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OTEC UTILITY USERS COUNCIL
FINAL GRANT TERMINATION REPORT
(SECOND YEAR ACTIVITIES)

DOE GRANT NO. DE-FG01-821099
FG 01-80 ET 21099

Puerto Rico Electric Power Authority

San Juan, Puerto Rico

September 1982

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INTRODUCTION

This report serves as the Final Grant Termination Report covering the second year activities of the OTEC Utility Users Council. These activities were funded under DOE Grant No. DE-FG01-821099. Funds remaining unspent at the end of FY '81 were used to support the grant for fiscal year 82.

1. MEETINGS AND ACTIVITIES

During the second year period (October 1981 to September 1982) of the Grant, two quarterly meetings were held, Hawaii Electric and Central Power, (Corpus Christi) sent representatives to provide their input and participate in Council activities and an updated OTEC 2000 A.D. Market Forecast was prepared.

March 8-9, 1982
Pittsburg, Pa

The first council meeting for 1982 was held on March 8,9 at the Westinghouse facilities in Pittsburg, Pa.

Highlights of the meeting were as follows:

A statement regarding the recent DOE OTEC Pilot Plant Awards was agreed on by all attending members and direction was given to review the statement with the other members for comments and approval. (See Attachment A for UUC Statement). It was decided to hold a

mail vote on a new Executive Board Member due to attendance difficulties. Suggested modification to the 1981 UUC 2000 OTEC Market Forecast were presented and a 1982 version was to be developed and forwarded for review. Mr. Fernando Perez of PREPA invited papers and participation in the 1982 Pan American Engineering Congress to be held in Puerto Rico on August 2-7, 1982. Mr. Ed Hirata of Hawaii Electric described the two Pilot Plant proposals. Mr. Tom Blake of the Virgin Islands, described the VI proposal. Mr. Fernando Perez described the two Puerto Rico proposals, and the remaining proposals were described by the Councils support contractor. Westinghouse gave a presentation on their advanced nickel-iron batteries (for transport), advanced low costs photocells (using dendritic ribbon cell formation) and gas cooled phosphoric acid fuel cells.

A tour was provided by Westinghouse of the pilot plant production facilities for dendritic formed photoelectric cells, nickel-iron transportation batteries, and a phosphoric acid fuel cell.

May 26-27, 1982
St. Petersburg, Fla

The second council meeting for 1982 was held on May 26, 27 at the Florida Power Corporation facilities in St. Petersburg, Florida. Highlights of the meeting were as follows:

The participants of this meeting expressed a positive desire to continue the OTEC Utility Council's activities beyond the DOE grant support period. The OTEC market forecast as seen by the council remained about the same as forecasted last year. The response to the recent DOE OTEC Pilot Plant Phase I award is varied. Hawaii Electric pleased with awards wishes other awards were made; PREPA protesting the awards; and the Virgin Islands and the Key West were very disappointed.

A draft version of the 1982 issue of the Council's 2000 A.D. Market Forecast was distributed for review. Forecasted generation which was primarily located in Puerto Rico and Hawaii was reduced as the demand growth has slowed down and future construction costs are seen as very high.

The council toured the new county Waste Energy Plant nearing completion north of Tampa; and the COMCO (coal oil mixture) facility followed by a tour of the 125 MW Barstow station where unit #1 is converted to burn this Barstow mixture.

July 19, 1982
San Juan,
Puerto Rico

The third council meeting was scheduled to be held on July 19 in San Juan, Puerto Rico, this meeting was later cancelled.

2. NEW REPRESENTATIVES

Two new representatives joined the council, Mr. Edward Y. Hirata of Hawaii Electric Company and Mr. Terry M. Puckett of Central Power Corpus Christi.

3. OTEC 2000 A.D. MARKET FORECAST

The council updated the 1981 version of the OTEC Survey for the Year 2000 A.D. This updated version is enclosed as Attachment B to this report.

4. OTEC PILOT PLANT PARTICIPATION

As of this writing the only UUC member to participate in the DOE OTEC Pilot Plant program is Hawaii Electric with the only two DOE awards made, being given to them.

5. FUTURE PLANS

Future activities of the council are uncertain at this time due to termination of grant funding, as well as to the council's concerns expressed in the "statement on the DOE OTEC Pilot Plant". (See Attachment A).

6. EXPENDITURES

In Fiscal Year 1982 the total of \$122,153 was expended. The expenditure breaks down into the following categories:

Contractual	\$ 100,292.49
Salaries	7,725.51
Travel and Living Expenses (Council Meetings)	13,987.64
Others	147.51
Total FY 1982 Expenditures	\$ 122,153.15

The salary expenditure was for the PREPA administration of the grant and the two council meetings. The support contractor United Engineers & Constructors expenditures included salaries, travel and living costs.

OTEC UTILITY USERS COUNCIL

STATEMENT ON THE DOE OTEC PILOT PLANT

The OTEC Utility Users Council believes OTEC electric power is one of the nation's major clean energy options that can be made available for commercial operation in the next ten to twenty years if adequately supported. Our 1981 forecast of a potential demand of some 13,500 to 15,700 megawatts for OTEC power by the year 2000 requires rigorous and diversified development of various OTEC pilot plants and their siting to satisfy the varied nature of the United States OTEC resources and sites. With the largest demand forecasted in the Gulf of Mexico and the Caribbean Region, development of pilot plants suited to the operation in these locations should be pursued.

The electric utilities of Hawaii, Puerto Rico, Key West and Virgin Islands have fully supported OTEC as a realistic future electric power generation option. They and similar island markets require the least difficult OTEC configurations, environment and sites. Since the major OTEC electric power market is in the Gulf of Mexico, it is essential that these challenges in configurations and siting also be successfully addressed.

The multiple award conceptual Phase I OTEC Pilot Plant Program was designed to satisfy these diverse requirements. The Utility Council continues to support multiple awards in the Phase I conceptual OTEC procurement. Only by exploring the diversity of sites and configurations, including those representative of the Caribbean, Gulf of Mexico and the Pacific will a successful OTEC Program emerge.

It is critical that a sufficient number of awards be made in this conceptual phase to better define moored floaters, grazing and the various fixed shelf mounted configurations. The environments and sites of the Caribbean, Gulf of Mexico, and Pacific, all must be included in this conceptual phase. The proposed concepts are representative of the combinations of sites, environment and configurations characteristic of the future major OTEC market areas and have to be funded for an adequate Phase I OTEC Program. Conceptual awards to at least the above four electric utility regions is the only action that supports the extensive OTEC development required to satisfy the congressional goal of a 10,000 megawatt, 2000 AD market during the next eighteen (18) years.

DOE has a serious obligation to carry out the OTEC programs to which they committed themselves. Congress has made its support of OTEC development very clear in legislative actions including PL 96-310, 320 and PL 97-88. We, the Utility Users Council, concur with congressional legislative action and look to the Department of Energy to carry out the OTEC Program as mandated.

MEMBERS APPROVING THIS STATEMENT

PUERTO RICO ELECTRIC POWER AUTHORITY (Lead Agency)	San Juan, Puerto Rico
HAWAIIAN ELECTRIC COMPANY	Honolulu, Hawaii
KEY WEST CITY ELECTRIC SYSTEM	Key West, Florida
FLORIDA POWER CORPORATION	St. Petersburg, Florida
SOUTHERN COMPANY SERVICES	Birmingham, Alabama
MIDDLE SOUTH SERVICES	New Orleans, Louisiana
GULF STATES UTILITIES COMPANY	Beaumont, Texas
HOUSTON LIGHT & POWER COMPANY	Houston, Texas
CENTRAL POWER & LIGHT	Corpus Christi, Texas
VIRGIN ISLAND WATER & POWER AUTHORITY	St. Thomas, Virgin Island

FLORIDA POWER AND LIGHT is the only member of the Council that does not support this statement since they have not had the opportunity to evaluate the proposals themselves.