 170)	10/1/84-3/15/85	\$ 36,000	\$ 38,763
22. Energy Initiatives Project (Djibouti) Evaluation (HBC reference 171)	11/30/84-2/15/85	\$ 16,286	\$ 16,823

¹Based on labor costs incurred and invoices received only.

Exhibit 1 (continued)

Summary of ECSP Activities
(Inception to date)

<u>Activity</u>	<u>Period of performance</u>	<u>Budget</u>	<u>Cumulative expenditures (12/31/85)¹</u>
23. Fact-finding mission to Haiti to examine the energy efficiency of the sugar and manufacturing industries (HBC reference 173)	2/20/85-12/31/85	\$ 11,500	\$ 12,291
24. Joint reconnaissance visit to Sri Lanka to identify energy bottlenecks in the agricultural sector (HBC reference 177)	6/1/85-12/31/85	None	\$ 15,090
25. Demonstration program and public information campaign to increase energy efficiency in the transportation sector (HBC reference 178)	6/1/85-ongoing	\$ 80,000	\$ 87,935
26. Study of impediments to private sector development of non-utility power generation (HBC reference 179/1004)	9/1/85-12/31/85	\$ 240,000	\$ 62,733
27. Market analysis of Cogeneration opportunities in USAID-assisted countries (HBC reference 180)	9/15/85-ongoing	\$ 75,000	\$ 1,198
28. Institutional barriers to private sector investment in energy conservation (HBC reference 181)	10/14/85-ongoing	\$ 60,000	\$ 16,712
29. General technical assistance: Thailand and Indonesia (HBC reference 182)	10/16/85-ongoing	\$ 140,000	\$ 15,496
30. Innovative private sector financing (HBC reference 183)	10/15/85-ongoing	\$ 75,000	\$ 4,512
31. Technology Transfer Teams for Energy Conservation (HBC reference 184)	10/16/85-ongoing	\$ 50,000	\$ 5,281
32. Asia/Near East Energy Conservation Promotion and Investment Workshop (HBC reference 185)	10/15/85-ongoing	\$120,000	-0-
33. Information exchange and energy conservation network development (HBC reference 186)	10/15/85-ongoing	\$ 75,000	-0-

¹Based on labor costs incurred and invoices received only.

Exhibit 2

Mission and Bureau Contributions (Buy-ins) to ECSP Projects

<u>ECSP Project</u>	<u>Mission/Bureau</u>	<u>Contributions</u>
Energy Demand Management & Conservation Training (152)	USAID/Colombo	\$ 60,000
Technology Transfer for Energy Management (153)	USAID/Manila	\$ 70,000 (*)
Regional Energy Conservation Seminar (162)	Latin American/ Caribbean	\$ 50,000
Pakistan: National Energy Conservation Center (168)	USAID/Islamabad	\$215,000
Dominican Republic: Project Evaluation (169)	USAID/Santo Domingo	\$ 13,000
Regional Industrial Energy Efficiency Project Evaluation (170)	USAID/ROCAP	\$ 26,000
Costa Rica Transportation, Phase II (178)	USAID/San Jose	\$ 30,000
Non-Utility Power Generation (179/1004)	Asia/Near East	\$100,000
Energy Conservation Promotion and Investment Workshop (185)	Asia/Near East	<u>\$ 60,000</u>
Total		\$624,000

(*) Separate contract with USAID/Manila

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Exhibit 3

First-Quarter Expenditures, FY 1986
(Ninth Quarter of the Contract) -- Summary

	<u>Contract budget¹</u>	<u>Quarterly expenditures²</u>	<u>Cumulative expenditures through 12/31/85²</u>	
			<u>\$</u>	<u>%</u>
Salaries	\$ 344,063	\$ 67,763	421,836	122.6
Fringe benefits	89,456	26,550	115,275	128.9
Overhead	390,168	90,327	507,674	130.1
Travel/trans./per diem	274,722	28,008	179,684	65.4
Other direct costs	41,200	15,910	131,088	318.2
Equipment	50,000	-0-	-0-	-0-
Subcontractor	<u>667,348</u>	<u>6,271</u>	<u>231,870</u>	<u>34.7</u>
Total estimated costs	\$1,856,957	\$234,829	\$1,587,427	85.5
Fixed fee	<u>123,698</u>	<u>15,674</u>	<u>105,741</u>	<u>85.5</u>
Total estimated costs and fixed fee	\$1,980,655	\$ 250,503	\$1,693,168	85.5

¹1,975,186 has been obligated so far, of which \$554,000 has been directly contributed by Regional Bureaus and Missions. Another \$70,000 has been contributed through another contract.

²Based on labor costs incurred and invoices received as of 12/31/85 and an audit conducted by Hagler, Bailly's accountants.

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Exhibit 4

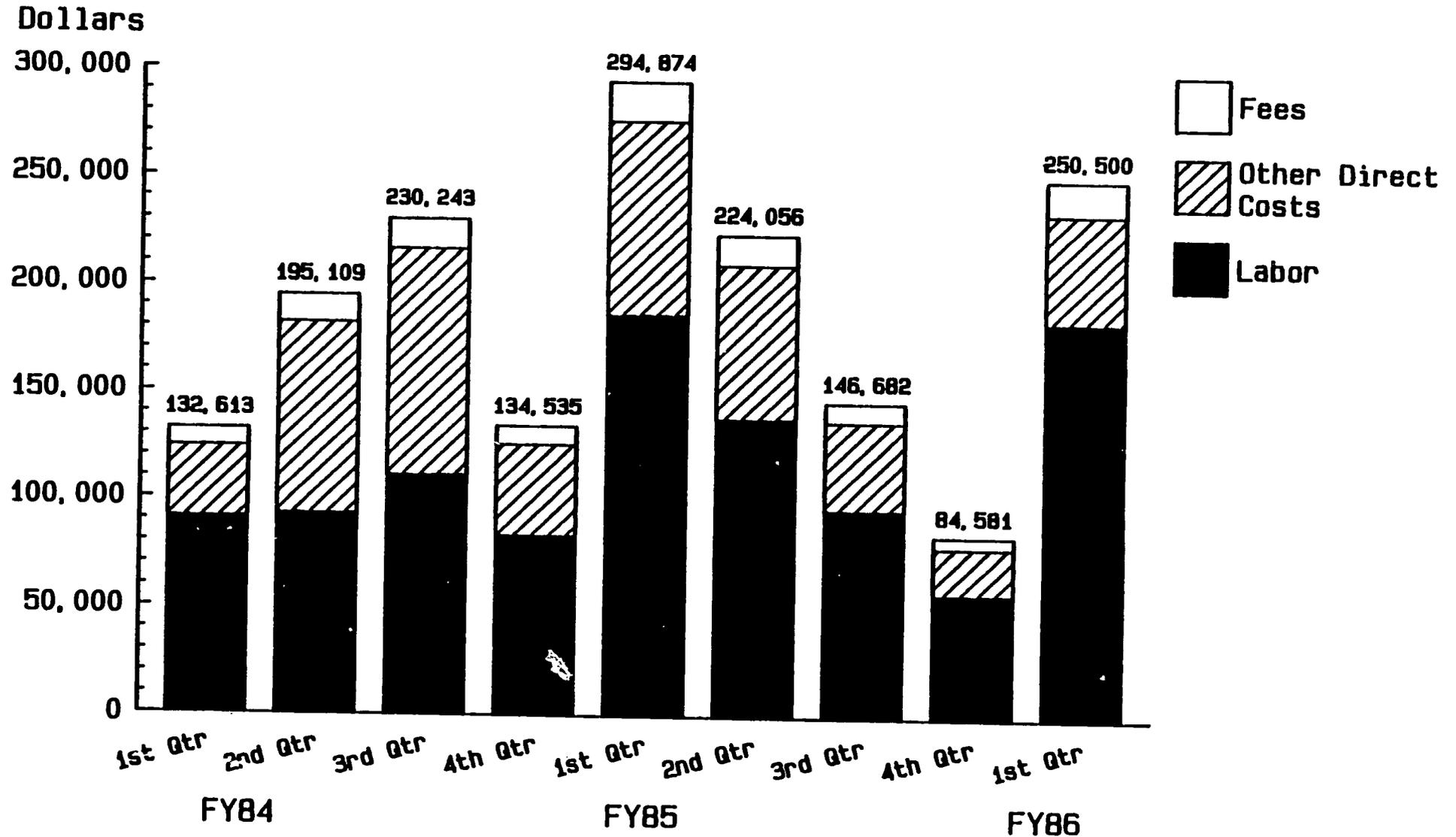
ECSP Expenditures by Quarter

<u>First year</u>		<u>Second year</u>	
First quarter (9/15/83-12/15/83)	\$132,613	First quarter (10/1/84-12/31/84)	\$294,874
Second quarter (12/15/83-4/1/84)	195,109	Second quarter (1/2/85-3/31/85)	224,056
Third quarter (4/2/84-6/30/84)	230,243	Third quarter (4/1/85-6/30/85)	146,682
Fourth quarter (7/2/84-9/28/84)	<u>134,535</u> 87,535	Fourth quarter (7/1/85-9/30/85)	<u>84,581</u>
Yearly total	692,500		750,193

<u>Third year</u>	
First Quarter (10/1/85-12/31/85)	\$250,503.

Exhibit 5

ECSP Quarterly Expenditures for Labor, Other Direct Costs, and Fees



U.S. AID CONSERVATION SERVICES PROGRAM
(Contract Number: DAN-5728-C-00-3073-00)

QUARTERLY ACTIVITY REPORT
(For period 10/1/85-12/31/85)

ACTIVITY: Program Management and Development

COUNTRY: Not country-specific

START DATE: 9/15/83

COMPLETION DATE: Ongoing

BUDGET: None

QUARTERLY EXPENDITURES: \$84,409

CUMULATIVE EXPENDITURES: \$324,567

S&T/EY MANAGER: Dr. David Jhirad

HBC MANAGER: Henri-Claude Bailly

HBC REFERENCE: 150/151

DESCRIPTION

This activity consists of the various management tasks associated with the execution of the contract -- e.g., progress review meetings, preparation of quarterly reports. It also includes planning activities associated with new initiatives. These initiatives are either triggered by the field, the regional bureaus, or directly by S&T/EY. (Some of these activities eventually become separate activities for program management purposes.) The first-quarter activities for the third year of ECSP (in addition to those that are already treated as separate program activities) are described below:

- o In recent quarters, Hagler, Bailly & Co. has assisted the Office of Energy in preparing a detailed program plan. Much of the plan is based on extensive analyses of energy needs in developing countries and on experience with various technologies and approaches to meet those needs.
- o Work was completed on the Strategy and Program Plan for Energy Conservation FY86 and FY87, which outlines a recommended and detailed course of action for implementing energy conservation measures in developing countries. The plan ranks the energy conservation potential of specific countries, identifies barriers to achieving energy conservation in these countries, and recommends ways in which AID can support energy

conservation in specific countries. The report is the culmination of a close collaborative effort by the Office of Energy, Hagler, Bailly, & Company, and the Oak Ridge National Laboratory. During this quarter, the program plan underwent further revisions incorporating the recommendations of various participants in this planning effort.

- o During the first quarter, there was a follow-up review of the training program and feasibility studies that were carried out in Sri Lanka during 1983 and 1984. With respect to the conservation activities, the management of the Sri Lanka Tyre Corporation is still seeking financing to implement its modernization plan which includes replacement of its boiler (focus of the feasibility study). The management is sending a letter to USAID/Columbo requesting some additional assistance to secure this financing.
- o The paper, Cogeneration in Developing Countries: Prospects and Problems was under review by USAID staff this quarter. This systematic analysis of the potential for cogeneration in developing countries also supplemented planning efforts for cogeneration activities initiated in Pakistan, Thailand, and India (see HBC Reference 179). Publication and distribution of a final report is expected next quarter.
- o A revision to the Energy Demand Management and Conservation Manual for Industry and Buildings was undertaken this quarter. The manual, originally developed for the Sri Lanka Energy Demand Management and Conservation Training Course (see QAR, 9/15/83-12/15/83), was revised in the second quarter of last year for general use in any developing country. This latest update will incorporate new materials on Energy Systems Maintenance Programs, Energy Conservation Awareness Programs, Project Scheduling, and Preparation of Bid and Specification Documents.
- o ECSP continues to promote a network of energy professionals and managers in countries where it is carrying out projects. A well established and active organization is functioning in the Philippines; ENMAP (Energy Managers Association of the Philippines) can usefully function as a model for associations in other developing countries. Prospects of forming similar organizations exist in Sri Lanka, Ecuador, Pakistan, and Central America. During trips carried out this quarter, ECSP contractor staff held discussions in each of the

countries they visited about the benefits of forming such associations and ultimately the building of an international network of such groups. A discussion of forming at least a regional network of energy manager associations will be part of the discussions during the workshop scheduled for Bangkok in the third quarter.

- o Work was started at the end of the quarter on the fourth Update report. Features will include summaries of the Office of Energy Program Plan and Energy Conservation Strategy Paper, a summary of an extensive article which appeared in the Costa Rican press on the transportation demonstration project, and reviews of energy manager activities in USAID-assisted countries.

ACTIVITY REPORTS

1. Cogeneration in Developing Countries: Prospects and Problems, (Discussion Draft), October 22, 1985.
2. Energy Conservation Services Program: Fourth Quarterly Report, FY1985 (7/1/85-9/30/85), October 30, 1985.
3. Strategy and Program Plan for Energy Conservation FY86 and FY87, October 1985.

KEY PERSONNEL

- o Hagler, Bailly & Company: Henri-Claude Bailly, President; Alain Streicher, Vice President; Pirooz Sharafi, Senior Associate; Bruce Appelbaum, Senior Associate; Gerald Schwinn, Associate; Bruce Exstrum, Associate; Marc Babin, Associate; Faith Klareich, Research Associate; Beverly Abreu, Research Associate.

EXPENDITURES

(As of 12/31/85, based on labor costs incurred and invoices received):

	<u>This quarter</u>	<u>Cumulative</u>
Salaries	\$ 26,449	\$ 100,021
Fringe benefits	9,939	28,332
Overhead	34,412	121,778
Travel/trans./per diem	1,998	6,168
Other direct costs	6,339	43,254
Equipment	0	0
Subcontractor	<u>0</u>	<u>4,745</u>
Total	\$ 79,137	\$304,298
 Fee	 <u>5,272</u>	 <u>20,270</u>
 GRAND TOTAL	 \$ 84,409	 \$324,568

U.S. AID CONSERVATION SERVICES PROGRAM
(Contract Number: DAN-5728-C-00-3073-00)

QUARTERLY ACTIVITY REPORT
(For period 10/1/85 - 12/31/85)

ACTIVITY: Haiti - Industrial Energy Conservation Program
(Contract Task Area 6)

COUNTRY: Haiti

START DATE: 2/20/85

COMPLETION DATE: Ongoing

BUDGET: \$11,500

CUMULATIVE EXPENDITURES: \$12,291

S&T/EY MANAGER: Dr. David Jhirad

HBC MANAGER: Alain Streicher

HBC REFERENCE: 173

DESCRIPTION

Based on the fact-finding mission conducted by Hagler, Bailly last quarter, USAID has proposed to the government of Haiti that a technical assistance program in energy conservation be implemented in the country. The program would entail training in energy management, a series of energy audits, the implementation of conservation measures, and a promotional campaign to encourage energy conservation. Small and medium-sized industrial facilities would be targeted for the program, including small distilleries which are the most intensive users of biomass, the largest component of the nation's energy supply. It is the intensive use of biomass that is creating severe ecological problems for Haiti -- i.e., deforestation, soil erosion, and accelerated sedimentation.

The Ministry of Mines and Energy Resources would have administrative responsibility for the program, and the ECSP staff would assist the Ministry in designing the program and estimating the potential level of national energy savings that could be derived from such measures.

During the quarter the Office of Energy received word from USAID/Port-au-Prince that the mission would contribute \$30,000 during FY1986 to assist in implementing the recommendations of

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the fact-finding mission. Plans are underway for a second mission to Haiti during the next quarter.

ACTIVITY REPORTS

None.

KEY PERSONNEL

- o Hagler, Bailly & Company: Alain Streicher, Vice President.
- o USAID/Port-au-Prince: Lou O'Connor, Energy Officer; John Lewis, Agriculture Specialist; James Walker, Economist; Muriel Jolivert, Energy Officer.
- o Haiti -- Ministry of Energy & Mineral Resources: Wilfrid St. Jean, Director of Energy Resources; Claude Delphin, Director of Planning.

EXPENDITURES

	<u>BUDGET</u>	<u>CUMULATIVE</u>
Salaries	\$ 3,250	\$ 3,791
Fringe benefits	975	1,137
Overhead	4,014	4,682
Travel/trans./per diem	1,188	1,434
Other direct costs	650	479
Equipment	0	0
Subcontractor	<u>0</u>	<u>0</u>
Total	\$10,077	\$11,523
Fee	<u>894</u>	<u>768</u>
GRAND TOTAL	\$10,971	\$12,291

U.S. AID CONSERVATION SERVICES PROGRAM
(Contract Number: DAN-5728-C-00-3073-00)

QUARTERLY ACTIVITY REPORT
(For period 10/1/85 - 12/31/85)

ACTIVITY: Sri Lanka Energy Use in Agriculture (Contract Task Area 1)

COUNTRY: Sri Lanka

START DATE: 4/16/85

COMPLETION DATE: Ongoing

BUDGET: None

CUMULATIVE EXPENDITURES: \$15,090

S+T/EY MANAGER: Dr. David Jhirad

HBC MANAGER: Alain Streicher

HBC REFERENCE: 177

DESCRIPTION

Discussions continued during the quarter to implement the recommendations made in the study team report prepared in June. The report recommended that the Mission and ECSP support activity in three areas. The first area relates to the availability of data for energy planning in agriculture, especially concerning data on land preparation for paddy and processing (cf. land recently developed under the Mahaweli Project). The second area relates to the supply of electric and mechanical power for productive use in the villages, taking into account (1) the large quantities of agricultural wastes such as rice husks and coconut coir dust (which can be used as fuels to generate direct heat, steam, and power), and (2) the large quantities of off-peak hydropower soon to be available from the Mahaweli Project. The last area is water pumping for irrigation in the dry zone.

On the basis of the study team report, USAID/Colombo, the government of Sri Lanka, and S&T/EY will decide which area will receive priority and follow-up.

ACTIVITY REPORTS

None.

KEY PERSONNEL

- o Hagler, Bailly & Company: Alain Streicher, Vice President (6 days in Sri Lanka)
- o USAID/S&T: Janine Finnel
- o USAID/Colombo: Eric Loken, Energy Officer; Charles Uphaus, Agricultural Officer
- o Sri Lanka: Dr. Anton Belasuriya, Sri Lanka Business Development Center; Dr. Rolando Jiror, National Planning Division, Ministry of Finance and Planning.

EXPENDITURES

Expenditures during this quarter for this task are included in HBC Reference 150/151.

	<u>CUMULATIVE</u>
Salaries	\$ 5,304
Fringe benefits	1,591
Overhead	6,551
Travel/trans./per diem	27
Other direct costs	674
Equipment	0
Subcontractor	<u>0</u>
Total	\$14,147
 Fee	 <u>942</u>
GRAND TOTAL	\$15,090

**U.S. AID CONSERVATION SERVICES PROGRAM
(Contract Number: DAN-5728-C-00-3073-00)**

**QUARTERLY ACTIVITY REPORT
(For period 10/1/85-12/31/85)**

ACTIVITY: Costa Rica-Fuel Efficiency in the Transportation Sector (Contract Task Area 4)

COUNTRY: Costa Rica

START DATE: 6/1/85

COMPLETION DATE: Ongoing

BUDGET: \$80,000

QUARTERLY EXPENDITURES: \$47,724

CUMULATIVE EXPENDITURES: \$87,935

S+T/EY MANAGER: Dr. David Jhirad

HBC MANAGER: Alain Streicher **HBC REFERENCE:** 178

DESCRIPTION

During this quarter ECSP contractor staff continued to support the government of Costa Rica in conducting a project to demonstrate and publicize the effectiveness of low-cost measures for saving fuel in road transportation. Activity centered on carrying out demonstrations in bus and taxi fleets, training all participating drivers in energy-efficient driving techniques, and gathering and analyzing data generated by the demonstrations.

Problems arising from extraneous data and in startup of the computer model developed for the project prevented completion of data analysis and interpretation by yearend; however, Costa Rican government staff trained under the project are carrying the work forward with further support from ECSP and staff at Oak Ridge National Laboratory (ORNL).

In November, work on the public information and awareness campaign gathered momentum and culminated in a 2-day fuel conservation seminar for fleet operators. This was followed by an 8-page Sunday newspaper supplement that was largely financed by subscriptions solicited from interested sponsors.

Both the bus and taxi demonstrations were carried out under normal operating conditions using fleets of 24 buses and 16 taxis.

Fuel conservation measures were applied to the fleets in a random manner, following a statistical design developed by ORNL staff. The measures, or variables, applied initially were optimum maintenance and radial tires. After 4 weeks each demonstration was suspended for a week, during which time all participating drivers were trained in fuel-efficient driving techniques. The courses were Spanish-language versions of the Driver Energy Conservation Awareness Training (DECAT) program developed by the U.S. Department of Energy. The training of 44 bus drivers and 27 taxi drivers proved to be a formidable administrative task, owing to the limited time they had available for training.

Following completion of driver training, the demonstrations resumed for a further 4-week period, during which driver incentives were given to bus drivers only. Data on kilometers travelled, fuel consumed, routes, drivers, and vehicle types were then edited and entered onto diskettes for processing on in-house personal computers. Linear regression analysis was applied to the data to assess the impact on fuel consumption of each of the four conservation measures and of other variables. This analysis was still in progress at the close of the quarter.

The second component of the project, the public information and awareness campaign, was designed and implemented with considerable support from the advertising and public relations agency that had developed a broad energy conservation campaign for RECOPE, the Costa Rican national refinery. Consequently, broad media coverage was obtained for key events such as the certificate award ceremony for taxi driver trainees and the fuel conservation seminar.

The seminar, which was held on December 3-4, attracted 55 persons who were largely operators of bus, taxi, truck and institutional fleets. Most of the speakers were provided by suppliers of energy-efficient products and services. Subsequently, an 8-page supplement entitled "Fuel Conservation: A Source of Energy for Coata Rica" appeared with the December 22nd issue of a leading national newspaper. The supplement, which was sponsored by 17 suppliers, examined various aspects of the subject in a style that would appeal to a broad audience.

Brochures for operators of light vehicles, buses and trucks were prepared, based largely on promotional material gathered in the U.S., and will be distributed through existing low cost channels, such as fleet operators' associations.

A report summarizing the project and including an analysis of all collected data will be completed in the next quarter. Consideration is being given to convening a small workshop of

energy conservation and transportation experts to consider the results of the Costa Rican demonstration project and to explore lessons for other developing countries.

ACTIVITY REPORT

Implementation of Fuel Conservation Measures in Costa Rican Bus and Taxi Fleets, (Draft), December 1985.

KEY PERSONNEL

- o Hagler, Bailly & Company: Alain Streicher, Vice President (1 day in Costa Rica); Robert Kowalski, Senior Associate (48 days in Costa Rica)
- o Oak Ridge National Laboratory: David Greene
- o USAID/San Jose: Heriberto Rodriguez, Energy Officer
- o Costa Rica: Ministry of Industry, Energy and Mines, Energy Directorate: Dr. Jorge Blanco, Director General; Ing. Alexandra Hernandez; Ing. Antony Araya. Ministry of Public Works and Transportation, Rodrigo Munguia

EXPENDITURES

(As of 12/31/85, based on labor costs incurred and invoices received):

	<u>This quarter</u>	<u>Cumulative</u>
Salaries	\$ 8,476	\$ 20,121
Fringe benefits	3,125	6,036
Overhead	11,022	24,850
Travel/trans./per diem	14,263	17,879
Other direct costs	3,687	7,686
Equipment	0	0
Subcontractor	<u>4,171</u>	<u>5,871</u>
Total	\$44,744	\$82,443
Fee	<u>2,980</u>	<u>5,492</u>
GRAND TOTAL	\$47,724	\$87,935

USAID/San Jose has contributed \$30,000 to this task.

U.S. AID CONSERVATION SERVICES PROGRAM
(Contract Number: DAN-5728-C-00-3073-00)

QUARTERLY ACTIVITY REPORT
(For period 10/1/85 -12/31/85)

ACTIVITY: Private Sector Involvement in Non-Utility Power
Generation (Contract Task Area 6)

COUNTRY: Pakistan, Thailand, India, Indonesia

START DATE: 9/9/85

COMPLETION DATE: Ongoing

BUDGET: \$240,000

QUARTERLY EXPENDITURES: \$58,315

CUMULATIVE EXPENDITURES: \$62,733

ST/EY MANAGER: Dr. David Jhirad

HBC MANAGER: Alain Streicher

HBC REFERENCE: 179/1004

DESCRIPTION

Based on the findings of a study team composed of senior level consultants from Hagler, Bailly and Arthur D. Little, a draft report on private sector power generation in Pakistan was completed this quarter. The study focused on the potential for and impediments to private sector involvement in power generation. The team spent three weeks studying the conditions in Pakistan and conducting extensive interviews with Pakistani representatives from both the public and private sectors.

Pakistan's economic and social development is currently constrained by a deficit in electric power generation. It is expected that this deficit will continue to grow if drastic measures are not taken to improve load management, loss reduction, and energy efficiency. The government of Pakistan has placed a high priority on programs geared toward reducing demand and increasing generating capacity. USAID, along with other donor agencies, has been working with the government of Pakistan to provide innovative approaches to relieving the country's electric power deficit. For the near term, the government of Pakistan has committed what resources it can to close the electric power gap. Consequently, any increase in power generation over that currently planned must be financed by the private sector.

The study team determined that the potential for private sector power generation is substantial in Pakistan. However, significant barriers exist to prevent this potential from being fully realized. The barriers include subsidized energy prices, lack of technical information, and institutional constraints. As a result, the team made specific recommendations to USAID with regard to energy source utilization and policy approaches to overcome institutional barriers to Pakistan's electric power deficit. Key recommendations included:

- o development of a buy-back rate structure accounting for seasonalities and load requirements.
- o assessment of the natural gas fields and associated gas available in Pakistan
- o study of electric generation tariffs that could lead to further rationalization of the rate structure to encourage the entrance of private sector power generation
- o familiarize utilities and industry with cogeneration so that opportunities in cogeneration can be pursued
- o detailed study of waste energy and biomass potential for small-scale power generation
- o expansion of the program in hydropower to make sites available to the private sector.

A final report on the study team's evaluation of the barriers to private sector electric generation in Pakistan will be available next quarter after review by USAID/Islamabad.

Also planned for next quarter is a mission to Thailand that will explore opportunities for cogeneration and small power generation initiatives there. The study generated from the activity will characterize the economic potential for cogeneration in Thailand, identify policy and institutional barriers to private sector electric generation, and make specific recommendations on ways to overcome these barriers. It is hoped that this activity will launch a greater interest in increasing private sector involvement in energy conservation in non-utility power generation throughout the region. These and similar energy conservation measures will be discussed and examined at the Asia/Near East workshop being planned for later in 1986 (see HBC Reference 185).

ACTIVITY REPORT

1. Private Sector Power Generation in Pakistan: Potential Impediments and Policy Issues, (draft), December 12, 1985.

KEY PERSONNEL

- o Hagler, Bailly & Company: Alain Streicher, Vice President (21 days in Pakistan); James Williams, Vice President (10 days in Pakistan); Pirooz Sharafi, Senior Associate.
- o USAID/Washington: Robert Archer, Asia/NE; James Sullivan, S&T/EY.
- o USAID/Islamabad: John Morgan, Charles Mosely, James Bever, Energy Officers
- o USAID/Bangkok: John Neave, Energy Officer

EXPENDITURES

(As of 12/31/85, based on labor costs incurred and invoices received):

	<u>This QUARTER</u>	<u>CUMULATIVE</u>
Salaries	\$16,565	\$18,264
Fringe benefits	5,054	5,479
Overhead	20,538	22,556
Travel/trans./per diem	9,474	9,474
Other direct costs	3,042	3,042
Equipment	0	0
Subcontractor	<u>0</u>	<u>0</u>
Total	\$54,673	\$58,815
Fee	<u>3,642</u>	<u>3,918</u>
GRAND TOTAL	\$58,315	\$62,733

The Asia/Near East Bureau has contributed \$100,000 to this task.

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U.S. AID CONSERVATION SERVICES PROGRAM
(Contract Number: DAN-5728-C-00-3073-00)

QUARTERLY ACTIVITY REPORT
(For period 10/1/85 -12/31/85)

ACTIVITY: Market Analysis of Cogeneration Opportunities in USAID-Assisted Countries (Contract Task Area 7)

COUNTRY: Pakistan, Thailand, India, Indonesia

START DATE: 10/15/85

COMPLETION DATE: 12/31/86

BUDGET: \$75,000

QUARTERLY EXPENDITURES: \$1,198

CUMULATIVE EXPENDITURES: \$1,198

ST/EY MANAGER: Dr. David Jhirad

HBC MANAGER: Henri-Claude Bailly **HBC REFERENCE:** 180

DESCRIPTION

Building on a proprietary model, developed by ECSP contractor Hagler, Bailly & Company, an analysis is underway to prepare detailed market profiles of cogeneration opportunities in various AID countries. Beginning with Pakistan and using the data gathered by the ECSP mission, the Hagler, Bailly Cogeneration Market Allocations Model is being modified to assess the size of the cogeneration market in Pakistan. Based on the cost of different cogeneration technologies (e.g., fuel oil boiler with steam turbine, natural gas boiler with steam turbine, gas turbine/waste heat recovery boiler, diesel/waste heat recovery boiler), and a market divided into new, replacement, and retrofit segments, the model will estimate, for a range of equipment sizes, the possible market shares. For the Pakistan analysis the industrial sector has been divided into four regions -- two with publicly-owned facilities and two with privately-owned facilities. The modifications to the model and the runs for Pakistan along with a report will be completed in the next quarter. Also as there are missions to Thailand, India, and Indonesia during this year, additional data will be collected and appropriate modifications made to the model to conduct cogeneration market analyses for these countries as well.

It is also planned to go beyond analysis and to try, where promising opportunities exist, to seek private sector participation in the identification and implementation of projects. Possible funding support from the World Bank and the regional development banks will be explored.

ACTIVITY REPORT

None.

KEY PERSONNEL

- o Hagler, Bailly & Company: Henri-Claude Bailly, President; James Williams, Vice President; Alain Streicher, Vice President; Pirooz Sharafi, Senior Associate; Marc Babin, Associate

EXPENDITURES

(As of 12/31/85, based on labor costs incurred and invoices received):

	<u>This quarter</u>	<u>Cumulative</u>
Salaries	\$ 443	\$ 443
Fringe benefits	133	133
Overhead	547	547
Travel/trans./per diem	0	0
Other direct costs	0	0
Equipment	0	0
Subcontractor	<u>0</u>	<u>0</u>
Total	\$1,123	\$1,123
Fee	<u>75</u>	<u>75</u>
GRAND TOTAL	\$1,198	\$1,198

U.S. AID CONSERVATION SERVICES PROGRAM
(Contract Number: DAN-5728-C-00-3073-00)

QUARTERLY ACTIVITY REPORT
(For period 10/1/85 -12/31/85)

ACTIVITY: Institutional Barriers to Private Sector Investment in
Energy Conservation (Contract Task Area 1)

COUNTRY: Not Country-Specific

START DATE: 10/14/85

COMPLETION DATE: 9/30/86

BUDGET: \$60,000

QUARTERLY EXPENDITURES: \$16,712

CUMULATIVE EXPENDITURES: \$16,712

ST/EY MANAGER: Dr. David Jhirad

HBC MANAGER: Henri-Claude Bailly **HBC REFERENCE:** 181

DESCRIPTION

During this quarter a draft work plan was developed to target efforts toward improving the investment climate within developing countries for private sector financing of energy conservation and small power generation. Such activities would stimulate both local and foreign investment in cogeneration and small power production in developing countries.

This activity will entail identification of investment barriers within select countries and regions, such as Central America, the Dominican Republic, Thailand, Korea, the Philippines, and Sri Lanka. The study will identify the most serious barriers to private sector investment in energy conservation, propose methods for mitigating their impact, and provide technical assistance to specific countries.

The implementation plan will include four primary activities:

- o identification of barriers: information to be compiled into a classification system and inventory
- o analysis of barriers: determine the relative impact of these barriers and quantify their effect; this data will

be formulated into a detailed investment climate profile for each country

- o development of mitigation plans: propose a range of options for each country
- o technical assistance for implementing mitigation strategies.

Continued activity is expected next quarter.

ACTIVITY REPORT

1. Assessment of Barriers to Private Sector Investment in Energy Conservation and Cogeneration in Developing Countries (draft work plan), November 8, 1985.

KEY PERSONNEL

- o Hagler, Bailly & Company: Henri-Claude Bailly, President; John Armstrong, Vice President.

EXPENDITURES

(As of 12/31/85, based on labor costs incurred and invoices received):

	<u>This</u> <u>QUARTER</u>	<u>CUMULATIVE</u>
Salaries	\$ 4,589	\$ 4,589
Fringe benefits	1,377	1,377
Overhead	5,668	5,668
Travel/trans./per diem	3,395	3,395
Other direct costs	639	639
Equipment	0	0
Subcontractor	<u>0</u>	<u>0</u>
Total	\$15,668	\$15,668
Fee	<u>1,044</u>	<u>1,044</u>
GRAND TOTAL	\$16,712	\$16,712

**U.S. AID CONSERVATION SERVICES PROGRAM
(Contract Number: DAN-5728-C-00-3073-00)**

**QUARTERLY ACTIVITY REPORT
(For period 10/1/85 -12/31/85)**

ACTIVITY: General Technical Assistance (Contract Task Area 6)

COUNTRY: Thailand, Indonesia

START DATE: 10/16/85

COMPLETION DATE: 9/30/87

BUDGET: \$140,000

QUARTERLY EXPENDITURES: \$15,496

CUMULATIVE EXPENDITURES: \$15,496

ST/EY MANAGER: Dr. David Jhirad

HBC MANAGER: Alain Streicher **HBC REFERENCE:** 182

DESCRIPTION

During this quarter, detailed work plans for Thailand and Indonesia were prepared and agreed on by the missions and the governments. For Thailand, these activities include a study of national energy conservation goals and a first-year program plan for a new national energy conservation center. The activity planned for Indonesia will entail a training program similar to the Energy Demand Training Program conducted by ECSP in Sri Lanka and Ecuador.

The study for Thailand will provide a set of short, medium, and long term goals for energy savings in the manufacturing sector. This will support efforts already in place by the National Energy Administration to build national momentum for energy conservation measures in the industrial sector. Both the World Bank and Asian Development Bank have sponsored studies to assess the energy situation in Thailand. Building on the findings of these recent evaluations, ECSP has proposed five areas of study that will assist in the preparation of the country's sixth five-year plan. These proposals include:

- o Establishment of national energy conservation goals (for industry first and later for transport and buildings)

- o Design of a detailed first-year program with emphasis on concrete actions, programs and a detailed organization and working system to carry out specific activities
- o Study of the barriers to private sector small scale power generation and cogeneration especially in light of the contemplated dendrothermal project using eucalyptus, and other renewable-based power generation options (i.e., rice husks, bagasse, etc.)
- o Training and other support activities for the soon-to-be established national energy conservation center.
- o Study of barriers/impediments to retrofit and process change investments in energy conservation.

On the basis of discussions held with representatives from the National Energy Administration, emphasis will be placed on the first three study areas.

With regard to Indonesia, discussions held with officials from the Directorate General for Power and New Energy, the Asian Development Bank, and World Bank have suggested that the country's needs would best be met with a program designed to supply both training and technical assistance.

The training component would be geared toward private sector energy engineers. The program itself would be modelled on the training program developed for Sri Lanka and Ecuador. Twenty to forty private sector engineers and directorate staff would participate in the program. Two private sector plants would be selected for energy audits and feasibility studies.

Technical support in Indonesia would meet the various needs of the directorate during the establishment of a national energy conservation center. This program would be similar to the services rendered in Thailand and close contact would be maintained between the two programs.

ACTIVITY REPORT

1. Memorandum on Fact Finding Visit to Indonesia (to Dr. David Jhirad et al. from Alain Streicher), November 11, 1985.
2. Memorandum on Thailand Trip Report (to Dr. David Jhirad et al. from Alain Streicher), November 14, 1985.

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KEY PERSONNEL

- o Hagler, Bailly & Company: Alain Streicher, Vice President (5 days in Indonesia; 5 days in Thailand).
- o AID/Bangkok: John Neave, Energy Officer
- o AID/Jakarta: Desmond O'Riordan, Energy Officer
- o Thailand: Prapeth Premani, Secretary General, & Dr. Itthi Bijayendrayodhin, Energy Economics Division, National Energy Administration
- o Indonesia: Dr. A.J. Sarjadi, Director for New Energy Development, Ministry of Mines and Energy

EXPENDITURES

(As of 12/31/85, based on labor costs incurred and invoices received):

	<u>This QUARTER</u>	<u>CUMULATIVE</u>
Salaries	\$ 5,194	\$ 5,194
Fringe benefits	1,558	1,558
Overhead	6,415	6,415
Travel/trans./per diem	1,161	1,161
Other direct costs	200	200
Equipment	0	0
Subcontractor	0	0
	<hr/>	<hr/>
Total	\$14,528	\$14,528
 Fee	 968	 968
	<hr/>	<hr/>
GRAND TOTAL	\$15,496	\$15,496

U.S. AID CONSERVATION SERVICES PROGRAM
(Contract Number: DAN-5728-C-00-3073-00)

QUARTERLY ACTIVITY REPORT
(For period 10/1/85 -12/31/85)

ACTIVITY: Innovative Private Sector Financing (Contract Task Area 7)

COUNTRY: Costa Rica, Central America, Dominican Republic, Pakistan

START DATE: 10/15/85

COMPLETION DATE: 12/31/86

BUDGET: \$75,000

QUARTERLY EXPENDITURES: \$4,512

CUMULATIVE EXPENDITURES: \$4,512

ST/EY MANAGER: Dr. David Jhirad

HBC MANAGER: Henri-Claude Bailly **HBC REFERENCE:** 183

DESCRIPTION

ECSP has supported exploratory work in the area of innovative financing of energy conservation projects and has prepared a number of documents outlining these concepts. The next logical step is to identify a private sector project which would lend itself to a demonstration of innovative financing. Previously funded USAID work in Costa Rica, Central America, the Dominican Republic, and Pakistan could be the source of such a project.

ECSP contractor staff, while in Costa Rica working on the transportation demonstration project, have been exploring with private and public sector officials possible energy conservation projects that would lend themselves to a demonstration of innovative approaches to financing. USAID is funding an industrial energy auditing project which is nearing completion; the 14 audited facilities could provide candidate projects for demonstrating innovative financing. Visits were made to four large industrial facilities (paper and cement plants and two food processing plants) to explore their interest in financing energy conservation projects through one or another innovative approach. At least two of the facilities expressed considerable interest since decisions were near on major energy-related expenditures and the managements were open to exploring new ways of financing

them. A mission devoted to exploring these opportunities is planned for the next quarter.

ACTIVITY REPORT

None.

KEY PERSONNEL

- o Hagler, Bailly & Company: Henri-Claude Bailly, President; Robert Kowalski, Senior Associate.

EXPENDITURES

(As of 12/31/85, based on labor costs incurred and invoices received):

	<u>This QUARTER</u>	<u>CUMULATIVE</u>
Salaries	\$1,655	\$1,655
Fringe benefits	497	497
Overhead	2,045	2,045
Travel/trans./per diem	0	0
Other direct costs	33	33
Equipment	0	0
Subcontractor	0	0
Total	\$4,230	\$4,230
Fee	282	282
GRAND TOTAL	\$4,512	\$4,512

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U.S. AID CONSERVATION SERVICES PROGRAM
(Contract Number: DAN-5728-C-00-3073-00)

QUARTERLY ACTIVITY REPORT
(For period 10/1/85 -12/31/85)

ACTIVITY: Technical Transfer Teams for Energy Conservation
(Contract Task Area 6)

COUNTRY: Not Country-specific

START DATE: 10/16/85

COMPLETION DATE: 9/30/87

BUDGET: \$50,000

QUARTERLY EXPENDITURES: \$5,281
CUMULATIVE EXPENDITURES: \$5,281

ST/EY MANAGER: Dr. David Jhirad

HBC MANAGER: Henri-Claude Bailly **HBC REFERENCE:** 184

DESCRIPTION

As an offshoot of the work for the Program Plan and Energy Conservation Strategy paper, a discussion document was prepared this quarter on the concept of Technology Transfer Teams. These teams would be comprised of technical personnel from private U.S. firms with experience in selected technologies and interest in business promotion and technology transfer to developing countries. These teams would be sent to developing countries to identify and implement projects for a specific technology. The technology being considered initially for transfer is cogeneration. Cogeneration is a proven technology with a broad range of equipment options for putting a system in place. Currently, many developing countries are experiencing an imbalance between the supply and demand for electricity where the growth in the demand for electricity is constrained by the rate at which new power plants can be built. Cogeneration offers a means of increasing electric generation capacity without additional construction of central power stations. It can be an alternative to conventional electric utility generation while at the same time conserving energy.

The technology transfer teams, composed of members with various expertise, will provide essential knowledge of a particular

technology and its market implications to their counterparts in select countries. When a technology transfer team is on mission to a country, it will also identify opportunities and constraints to the transfer of that technology. For this purpose, the team will develop a business analysis agenda that will serve as a basis for market research by USAID. Team activities will include the design of any information dissemination initiatives, marketing, and training efforts necessary for the efficient transfer of a specific technology. Also, team members will be used to monitor the progress of transfer measures and changes in the investment climate that might affect the eventual transfer of the technology.

The overall strategy will be to develop a mix of information, market, and feasibility study activities sufficient to stimulate investment in cogeneration in a target country. Members of the team will be selected on the basis of their financial interest and experience in the adoption of cogeneration technologies in developing countries. The primary objectives of the effort will be:

- o development of an information program to familiarize industrial plant managers and owners with the advantages of cogeneration.
- o detailed market analyses of the constraints and opportunities for cogeneration in selected countries
- o identification of specific potential cogeneration sites
- o incorporating the U.S. and host country private sector into all aspects of the project
- o packaging financing for specific projects
- o carrying out information dissemination programs which succeed in stimulating additional private sector investment in cogeneration.

Further development of this initiative is expected next quarter.

ACTIVITY REPORT

Concept and Approach to Technology Transfer Teams for Energy Conservation -- Focus: Cogeneration (Draft), October 28, 1985

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KEY PERSONNEL

- o Hagler, Bailly & Company: Henri-Claude Bailly, President; John Armstrong, Vice President; Peter Bos, Consultant.

EXPENDITURES

(As of 12/31/85, based on labor costs incurred and invoices received):

	<u>This QUARTER</u>	<u>CUMULATIVE</u>
Salaries	\$ 523	\$ 523
Fringe benefits	157	157
Overhead	645	645
Travel/trans./per diem	0	0
Other direct costs	0	0
Equipment	0	0
Subcontractor	<u>\$3,626</u>	<u>3,626</u>
Total	\$4,951	\$4,951
Fee	<u>330</u>	<u>330</u>
GRAND TOTAL	\$5,281	\$5,281

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**U.S. AID CONSERVATION SERVICES PROGRAM
(Contract Number: DAN-5728-C-00-3073-00)**

**QUARTERLY ACTIVITY REPORT
(For period 10/1/85 -12/31/85)**

ACTIVITY: Asia-Near East Energy Conservation Promotion and
Investment Workshop (Contract Task Area 4)

COUNTRY: Asia-Near East Region

START DATE: 10/15/85

COMPLETION DATE: Ongoing

BUDGET: \$120,000

ST/EY MANAGER: Dr. David Jhirad

HBC MANAGER: Alain Streicher

HBC REFERENCE: 185

DESCRIPTION

Discussions and planning were continued during the quarter to organize a workshop in the Asia/Near East region similar to the Latin America/Caribbean Regional Energy Conservation Seminar which was held in Costa Rica in January 1985. Tentative plans call for holding the workshop in Bangkok later in 1986. The purpose of the workshop is to expand private sector participation and investment in energy conservation and to improve AID energy conservation project implementation. Tentatively, the workshop will last four days with an optional fifth day. The following topics will be covered:

- o Day 1 -- Introduction and presentations on USAID-assisted energy conservation projects
- o Day 2 -- Project implementation experience and problems
- o Day 3 -- Private sector financial and economic issues
- o Day 4 -- Cogeneration development and private power generation

- o Day 5 -- Optional field trip

A cable discussing the workshop and requesting comments has gone to all missions in the region.

ACTIVITY REPORT

None.

KEY PERSONNEL

- o Hagler, Bailly -- Henri-Claude Bailly, President; Alain Streicher, Vice President; Gerald Schwinn, Associate
- o USAID/Washington -- Robert Archer, A/NE

EXPENDITURES

Expenditures during this quarter for this task are included in HBC Reference 150/151.

	<u>BUDGET</u>
Salaries	32,250
Fringe benefits	8,061
Overhead	38,369
Travel/trans./per diem	22,412
Other direct costs	14,059
Equipment	-0-
Subcontractor	<u>-0-</u>
Total	115,151
Fee	<u>4,849</u>
GRAND TOTAL	120,000

The Asia/Near East Bureau is contributing \$60,000 to this activity

c/v

**U.S. AID CONSERVATION SERVICES PROGRAM
(Contract Number: DAN-5728-C-00-3073-00)**

**QUARTERLY ACTIVITY REPORT
(For period 10/1/85 -12/31/85)**

ACTIVITY: Information Exchange and Energy Conservation Network
Development (Contract Task Area 5)

COUNTRY: Not Country-specific

START DATE: 10/15/85

COMPLETION DATE: ongoing

BUDGET: \$75,000

ST/EY MANAGER: Dr. David Jhirad

HBC MANAGER: Gerald Schwinn

HBC REFERENCE: 186

DESCRIPTION

In order to keep better track of the many information activities of ECSP, we have established this separate task to monitor such activities. It is here that we will report each quarter on the number of publications requested and distributed as well as the ECPIE Model and other computer products. Exhibit 6 shows the requests through this quarter for publications and the ECPIE Model.

ACTIVITY REPORT

None.

KEY PERSONNEL

- o Hagler, Bailly & Company: Gerald Schwinn, Associate.

EXPENDITURES

Expenditures during this quarter for this task are included in HBC Reference 150/151.

Exhibit 6 Requests for ECSP Publications and Computer Products

<u>TITLE</u>	<u>SOURCE OF REQUEST</u>				
	<u>USAID STAFF</u>	<u>USAID PROJECT STAFF</u>	<u>PRIVATE SECTOR U.S.</u>	<u>PRIVATE SECTOR ABROAD</u>	<u>OTHER DONOR AGENCIES</u>
Energy Demand Management & Conservation Manual	4	3	1	2	1
Industrial Energy Audit Manual	3	4	1	2	1
ESCP/IE	6	7	4	2	1
Latin America & Caribbean Regional Energy Conservation Seminar - Paper	2	3	1	2	1
Conclusions & Recommendations of the Latin America & Caribbean Energy Seminar	1	1			1
Energy Equipment Cost Directory	2	3		1	1
Transportation Sector in Costa Rica & Opportunities for Energy Conservation	1	3	1		
Financing Energy Conservation in Developing Countries	2	2	2	1	1