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Decision 82 11 086 NOV 17 1982

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of Southern California Edison Company for Authority to Implement a Residential Conservation Financing Program with Zero Interest Financing (ZIP) and Cash Incentive Payments (CIP), and to Recover the First Year's Expenses of the Program Through its Conservation Load Management Adjustment Clause.	Application 61066 (Filed November 19, 1981)
In the Matter of the Application of Southern California Edison Company for Authority to Increase Rates to Recover the 1982 Incremental Expenses of its Residential Conservation Service (RCS) Program Through its Conservation Load Management Adjustment Clause.	Application 61067 (Filed November 19, 1981)

John R. Bury, David N. Barry, III, Frank J. Cooley, Richard K. Durant, James M. Lehrer, Carol Henningson, and Clyde E. Hirschfeld, Attorneys at Law, for Southern California Edison Company, applicant.

Robert M. Loch, Thomas D. Clarke, Jo A. Harrington, and Jeffrey E. Jackson, Attorneys at Law, for Southern California Gas Company; Daniel E. Gibson and Merek E. Lipson, Attorneys at Law, for Pacific Gas and Electric Company; Matthew Steen, for Association of Southern California Energy Programs and Community Action Commission of Santa Barbara County, Inc.; Peggy C. Gardels, for City of Santa Monica; Kelley McQueen, for Community Services Department of San Bernardino County; and Arlene Ichien, Attorney at Law, for California Energy Commission; interested parties.

Freda Abbott, Attorney at Law, and
Ronald L. Knecht, for the
Commission staff.

O P I N I O N

Summary of Decision

The decision authorizes Southern California Edison Company (Edison) to implement fully two programs which will greatly expand its existing aid to residential ratepayers in identifying and financing cost-effective investments in home energy efficiency. Together, the two program will provide Edison's customers with their best opportunity to reduce their electric bills, in this time of increasing costs.

The decision addresses Edison's version of the federally mandated Residential Conservation Service (RCS) program to provide residential ratepayers with free "energy audits" which will identify for each participating ratepayer weatherization measures which can be installed cost-effectively in his or her home. Edison expects to fund 71,520 RCS audits in 1982.

Edison is being authorized to spend $8.0 million in the next year to weatherize an estimated 33,000 homes. Edison will provide 8% financing, or cash credits providing comparable assistance, for up to 14 cost-effective measures. Four measures have been found to be so clearly cost-effective that Edison will provide Residential Conservation Financing Program (RCFP) assistance without any prior audit. These items are attic insulation, weatherstripping, caulking, and duct wrap. Eight additional measures will be eligible for RCFP only when shown to be cost-effective by an RCS audit of the ratepayer's residence. These measures are wall insulation, floor insulation, storm or thermal windows, replacement of central air-conditioners, evaporative coolers, precoolers for air-conditioning condensers, whole-house fan, replacement or retrofit of electric water heater with a heat pump water heater, and replacement of central electric heat with a central heat pump. Edison will also assist the purchase of energy-efficient refrigerators.

RCFP will be available to Edison residential customers who have electric space heating, electric central air-conditioning, or both. Even customers who never participate directly in the programs will save money over the life of the weatherization measures. Edison will be able to "supply" energy through conservation at far less cost than if new energy supplies were purchased to provide equivalent amounts of electricity.

The Commission has ordered a number of provisions to ensure that the benefits of RCFP are spread equitably. First, the total size of RCFP loans has been limited to no more than $3,500 for each dwelling unit: $750 for attic insulation: $250 total for the weatherstripping, caulking, and duct wrap: and $2,500 total for the remaining items. Second, RCFP loans are repayable over 100 months, ensuring relatively small monthly payments (loans are due in full upon sale of the unit). Minimum loans will be $150, and minimum monthly payments $5.

Third, special efforts have been taken to allow renter participation. The credit option will ensure that renters can recover the costs of weatherization investment quickly, without accepting any new debts.

Fourth, additional efforts are directed to allowing low-income ratepayers the opportunity to participate. Edison will provide increased credits to low-income participants who install attic insulation, weatherstripping, caulking, or duct wrap. Edison also will provide low-income participants in RCFP up to $200 in credits for cost-effective "building envelope" repairs, such as repairing holes in walls and replacing broken windows. The increased credits will nearly cover the cost of installing the measures, but will still be cost-effective to the utility and its ratepayers.

I. Introduction

By Application (A.) 61066 Southern California Edison Company (Edison) seeks authority to implement a systemwide RCPP and to accumulate program expenses as a specified program under its Conservation Load Management Adjustment Clause (CLMAC). Edison proposes to offer both zero interest financing (ZIP) for loans and cash incentive payments (CIP) for incentives to its residential customers in connection with the purchase and installation of certain energy conservation and weatherization measures. The application requests an increase in the Conservation Load Management Adjustment Billing Factor (CLMABF) effective for service rendered on or before April 1, 1982 to recover all reasonably incurred expenses. This would result in an estimated annualized increase in revenues of approximately $9.9 million.

In A.61067 Edison seeks authority to increase rates to recover all reasonably incurred incremental expenses of its systemwide RCS program. It also seeks to include the RCS program as a specified program under its CLMAC tariff provision.

A public witness hearing was held April 1, 1982 at Los Angeles. Nine members of the public representing various organizations[1] in Edison's service area made statements for the record. All those making statements opposed any program which would necessitate raising residential rates.

The two applications were consolidated for hearing because of the interrelationship between RCPP and the RCS audit program.

Thirteen days of hearing were held in May, June, and July, 1982 in San Francisco. The matters were submitted July 14 subject to the filing of concurrent briefs due August 17, 1982. In the course of the proceeding 45 exhibits and 1,166 pages of transcript were received in evidence.

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[1] Representatives of Action, Southern California Utilities Protest Council, Gray Panthers, and Community Action Commission of Santa Barbara County.

Edison presented the testimony of five witnesses in support of A.61066 and three in support of A.61067. Edison also presented one witness to rebut the Commission staff's showing. For the Commission staff, four witnesses presented testimony and evidence. The California Energy Commission (CEC) and the City of Santa Monica (City) each had one witness testify relative to RCS.

Background

Edison is engaged in generating, transmitting, and distributing electricity in portions of central and southern California. Edison owns and operates 11 fossil-fueled steam electric generating plants, two combustion turbine plants, one diesel electric generating plant, 36 hydroelectric plants, and 80% of the San Onofre Nuclear Generating Station, all located in central and southern California. In addition it owns a small fossil-fueled steam electric generating unit and a small combustion turbine unit in Arizona, and a 48% interest in Units 4 and 5 of a coal-fired steam electric generating plant in Farmington, New Mexico (Four Corners Project), all of which are operated by another utility. It also operates two coal-fired electric generating units in Clark County, Nevada (Mohave Project), in which it owns a 56% undivided interest; and operates four Hoover hydroelectric generating units owned by others and located on the Arizona side of the Hoover facility.

Edison's service area is located in 15 counties in central and southern California, including Fresno, Imperial, Inyo, Kern, Kings, Los Angeles, Madera, Mono, Orange, Riverside, San Bernardino, Santa Barbara, Tulare, Tuolumne, and Ventura Counties, and includes about 150 incorporated communities as well as outlying rural territories. Edison also supplies electricity to other electric utilities under special contracts for distribution and for other uses by them.

The total system operating capacity available to Edison under favorable operating conditions is approximately 15,504 megawatts (MW) (summer rating).

II. Edison's Proposal

A.61066 - RCPP

By this application Edison seeks authority to implement RCPP and to accumulate program expenses as a Specified Program under its CLMAC. It proposes to offer both ZIP loans and CIP to its residential customers in connection with the purchase and installation of certain conservation and weatherization measures. It also proposes to increase its CLMABF for service rendered after April 1, 1982 to recover all reasonably incurred first-year expenses. This would result in an estimated annualized increase in retail revenues of approximately $8.9 million over present rates. Estimated first-year expenses would be recovered through the balancing account where the applicable revenues and expenditures are compared each month and any differential reflected in subsequent rate adjustments under the CLMAC procedure.

The application states Edison proposes to offer ZIP loan financing and CIP to reduce the cost barriers associated with the implementation of conservation measures. It alleges the implementation of conservation measures will benefit Edison, its shareholders, and most importantly its customers by reducing the need for new generating resources as well as the amount of high cost, imported, low-sulfur fuel oil required to generate electricity to meet system demand.

Edison proposes to offer participating customers:

Loan financing at no interest for a period up to 60 months and/or:

Cash incentives for attic insulation, air duct insulation, caulking and weatherstripping, wall insulation, floor insulation, thermal windows and doors, replacement energy-efficient central air-conditioner, evaporative cooler, pre-cooler, whole house fan, heat pump water heater, replacement of electric resistance heater with a central heat pump;

Cash incentives for replacement of a customer's primary refrigerator if the replacement refrigerator consumes 80 kWh/month or less;

Installation, at the utility's option, of a load cycling device on a mandatory basis for participating customers who have central electric air-conditioning;

Larger incentives for low-income customers on an experimental basis;

Loans which are due and payable upon sale of the property;

Minimum loan amount of $200 and a monthly payment of 1/60th of the original principal, but not less than $10/month; and

Loan limits of $3,500 for single-family and duplex dwellings; $1,750 per unit for rental units; $1,500 for occupants of rented property; and $1,500 for mobile homes.

It states the program is directed to the estimated 24% (666,550 of 2,819,180) of Edison's residential customers (primary customers) who have electric space heating and/or electric central air-conditioning.

The application identifies four subgroups of primary customers for outreach and program participation. These are:

1. Low-income households.
2. Renters.
3. Households maintained by persons aged 65 and older (elderly).
4. Households maintained by persons who speak Spanish as their primary language.

The application states that Edison and the gas utilities within its service territory provide cooperative services to promote and implement RCS to those customers served by Edison and a gas utility. This cooperative effort includes provisions for the operation of a central processing center where audit requests are received, customer data are collected, and audit assignments are made for mutual customers. Customers with electric space heating and/or central air-conditioning and/or electric water heating are to receive audits from Edison. All other mutual customers would receive an audit by the serving gas utility.

At the time of an audit, the customer is to be informed of the estimated savings in energy costs as a result of installation of suggested conservation measures and the use of energy conservation practices. The auditor is to explain the ZIP and CIP programs, provide a copy of the RCS contractors list, answer questions, and instruct the customer in the procedures for completing and sending a ZIP/CIP application. Upon receipt of the application, Edison proposes to review and commit to the loan and/or incentive, perform an inspection as necessary after the conservation measure is installed, and disburse the principal amount of the loan or incentive to the customer who, in turn, is responsible for payment to the contractor or supplier. A lien would be required on the property for loans in excess of $1,500.

Customer contact expenses for the program are to be included in Edison's RCS program expenses. Thus, if the RCS program is reduced or eliminated, precluding in-the-dwelling audits, additional RCPP funding would be required to cover customer contact expenses.

According to Edison's application, "each Conservation Measure shows a positive net benefit from all four perspectives." (Exh. 1, p. 3-16.) However, Edison also asserts that nonparticipants will bear a net cost from ZIP unless the utility is allowed to require air-conditioning cycling as a condition for participation.

Finally, in view of the Edison staff stipulation deferring consideration of cost-effectiveness methodologies to A.61138 it argues that "the two proposals, Edison's and the staff's, should only be evaluated on the reasonableness of their respective ZIP/CIP program descriptions." (Concurrent brief of Edison, p. 21.)

Edison states that by offering an option of ZIP loan financing or CIP, the economic constraint associated with high initial costs of conservation measures should be mitigated and the probability of participation increased. A customer would have the choice between participating in ZIP or CIP for different conservation measures but the same measure would not be eligible for both ZIP and CIP to the same customer.

In addition to the energy savings incentive, credits against federal and state income tax liability provide an additional incentive to participants for the installation of qualifying measures.

Edison states that in its first year the program will stimulate conservation actions in approximately 33,000 dwelling units resulting in annualized savings of approximately 63 million KWh and a demand reduction of approximately 15 MW.

For financing Edison proposes that an administrative trust (trust) with leveraged funding be used for the program[2] provided that the trust is determined a nontaxable financing mechanism. Because it receives no economic benefit from such trust funding, Edison submitted a request to the Internal Revenue Service (IRS) for a ruling that the trust funding be exempted from taxation as taxable income. At the time of the application, Edison expected a ruling in early 1982.

If an unfavorable IRS ruling on such request is received prior to the effective date of a decision on this application, Edison

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2 Edison initiated a trust titled "Conservation Ratepayers Trust," with the Bank of America as trustee for Edison's Greater Eastern Desert Area Phase I residential conservation financing program that started April 1, 1981.

proposes to use the alternative of a leveraged subsidiary financing mechanism. If Edison has not received any IRS ruling prior to the effective date of a decision on this application, Edison proposes the following:

1. The Commission authorize Edison to implement the program using the trust-funding mechanism as proposed.

2. The Commission also find that the leveraged subsidiary is a fair, just, and equitable financing mechanism and that, in the event a favorable IRS ruling on Edison's request is not received prior to November 1, 1982, Edison be authorized, upon advice letter notification to the Commission, to change its financing plan from the trust to the leveraged subsidiary to be effective prior to December 31, 1982.

With adoption of its program, Edison proposes to add 0.016 ¢/kWh to the existing CLMAFF for lifeline domestic service, nonlifeline domestic service, and other than domestic service.[7]

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[7] By D.92166 dated August 19, 1980 Edison was authorized to revise its tariffs to reflect load management adjustment billing factors to recover certain expenditures for the authorized accelerated 1980 load management programs. That decision also authorized the establishment of a load management balancing account. By Advice Letter 533-E dated August 25, 1980 Edison revised its CLMAC to include the load management adjustment clause (LMAC). By D.92853 dated April 1, 1981 Edison was authorized to revise its tariffs to establish a solar demonstration programs adjustment clause (SDPAC) with billing factors subject to revision on January 1 of each year and to be applied on a uniform cents per kilowatt-hour basis to all retail sales, excluding Catalina. By Advice Letter 552-E dated April 1, 1981, supplemented April 28, 1981, Edison included SDPAC under its CLMAC. The LMAC and SDPAC were combined and named CLMAC by Advice Letter 558-E effective June 3, 1981.

Edison proposed that the increase become effective for service rendered on and after April 1, 1982. The proposed increases in revenues estimated by revenue class would be:

Description	Sales M^6kWh	Proposed Increases $\$M^6$	%
Residential			
Lifeline	9,142	1.5	0.3
Nonlifeline	7,648	1.2	0.2
Total	16,790	2.7	0.2
Agricultural	1,050	0.2	0.2
Commercial	15,780	2.5	0.2
Industrial	17,067	2.7	0.2
Other Public Authority	4,565	0.8	0.2
Total	55,252	8.9	0.2

The table shows the effect of the request applied to the various revenue classes following the formula for rate spread adopted in Edison's latest general rate case, D.92549, wherein rate relationships are maintained by applying rate changes on a uniform c/kWh basis to each revenue class.

A.61067 - RCS

The National Energy Conservation Policy Act (NECPA), Pub. L. No. 95-619 (November 9, 1978), 92 Stat. 3206 et seq., as amended, requires public utilities to carry out a program of residential conservation services for their customers to encourage adoption of energy conserving practices and the installation of energy conservation measures (conservation measures).

The United States Department of Energy (DOE) has issued a set of final rules under which each state is to establish an RCS State Plan. The CEC has been designated the "Lead Agency" by the governor of California for the development and implementation of the California RCS State Plan.

The California RCS State Plan of January 1981, approved by DOE December 29, 1980, requires Edison to send an announcement concerning RCS (Program Announcement) to each residential customer no later than six months after approval of the RCS State Plan and, in addition, provide a variety of services. Following is a brief description of the services available to each eligible customer under the proposed RCS program:

A. Program Announcement

In accordance with the RCS State Plan, Edison began sending a program announcement to each eligible customer on June 1, 1981. This brochure was the product of a cooperative effort between Edison and the three gas utilities with service territories that overlap Edison's: Southern California Gas Company (SoCal), Long Beach Gas, and Southwest Gas Corporation.

B. Home Energy Audit

The RCS on-site home energy audits (Class A audits) are designed to provide customers with information on the conservation measures and practices which are likely to be cost-effective for the particular residence and to assist the customer in arranging for purchasing, installing, and financing those measures. The audit itself will consist of:

1. Surveying the customer's residence and taking measurements of or data for all major variables affecting energy consumption.

2. Recording this information on a proposed Home Energy Survey Worksheet and inputting this information into a portable computer.

3. Providing the customer with a copy of the computer printout and explaining the results in detail.

4. Recommending to the customer which conservation practices should be adopted and which conservation measures should be installed.

5. Determining if the customer is interested in assistance in arranging for installation or financing of conservation measures.

C. Assistance in Arranging Installation

At the conclusion of the Class A audit, the auditor will offer to assist the customer in arranging for the installation of those measures that are recommended through the audit process. If the customer is interested, he or she is provided with the name, address, and phone number of qualifying installers in the area selected from the CEC's master list of such installers.

D. Assistance in Arranging Financing

Edison will offer to assist all eligible customers in arranging for financing at the conclusion of the RCS audit. This includes a standardized credit application form, a list of qualified lenders, and a telephone number to call if the customer needs further assistance. Assuming approval of A.61066, the customer will be advised that for many of the RCS conservation measures (and a few additional Edison-approved measures found to be cost-effective by the RCS audit), Edison will offer ZIP and/or CIP financing.

E. Post-Installation Inspections and Customer Complaints

Edison will perform on-site, post-installation inspection of conservation measures installed under the RCS program according to the procedures outlined in the application.

Upon receiving a complaint regarding an installer or lender participating in the RCS program, Edison proposes to contact both the complainant and the installer or lender to attempt to mediate the problem.

As an alternative to the on-site Class A audit, a "do-it-yourself" audit option (Class B audit) was scheduled to be introduced on or before June 1, 1982, as stipulated in the California RCS State Plan. An information packet is to be supplied to assist the customer in conducting the Class B audit. This would include a Class B audit workbook to explain the steps involved in gathering and reporting information on residence size and type, household population, number and type of appliance, and other energy-related variables.

The customer would submit these data to Edison for calculation of estimated energy savings for the various conservation measures. These results together with Edison's recommendations on conservation practices to be adopted and conservation measures to be installed would then be returned to the customer. Additionally, the customer would receive printed instructions on the steps necessary to secure installation and financing.

By this application Edison requests authority to increase rates to recover all reasonably incurred incremental expenses of a systemwide RCS program in addition to the $8,089,000 reflected in base rates authorized in its last general rate case, D.93540.[4] It also seeks to include the proposed systemwide RCS program as a specified program in its CLMAC tariff provision. For the purposes of this application, Edison estimates such incremental expenses for the 1982 RCS program to be $5,819,000. Total 1982 calendar year RCS expenses are estimated at $13,908,000.

The requested increases to the CLMABF for the RCS program would add 0.014 ¢/kWh to lifeline domestic service, nonlifeline domestic service, and other than domestic service.

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4 Edison's characterization is incorrect, as we discuss in today's decision in A.61005. That decision approves Edison's request for redirection of 1982 conservation funds, producing an authorized 1982 RCS funding level of $8,089,000. That amount includes $760,500 for Edison's Greater Eastern Desert Area ZIP, a program which is to be superseded by RCPP.

Edison proposes that the increases become effective for service rendered after April 1, 1982. It also proposes to file future CLMAC applications for a revision date of January 1 of each year to recover all reasonably incurred expenses of the RCS program.

The application states that on April 1, 1981, Edison began a prototype RCS program in conjunction with a ZIP program in the greater eastern desert area of its service territory. Based in part on the results of this prototype effort, Edison states it has designed a systemwide RCS program that will effectively serve the needs of its customers and meet appropriate state and federal requirements.

III. City Proposal

City's witness testified on contract negotiations between City, Edison, and SoCal for City to perform all RCS audits within its city limits. The witness explained that she was appearing to present the Commission with information regarding the contract negotiations and was not making any recommendations. She stated she did not believe Commission approval of a contract for audits to be performed by City was necessary because the language contained in D.82-05-043, in A.60446 and A.60447, SoCal's RCS and Weatherization Financing and Credits Program (WFCP) applications clearly encouraged this type of program.

IV. CEC Position

CEC took issue with the staff recommendation for cutting Edison's requested 1982 incremental RCS program expenses. CEC recommended that the request be approved at the rate of $646,555 per month in 1982 with savings from RCS program improvements to be used to provide the capacity to conduct a greater number of audits.

CEC pointed to its responsibility for the RCS State Plan and stated its commitment to ensuring the proper and full implementation of RCS by all covered utilities. CEC estimated the installation of conservation measures through the RCS State Plan can save approximately 49 trillion British thermal units (Btu) by the end of 1983 with significant energy savings continuing in subsequent years.

CEC stated that the second phase of hearings to consider revisions to the RCS State Plan was then in process. The goal of these hearings was to simplify RCS audit requirements and reduce audit costs. Adoption of revisions will present an opportunity for covered utilities to use savings from a more simplified, more cost-effective program to expand their RCS programs.

CEC stated that the staff recommendation that only $1,382,000 in incremental expenditures for RCS be approved unjustified by the record and beyond the scope of the proceeding. It stated that the staff recommendation was derived by reducing by 32% the sum of the $8,089,000 authorized in base rates plus the $5,819,000 requested in this proceeding and subtracting, from that amount, the amount authorized ($8,089,000) in base rates. It argued that adopting the staff recommendation would in effect reduce the amount already authorized for the RCS program.

CEC also asserted that the staff-recommended amount for RCS was based on sheer speculation of cost savings in the place of cost analysis and should be rejected.

V. Staff Position

A.61066

Staff analysis of Edison's ZIP/CIP program was provided by the Energy Conservation Branch (ECB) of the Utilities Division, by the Policy and Planning Division, and by the Revenue Requirements

Division. The staff concluded that the overall program as proposed by Edison would be cost-effective but recommended that the incentive levels be modified to ensure customer participation.

Staff recommends an 8% interest, 100-month loan for the full amount of the purchase price instead of a 0% interest, 60-month loan on part of the purchase price as proposed by Edison. It believes that providing full-cost loan financing and minimizing monthly repayment costs are essential to removing the financial barriers to conservation. It states many customers lack the requisite financial resources to make their home more efficient. It states that under its modified plan, the program will be cost-effective to program participants, the utility, and society: and that nonparticipants would also benefit from the net energy and capacity savings.

Staff's recommended cash incentives for the first four program items are more consistent with those incentive levels granted to SoCal in D.82-02-135 dated February 17, 1982. Staff's recommended schedule is based on the lowest of the following: Edison's CIP schedule: 30% of the installed cost: or SoCal's authorized cash incentive (for measures covered by SoCal). It states that limitation to 30% of the installed cost makes the CIP program approximately equal in value to the participant as the 100-month loan at 8%.

As analyzed by the ECB, Edison's proposed program would provide conserved energy at 1.3¢/kWh, compared with the company's marginal cost-average cost gap of 3¢/kWh. Edison's proposal would be cost-effective from all four of the perspectives employed by the Commission: society, participant, utility, and nonparticipant. At a 10% discount rate, all individual measures would be cost-effective to the nonparticipant. (Exh. 43.) Staff's recommended program changes would improve cost-effectiveness by reducing program costs.

Staff expects that its recommendations will save Edison ratepayers about $36.4 million on a discounted life cycle basis. It states that for the first year implementation of the ZIP/CIP program, as modified, no additional funds would be required above Edison's requested $11.3 million.

Staff recommends that eligibility for refrigerator cash incentives be limited to units which exceed the energy efficiency requirements of the "standard models," identified in the CEC's efficiency standards, by at least 20%.

Staff has no objection to Edison's request that ZIP/CIP program participants participate in its load management program, or to the condition that program eligibility be conditioned on the customer's agreement to allow Edison to install a load-cycling device. The staff believes, however, that this could reduce customer participation, and could be inequitable.

Staff has no objection to Edison's proposed $200 grants for improvements to the "building envelope," so long as such improvements were found cost-effective in the course of a prior energy audit. It states Edison should pay the lesser of the actual price for building envelope repairs, or $200.

The staff recommends that the maximum loan per dwelling unit be $3,500. This would allow loans large enough to cover replacement heat pump furnaces and would ensure equitable distribution of loan funds.

Finally, staff recommends that all work financed under the ZIP/CIP program should be installed in accordance with RCS standards by RCS listed contractors, or the customer, and that all work financed under the program should be covered by repair or replacement warranties equal to or exceeding those required by the RCS State Plan, including a 3-year manufacturer's warranty for free repair or replacement of materials.

Staff does not object to a supplemental loan for landlords for building repairs to improve energy efficiency when the majority of the building's tenants are low income.

Staff does not recommend Edison's proposed larger cash incentives for the low-income group. It states that the cost of measures does not vary with income level, nor do the useful lives or the energy savings vary with income level for a given device. However, it recognizes that greater incentives may be required to persuade low-income customers who are less able and less inclined to accept deferred benefits to participate in the program.

Staff recommends that transfers to close relatives of residences which have been financed under the loan program not trigger full repayment of the balance of the loan if the transferee assumes in writing all obligations regarding the loan.

It recommends a minimum loan amount of $150, instead of Edison's proposed $200 and a minimum monthly repayment of $5, instead of Edison's $10 or 1% of the original principal stating this is consistent with SoCal's financing program.

Staff agrees with Edison's proposal that low-income tenants be offered a package of low-cost conservation measures at no charge, stating that targeting and outreach efforts for special ZIP/CIP markets should be approved because they are appropriate and reasonable.

Staff recommends that Edison's $8.9 million revenue increase request be granted subject to three caveats. First, in absence of recorded data it used Edison's workpapers for certain calculations and later-filed data should be carefully reviewed. It emphasized Edison should exercise strict constraints in the matter of program costs stating that economies will be achieved throughout the program and that future revenue requirements will reflect such economies.

The second caveat concerns federal and state law related to NECPA. Since this body of law may be subject to change, staff feels Edison's recorded costs should reflect any reductions with appropriate adjustments in funding made during the programs' annual review.

The third caveat relates to the funding mechanism to be used to implement the proposed CIP program. Both Edison and staff assumed that a leveraged trust will be used for loan financing. Should a different financing mechanism be used, staff recommends that the full $8.9 million be approved with adjustments in funding at the time of the program's annual review.

A.61067

Edison has been authorized $8,089,000 in 1982 base rates to finance its RCS program (see footnote 4, supra). By this application it seeks authority to increase rates by an additional $5,819,000 to finance RCS audits as mandated by NECPA.

Staff expresses concern over the proposed audit cost, the energy savings generated and the possible modifications of the RCS program. It states that federal legislation may eliminate the RCS program and that the state program is being streamlined to make it more cost-effective.

Staff's witness states that prior Commission decisions set a precedent for consistency in RCS proceedings and that Edison's proposal should not be evaluated in isolation. For this reason he recommends that Edison be granted only $9,471,000 rather than the requested $13,908,000 to conduct its 1982 RCS program. This recommendation would result in Edison's receiving $1,382,000 of the requested $5,819,000 in incremental revenues.

Based in part on other RCS proceedings,[5] the staff witness summarizes the problems of the RCS program as follows:

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5 Staff witness Grove testified in Pacific Gas and Electric Company (PG&E) A.59537 et al. (D.93891, December 30, 1981) and Southern California Gas Company (SoCal) A.60446 and A.60447 (D.82-02-135, February 17, 1982).

1. There is no requirement that the RCS program be cost-effective.
2. RCS has no provisions to eliminate unnecessary or second audits.
3. RCS is inequitable to the customer who has been conserving.
4. With all the consumer protection elements built into the plan, RCS does not require the recipient of the audit to implement any measures or practices.
5. RCS places the burden on the utilities, their ratepayers, and the CPUC to carry out an expensive program without giving federal or state incentives.
6. RCS does not completely measure the heat loss and gain of a building envelope.
7. RCS auditors can make errors while auditing. It would not be uncommon for two certified auditors to make different recommendations if they audited the same home.

The staff witness also states there is a problem of conservation potential. He states that California utilities have been in the conservation business for the past six years and that the majority of Edison's service area is in a moderate climatic zone. With the enactment of conservation-oriented standards, the implementation of utility conservation programs, and the higher cost of energy, California has managed to reduce its per capita energy consumption in the residential sector. He asserts that these factors reduce the conservation potential for an RCS audit.

Staff takes exception to Edison's audit cost estimates. Edison estimates $12.2 million for 71,520 Class A audits - $167 per audit - including payments to SoCal for 25,760 audits performed for mutual customers. Staff believes the Class A audit could be performed for less than $100 each and possibly for $50 if RCS is greatly simplified.

Staff states utilities are already performing RCS audits for $100 or less. It points out that in Edison's great eastern desert area program the cost per audit in 1981 was $100. Further, studies by CEC staff have shown that Class A audits can be performed for less than $100. Thus, staff argues, it appears not unreasonable to conclude that a Class A audit will cost approximately $100.

Staff finds Edison's position unclear whether Class B (do-it-yourself) audits will be implemented before 1983. Expenses for 1982 were estimated at $1.8 million but no Class B audits have been performed to date and Edison states none will be made in 1982.

Staff recommends that the level of audits proposed by Edison on a prorated monthly basis for the remainder of 1982 be adopted. It states that based on assumed $100 audit and 25-30% incremental start-up cost included by Edison, the amount of funding provided under the staff proposal would be sufficient for approximately 20,000 audits during the fourth quarter of 1982. This would represent full capacity use of the company's own auditor team plus the assumed 6,500 "mutual" audits performed by SoCal.

VI. Discussion

Cost-Effectiveness

Considerable hearing time was consumed on the subject of cost-effectiveness. During the proceeding the issue of the appropriate avoided cost value to be used for cost-effectiveness analysis was broached by both Edison and staff. After considerable negotiation, Edison and staff agreed that the proposed ZIP/CIP program and modifications proposed by staff are cost-effective with regard to overall societal, participant's, and utility's perspectives using either Edison's or staff's methodology. Staff and Edison stipulated that the methodology for the development of marginal and/or avoided costs should not be determined in this proceeding.

Staff, however, disagreed with Edison on whether certain forms of the ZIP/CIP proposals would be cost-effective to the nonparticipant. They also disagreed on the appropriate discount rate to be used for cost-effectiveness analysis and for determining the appropriate financing mechanisms.

Edison believes that with the stipulation (Exh. 41) the issue of marginal and/or avoided cost is eliminated from this proceeding and that its application and the staff's proposed modifications should be evaluated on the reasonableness of the respective program descriptions.

The Commission's Policy and Planning Division recommends that the determinative test of cost-effectiveness is properly the societal test. Commercial and industrial energy customers generally have recognized the benefits of conservation in relation to new supply costs; furthermore, small residential users have the benefit of a low lifeline energy rate. Staff asserts that those circumstances reduce the importance of the nonparticipant test.

Revenue Requirements Division recommends that the principal test should be the social cost-effectiveness test but that all four cost-effectiveness tests should be applied on a measure-by-measure basis. According to this view, the social (or societal) test should be first applied to measure the impact of a measure on overall economic efficiency and, thus, total economic welfare in the society. The degree of cost-effectiveness would be evaluated in relation to the results of the three other tests.

Notwithstanding these differences, staff uniformly favors the adoption of the ZIP/CIP program as modified stating that the differences are not material to the outcome of the case.

The cost-effectiveness issue relative to conservation programs has been the subject of considerable discussion in D.92653 in PG&E's conservation financing proceeding, A.59537; D.82-01-103 in our OIR 2 rulemaking concerning cogeneration and small power producers: and D.82-02-135 in SoCal's PCS (A.60446) and WPCP (A.60447) proceeding.

In A.59537 the Special Economic Projects Section of the Commission's Revenue Requirements Division recommended that we require conservation programs to be cost-effective from the nonparticipant's perspective. After a lengthy discussion we stated in D.92657:

> "We conclude that a conservation measure, as distinguished from the amount of utility-provided incentive, must meet the tests of cost-effectiveness to the customer, the utility, and society to be considered cost-effective for purposes of receiving a utility incentive. It would not be proper for this Commission to encourage consumers to purchase conservation measures the cost of which exceeds the savings generated. Nor would it be a reasonable expenditure of ratepayer funds to require a utility to purchase energy from conservation measures at a higher per unit cost than its marginal cost of energy. Finally, an inefficient allocation of resources would be created if the total cost of a conservation measure, including utility incentives, exceeds the resultant total savings to the customer and the utility."
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> * * *
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> "There is the further question of what portion of the cost of financing these measures should be paid by the utility and ultimately its ratepayers. In this regard, there is a role for what has been called the nonparticipating ratepayer test for determining the cost-effectiveness of utility incentives. The comparison of utility program costs to the difference between marginal and average cost is relevant to our inquiry on this issue."
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> * * *
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> "We conclude that it is desirable, though not necessary, to restrict utility conservation expenditures to the difference between marginal and average cost. This is a proper standard so long as the market penetration of conservation

measures is being maximized. If market penetration is not proceeding rapidly enough because of the market imperfections noted above it is equally proper to enlarge conservation incentives beyond this level.

"In determining the proper level of utility-provided incentives, it is our responsibility to assure that utilities we regulate provide adequate and reliable supplies of energy at the lowest reasonable cost. The widespread use of conservation measures increases both the adequacy and reliability of energy supplies and reduces the total revenue requirement of the utilities. Thus, a proper incentive is that which will maximize market penetration of useful conservation measures while minimizing cost to the ratepayers. This determination can only be made by the exercise of reasoned judgment based on current facts and guided by the theoretical limits just discussed."

We have long recognized that conservation is one of the most important tasks facing utilities today. In D.84902 dated September 16, 1975 we noted:

"Continued growth of energy consumption at the rates we have known in the past would mean even higher rates for customers, multi-billion dollar capital requirements for utilities, and unchecked proliferation of power plants. Energy growth of these proportions is simply not sustainable... Reducing energy growth in an orderly, intelligent manner is the only long-term solution to the energy crisis."

As we stated in D.93894 in A.60546, we recognize that the ratepayers' ability to absorb continuous rate increases is limited. Thus we must not only determine that a conservation program is cost-effective for ratepayers but we must also ensure that the design of the program is as efficient as possible. Accordingly any rate increase must be the minimum which will allow the realization of the programs benefits for ratepayers. D.93804 substituted an 8% loan program for the ZIP program proposed by San Diego Gas & Electric Company (SDG&E), on the grounds that 8% financing would induce substantially the same customer participation as 0%, but at much lower subsidy cost. With this in mind we review the two applications.

Staff and Edison agree that the ZIP/CIP proposals and the modifications proposed by staff are cost-effective from the societal, participant's, and utility's perspectives using either staff's or Edison's marginal or avoided cost methodology. In keeping with the stipulation entered into between staff and Edison and received in evidence (Exh. 41) for purposes of this proceeding we will not adopt a particular marginal and/or avoided cost methodology.[6]

With respect to the nonparticipant's perspective, Exh. 47 shows net savings overall using either Edison's or staff's

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[6] The marginal/avoided cost issue has been covered in detail in Edison's general rate case, A.61138, and in A.82-03-26 et al., resulting from D.82-01-103 in the OIR 2 proceeding.

avoided cost methodology. Exhibit 43 also demonstrates the cost-effectiveness of RCFP measures under the nonparticipant test, regardless of whether Edison's or staff's avoided/marginal cost and average cost figures are used. Because overall cost-effectiveness for the nonparticipant has been demonstrated RCFP, as modified, should be instituted.

We agree with staff that Edison's overall proposal is cost-effective and will adopt the program with the modifications noted above. Measures that will be eligible for financing without an audit include: attic insulation, caulking, weatherstripping, duct insulation, and qualifying energy efficient refrigerators.[7] Measures eligible under the program, after an audit demonstrates their cost-effectiveness, include wall insulation, floor insulation, thermal/storm doors and windows, replacement energy-efficient central air-conditioners, evaporative coolers, precoolers, whole house fans, heat pump water heaters, and central heat pump replacements for electric resistance heaters.

In addition to other eligibility requirements, RCFP will be available for heat pump water heaters and central heat pump only for households with no natural gas hook-up. We do not want RCFP to facilitate conversions of space and water heating from natural gas to electricity.

Edison will be required to determine the eligibility of individual manufacturers' products based on objective performance criteria. Performance standards assure the cost-effectiveness of ratepayer-financed measures without involving the utility or this Commission unduly in the marketplace. The establishment of performance standards for eligible measures is not anti-competitive.

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[7] Water heater blankets and low-flow showerheads are part of the so-called "Big Six" which are installed free to electric water heater customers as part of Edison's Wrap Up program, and, thus, are not included in the ZIP/CIP program.

To ensure the continued cost-effectiveness to ratepayers of RCFP financing, we will require Edison to file a report on December 1, 1983 providing data on the cost-effectiveness of thermal windows, heat pump water heaters and heat pump central heaters to nonparticipants.

Appropriate Loan Characteristics.

In D.82-02-135 dated February 17, 1982, we ordered that SoCal's weatherization financing conservation program carry an 8% interest rate. In this proceeding, staff recommends that Edison's ZIP/CIP loan programs should also be established at 8% to correspond to that authorized SoCal. We agree that an interest rate of 8% for Edison's ZIP/CIP program is appropriate and more desirable than 0%.

With an 8% program, we believe Edison can achieve reasonable penetration levels of weatherization in single-family and multifamily homes at considerably less cost to its ratepayers than with 0% financing. Such a program would be in the best interests of all ratepayers, participants and nonparticipants. It will be consistent with SoCal's weatherization program and so will avoid possible confusion concerning the financing available in the utilities' mutual service area.

The cost-effectiveness of such an approach is also clear. Evidence presented indicates that the 8% financing will be cost-effective from the utility's, societal, participant's, and nonparticipant's perspectives. Nonparticipants will benefit from the net energy and capacity savings. Cost-effectiveness to nonparticipants will be heightened by increasing the financing interest rate charges from 0 to 8%. We, therefore, adopt an 8% interest rate for Edison's weatherization loans available for single-family and multifamily residences.

We will also adopt the 100-month repayment as established in D.82-02-135 and recommended by staff in this proceeding. With regard to the loan repayment, we believe staff's 100-month repayment recommendation will remove a major financial obstacle to customer participation. It will provide up front the money needed by targeted customers to make their home energy-efficient.

Appropriate Cash Incentives

Edison presented a complex system predicated on the use of a cost-effectiveness analysis of each unique conservation measure determining an appropriate incentive for that measure. In the alternative, staff recommended that the cash incentive level be established at the SoCal WFCP incentive level for measures offered by both utilities, and at the lower of 30% of the installed cost of the measure, or Edison's proposed cash incentive level for other RCFP measures. Staff asserts that this simple 30% calculation approximates, for most measures, the incentive value offered by an 8% loan and produces cash incentive levels that frequently are similar to the amounts proposed by Edison.

Edison's proposed incentive payments differ considerably from those proposed by staff, as shown below. We will adopt the staff's proposed CIP levels.

Description	SCE's Proposed CIP	ECB's Recommended CIP Level	ECB's Less SCE's
Wall Insulation	$990	$145	-845
Attic and Duct Insulations, caulking and weatherstripping	272	427*	+155
Floor Insulation	536	128	-408
Thermal Window Insulation	1036	134	-902
Replacement Central Air Conditioner (CAC)	421	421	-0-
Evaporative Cooler	328	328	-0-
Pre Cooler for CAC	296	200	- 96
Whole House Fan	192	160	- 32
Heat Pump (H.P.) Water Heater	266	266	-0-
H.P. Furnace	1265	915	-350
Energy Efficient Refrig.	100	100	-0-

* Cash Incentives authorized in D.82-02-135 (p. 82a) are as follows: attic insulation $302, duct wraps $106, caulking/weatherstripping $19.

We believe that in light of SoCal's weatherization program, the staff approach should be adopted. This approach will ensure that for measures which are included in both Edison's program and SoCal's program, Edison would not pay a greater incentive to its customers.

Additional Program Design Issues.

Edison proposes that loans over $1,500 be secured by a lien. Staff recommends that liens be required for loans over $5,000. Edison argues that a lien on loans of $1,500 or more offers two major advantages: (1) it provides notification to the utility of title transfer through escrow and (2) it provides an added incentive for the customer to fulfill the repayment obligation. Also in its ZIP demonstration program, where a mortgage for loans exceeding $1,500 is required, the default rates are extremely low. Edison believes that the requirement of a lien at lower loan amounts would lessen the default rate. Staff considers the imposition of a $1,500 lein condition as an impediment to customer participation in the ZIP/CIP program.

Notwithstanding the arguments made by Edison, we will only order the utility to require liens for loans in excess of $5,000. For loans above $1,500 but no more than $5,000, we will allow Edison to determine whether a lien is to be required. Because Edison's program is dominated by electric appliances, the utility may determine that more stringent security arrangements than those authorized for other weatherization programs may be appropriate.

Further, we will allow Edison flexibility in the selection of means to secure RCFP loans above $5,000. In D.82-11-019 (November 3, 1982), we authorized PG&E to accept any of four forms of security on ZIP loans: a lien; an assignment of rents; a payment bond; or a 75% deposit of the outstanding loans. PG&E was provided this flexibility in order to ensure the availability of ZIP to public housing authorities which may be restricted by federal regulations or contract provisions from accepting a lien. Edison will be given the same flexibility.

Edison proposes that customers receiving financing for measures related to central air-conditioning be required to accept the installation, at the company's option, of an Edison-activated load-cycling device for the automatic shifting of air-conditioning load. Staff believes that the imposition of the load-cycling device would be unfair because it would be imposed on only those who conserved and not on those who choose not to conserve. Staff also fears that a mandatory program could result in reduced customer participation.

We agree with staff that mandatory installation of the load-cycling device could result in reduced customer participation. Were the cost-effectiveness of air-conditioner cycling firmly established, we might be willing to accept the risk of reduced participation. However, Edison's air-conditioner cycling program is still experimental. Edison has proposed a large demonstration program for 1983-84 in its pending general rate case. Edison is welcome to reapply for inclusion of a mandatory air-conditioning cycling program once its cost-effectiveness can be demonstrated.

Regarding the energy-efficient refrigerator program, Edison agreed with staff's proposal that those qualifying should be limited to units that are no larger than 12 cubic feet and rated to use 960 kWh/year (80 kWh per month) or less for frost-free models and 720 kWh/year (60 kWh per month) or less for partial defrost models. We will accept staff's recommendation as it offers more program efficiency and can easily be understood by customers.

Certain other features of the RCFP authorized by this decision have been the issue of discussion, findings, and conclusions in prior Commission decisions authorizing weatherization financing programs for other California utilities. These features include credit requirements for loan eligibility, monitoring of contractor bids, procedures for processing applications and disbursing funds, treatment of investments in the financing subsidiary, inspection and warranty requirements, and program sunset date. Such features of the authorized RCFP are consistent with programs previously authorized.

Financing Subsidiary

Edison proposes to use a leveraged administrative trust to finance the project. It also considered direct utility financing, utility-subsidized bank loans, and a wholly owned nonutility financing subsidiary. In choosing the leveraged administrative trust, Edison requested confirmation from the IRS that this method would not incur federal income tax liability. Should the IRS give a negative reply, Edison proposed the leveraged subsidiary approach.

In PG&E's ZIP program we determined that the financial subsidiary approach was proper. As in the PG&E case, risk to the investors would be alleviated by the proposed "advance tariff ruling." Thus, while the financing subsidiary is slightly more costly than the leveraged trust, the degree depending on the discount rate assumed, we believe the financing subsidiary is the most desirable of options available. It maintains the customary investor and consumer relationship and better allocates financing costs between present and future ratepayers.

Staff recommends that 25% of the capital for program financing come from the company. Under Edison's proposed leveraged trust 25% of the capital would come from ratepayers. Under either approach the remaining capital would come from conventional lenders. Thus, Edison would require assurances that it would be allowed to recover the financing costs. In both PG&E's ZIP program and SoCal's WFCP, we determined that such an assurance was a prerequisite for the type of financing authorized. We therefore find that lender assurance is necessary and will be adopted.

We will authorize Edison to recover RCFP expenses through its CLMAC, and to record those expenses as a specified program within CLMAC. We will authorize 1983 funding of $8.9 million, consistent with Edison's request. However, we will defer the inception of CLMAC treatment until January 1, 1983, when the rates to be authorized in A.61138 (Edison's test year 1983 rate application) will take effect. The CLMABF adjustment necessary to recover the $8.9 million will be set to reflect the 1983 sales forecasts and return on equity to be adopted in A.61138.

<u>RCS</u>

With regard to funding the RCS program, Edison seeks an additional $5,819,000 for the nine-month period from April 1 through December 31, 1982, prorated to $646,555 per month. Staff recommends adoption of the level of audits proposed by Edison prorated on a monthly basis for the remainder of 1982 allowing $100 per audit. This would amount to approximately $350,000 for the fourth quarter 1982.

CEC recommends Edison's request be granted by applying the suggested billing factor for the months remaining in 1982 after a decision is issued.

Edison states that it does not anticipate conducting any Class B audits during 1982. Removal of the labor and material funding of the Class B audit results in a new 1982 funding level as follows:

Total 1982 Program Costs		$13,958,000
Less total annual request for		
Class B audits		
Labor	$ 239,617	
Materials and Service	1,533,223	1,772,840
New level of funding		$12,185,160

Edison spent $1.2 million during the first quarter of 1982 (Exh.13). Testimony of Edison's witness was that RCS expenditures for the second and third quarters of 1982 were reduced from that of the first quarter. While the results of the second-quarter expenditures were not available at the time of the hearing, it would appear that Edison would have funds available in excess of $2 million for the fourth quarter.

Despite the concerns raised by CEC, we find that Edison's 1982 RCS funding level, as revised to $8,080,000 in today's decision in A.61005, is adequate. There is nothing in the record to support the additional $4,046,160 requested in this proceeding to fund the RCS program for the balance of 1982. For its ZIP demonstration Edison stated that its audits were running approximately $100 each. In D.82-02-135 we approved $94 per audit for SoCal. In D.07809 we authorized PG&E $12,000,000 to reach its goal of 182,000 RCS audits in 1982 (approximately $65 per audit). With approximately $2 million allowable for the fourth quarter of 1982 we believe that Edison has adequate funding to perform the number of RCS audits its personnel can complete. The request for additional funding for 1982 through the adjustment of CLMABF will be denied.

The request that its RCS program for 1983 be funded through base rates need not be addressed in this proceeding. As indicated in its testimony, exhibits, and briefs, Edison has requested funding for its 1983 RCS program in its current general rate proceeding, A.61178.

Low-Income Provisions

Edison proposes to offer increased cash incentives and increased loan incentives to low-income customers. In D.82-09-62, in A.60446 and A.60447 (September 22, 1982), we authorized SoCal to offer increased cash credits to low-income participants in WFCP. The increased WFCP incentives are limited to the Big 6 measures, and are limited to credits, rather than loans. The table below compares Edison's proposal and SoCal's adopted low-income program.

Conservation Measures	Edison Proposed Low-Income Component(1) Cash Incentive	Interest Incentive	Maximum Loan	SoCal WFCP Low-Income Credit(2)
Attic, Duct Insulation & C/WS(4)	$ 384	$ 368	$ 856	$502
Water Flow Control Device	(3)	-	-	25
Water Heater Blanket	(3)	-	-	9
Wall Insulation(4)	1,095	1,086	2,527	0
Floor Insulation(4)	512	480	1,117	0
Thermal Windows	1,213	1,339	3,116	-
Replacement CAC	532	502	1,168	-
Evaporative Cooler	441	441	1,026	-
Pre-Cooler for CAC	321	286	666	-
Whole House Fan	230	189	440	-
Heat Pump Water Heater	351	290	675	-
Heat Pump Furnace	1,496	1,605	3,735	-
Energy-Efficient Refrigerator	100	-	-	-

(1) Exh. 1, p. 7-8.

(2) D.82-09-062, A.60446 and A.60447 (September 22, 1982).

(3) Edison provides these items free of charge to all customers through its Wrap-Up program.

(4) Based on a weighted average.

Were we to authorize the low-income component of RCPP as proposed, low-income customers in the utilities' joint service territory would face two very different sets of opportunities. In the interest of consistency, we will limit Edison to a low-income program comparable to that included within SoCal's WFCP. Based on analyses in this proceeding, the higher incentives for attic and duct insulation, caulking, and weatherstripping will still meet all four of the Commission's tests of cost-effectiveness. Edison's low-income customers will still be eligible for RCPP credits for the other measures at the same levels as other Edison customers. At the first annual review of RCPP, Edison should supply data concerning the appropriateness of expanding its low-income incentives.

Edison states it intends to market its financing program to achieve equitable participation by low-income customers, the elderly, owners and renters of rental units, and minorities. The detailed marketing strategy and objectives for such special target groups include:

1. Special financing with additional economic incentives to give these groups a realistic opportunity to participate.
2. Efforts to achieve participation levels by target groups equal to or greater than their proportion of Edison's customers eligible for benefits.
3. Special incentive offers to owners and managers of rental units.

This is an ambitious but reasonable plan for reaching the target markets. It analyzes these markets statistically, identifies disincentives to overcome, and outlines various marketing strategies and special outreach activities which can be employed to make the program benefits available to the target markets.

We will adopt Edison's proposals for targeting and outreach efforts to achieve equitable participation by low-income customers, the elderly, minorities, landlords, and renters. Its targeted

outreach strategy is reasonable as is its plan to achieve maximum effectiveness by using the services of community groups, local governments, and other associations to deliver information to the target group.

Edison will be ordered to file, within 30 days of the effective date of this order, a report detailing and explaining its entire plan for promoting low-income participation in RCFP and RCS. In this report, Edison will be directed to provide an opportunity for community-based organizations and private contractors to install eligible measures in low-income residences, and to receive credit payments directly from Edison. This provision should be generally consistent with similar efforts ordered for SoCal in D.82-09-062 (September 22, 1982).

City Proposal

We note with great interest the testimony of the City of Santa Monica concerning its proposal to perform all RCS audits within the city limits on behalf of Edison and SoCal. We agree with City's witness, that this type of cooperative effort was clearly encouraged by our statements in D.82-05-043. In that decision (at mimeographed page 4) we stated:

> "We believe that it is likewise appropriate for SoCal to enter into contracts with outside groups, whether they be government agencies, community groups or private firms, to provide RCS audits. Such contracts are desirable under the circumstances permitted by the CEC's Cal Plan or as otherwise approved by the CEC, but only where they result in no greater expenditure than SoCal would have incurred to achieve the same estimated conservation through its own RCS and WFCP efforts. Thus SoCal should take an active role in seeking out and utilizing local government and community resources. Circumstances under which these resources should be used include:
>
> a. Where local governments and community groups have direct access to a portion of the population (linguistic, cultural, community) not easily reached by the utility.

b. Where local governments and community groups can provide services at a level of training and expertise comparable with utility capability.

Moreover, we expect SoCal to be prudent in its expenditures on such activities."

The record indicates that the City proposal, if effectively implemented, would produce additional savings beyond those anticipated by a SCE audit because of reduced costs and the direct application of energy-saving devices. As such, this proposal demonstrates that local governments, or other locally based groups may be able to perform RCS services in a manner which increases ratepayer savings. To be certain, additional savings should occur if local governments, community groups or private firms offer to provide RCS audits at lower cost than the utility. Therefore, we reaffirm for the purposes of SCE the above policy statement as set forth in the cited SoCal decision.

Findings of Fact

1. The major difference in societal benefits and societal costs justifies extraordinary efforts to achieve conservation by taxpayers through tax credits, by utility conservation programs, and by utility customers.

2. The major beneficiary of conservation is the utility ratepayer through reduced revenue requirements brought about by energy savings.

3. NECPA of 1978 requires on-site energy use audits for residential customers upon request.

4. NECPA allows for the individual states to file RCS State Plans.

5. CEC is the lead agency for developing a California RCS State Plan.

6. By A.61066, Edison requests authority to increase its CLMABF to recover $8.9 million estimated expenses for its proposed RCFP.

7. By A.61066, Edison requests authority to include RCFP as a specified program for inclusion within the CLMAC.

8. By A.61067, Edison requests authority to increase its CLMABF to recover incremental 1982 expenses of $5.8 million for its RCS program.

9. An adjustment to the CLMABF is appropriate to recover all reasonably incurred expenses associated with RCFP.

10. Many customers lack the requisite financial resources to make their homes more energy-efficient. Full-cost loans will allow targeted customers to participate in the program.

11. The appropriate interest rate for loans offered under Edison's RCFP is 8%.

12. It is appropriate to require that repayment of RCPP loans begin immediately, with a repayment period of up to 100 months.

13. Participating customer interest payments will partially offset Edison's cost of providing financing.

14. The following measures are cost-effective in the preponderance of cases, and therefore should qualify for 8% financing or cash incentive payments either with or without any energy audit: attic insulation, weatherstripping, caulking, and duct wrap.

15. If shown cost-effective by an RCS audit, the following measures should also be eligible for 8% financing or cash incentive payments: wall insulation, floor insulation, replacement energy-efficient central air-conditioners, evaporative coolers, thermal windows, whole house fans, heat pump water heaters, and central heat pump replacements for electric resistance heating. Incentives should also be available to purchasers of qualified energy-efficient refrigerators.

16. Staff's proposed cash incentive levels are appropriate.

17. It is appropriate to require installation of all measures in Finding 14 as a condition for receiving utility-provided conservation financing loans; it is also appropriate to require installation of the measures in Finding 14 as a condition for receiving utility-provided conservation financing loans for the remaining measures eligible for financing.

18. Eligibility for refrigerator cash incentives should be limited to refrigerators which exceed the energy efficiency of the relevent "standard model" set forth in the CEC's Appliance Efficiency Standards by at least 20%.

19. The requirement of the installation of an air-conditioning load-cycling device could reduce customer participation and is therefore inappropriate at this time.

20. Loan limitations are appropriate to help control program costs and ensure equitable allocation of program money among potential RCPP participants.

21. A financing limit per housing unit of $1,000 for the installation of the measures in Finding 14, a total limit of $2,500 for installation of all weatherization measures except a heat pump furnace, and $3,500 for all measures to the extent that they are found cost-effective by a prior energy audit are appropriate.

22. It is appropriate to give Edison the discretion to require a lien or other comparable form of security for RCPP loans in excess of $1,500 and to require such security on loans in excess of $5,000.

23. It is appropriate to require repayment of the unpaid balance of a RCPP loan upon the sale or transfer of ownership of the property on which the installation has been made, except in instances of transfers to close relatives if the transferee assumes in writing all obligations regarding the loan.

24. It is reasonable to require a minimum financing of $150, a minimum monthly payment of $5 and the credit criteria proposed by Edison.

25. The determination of appropriate marginal and/or avoided costs is an issue in Edison's current (1983) general rate case, A.61138. The RCPP proposed by Edison and the modifications proposed by the staff are cost-effective from the societal, utility's, participant's, and nonparticipant's perspectives, using either or both the staff's and/or Edison's marginal or avoided cost methodology.

26. A marginal and/or avoided cost figure should not be adopted in this proceeding because the methodologies used by staff and Edison have not been developed on this record.

27. Special efforts are necessary to gain the participation of low-income customers in Edison's RCPP, and it is reasonable for Edison to offer such customers larger cost-effective credits as part of RCPP.

28. It is reasonable for Edison's low-income RCPP credits to be consistent with SoCal's low-income WPCP credits.

29. Edison's plans to achieve satisfactory levels of participation by low-income, elderly, non-English-speaking persons, and renters through special outreach efforts and coordination with communities, schools, churches, neighborhood organizations, and other groups, are reasonable and appropriate as modified.

30. Edison proposes to use a leveraged administrative trust for funding RCPP. Unless a favorable ruling on the tax exempt status is received by November 1, 1982, Edison proposes to use a financing subsidiary.

31. Edison's proposal to fund RCPP through a leveraged administrative trust is not reasonable in the absence of a favorable IRS ruling.

32. Edison's alternative proposal to use a financing subsidiary is fair and reasonable.

33. Lenders require as a condition for advance of the debt funds required that the CLMAC procedure and balancing account will guarantee a debt service revenue over the life of the borrowings from the lender, and the equity investment to provide a "cushion" for the debt service.

34. Edison's requested $8.9 million for first year funding for its RCPP is fair and reasonable.

35. Adjustment to Edison's CLMABF for 1983 should be concurrent with the decision on A.61138, Edison's test year 1983 rate case, since 1983 sales forecasts will be adopted in that decision.

36. Edison's RCPP as modified is reasonable.

37. Revisions currently under consideration by the CEC for the RCS State Plan should result in a simplified Class A audit with reduced costs which may require less time to perform. Until modifications in the RCS State Plan are made, authorization for RCS program costs should be kept to a minimum.

38. Edison will not conduct any Class B audits this year.

39. Without conducting any Class B audits in 1982, Edison's funding requirement is reduced.

40. The decision adopted today in A.61095 authorizes Edison $8.089 million for 1982 RCS expenses. Edison has reduced its second and third quarter RCS expenditures. Funding for the balance of 1982 is adequate based on that authorization.

41. Additional savings should occur if local governments, community groups, or private firms offer to provide RCS audits at lower cost than the utility.

42. Edison has requested 1983 funding for its RCS program in A.61138.

43. Edison's filed RCS program as modified is reasonable.

44. A 100% inspection level of all RCFP installations is a reasonable initial requirement to assure reliable energy savings, but it is reasonable to reduce the inspection rate of contractors who develop proven records of proficiency.

45. Features of the authorized RCFP not specifically discussed above are consistent with other weatherization financing programs previously authorized by the Commission.

46. Edison should continue the warranty, specifications, and installation requirements of its existing heat pump demonstration program in RCFP.

<u>Conclusions of Law</u>

1. Edison should be authorized to implement RCFP as described in this decision and under the terms and conditions provided.

2. Edison should be authorized to increase rates by $8.9 million to cover costs of implementing RCFP.

3. Edison's RCS program conforms to mandatory features of the RCS State Plan as approved by DOE.

4. RCFP should be integrated with and follow RCS procedures wherever appropriate.

5. RCFP is consistent with the purposes and requirements of the NECPA and the Energy Security Act of 1980.

6. RCFP will not be anticompetitive in lending or other relevant markets and will not violate federal or state antitrust laws.

7. It is appropriate to account for RCFP costs through CLMAC.

8. The RCS program is mandated under NECPA, Energy Security Act, DOE regulations, and the RCS State Plan promulgated by CEC.

9. Edison is legally obligated under federal and state law to go forward with RCS.

10. This order should become effective immediately to allow Edison to extend the benefits of RCFP and RCS to all its customers as quickly as possible.

<u>O R D E R</u>

IT IS ORDERED that:

1. Southern California Edison Company (Edison) shall implement a Residential Conservation Financing Program (RCFP) throughout its service area in conformity with this decision.

2. Edison shall offer 8% financing or cash incentive payment (CIP) either with or without a prior energy audit, for the following residential energy conservation measures:

a. Attic insulation.

b. Weatherstripping of all doors and windows which lead to unheated or uncooled areas (weatherstripping).

c. Caulking or sealing of major cracks and other openings in buildings exterior and sealing of wall outlets (caulking).

d. Insulation of accessible heating and cooling system ducts which enter or leave unheated or uncooled areas (duct wrap).

3. To the level found to be cost-effective in the course of a prior energy audit, Edison shall provide 8% financing or CIP for the following measures. Measures h and i shall be eligible for RCFP only in households which are not served by natural gas.

a. Wall insulation.

b. Floor insulation.

c. Thermal and storm windows and doors for the exterior of dwellings.

d. Replacement of central air-conditioners.

e. Evaporative coolers.

f. Precoolers for air-conditioning condensers.

g. Whole house fan.

h. Replacement or retrofit of electric water heater with a heat pump water heater.

i. Replacement of central electric heat with a central heat pump.

4. Edison shall provide CIP for qualifying energy-efficient refrigerators, which are those which exceed the energy efficiency of the relevant "standard model" set forth in the Appliance Efficiency Standards promulgated by the California Energy Commission by at least 20%.

5. Edison is authorized to provide 8% financing or CIP subject to the following procedures and requirements:

a. For purposes of Edison's RCFP, "single-family" residence shall include mobile homes and residences with one to four units; "multifamily" residences are those with five units or more. Interior units in multi-storied buildings do not qualify for wall, floor, and ceiling insulation loans or cash incentives.

b. Eight percent loans or CIP payments shall be available to all owners of single-family and multifamily residences. CIP shall be available to all Edison residential customers.

c. To qualify for a loan applicant must have been an Edison customer for 12 months with no shutoffs for 10 months prior to applying for a loan.

d. All loans shall bear an interest rate of 8%.

e. Loan ceilings shall be imposed in the following amounts:

(1) $1,000 for installation of all measures in Ordering Paragraph 2.

(2) $750 for installation of attic insulation alone.

(3) $250 for installation of the caulking, weatherstripping, and duct wrap.

(4) $2,500 for the installation of the remaining RCPP measures to the extent they are found cost-effective by a prior energy audit.

f. Repayment of loan amounts shall commence immediately after issuance. The repayment period shall be 100 months.

g. The minimum loan shall be $150 and shall require a minimum monthly repayment of $5.

h. Edison shall accept as security for RCPP loans in excess of $5,000 any one of the following forms of security:

(1) A lien.

(2) An assignment of rents.

(3) A payment bond.

(4) A 75% deposit of the outstanding loan.

Edison may require such security on loans between $1,500 and $5,000.

i. Every RCPP loan shall provide that the balance due on any RCPP loan shall be repayable in full upon the sale or transfer of ownership (other than an exempt transfer as defined below) of the property on which the RCPP loan improvements have been made.

j. Transfers to close relatives, as defined, of residences which have been weatherized under RCPP shall be exempt transfers not requiring repayment of the balance of any RCPP loan at the time of such transfer if the transferee assumes in writing all obligations of the transferor regarding the loan. An exempt transfer is defined as a transfer to a husband, wife, father, mother, grandfather, grandmother, son, daughter, brother, sister, including such relationships brought on by adoption or marriage, without limitation, such as stepmother, stepdaughter, daughter-in-law, or mother-in-law.

k. Edison shall monitor bid prices for the installation of eligible measures and shall require that an additional bid be obtained by a customer when a bid is not within the reasonable range known to Edison at the time. All loan applications shall include a notice advising applicant to obtain more than one bid and noting Edison's right to require an additional bid before approving the loan.

l. For multifamily residences, RCPP loans shall be available and loan ceilings imposed for each dwelling unit to be weatherized.

m. Credits shall be paid to applicant in a single payment within 30 days following a satisfactory inspection of the installed measures.

n. A renter's application for a credit shall be accompanied by a signed waiver from the property owner releasing his claim for utility credits on those measures installed on his property.

o. Edison shall advise all applicants for credits of the nature and extent to which their state income tax credit can be affected by choosing this incentive.

p. Edison shall provide increased RCPP to eligible low-income customers, based on a total average credit of $502 for attic and duct insulation, caulking, and weatherstripping. For purposes of RCPP, a "low-income" person shall be defined as any person meeting the standards set by the U.S. Bureau of Labor Statistics for eligibility to receive payments under the Federal Energy Assistance Program. The low-income program shall conform to the provisions of Chapter XIV of the RCS State Plan.

q. Edison shall make available to all low-income customers a credit of up to $200 for improvements to the "building envelope," to the extent that such improvements have been found cost-effective in the course of a prior energy audit. At the election of a low-income participant, Edison shall process the application for a building envelope credit upon applicant's furnishing Edison a cash deposit receipt identifying the purchase and stating the actual price of the item. Edison shall then directly pay the retailer up to the lesser of either the actual price of materials for building envelope repairs or the $200 credit.

r. Edison shall process the RCPP applications of do-it-yourselfers upon being furnished with a cash deposit receipt for eligible measure (Ordering Paragraphs 2 and 3) materials. The cash deposit receipt must specifically identify the material being purchased and the total price of that material. Edison shall finance only the lesser of either the actual price of the measure or the applicable credit. The do-it-yourselfer shall have the ability to forgo this option in favor of receiving the full amount of the applicable credit upon installation and inspection of the measure.

s. Edison shall not process second or subsequent applications for a loan or credits by the same homeowner until the current list of first-time applicants has been processed.

t. All work financed shall be installed in accordance with California RCS standards and by a state licensed contractor or the customer.

u. Edison shall promptly inspect all do-it-yourself weatherization work installed and financed under RCFP and all work installed by contractors who have not yet demonstrated their proficiency. Edison shall develop procedures to allow for the inspection of as little as 20% of the work of contractors who have demonstrated their proficiency.

v. All work financed under RCFP shall be covered by repair or replacement warranties equaling or exceeding those required by the RCS State Plan, including a three-year manufacturer's warranty for free repair or replacement of materials and devices financed under the program, but including labor costs only for the first year as provided in the RCS State Plan.

w. All dwellings constructed prior to the effective date of this order will be eligible to qualify for 8% loans and credits.

x. No 8% loan or CIP shall be made by Edison for weatherization measures included in the present program if installed after December 31, 1986.

6. Edison shall use its best efforts to promote RCFP and RCS and achieve satisfactory levels of participation in both programs for its low-income, elderly, non-English-speaking, and renter customers. Within 30 days of the effective date of this order, Edison shall file a report consistent with this decision detailing and explaining its entire plan for promoting low-income participation in RCFP and RCS. This plan shall include provisions for direct payment of credits to qualified community-based organizations and private contractors which install RCFP measures in low-income-occupied dwellings. This filing shall be served on all appearances in these proceedings.

7. Edison is authorized to increase its CLMABF as of January 1, 1983 to recover first year expenses of RCPP in the amount of $8.9 million. The expenses can be accumulated as a specified program under Edison's CLMAC. The CLMABF adjustment for 1983 RCPP expenditures will be set by applying a uniform addition to the rates for lifeline domestic service, nonlifeline domestic service, and other than domestic service, based on 1983 sales projections adopted in the decision in A.61138.

8. Edison is authorized to incorporate a California corporation as its subsidiary to undertake RCPP.

9. Edison is authorized to project finance RCPP and to file project letters and advice letters in accordance with General Order 96-A to obtain Commission approval of financial arrangements between Edison and its financing affiliate, and between the financing subsidiary and lenders and to obtain Commission approval of adjustments to the CLMAC. Edison's project financing shall be subject to the following additional requirements:

a. Edison shall use its best efforts to achieve an 80/20 debt-to-equity ratio for the financing subsidiary. A ceiling of $150,000,000 shall be placed on the total capital (debt and equity) to be provided through the financing subsidiary over the duration of RCPP.

b. The rate of return on the equity investment in the financing subsidiary shall equal the return on equity authorized for Edison in its pending general rate case, A.61138.

c. The CLMABF balancing account shall not be terminated so long as RCPP borrowings remain outstanding.

d. Edison is authorized to assign RCPP-related CLMABF revenues to the financing subsidiary.

10. To implement RCPP as authorized above, Edison is authorized, as of January 1, 1983, to accumulate RCPP expenditures as a specified program under Edison's CLMAC.

11. The financing subsidiary through Edison is authorized to recover 100% of the debt service in a timely manner and under all circumstances through the CLMABP tariff for all Commission-approved subsidiary borrowings over the life of the borrowings.

12. For debt service only, Edison is authorized to make changes through advice letter filings for all Commission-approved subsidiary borrowings. Once a specific borrowing has been approved by project letter and committed, subsequent hearings will not be initiated by the Commission related to that specific borrowing.

This order is effective today.

Dated November 17, 1982, at San Francisco, California.

JOHN E. BRYSON
President
RICHARD D. GRAVELLE
LEONARD M. GRIMES, JR.
VICTOR CALVO
PRISCILLA C. GREW
Commissioners

We dissent on that portion of the decision that authorizes Edison a return on its equity investment in the financing subsidiary equal to its 1983 return on equity. We believe that the return should be limited to Edison's overall rate of return since it is Edison's choice as to how it raises funds to support the equity portion of the subsidiary.

/s/ RICHARD D. GRAVELLE
/s/ VICTOR CALVO
Commissioners

I CERTIFY THAT THIS DECISION WAS APPROVED BY THE ABOVE COMMISSIONERS TODAY.

Joseph E. Bodovitz, Executive Director

avoided cost methodology. Notwithstanding disagreements concerning which, if any, test should be given primacy,[6] we believe that overall cost-effectiveness for the nonparticipant has been demonstrated and that the ZIP/CIP program, as modified, should be instituted.

We agree with staff that Edison's overall proposal is cost-effective and will adopt the program with the modifications noted above. Measures that will be eligible for financing without an audit include: attic insulation, caulking, weatherstripping, duct insulation, and qualifying energy efficient refrigerators.[7] Measures eligible under the program, after an audit demonstrates their cost-effectiveness, include wall insulation, floor insulation, thermal/storm doors and windows, replacement energy-efficient central air-conditioners, evaporative coolers, precoolers, whole house fans, heat pump water heaters, and central heat pump replacements for electric resistance heaters.

To ensure the continued cost-effectiveness to ratepayers of financing all these measures, we will require Edison to file a report on December 1, 1983 providing data on the cost-effectiveness of thermal windows to nonparticipants.

In D.82-02-135 dated February 17, 1982, we ordered that SoCal's weatherization financing conservation program carry an 8% interest rate. In this proceeding, staff recommends that Edison's ZIP/CIP loan programs should also be established at 8% to correspond to that authorized SoCal. We agree that an interest rate of 8% for Edison's ZIP/CIP program is appropriate and more desirable than 0%.

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[6] Edison states the primary test to measure cost-effectiveness is the utility perspective test, i.e. if the conservation program does not appear to have the potential to reduce the total cost of providing electricity over the life of the program it should not be pursued.

[7] Water heater blankets and low-flow showerheads are part of the so-called "Big Six" which are installed free to electric water heater customers as part of Edison's wrapup program, and, thus, are not included in the ZIP/CIP program.

We believe that in light of SoCal's weatherization program, the staff approach should be adopted. This approach will ensure that for measures which are included in both Edison's program and SoCal's program, Edison would not pay a greater incentive to its customers.

Edison proposes that loans over $1,500 be secured by a lien. Staff recommends that liens be required for loans over $5,000. Edison argues that a lien on loans of $1,500 or more offers two major advantages: (1) it provides notification to the utility of title transfer through escrow and (2) it provides an added incentive for the customer to fulfill his repayment obligation. Also in its ZIP demonstration program, where a mortgage for loans exceeding $1,500 is required, the default rates are extremely low. Edison believes that the requirement of a lien at lower loan amounts would lessen the default rate.

Staff considers the imposition of a $1,500 lien condition as an impediment to customer participation in the ZIP/CIP program.

Notwithstanding the arguments made by Edison, we believe that reason and consistency require that liens be required only for loans in excess of $5,000. Since only owners of multiple-unit dwellings will be able to borrow more than $3,500 per building, single-family homeowners will never be required to give a lien.

Edison proposes that customers receiving financing for measures related to central air-conditioning be required to accept the installation, at the company's option, of an Edison-activated load-cycling device for the automatic shifting of air-conditioning load. Staff believes that any such program should be voluntary. Staff believes that the imposition of the load-cycling device would be unfair because it would be imposed on only those who conserved and not on those who choose not to conserve. Staff also fears that a mandatory program could result in reduced customer participation.

We agree with staff that mandatory installation of the load-cycling device would be inequitable and could result in reduced customer participation.

Regarding the energy-efficient refrigerator program, Edison agreed with staff's proposal that those qualifying should be limited to units that are 12 cubic feet and rated to use 960 kWh/year (80 kWh per month) or less for frost-free models and 720 kWh/year (60 kWh per month) or less for partial defrost models. We will accept staff's recommendation as it offers more program efficiency and can easily be understood by customers.

Edison proposes to use a leveraged administrative trust to finance the project. It also considered direct utility financing, utility-subsidized bank loans, and a wholly owned nonutility financing subsidiary. Staff favors the financing subsidiary method.

In choosing the leveraged administrative trust, Edison requested confirmation from the IRS that this method would not incur federal income tax liability. Should the IRS give a negative reply, Edison proposed the leveraged subsidiary approach.

In PG&E's ZIP program we determined that the financial subsidiary approach was proper. As in the PG&E case, risk to the investors would be alleviated by the proposed "advance tariff ruling." Thus, while the financing subsidiary is slightly more costly than the leveraged trust, the degree depending on the discount rate assumed, we believe the financing subsidiary is the most desirable of options available. It maintains the customary investor and consumer relationship and better allocates financing costs between present and future ratepayers.

Staff recommends that 25% of the capital for program financing come from the company. Under Edison's proposal 25% of the capital would come from ratepayers. Under either approach the remaining 75% could come from conventional lenders. Thus, Edison would require assurances that it would be allowed to recover the

outreach strategy is reasonable as is its plan to achieve maximum effectiveness by using the services of community groups, local governments, and other associations to deliver information to the target group.

Findings of Fact

1. The major difference in societal benefits and societal costs justifies extraordinary efforts to achieve conservation by taxpayers through tax credits, by utility conservation programs, and by utility customers.

2. The major beneficiary of conservation is the utility ratepayer through reduced revenue requirements brought about by energy savings.

3. NECPA of 1978 requires on-site energy use audits for residential customers upon request.

4. NECPA allows for the individual states to file a RCS State Plan.

5. CEC is the lead agency for developing a RCS State Plan.

6. By A.61066, Edison requests authority to increase its CLMABF to recover $8.9 million estimated expenses for its proposed RCFP.

7. By A.61066, Edison requests authority to include RCFP as a specified program for inclusion within the CLMAC.

8. By A.61067, Edison requests authority to increase its CLMABF to recover incremental 1982 expenses of $5.8 million for its RCS program.

9. An adjustment to the CLMABF is appropriate to recover all reasonably incurred expenses associated with RCFP.

10. Many customers lack the requisite financial resources to make their homes more energy-efficient. Full-cost loans will allow targeted customers to participate in the program.

11. The appropriate interest rate for loans offered under Edison's RCFP is 8%.

21. A financing limit of $1,000 for the installation of the measures in Finding 14, a total limit of $2,500 for installationof all weatherization measures except a heat pump furnace, and $3,500 for all measures to the extent they are found cost-effective by a prior energy audit are appropriate.

22. A requirement that loans over $1,500 be secured by a lien is not in the best interest of the ratepayer.

23. It is appropriate to require repayment of the unpaid balance of a RCFP loan upon the sale or transfer of ownership of the property on which the installation has been made, except in instances of transfers to close relatives if the transferee assumes in writing all obligations regarding the loan.

24. It is reasonable to require a minimum financing of $150, a minimum monthly payment of $5 and the credit criteria proposed by Edison.

25. The determination of appropriate marginal and/or avoided costs is an issue in Edison's current (1983) general rate case, A.61138. The RCFP proposed by Edison and the modifications proposed by the staff are cost-effective from the societal, participant's, and utility's perspectives, using either or both the staff's and/or Edison's marginal or avoided cost methodology.

26. A marginal and/or avoided cost figure should not be adopted in this proceeding because the methodologies used by staff and Edison have not been developed on this record.

27. Special efforts are necessary to gain the participation of low-income customers in Edison's RCFP, and it is reasonable for Edison to offer such customers larger cost-effective credits as part of RCFP.

28. It is reasonable for Edison's low-income RCFP credits to be consistent with SoCal's low-income WFCP credits.

29. Edison's plans to achieve satisfactory levels of participation by low-income, elderly, non-English-speaking persons, and renters through special outreach efforts and coordination with communities, schools, churches, neighborhood organizations, and other groups, are reasonable and appropriate as modified.

2. Edison shall offer 8% financing or cash incentive payment (CIP) either with or without a prior energy audit, for the following residential energy conservation measures:

a. Attic insulation.

b. Weatherstripping of all doors and windows which lead to unheated or uncooled areas (weatherstripping).

c. Caulking or sealing of major cracks and other openings in buildings exterior and sealing of wall outlets (caulking).

d. Insulation of accessible heating and cooling system ducts which enter or leave unheated or uncooled areas (duct wrap).

3. To the level found to be cost-effective in the course of a prior energy audit, Edison shall provide 8% financing or CIP for the following measures:

a. Wall insulation.

b. Floor insulation.

c. Thermal and storm windows and doors for the exterior of dwellings.

d. Replacement of central air-conditioners.

e. Evaporative coolers.

f. Precoolers for air-conditioning condensers.

g. Whole house fan.

h. Replacement or retrofit of electric water heater with a heat pump water heater.

i. Replacement of central electric heat with a central heat pump.

4. Edison shall provide CIP for qualifying energy-efficient refrigerators.

5. Edison is authorized to provide 8% financing or CIP subject to the following procedures and requirements:

a. For purposes of Edison's RCFP, "single-family" residence shall include mobile homes and residences with one to four units; "multifamily" residences are those with five units or more. Interior units in multi-storied buildings do not qualify for wall, floor, and ceiling insulation loans or cash incentives.

b. Eight percent loans or CIP payments shall be available to all owners of single-family and multifamily residences. CIP shall be available to all Edison residential customers.

c. To qualify for a loan applicant must have been an Edison customer for 12 months with no shutoffs for 10 months prior to applying for a loan.

d. All loans shall bear an interest rate of 8%.

e. Loan ceilings shall be imposed in the following amounts:

   (1) $1,000 for installation of all measures in Ordering Paragraph 2.

   (2) $750 for installation of attic insulation alone.

   (3) $250 for installation of the caulking, weatherstripping, and duct wrap.

   (4) $2,500 for the installation of the remaining RCFP measures to the extent they are found cost-effective by a prior energy audit.

f. Repayment of loan amounts shall commence immediately after issuance. The repayment period shall be 100 months.

g. The minimum loan shall be $150 and shall require a minimum monthly repayment of $5.

h. Edison shall record a lien upon title to any residence for which it has issued a loan in excess of $5,000.

i. Every RCFP loan shall provide that the balance due on any RCFP loan shall be repayable in full upon the sale or transfer of ownership (other than an exempt transfer as defined below) of the property on which the RCFP loan improvements have been made.

9. Edison is authorized to project finance RCFP and to file project letters and advice letters in accordance with General Order 96-A to obtain Commission approval of financial arrangements between Edison and its financing affiliate, and between the financing subsidiary and lenders and to obtain Commission approval of adjustments to the CLMAC. Edison's project financing shall be subject to the following additional requirements:

a. Edison shall use its best efforts to achieve an 80/20 debt-to-equity ratio for the financing subsidiary. A ceiling of $150,000,000 shall be placed on the total capital (debt and equity) to be provided through the financing subsidiary over the duration of RCFP.

b. The rate of return on the equity investment in the financing subsidiary shall equal Edison's last authorized return on equity (14.95%). This return will be subject to review in Edison's next general rate case.

c. The CLMABF balancing account shall not be terminated so long as RCFP borrowings remain outstanding.

d. Edison is authorized to assign RCFP-related CLMABF revenues to the financing subsidiary.

10. To implement RCFP as authorized above, Edison is authorized, as of the effective date of this decision, to accumulate RCFP expenditures, as a specified program under Edison's CLMAC.

11. The subsidiary through Edison is authorized to recover 100% of the debt service in a timely manner and under all circumstances through the CLMABF tariff for all Commission-approved subsidiary borrowings over the life of the borrowings.

Freda Abbott, Attorney at Law, and
Ronald L. Knecht, for the
Commission staff.

O P I N I O N

Summary of Decision

The decision authorizes Southern California Edison Company (Edison) to implement fully two programs which will greatly expand its existing aid to residential ratepayers in identifying and financing cost-effective investments in home energy efficiency. Together, the two program will provide Edison's customers with their best opportunity to reduce their utility bills, in this time of skyrocketing costs.

The Residential Conservation Service (RCS) is Edison's version of a federally mandated program providing residential ratepayers with free "energy audits" which will identify for each ipating ratepayer weatherization measures which can be installed cost-effectively in his or her home. Edison expects to fund 71,520 RCS audits in 1982.

Edison is being authorized to spend $8.9 million in the next year to weatherize an estimated 33,000 homes. Edison will provide 8% financing, or cash credits providing comparable assistance, for up to 14 cost-effective measures. Four measures have been found to be so clearly cost-effective that Edison will provide Residential Conservation Financing Program (RCFP) assistance without any prior audit. These items are attic insulation, weatherstripping, caulking, and duct wrap. Eight additional measures will be eligible for RCFP only when shown to be cost-effective by an RCS audit of the ...payer's residence. These measures are wall insulation, floor insulation, storm or thermal windows, replacement of central air-conditioners, evaporative coolers, precoolers for air-conditioning condensers, whole-house fan, replacement or retrofit of electric water heater with a heat pump water heater, and replacement of electric heat with a central heat pump. Edison will also assist the purchase of energy-efficient refrigerators.

Even customers who never participate directly in the programs will save money over the life of the weatherization measures. Edison will be able to "supply" energy through conservation at far less cost than if new energy supplies were purchased to provide equivalent amounts of electricity.

The Commission has ordered a number of provisions to ensure that the benefits of RCFP are spread equitably. First, the total size of RCFP loans have been limited to no more than $3,500 for each dwelling unit: $750 for attic insulation; $250 total for the weatherstripping, caulking, and duct wrap; and $2,500 total for the remaining items. Second, RCFP loans are repayable over 100 months, ensuring relatively small monthly payments (loans are due in full upon sale of the unit). Minimum loans will be $150, and minimum monthly payments $5.

Third, special efforts have been taken to allow renter participation. The credit option will ensure that renters can recover the costs of weatherization investment quickly, especially if they install measures themselves, on a do-it-yourself basis.

Fourth, additional efforts are directed to allowing low-income ratepayers the opportunity to participate. Edison will provide increased credits to low-income participants who install attic insultion, weatherstripping, caulking, or duct wrap. Edison also will provide low-income participants in RCFP up to $200 in credits for cost-effective "building envelope" repairs, such as repairing holes in walls and replacing broken windows. The increased credits will nearly cover the cost of installing the measures, but will still be cost-effective to the utility and its ratepayers.

Introduction

By Application (A.) 61066 Southern California Edison Company (Edison) seeks authority to implement a systemwide RCFP and to accumulate program expenses as a specified program under its Conservation Load Management Adjustment Clause (CLMAC). Edison proposes to offer both zero interest financing (ZIP) for loans and cash incentive payments (CIP) for incentives to its residential customers in connection with the purchase and installation of certain energy conservation and weatherization measures. The application requests an increase in the Conservation Load Management Adjustment Billing Factor (CLMABF) effective for service rendered on or before April 1, 1982 to recover all reasonably incurred expenses. This would result in an estimated annualized increase in revenues of approximately $8.9 million.

In A.61067 Edison seeks authority to increase rates to recover all reasonably incurred incremental expenses of its systemwide RCS program. This would be in addition to those expenses reflected in base rates authorized in Decision (D.) 92549, Edison's last general rate case. It also seeks to include the RCS program as a specified program under its CLMAC tariff provision.

A public witness hearing was held April 1, 1982 at Los Angeles. Nine members of the public representing various organizations[1] in Edison's service area made statements for the record. All those making statements opposed any program which would necessitate raising residential rates.

The two applications were consolidated for hearing because of the interrelationship between RCPP and the RCS audit program.

Thirteen days of hearing were held in May, June, and July, 1982 in San Francisco. The matters were submitted July 14 subject to the filing of concurrent briefs due August 13, 1982. In the course of the proceeding 45 exhibits and 1,166 pages of transcript were received in evidence.

Edison presented the testimony of five witnesses in support of A.61066 and three in support of A.61067. Edison also presented one rebuttal witness to the Commission staff's showing. For the Commission staff, four witnesses presented testimony and evidence. The California Energy Commission (CEC) and the City of Santa Monica (City) each had one witness testify relative to RCS.

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[1] Representatives of Action, Southern California Utilities Protest Council, Gray Panthers, and Community Action Commission of Santa Barbara County.

Background

Edison is engaged in generating, transmitting, and distributing electricity in portions of central and southern California. Edison owns and operates 11 fossil-fueled steam electric generating plants, two combustion turbine plants, one diesel electric generating plant, 36 hydroelectric plants, and the 80%-owned San Onofre Nuclear Generating Station (San Onofre), all located in central and southern California. In addition it owns a small fossil-fueled steam electric generating unit and a small combustion turbine unit in Arizona, and a 48% interest in Units 4 and 5 of a coal-fired steam electric generating plant in Farmington, New Mexico (Four Corners Project), all of which are operated by another utility. It also operates two coal-fired electric generating units in Clark County, Nevada (Mohave Project), in which it owns a 56% undivided interest; and operates four Hoover hydroelectric generating units owned by others and located on the Arizona side of the Hoover facility.

Edison's service area is located in 15 counties in central and southern California, including Fresno, Imperial, Inyo, Kern, Kings, Los Angeles, Madera, Mono, Orange, Riverside, San Bernardino, Santa Barbara, Tulare, Tuolumne, and Ventura Counties, and includes about 150 incorporated communities as well as outlying rural territories. Edison also supplies electricity to other electric utilities under special contracts for distribution and for other uses by them.

The total system operating capacity available to Edison under favorable operating conditions is approximately 15,504 megawatts (MW) (summer rating).

A.61066 - RCFP

By this application Edison seeks authority to implement RCFP and to accumulate program expenses as a Specified Program under its CLMAC. It proposes to offer both ZIP loans and CIP to its residential customers in connection with the purchase and installation of certain conservation and weatherization measures. It also proposes to increase its CLMABF for service rendered after

April 1, 1982 to recover all reasonably incurred first-year expenses. This would result in an estimated annualized increase in retail revenues of approximately $8.9 million over present rates. Estimated first-year expenses would be recovered through the balancing account where the applicable revenues and expenditures are compared each month and any differential reflected in subsequent rate adjustments under the CLMAC procedure.

The application states Edison proposes to offer ZIP loan financing and CIP to reduce the cost barriers associated with the implementation of conservation measures. It alleges the implementation of conservation measures will benefit Edison, its shareholders, and most importantly its customers by reducing the need for new generating resources as well as the amount of high cost, imported, low-sulfur fuel oil required to generate electricity to meet system demand.

Edison proposes to offer participating customers:

Loan financing at no interest for a period up to 60 months and/or;

Paying a cash incentive for attic insulation, air duct insulation, caulking and weatherstripping, wall insulation, floor insulation, thermal windows and doors, replacement energy-efficient central air-conditioner, evaporative cooler, pre-cooler, whole house fan, heat pump water heater, replacement of electric resistance heater with a central heat pump:

Cash incentives for replacement of a customer's primary refrigerator if the replacement refrigerator consumes 80 kWh/month or less;

Installation, at the utility's option, of a load cycling device on a mandatory basis for participating customers who have central electric air-conditioning;

Larger incentives for low-income customers on an experimental basis;

Loans which are due and payable upon sale of the property;

Minimum loan amount of $200 and a monthly payment of 1/60th of the original principal, but not less than $10/month; and

> Loan limits of $3,500 for single-family and duplex dwellings: $1,750 per unit for rental units: $1,500 for occupants of rented property; and $1,500 for mobile homes.

It states the program is directed to the estimated 24% (666,550 of 2,819,180) of Edison's residential customers (primary customers) who have electric space heating and/or electric central air-conditioning.

The application identifies four subgroups of primary customers for outreach and program participation. These are:

1. Low-income households.
2. Renters.
3. Households maintained by persons aged 65 and older (elderly).
4. Households maintained by persons who speak Spanish as their primary language.

The application states that Edison and the gas utilities within its service territory provide cooperative services to promote and implement RCS to those customers served by Edison and a gas utility. This cooperative effort includes provisions for the operation of a central processing center where audit requests are received, customer data are collected, and audit assignments made for mutual customers. Customers with electric space heating and/or central air-conditioning and/or electric water heating are to receive audits from Edison. All other mutual customers would receive an audit by the serving gas utility.

At the time of an audit, the customer is to be informed of the estimated savings in energy costs as a result of installation of suggested conservation measures and the use of energy conservation practices. The auditor is to explain the ZIP and CIP programs, provide a copy of the RCS contractors list answer questions, and instruct the customer in the procedures for completing and sending a ZIP/CIP application. Upon receipt of the application, Edison proposes to review and commit to the loan and/or incentive, perform an inspection as necessary after the conservation measure is installed, and disburse the principal amount of the loan or incentive to the customer who, in turn, is responsible for payment to the contractor or supplier. A mortgage will be recorded for customers with loans in excess of $1,500.

Customer contact expenses for the program are included in Edison's RCS program expenses. Thus, if the RCS program is reduced or eliminated, precluding in-the-dwelling audits, additional funding would be required to cover customer contact expenses.

According to Edison's application, "each Conservation Measure shows a positive net benefit from all four perspectives." (Exh. 1, p. 3-16). However, Edison also asserts that nonparticipants will bear a net cost from ZIP unless the utility is allowed to require air-conditioning cycling as a condition for participation. Finally, in view of the Edison staff stipulation deferring consideration of cost-effectiveness methodologies to A.61138 it [illegible] that "the two proposals, Edison's and the staff's, should only be evaluated on the reasonableness of their respective ZIP/CIP program descriptions." (Concurrent brief of Edison, p.21.)

Edison states that by offering an option of ZIP loan financing or CIP, the economic constraint associated with high initial costs of conservation measures should be mitigated and the probability of participation increased. A customer would have the choice between participating in ZIP or CIP for different conservation measures but the same measure would not be eligible for both ZIP and CIP to the same customer.

In addition to the energy savings incentive, credits against federal and state income tax liability provide an additional incentive to participants for the installation of qualifying measures.

Edison states that in its first year the program will stimulate conservation actions in approximately 33,000 dwelling units resulting in annualized savings of approximately 63 million kWh and a demand reduction of approximately 15 MW.

For financing Edison proposes that an administrative trust (trust) with leveraged funding be used for the program[2] provided that the trust is determined a nontaxable financing mechanism. Because it receives no economic benefit from such trust funding, Edison submitted a request to the Internal Revenue Service (IRS) for a ruling that the trust funding be exempted from taxation as taxable income. A ruling was expected in early 1982.

If an unfavorable IRS ruling on such request is received prior to the effective date of a decision on this application, Edison proposes to use the alternative of a leveraged subsidiary financing mechanism. If Edison has not received any IRS ruling prior to the effective date of a decision on this application, Edison proposes the following:

1. The Commission authorize Edison to implement the program using the trust-funding mechanism as proposed.
2. The Commission also find that the leveraged subsidiary is a fair, just, and equitable financing mechanism and that, in the event a favorable IRS ruling on Edison's request is not received prior to November 1, 1982, Edison be authorized, upon advice letter notification to the Commission, to change its financing plan from the trust to the leveraged subsidiary to be effective prior to December 31, 1982.

2 Edison initiated a trust titled "Conservation Ratepayers Trust," with the Bank of America as trustee for Edison's Greater Eastern Desert Area Phase I residential conservation financing program that started April 1, 1981.

With adoption of its program, Edison proposes to add to the existing CLMABF 0.016 ¢/kWh to lifeline domestic service, nonlifeline domestic service, and other than domestic service.[3]

[3] By D.92166 dated August 19, 1980 Edison was authorized to revise its tariffs to reflect load management adjustment billing factors to recover certain expenditures for the authorized accelerated 1980 load management programs. That decision also authorized the establishment of a load management balancing account. By Advice Letter 533-E dated August 25, 1980 Edison revised its CLMAC to include the load management adjustment clause (LMAC). By D.92853 dated April 1, 1981 Edison was authorized to revise its tariffs to establish a solar demonstration programs adjustment clause (SDPAC) with billing factors subject to revision on January 1 of each year and to be applied on a uniform cents per kilowatt-hour basis to all retail sales, excluding Catalina. By Advice Letter 552-E dated April 1, 1981, supplemented April 28, 1981, Edison included SDPAC under its CLMAC. The LMAC and SDPAC were combined and named CLMAC by Advice Letter 558-E effective June 3, 1981.

The increase would become effective for service rendered on and after April 1, 1982. The proposed increases in revenues estimated by revenue class are as follows:

Description	Sales M^2kWh	Proposed Increases $M^2	%
Residential			
Lifeline	9,142	1.5	0.3
Nonlifeline	7,648	1.2	0.2
Total	16,790	2.7	0.2
Agricultural	1,050	0.2	0.2
Commercial	15,780	2.5	0.2
Industrial	17,067	2.7	0.2
Other Public Authority	4,565	0.8	0.2
Total	55,252	8.9	0.2

The table shows the effect of the request applied to the various revenue classes following the formula for rate spread adopted in Edison's latest general rate case, D.92549, wherein rate relationships are maintained by applying rate changes on a uniform ¢/kWh basis to each revenue class.

A.61067 - RCS

By this application Edison requests authority to increase rates to recover all reasonably incurred incremental expenses of a systemwide RCS program in addition to the $8,089,000 reflected in base rates authorized in its last general rate case, D.92549. It also seeks to include the proposed systemwide RCS program as a specified program in its CLMAC tariff provision. For the purposes of this application, Edison estimates such incremental expenses for the 1982 RCS program to be $5,819,000. Total 1982 calendar year RCS expenses are estimated at $13,908,000.

The requested increases to the CLMABF for the RCS program would add 0.014 ¢/kWh to lifeline domestic service, nonlifeline domestic service, and other than domestic service.

Edison proposes that the increases become effective for service rendered after April 1, 1982. It also proposes to file future CLMAC applications for a revision date of January 1 of each year to recover all reasonably incurred expenses of the RCS program.

The application states that on April 1, 1981, Edison began a prototype RCS program in conjunction with a ZIP program in the greater eastern desert area of its service territory. Based in part on the results of this prototype effort, Edison states it has designed a systemwide RCS program that will effectively serve the needs of its customers and meet appropriate state and federal requirements.

It states its RCS program is designed to provide residential customers with a comprehensive audit service that leads to increased customer awareness of the need for and benefits of energy conservation, and to motivate customers to actually implement those measures and practices that are appropriate for their particular residence.

The National Energy Conservation Policy Act (NECPA), Pub. L. No. 95-619 (November 9, 1978), 92 Stat. 3206 et seq., as amended, requires public utilities to carry out a program of residential conservation services for their customers to encourage adoption of energy conserving practices and the installation of energy conservation measures (conservation measures).

The United States Department of Energy (DOE) has issued a set of final rules under which each state is to establish an RCS State Plan. The CEC has been designated the "Lead Agency" by the governor of California for the development and implementation of the California RCS State Plan.

The California RCS State Plan of January 1981, approved by DOE December 29, 1980, requires Edison to send an announcement concerning RCS (Program Announcement) to each residential customer no later than six months after approval of the RCS State Plan and, in addition, provide a variety of services. Following is a brief description of the above-listed services available to each eligible customer under the proposed RCS program:

A. Program Announcement

In accordance with the RCS State Plan, Edison began sending a program announcement to each eligible customer on June 1, 1981. This brochure was the product of a cooperative effort between Edison and the three gas utilities with service territories that overlap Edison's: Southern California Gas Company (SoCal), Long Beach Gas, and Southwest Gas Corporation.

B. Home Energy Audit

The RCS on-site home energy audits (Class A audits) are designed to provide customers with information on the conservation measures and practices which are likely to be cost-effective for the particular residence and to assist the customer in arranging for purchasing, installing, and financing those measures. The audit itself will consist of:

1. Surveying the customer's residence and taking measurements of or data for all major variables affecting energy consumption.
2. Recording this information on a proposed Home Energy Survey Worksheet and inputting this information into a portable computer.
3. Providing the customer with a copy of the computer printout and explaining the results in detail.
4. Recommending to the customer which conservation practices should be adopted and which conservation measures should be installed.
5. Determining if the customer is interested in assistance in arranging for installation or financing of conservation measures.

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later than six months after approval of the RCS State Plan and, in addition, provide a variety of services. Following is a brief description of the above-listed services available to each eligible customer under the proposed RCS program:

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B. <u>Home Energy Audit</u>

The RCS on-site home energy audits (Class A audits) are designed to provide customers with information on the conservation measures and practices which are likely to be cost-effective for the particular residence and to assist the customer in arranging for purchasing, installing, and financing those measures. The audit itself will consist of:

1. Surveying the customer's residence and taking measurements of or data for all major variables affecting energy consumption.

2. Recording this information on a proposed Home Energy Survey Worksheet and inputting this information into a portable computer.

3. Providing the customer with a copy of the computer printout and explaining the results in detail.

4. Recommending to the customer which conservation practices should be adopted and which conservation measures should be installed.

5. Determining if the customer is interested in assistance in arranging for installation or financing of conservation measures.

C. <u>Assistance in Arranging Installation</u>

At the conclusion of the Class A audit, the auditor will offer to assist the customer in arranging for the installation of those measures that are recommended through the audit process. If the customer is interested, he or she is provided with the name, address, and phone number of qualifying installers in the area selected from the CEC's master list of such installers.

D. <u>Assistance in Arranging Financing</u>

Edison will offer to assist all eligible customers in arranging for financing at the conclusion of the RCS audit. This includes a standardized credit application form, a list of qualified lenders, and a telephone number to call if the customer needs further assistance. Assuming approval of A.61066, the customer will be advised that for many of the RCS conservation measures (and a few additional Edison-approved measures found to be cost-effective by the RCS audit), Edison will offer ZIP and/or CIP financing.

E. <u>Post-Installation Inspections and Customer Complaints</u>

Edison will perform on-site, post-installation inspection of conservation measures installed under the RCS program according to the procedures outlined in the application.

Upon receiving a complaint regarding an installer or lender participating in the RCS program, Edison proposes to contact both the complainant and the installer or lender to attempt to mediate the problem.

As an alternative to the on-site Class A audit, a "do-it-yourself" audit option (Class B audit) is scheduled to be introduced on or before June 1, 1982, as stipulated in the California RCS State Plan. An information packet is to be supplied to assist the customer in conducting the Class B audit. This would include a Class B audit workbook to explain the steps involved in gathering and reporting information on residence size and type, household population, number and type of appliance, and other energy-related variables.

The customer would submit these data to Edison for calculation of estimated energy savings for the various conservation measures. These results together with Edison's recommendations on conservation practices to be adopted and conservation measures to be installed would then be returned to the customer. Additionally, the customer would receive printed instructions on the steps necessary to secure installation and financing.

City Proposal

City's witness testified on contract negotiations between City, Edison, and SoCal for City to perform all RCS audits within its city limits. The witness explained that she was appearing to present the Commission with information regarding the contract negotiations and was not making any recommendations. She stated she did not believe Commission approval of a contract for audits to be performed by City was necessary because the language contained in D.82-05-043, in A.60446 and A.60447, SoCal's RCS and Weatherization Financing and Credits Program (WFCP) applications clearly encouraged this type of program.

CEC

CEC takes issue with the staff recommendation for cutting Edison's requested 1982 incremental RCS program expenses. CEC recommends that the request be approved at the rate of $646,555 per month in 1982 with savings from RCS program improvements to be used to provide the capacity to conduct a greater number of audits.

CEC points to its responsibility for the RCS State Plan and states its commitment to ensuring the proper and full implementation of RCS by all covered utilities. CEC estimates the installation of conservation measures through the RCS State Plan can save approximately 49 trillion British thermal units (Btu) by the end of 1983 with significant energy savings continuing in subsequent years.

CEC states that the second phase of hearings to consider revisions to the RCS State Plan is now in process. The goal of these hearings is to simplify RCS audit requirements and reduce audit costs. Adoption of revisions will present an opportunity for covered utilities to use savings from a more simplified, more cost-effective program to expand their RCS programs.

CEC states that the staff recommendation that only $1,382,000 in incremental expenditures for RCS be approved is unjustified by the record and beyond the scope of the proceeding. It states that the staff recommendation is derived by reducing by 32% the $8,089,000 already authorized in base rates plus the $5,819,000 requested in this proceeding and subtracting the amount from that already authorized ($8,089,000) in base rates. It argues that adopting the staff recommendation would in effect reduce the amount already authorized for the RCS program.

CEC also asserts that the staff-recommended amount for RCS is based on sheer speculation of cost savings in the place of cost analysis and should be rejected.

<u>A.61066 - Staff</u>

Staff analysis of Edison's ZIP/CIP program was provided by the Energy Conservation Branch (ECB). The staff concluded that the overall program as proposed by Edison would be cost-effective but recommended that the incentive levels be modified to ensure customer participation.

Staff recommends an 8% interest, 100-month loan for the <u>full</u> amount of the purchase price instead of a 0% interest, 60-month loan on <u>part</u> of the purchase price as proposed by Edison. It believes that providing full-cost loan financing and minimizing monthly repayment costs are essential to removing the financial barriers to conservation. It states many customers lack the requisite financial resources to make their home more efficient. It states that under its modified plan, the program will be cost-effective to program participants, the utility, and society; and that nonparticipants would also benefit from the net energy and capacity savings.

Staff's recommended cash incentives for the first four program items are more consistent with those incentive levels granted to SoCal in D.82-02-135 dated February 17, 1982. Staff's recommended schedule is based on the lowest of the following: Edison's CIP schedule; 30% of the installed cost; or SoCal's authorized cash incentive (for measures covered by SoCal). It states that limitation to 30% of the installed cost makes the CIP program approximately equal value to the participant as the 100-month loan at 8%.

As analyzed by the ECB, Edison's proposed program would provide conserved energy at 1.3¢/kWh, compared with the company's marginal cost-average cost gap of 3¢/kWh. Edison's proposal would be cost-effective from all four of the perspectives employed by the Commission: society, participant, utility, and nonparticipant. At a 10% discount rate, all individual measures would be cost-effective to the nonparticipant except thermal window insulation, heat pump water heater, and heat pump furnace (Exh. 40). Staff's recommended program changes would improve cost-effectiveness by reducing program costs.

Staff expects that its recommendations will save Edison ratepayers about $36.4 million on a discounted life cycle basis. It states that for the first year implementation of the ZIP/CIP program, as modified, no additional funds would be required above Edison's requested $11.3 million.

Staff states that the overall cost of the CIP program under its recommendation is about $0.4 million lower than Edison's proposal. The first year cost of its proposed 8% full-cost loan program is only $0.5 million more than the first year cost of the zero interest partial loan program proposed by Edison. The net difference of $85,500 could be reallocated from Edison's proposed contingency fund for targeting special customers for the first year with no appreciable change in costs and estimated energy savings.

Staff recommends that eligibility for refrigerator cash incentives be limited to units which exceed the energy efficiency requirements of the "standard models," identified in the CEC's efficiency standards, by at least 20%.

Staff has no objection to Edison's request that ZIP/CIP program participants participate in its loan management program, or to the condition that program eligibility be conditioned on the customer's agreement to allow Edison to install a load-cycling device. The staff believes, however, that this could reduce customer participation.

Staff has no objection to Edison's proposed $200 grants for improvements to the "building envelope," so long as such improvements were found cost-effective in the course of a prior energy audit. It states Edison should pay the lesser of the actual price for building envelope repairs, or $200.

The staff recommends that the maximum loan per dwelling unit be $3,500. This would allow loans large enough to cover replacement heat pump furnaces and would ensure equitable distribution of loan funds.

Finally, staff recommends that all work financed under the ZIP/CIP program should be installed in accordance with RCS standards by RCS listed contractors, or the customer, and that all work financed under the program should be covered by repair or replacement warranties equal to or exceeding those required by the RCS State Plan, including a 3-year manufacturer's warranty for free repair or replacement of materials.

Staff does not object to a supplemental loan for landlords for building repairs to improve energy efficiency when the majority of the building's tenants are low income.

Staff does not recommend Edison's proposed larger cash incentives for the low-income group. It states that the cost of measures does not vary with income level, nor do the useful lives or the energy savings vary with income level for a given device. However, it recognizes that greater incentives may be required to persuade low-income customers who are less able and less inclined to accept deferred benefits to participate in the program.

Staff recommends that transfers to close relatives of residences which have been financed under the loan program not trigger full repayment of the balance of the loan if the transferee assumes in writing all obligations regarding the loan.

It recommends a minimum loan amount of $150, instead of Edison's proposed $200 and a minimum monthly repayment of $5, instead of Edison's $10 or 1% of the original principal stating this is consistent with SoCal's financing program.

Staff agrees with Edison's proposal that low-income tenants be offered a package of low-cost conservation measures at no charge, stating that targeting and outreach efforts for special ZIP/CIP markets should be approved because they are appropriate and reasonable.

Staff recommends that Edison's $8.9 million revenue increase request be granted subject to three caveats. First, in absence of recorded data it used Edison's workpapers for certain calculations and later-filed data should be carefully reviewed. It emphasized Edison should exercise strict constraints in the matter of program costs stating that economies will be achieved throughout the program and that future revenue requirements will reflect such economies.

The second caveat concerns federal and state law related to NECPA. Since this body of law is in the process of change, staff feels Edison's recorded costs should reflect any reductions with appropriate adjustments in funding made during the programs' annual review.

The third caveat relates to the funding mechanism to be used to implement the proposed ZIP program. Both Edison and staff assumed that a leveraged trust will be used for loan financing. Should a different financing mechanism be used, staff recommends that the full $8.9 million be approved with adjustments in funding at the time of the program's annual review.

<u>A.61067 - Staff</u>

Edison has been authorized $8,089,000 in 1982 base rates to finance its RCS program. By this application it seeks authority to increase rates by an additional $5,819,000 to finance RCS audits as mandated by NECPA.

Staff expresses concern over the proposed audit cost, the energy savings generated and the possible modifications of the RCS program. It states that federal legislation may eliminate the RCS program and that the state program is being streamlined to make it more cost-effective.

Staff's witness states that prior Commission decisions set a precedent for consistency in RCS proceedings and that Edison's proposal should not be evaluated in isolation. For this reason he recommends that Edison be granted only $9,471,000 rather than the requested $13,908,000 to conduct its 1982 RCS program. This recommendation would result in Edison's receiving $1,382,000 of the requested $5,819,000 in incremental revenues.

Based in part on other RCS proceedings,[4] the staff witness summarizes the problems of the RCS program as follows:

1. There is no requirement that the RCS program be cost-effective.
2. RCS has no provisions to eliminate unnecessary or second audits.
3. RCS is inequitable to the customer who has been conserving.
4. With all the consumer protection elements built into the plan, RCS does not require the recipient of the audit to implement any measures or practices.
5. RCS places the burden on the utilities, their ratepayers, and the CPUC to carry out an expensive program without giving federal or state incentives.
6. RCS does not completely measure the heat loss and gain of a building envelope.
7. RCS auditors can make errors while auditing. It would not be uncommon for two certified auditors to make different recommendations if they audited the same home.

Staff witness also states there is a problem of conservation potential. He states California utilities have been in the conservation business for the past six years and that the

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[4] Staff witness Grove testified in Pacific Gas and Electric Company (PG&E) A.59537 et al. (D.93891 dated December 30, 1981) and SoCal A.60446 et al. (D.82-02-135 dated February 17, 1982.)

majority of Edison's service area is in a moderate climatic zone. With the enactment of conservation-oriented standards, the implementation of utility conservation programs, and the higher cost of energy, California has managed to reduce its per capita energy consumption in the residential sector. He asserts that these factors reduce the conservation potential for an RCS audit.

Staff takes exception to Edison's audit cost estimates. Edison estimates $12.2 million for 71,520 Class A audits - $167 per audit - including payments to SoCal for 25,760 audits performed for mutual customers. Staff believes the Class A audit could be performed for less than $100 each and possibly for $50 if RCS is greatly simplified.

Staff states utilities are already performing RCS audits for $100 or less. It points out that in Edison's great eastern desert area program the cost per audit in 1981 was $100. Further, studies by CEC staff have shown that Class A audits can be performed for less than $100. Thus, staff argues, it appears not unreasonable to conclude that a Class A audit will cost approximately $100.

Staff finds Edison's position unclear whether Class B (do-it-yourself) audits will be implemented before 1983. Expenses for 1982 were estimated at $1.8 million but no Class B audits have been performed to date and Edison states none will be made in 1982.

Staff recommends that the level of audits proposed by Edison on a prorated monthly basis for the remainder of 1982 be adopted. It states that based on assumed $100 audit and 25-30% incremental start-up cost included by Edison, the amount of funding provided under the staff proposal would be sufficient for approximately 20,000 audits during the fourth quarter of 1982. This would represent full capacity use of the company's own auditor team plus the assumed 6,500 "mutual" audits performed by SoCal.

Cost-Effectiveness

Considerable hearing time was consumed on the subject of cost-effectiveness. During the proceeding the issue of the appropriate avoided cost value to be used for cost-effectiveness analysis was broached by both Edison and staff. After considerable negotiation, Edison and staff agreed that the proposed ZIP/CIP program and modifications proposed by staff are cost-effective with regard to overall societal, participant's, and utility's perspectives using either or both Edison's or staff's methodology. Staff and Edison stipulated that the methodology for the development of marginal and/or avoided costs should not be determined in this proceeding.

Staff, however, disagreed with Edison on whether the ZIP/CIP proposals would be cost-effective to the nonparticipant. They also disagreed on the appropriate discount rate to be used for cost-effectiveness analysis and for determining the appropriate financing mechanisms.

Edison believes that with the stipulation (Exh. 41) the issue of marginal and/or avoided cost is eliminated from this proceeding and that its application and the staff's proposed modifications should be evaluated on the reasonableness of the respective program descriptions.

The Commission's Policy and Planning Division recommends that the determinative test of cost-effectiveness is properly the societal test. Commercial and industrial energy customers generally have recognized the benefits of conservation in relation to new supply costs; furthermore, small residential users have the benefit of a low lifeline energy rate. Staff asserts that those circumstances reduce the importance of the nonparticipant test.

Revenue Requirements Division recommends that the principal test should be the social cost-effectiveness test but that all four cost-effectiveness tests should be applied on a measure-by-measure basis. According to this view, the social (or societal) test should be first applied to measure the impact of a measure on overall economic efficiency and, thus, total economic welfare in the society. The degree of cost-effectiveness would be evaluated in relation to the results of the three other tests.

Notwithstanding these differences, staff uniformly favors the adoption of the ZIP/CIP program as modified stating that the differences are not material to the outcome of the case.

The cost-effectiveness issue relative to conservation programs has been the subject of considerable discussion in D.92653 in PG&E's conservation financing proceeding, A.59537; D.82-01-103 in our OIR 2 rulemaking concerning cogeneration and small power producers; and D.82-02-135 in SoCal's RCS (A.60446) and (A.60447) proceeding.

In A.59537 the Special Economic Projects Section of the Commission's Revenue Requirements Division recommended that we require conservation programs to be cost-effective from the nonparticipant's perspective. After a lengthy discussion we stated in D.92653:

> "We conclude that a conservation measure, as distinguished from the amount of utility-provided incentive, must meet the tests of cost-effectiveness to the customer, the utility, and society to be considered cost-effective for purposes of receiving a utility incentive. It would not be proper for this Commission to encourage consumers to purchase conservation measures the cost of which exceeds the savings generated. Nor would it be a reasonable expenditure of ratepayer funds to require a utility to purchase energy from conservation measures at a higher per unit cost than its marginal cost of energy. Finally, an inefficient allocation of resources would be created if the total cost of a conservation measure, including utility incentives, exceeds the resultant total savings to the customer and the utility."

Discussion

We have long recognized that conservation is one of the most important tasks facing utilities today. In D.84902 dated September 16, 1975 we noted:

> "Continued growth of energy consumption at the rates we have known in the past would mean even higher rates for customers, multi-billion dollar capital requirements for utilities, and unchecked proliferation of power plants. Energy growth of these proportions is simply not sustainable... Reducing energy growth in an orderly, intelligent manner is the only long-term solution to the energy crisis."

As we stated in D.93894 in A.60546, we recognize that the ratepayers' ability to absorb continuous rate increases is limited. Thus we must not only determine that a conservation program is cost-effective for ratepayers but we must also ensure that the design of the program is as efficient as possible. Accordingly any rate increase must be the minimum which will allow the realization of the programs benefits for ratepayers. D.93894 substituted an 8% loan program for the ZIP program proposed by San Diego Gas & Electric Company, on the grounds that 8% financing would induce substantially the same customer participation as 0%, but at much lower subsidy cost. With this in mind we review the two applications.

Staff and Edison agree that the ZIP/CIP proposals and the modifications proposed by staff are cost-effective from the societal, participant's, and utility's perspectives using either or both staff's and/or Edison's marginal or avoided cost methodology. In keeping with the stipulation entered into between staff and Edison and received in evidence (Exh. 41) for purposes of this proceeding we will not adopt a particular marginal and/or avoided cost methodology.[5]

With respect to the nonparticipant's perspective, Exh. 43 shows net savings overall using either Edison's or staff's

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[5] The marginal/avoided cost issue has been covered in detail in Edison's general rate case, A.61138.

avoided cost methodology. Notwithstanding disagreements concerning which, if any, test should be given primacy,6 we believe that overall cost-effectiveness for the nonparticipant has been demonstrated and that the ZIP/CIP program, as modified, should be instituted.

We agree with staff that Edison's overall proposal is cost-effective and will adopt the program with the modifications noted above. Measures that will be eligible for financing without an audit include: attic insulation, caulking, weatherstripping, duct insulation, and qualifying energy effieient refrigerators.7 Measures eligible under the program, after an audit demonstrates their cost-effectiveness, include wall insulation, floor insulation, thermal/storm doors and windows, replacement energy-efficient central air-conditioners, evaporative coolers, precoolers, whole house fans, heat pump water heaters, and central heat pump replacements for electric resistance heaters.

In addition to other eligibility requirements, we will restrict the availability of RCFP for heat pump water heaters and central heat pump to households with no natural gas hook-up. We do not want RCFP to facilitate conversions of space and water heating from natural gas to electricity.

Edison will be required to determine the eligibility of individual manufacturers' products based on objective performance criteria. Performance standards assure the cost-effectiveness of ratepayer-financed measures without involving the utility or this Commission unduly in the marketplace. The establishment of performance standards for eligible measures is not anti-competitive.

[6] Edison states the primary test to measure cost-effectiveness is the utility perspective test, i.e. if the conservation program does not appear to have the potential to reduce the total cost of providing electricity over the life of the program it should not be pursued.

[7] Water heater blankets and low-flow showerheads are part of the so-called "Big Six" which are installed free to electric water heater customers as part of Edison's Wrap Up program, and, thus, are not included in the ZIP/CIP program.

To ensure the continued cost-effectiveness to ratepayers of RCFP financing, we will require Edison to file a report on December 1, 1983 providing data on the cost-effectiveness of thermal windows, heat pump water heaters and heat pump central heaters to nonparticipants.

Appropriate Loan Characteristics.

In D.82-02-135 dated February 17, 1982, we ordered that SoCal's weatherization financing conservation program carry an 8% interest rate. In this proceeding, staff recommends that Edison's ZIP/CIP loan programs should also be established at 8% to correspond to that authorized SoCal. We agree that an interest rate of 8% for Edison's ZIP/CIP program is appropriate and more desirable than 0%.

With an 8% program, we believe Edison can achieve reasonable penetration levels of weatherization in single-family and multifamily homes at considerably less cost to its ratepayers than with 0% financing. Such a program would be in the best interests of all ratepayers, participants and nonparticipants. It will be consistent with SoCal's weatherization program and so will avoid possible confusion concerning the financing available in the utilities' mutual service area.

The cost-effectiveness of such an approach is also clear. Evidence presented indicates that the 8% financing will be cost-effective from the utility's, societal, and participant's perspectives. Nonparticipants will benefit from the net energy and capacity savings. Cost-effectiveness to nonparticipants will also be heightened by increasing the financing interest rate charges from 0 to 8%. We, therefore, adopt an 8% interest rate for Edison's weatherization loans available for single-family and multifamily residences.

We will also adopt the 100-month repayment as established in D.82-02-135 and recommended by staff in this proceeding. With regard to the loan repayment, we believe staff's 100-month repayment recommendation will remove a major financial obstacle to customer participation. It will provide up front the money needed by targeted customers to make their home energy-efficient.

Appropriate Cash Incentives Levels

Edison presented a complex system predicated on the use of a cost-effectiveness analysis of each unique conservation measure determining an appropriate incentive for that measure. In the alternative, staff recommended that the cash incentive level be established at the lower of 30% of the installed cost of the measure, or Edison's proposed cash incentive level, and for measures offered by both Edison and SoCal, the SoCal incentive levels. Staff asserts that this simple 30% calculation approximates, for most measures, the incentive value offered by an 8% loan and produces cash incentive levels that frequently are similar to the amounts proposed by Edison.

Edison's proposed incentive payments differ considerably from those proposed by staff, as shown below. We will adopt the staff's proposed CIP levels.

Description	SCE's Proposed CIP	ECB's Recommended CIP Level	ECB's Less SCE's
Wall Insulation	$990	$145	-845
Attic and Duct Insulations, caulking and weatherstripping	272	427 1/	+155
Floor Insulation	536	128	-408
Thermal Window Insulation	1036	134	-902
Replacement Central Air Conditioner (CAC)	421	421	-0-
Evaporative Cooler	328	328	-0-
Pre Cooler for CAC	296	200	- 96
Whole House Fan	192	160	- 32
Heat Pump (H.P.) Water Heater	266	266	-0-
H.P. Furnace	1265	915	-350
Energy Efficient Refrig.	100	100	-0-

1/ Cash Incentives authorized in D.82-02-135 (p. 82a) are as follows: attic insulation $302, duct wraps $106, caulking/weatherstripping $19.

We believe that in light of SoCal's weatherization program, the staff approach should be adopted. This approach will ensure that for measures which are included in both Edison's program and SoCal's program, Edison would not pay a greater incentive to its customers.

Additional Program Design Issues.

Edison proposes that loans over $1,500 be secured by a lien. Staff recommends that liens be required for loans over $5,000. Edison argues that a lien on loans of $1,500 or more offers two major advantages: (1) it provides notification to the utility of title transfer through escrow and (2) it provides an added incentive for the customer to fulfill his repayment obligation. Also in its ZIP demonstration program, where a mortgage for loans exceeding $1,500 is required, the default rates are extremely low. Edison believes that the requirement of a lien at lower loan amounts would lessen the default rate. Staff considers the imposition of a $1,500 lein condition as an impediment to customer participation in the ZIP/CIP program.

Notwithstanding the arguments made by Edison, we will only order the utility to require liens for loans in excess of $5,000. For loans above $1,500 but no more than $5,000, we will allow Edison to determine whether a lien is to be required. Because Edison's program is dominated by electric appliances, the utility may determine that more stringent security arrangements than those authorized for other weatherization programs may be appropriate.

Further, we will allow Edison flexibility in the selection of means to secure RCFP loans above $5,000. In D.82-11-019 (November 3, 1982), we authorized PG&E to accept any of four forms of security on ZIP loans: a lien; an assignment of rents; a payment bond; or a 75% deposit of the outstanding loans. PG&E was provided this flexibility in order to ensure the availability of ZIP to public housing authorities which may be restricted by federal regulations or contract provisions from accepting a lien. Edison will be given the same flexibility.

Edison proposes that customers receiving financing for measures related to central air-conditioning be required to accept the installation, at the company's option, of an Edison-activated load-cycling device for the automatic shifting of air-conditioning load. Staff believes that the imposition of the load-cycling device would be unfair because it would be imposed on only those who conserved and not on those who choose not to conserve. Staff also fears that a mandatory program could result in reduced customer participation.

We agree with staff that mandatory installation of the load-cycling device could result in reduced customer participation. Were the cost-effectiveness of air-conditioner cycling firmly established, we might be willing to accept the risk of reduced participation. However, Edison's air-conditioner cycling program is still experimental. Edison has proposed a large demonstration program for 1983-84 in its pending general rate case. Edison is welcome to reapply for inclusion of a mandatory air-conditioning cycling program once its cost-effectiveness can be demonstrated.

Regarding the energy-efficient refrigerator program, Edison agreed with staff's proposal that those qualifying should be limited to units that are no larger than 12 cubic feet and rated to use 960 kWh/year (80 kWh per month) or less for frost-free models and 720 kWh/year (60 kWh per month) or less for partial defrost models. We will accept staff's recommendation as it offers more program efficiency and can easily be understood by customers.

Certain other features of the RCFP authorized by this decision have been the issue of discussion, findings, and conclusions in prior Commission decisions authorizing weatherization financing programs for other California utilities. These features include credit requirements for loan eligibility, monitoring of contractor bids, procedures for processing applications and disbursing funds, inspection and warranty requirements, and program sunset date. Such features of the authorized RCFP are consistent with programs previously authorized.

Financing Subsidiary

Edison proposes to use a leveraged administrative trust to finance the project. It also considered direct utility financing, utility-subsidized bank loans, and a wholly owned nonutility financing subsidiary. In choosing the leveraged administrative trust, Edison requested confirmation from the IRS that this method would not incur federal income tax liability. Should the IRS give a negative reply, Edison proposed the leveraged subsidiary approach.

In PG&E's ZIP program we determined that the financial subsidiary approach was proper. As in the PG&E case, risk to the investors would be alleviated by the proposed "advance tariff ruling." Thus, while the financing subsidiary is slightly more costly than the leveraged trust, the degree depending on the discount rate assumed, we believe the financing subsidiary is the most desirable of options available. It maintains the customary investor and consumer relationship and better allocates financing costs between present and future ratepayers.

Staff recommends that 25% of the capital for program financing come from the company. Under Edison's proposal 25% of the capital would come from ratepayers. Under either approach the remaining 75% could come from conventional lenders. Thus, Edison would require assurances that it would be allowed to recover the financing costs. In both PGE&'s ZIP program and SoCal's weatherization program, we determined that such an assurance was a prerequisite for the type of financing authorized. We therefore find that lender assurance is necessary and will be adopted.

With regard to funding the RCS program, Edison seeks an additional $5,819,000 for the nine-month period from April 1 through December 31, 1982, prorated to $646,555 per month. Staff recommends adoption of the level of audits proposed by Edison prorated on a monthly basis for the remainder of 1982 allowing $100 per audit. This would amount to approximately $350,000 for the fourth quarter 1982.

CEC recommends Edison's request be granted by applying the suggested billing factor for the months remaining in 1982 after a decision is issued.

Edison states that it does not anticipate conducting any Class B audits during 1982. Removal of the labor and material funding of the Class B audit results in a new 1982 funding level as follows:

Total 1982 Program Costs		$13,958,000
Less total annual request for Class B audits		
Labor	$ 239,617	
Materials and Service	1,533,223	1,772,840
New level of funding		$12,185,160

By D.92549 Edison was authorized $8.1 million for 1982 RCS expenses. Edison spent $1.2 million during the first quarter of 1982 (Exh.13). Testimony of Edison's witness was that RCS expenditures for the second and third quarters of 1982 were reduced from that of the first quarter. While the results of the second-quarter expenditures were not available at the time of the hearing, it would appear that Edison would have funds available in excess of $2 million for the fourth quarter.

There is nothing in the record to support an additional $4,046,160 to fund the RCS program for the balance of 1982. For its ZIP demonstration Edison stated that its audits were running approximately $100 each. In D.82-02-135 we approved $94 per audit for SoCal. In D.93891 we authorized PG&E $12,000,000 to reach its goal of 182,000 RCS audits in 1982 (approximately $65 per audit). With approximately $2 million allowable for the fourth quarter of 1982 we believe that Edison has adequate funding to perform the number of RCS audits its personnel can complete. The request for additional funding for 1982 through the adjustment of CLMABF will be denied.

The request that its RCS program for 1983 be funded through base rates need not be addressed in this proceeding. As indicated in its testimony, exhibits, and briefs, Edison has requested funding for its 1983 RCS program in its current general rate proceeding, A.61138.

Edison proposes to offer increased cash incentives and increased loan incentives to low-income customers. In D.82-09-62, in A.60446 and A.60447 (September 22, 1982), we authorized SoCal to offer increased cash credits to low-income participants in WFCP. The increased WFCP incentives are limited to the Big 6 measures, and are limited to credits, rather than loans. The table below compares Edison's proposal and SoCal's adopted low-income program.

Conservation Measures	Edison Proposed Low-Income Component(1) Cash Incentive	Interest Incentive	Maximum Loan	SoCal WFCP Low-Income Credit(2)
Attic, Duct Insulation & C/WS(4)	$ 384	$ 368	$ 856	$502
Water Flow Control Device	(3)	-	-	25
Water Heater Blanket	(3)	-	-	9
Wall Insulation(4)	1,095	1,086	2,527	0
Floor Insulation(4)	512	480	1,117	0
Thermal Windows	1,213	1,339	3,116	-
Replacement CAC	532	502	1,168	-
Evaporative Cooler	441	441	1,026	-
Pre-Cooler for CAC	321	286	666	-
Whole House Fan	230	189	440	-
Heat Pump Water Heater	351	290	675	-
Heat Pump Furnace	1,496	1,605	3,735	-
Energy-Efficient Refrigerator	100	-	-	-

(1) Exh. 1, p. 7-8.

(2) D.82-09-062, A.60446 and A.60447 (September 22, 1982).

(3) Edison provides these items free of charge to all customers through its Wrap-Up program.

(4) Based on a weighted average.

Were we to authorize the low-income component of RCFP as proposed, low-income customers in the utilities' joint service territory would face two very different sets of opportunities. In the interest of consistency, we will limit Edison to a low-income program comparable to that included within SoCal's WFCP. Based on analyses in this proceeding, the higher incentives for attic and duct insulation, caulking, and weatherstripping will still meet all four of the Commission's tests of cost-effectiveness. Edison's low-income customers will still be eligible for RCFP credits for the other measures at the same levels as other Edison customers. At the first annual review of RCFP, Edison should supply data concerning theappropriateness of expanding its low-income incentives.

Edison states it intends to market its financing program to achieve equitable participation by low-income customers, the elderly, owners and renters of rental units, and minorities. The detailed marketing strategy and objectives for such special target groups includes:

1. Special financing with additional economic incentives to give these groups a realistic opportunity to participate.
2. Efforts to achieve participation levels by target groups equal to or greater than their proportion of Edison's customers eligible for benefits.
3. Special incentive offers to owners and managers of rental units.

This is an ambitious but reasonable plan for reaching the target markets. It analyzes these markets statistically, identifies disincentives to overcome, and outlines various marketing strategies and special outreach activities which can be employed to make the program benefits available to the target markets.

We will adopt Edison's proposals for targeting and outreach efforts to achieve equitable participation by low-income customers, the elderly, minorities, landlords, and renters. Its targeted

outreach strategy is reasonable as is its plan to achieve maximum effectiveness by using the services of community groups, local governments, and other associations to deliver information to the target group.

Edison will be ordered to file, within 30 days of the effective date of this order, a report detailing and explaining its entire plan for promoting low-income participation in RCFP and RCS. In this report, Edison will be directed to provide an opportunity for community-based organizations and private contractors to install eligible measures in low-income residences, and to receive credit payments directly from Edison. This provision should be generally consistent with similar efforts ordered for SoCal in D.82-09-062 (September 22, 1982).

City Proposal

We note with great interest the testimony of the City of Santa Monica concerning its proposal to perform all RCS audits within the city limits on behalf of Edison and SoCal. We agree with City's witness, that this type of cooperative effort was clearly encouraged by our statements in D.82-05-043. In that decision (at mimeographed page 4) we stated:

> "We believe that it is likewise appropriate for SoCal to enter into contracts with outside groups, whether they be government agencies, community groups or private firms, to provide RCS audits. Such contracts are desirable under the circumstances permitted by the CEC's Cal Plan or as otherwise approved by the CEC, but only where they result in no greater expenditure than SoCal would have incurred to achieve the same estimated conservation through its own RCS and WFCP efforts. Thus SoCal should take an active role in seeking out and utilizing local government and community resources. Circumstances under which these resources should be used include:
>
> a. Where local governments and community groups have direct access to a portion of the population (linguistic, cultural, community) not easily reached by the utility.

> b. Where local governments and community groups can provide services at a level of training and expertise comparable with utility capability.
>
> Moreover, we expect SoCal to be prudent in its expenditures on such activities."

The record indicates that the City proposal, if effectively implemented, would produce additional savings beyond those anticipated by a SCE audit because of reduced costs and the direct application of energy-saving devices. As such, this proposal demonstrates that local governments, or other locally based groups may be able to perform RCS services in a manner which increases ratepayer savings. To be certain, additional savings should occur if local governments, community groups or private firms offer to provide RCS audits at lower cost than the utility. Therefore, we reiterate for the purposes of SCE the above policy statement as set forth in the cited SoCal decision.

Findings of Fact

1. The major difference in societal benefits and societal costs justifies extraordinary efforts to achieve conservation by taxpayers through tax credits, by utility conservation programs, and by utility customers.

2. The major beneficiary of conservation is the utility ratepayer through reduced revenue requirements brought about by energy savings.

3. NECPA of 1978 requires on-site energy use audits for residential customers upon request.

4. NECPA allows for the individual states to file RCS State Plans.

5. CEC is the lead agency for developing a California RCS State Plan.

6. By A.61066, Edison requests authority to increase its CLMABF to recover $8.9 million estimated expenses for its proposed RCFP.

7. By A.61066, Edison requests authority to include RCFP as a specified program for inclusion within the CLMAC.

8. By A.61067, Edison requests authority to increase its CLMABF to recover incremental 1982 expenses of $5.8 million for its RCS program.

9. An adjustment to the CLMABF is appropriate to recover all reasonably incurred expenses associated with RCFP.

10. Many customers lack the requisite financial resources to make their homes more energy-efficient. Full-cost loans will allow targeted customers to participate in the progra.

11. The appropriate interest rate for loans offered under Edison's RCFP is 8%.

12. It is appropriate to require that repayment of RCFP loans begin immediately, with a repayment period of up to 100 months.

13. Participating customer interest payments will partially offset Edison's cost of providing financing.

14. The following measures, already determined to be cost-effective, can qualify for 8% financing or cash incentive payments either with or without any energy audit: attic insulation, weatherstripping, caulking, and duct wrap.

15. If shown cost-effective by an RCS audit, the following measures should also be eligible for 8% financing or cash incentive payments: wall insulation, floor insulation, replacement energy-efficient central air-conditioners, evaporative coolers, thermal windows, whole house fans, heat pump water heaters, and central heat pump replacements for electric resistance heating. Incentives will also be available to purchasers of qualified energy-efficient refrigerators.

16. Staff's cash incentive levels are appropriate.

17. It is appropriate to require installation of all measures in Finding 14 as a condition for receiving utility-provided conservation financing loans; it is also appropriate to require installation of the measures in Finding 14 as a condition for receiving utility-provided conservation financing loans for the remaining measures eligible for financing.

18. Eligibility for refrigerator cash incentives should be limited to refrigerators which exceed the energy efficiency of the relevant "standard model" set forth in the CEC's Appliance Efficiency Standards by at least 20%.

19. The requirement of the installation of an air-conditioning load-cycling device could reduce customer participation and is therefore inappropriate.

20. Loan limitations are appropriate to help control program costs and ensure equitable allocation of program money among potential RCFP participants.

21. A financing limit per housing unit of $1,000 for the installation of the measures in Finding 14, a total limit of $2,500 for installation of all weatherization measures except a heat pump furnace, and $3,500 for all measures to the extent that they are found cost-effective by a prior energy audit are appropriate.

22. It is appropriate to give Edison the discretion to require a lien or other comparable form of security for RCFP loans in excess of $1,500, and to require such security on loans in excess of $5,000.

23. It is appropriate to require repayment of the unpaid balance of a RCFP loan upon the sale or transfer of ownership of the property on which the installation has been made, except in instances of transfers to close relatives if the transferee assumes in writing all obligations regarding the loan.

24. It is reasonable to require a minimum financing of $150, a minimum monthly payment of $5 and the credit criteria proposed by Edison.

25. The determination of appropriate marginal and/or avoided costs is an issue in Edison's current (1983) general rate case, A.61138. The RCFP proposed by Edison and the modifications proposed by the staff are cost-effective from the societal, utility's, participant's, and nonparticipant's perspectives, using either or both the staff's and/or Edison's marginal or avoided cost methodology.

26. A marginal and/or avoided cost figure should not be adopted in this proceeding because the methodologies used by staff and Edison have not been developed on this record.

27. Special efforts are necessary to gain the participation of low-income customers in Edison's RCFP, and it is reasonable for Edison to offer such customers larger cost-effective credits as part of RCFP.

28. It is reasonable for Edison's low-income RCFP credits to be consistent with SoCal's low-income WFCP credits.

29. Edison's plans to achieve satisfactory levels of participation by low-income, elderly, non-English-speaking persons, and renters through special outreach efforts and coordination with communities, schools, churches, neighborhood organizations, and other groups, are reasonable and appropriate as modified.

30. Edison proposes to use a leveraged administrative trust for funding RCFP. Unless a favorable ruling on the tax exempt status is received by November 1, 1982, Edison proposes to use a financing subsidiary.

31. Edison's proposal to use a leveraged administrative trust is not reasonable.

32. Edison's alternative proposal to use a financing subsidiary is fair and reasonable.

33. Lenders require as a condition for advance of the debt funds required that the CLMAC procedure and balancing account will guarantee a debt service revenue over the life of the borrowings from the lender, and the equity investment to provide a "cushion" for the debt service.

34. Edison's requested $8.9 million for first year funding for its RCFP is fair and reasonable.

35. Edison's proposed adjustments to the CLMABF are appropriate.

36. Edison's RCFP as modified is reasonable.

37. Revisions currently under consideration by the CEC for the RCS State Plan should result in a simplified Class A audit with reduced costs and may require less time to perform. Until modifications in the RCS State Plan are made, RCS program costs should be kept to a minimum.

38. Edison will not conduct any Class B audits this year.

39. Without conducting any Class B audits in 1982, Edison's funding requirement is reduced.

40. D.92549 authorized Edison $8.1 million for 1982 RCS expenses. Edison has reduced its second and third quarter RCS expenditures. Funding for the balance of 1982 should be prorated on a monthly basis.

41. City's RCS proposal is for informational purposes only.

42. Edison requested 1983 funding for its RCS program in A.61138.

43. Edison's filed RCS program as modified is reasonable.

44. A 100% inspection level of all RCFP installations is a reasonable initial requirement to assure reliable energy savings, but it is reasonable to reduce the inspection rate of contractors who develop proven records of proficiency.

<u>Conclusions of Law</u>

1. Edison should be authorized to implement RCFP as described in this decision and under the terms and conditions provided.

2. Edison should be authorized to increase base rates by $8.9 million to cover costs of implementing RCFP.

3. $9,471,000 (an increase of $1,382,000) should be authorized as a reasonable level of expenditures for Edison's RCS in 1982.

4. Edison's RCS program conforms to mandatory features of the RCS State Plan as approved by DOE.

5. RCFP should be integrated with and follow RCS procedures wherever appropriate.

6. RCFP is consistent with the purposes and requirements of the NECPA and the Energy Security Act of 1980.

7. RCFP will not be anticompetitive in lending or other relevant markets and will not violate federal or state antitrust laws.

8. It is appropriate to account for RCFP costs through CLMAC.

9. The RCS program is mandated under NECPA, Energy Security Act, DOE regulations, and the RCS State Plan promulgated by CEC.

10. Edison is legally obligated under federal and state law to go forward with RCS.

11. This order should become effective immediately to allow Edison to extend the benefits of RCFP and RCS to all its customers as quickly as possible.

<u>O R D E R</u>

IT IS ORDERED that:

1. Southern California Edison Company (Edison) shall implement a Residential Conservation Financing Program (RCFP) throughout its service area in conformity with this decision.

2. Edison shall offer 8% financing or cash incentive payment (CIP) either with or without a prior energy audit, for the following residential energy conservation measures:

a. Attic insulation.

b. Weatherstripping of all doors and windows which lead to unheated or uncooled areas (weatherstripping).

c. Caulking or sealing of major cracks and other openings in buildings exterior and sealing of wall outlets (caulking).

d. Insulation of accessible heating and cooling system ducts which enter or leave unheated or uncooled areas (duct wrap).

3. To the level found to be cost-effective in the course of a prior energy audit, Edison shall provide 8% financing or CIP for the following measures. Measures h and i shall be eligible for RCFP only in households which are not served by natural gas.

a. Wall insulation.

b. Floor insulation.

c. Thermal and storm windows and doors for the exterior of dwellings.

d. Replacement of central air-conditioners.

e. Evaporative coolers.

f. Precoolers for air-conditioning condensers.

g. Whole house fan.

h. Replacement or retrofit of electric water heater with a heat pump water heater.

i. Replacement of central electric heat with a central heat pump.

4. Edison shall provide CIP for qualifying energy-efficient refrigerators, which are those which exceed the energy efficiency of the relevant "standard model" set forth in the Appliance Efficiency Standards promulgated by the California Energy Commission by at least 20%.

5. Edison is authorized to provide 8% financing or CIP subject to the following procedures and requirements:

a. For purposes of Edison's RCFP, "single-family" residence shall include mobile homes and residences with one to four units; "multifamily" residences are those with five units or more. Interior units in multi-storied buildings do not qualify for wall, floor, and ceiling insulation loans or cash incentives.

b. Eight percent loans or CIP payments shall be available to all owners of single-family and multifamily residences. CIP shall be available to all Edison residential customers.

c. To qualify for a loan applicant must have been an Edison customer for 12 months with no shutoffs for 10 months prior to applying for a loan.

d. All loans shall bear an interest rate of 8%.

e. Loan ceilings shall be imposed in the following amounts:

(1) $1,000 for installation of all measures in Ordering Paragraph 2.

(2) $750 for installation of attic insulation alone.

(3) $250 for installation of the caulking, weatherstripping, and duct wrap.

(4) $2,500 for the installation of the remaining RCFP measures to the extent they are found cost-effective by a prior energy audit.

f. Repayment of loan amounts shall commence immediately after issuance. The repayment period shall be 100 months.

g. The minimum loan shall be $150 and shall require a minimum monthly repayment of $5.

h. Edison shall accept as security for RCFP loans in excess of $5,000 any one of the following forms of security:

(1) A lien,

(2) An assignment of rents,

(3) A payment bond, or

(4) A 75% deposit of the outstanding loan.

Edison may require such security on loans above $1,500.

i. Every RCFP loan shall provide that the balance due on any RCFP loan shall be repayable in full upon the sale or transfer of ownership (other than an exempt transfer as defined below) of the property on which the RCFP loan improvements have been made.

j. Transfers to close relatives, as defined, of residences which have been weatherized under RCFP shall be exempt transfers not requiring repayment of the balance of any RCFP loan at the time of such transfer if the transferee assumes in writing all obligations of the transferor regarding the loan. An exempt transfer is defined as a transfer to a husband, wife, father, mother, grandfather, grandmother, son, daughter, brother, sister, including such relationships brought on by adoption or marriage, without limitation, such as stepmother, stepdaughter, daughter-in-law, or mother-in-law.

k. Edison shall monitor bid prices for the installation of eligible measures and shall require that an additional bid be obtained by a customer when a bid is not within the reasonable range known to Edison at the time. All loan applications shall include a notice advising applicant to obtain more than one bid and noting Edison's right to require an additional bid before approving the loan.

l. For multifamily residences, RCFP loans shall be available and loan ceilings imposed for each dwelling unit to be weatherized.

m. Credits shall be paid to applicant in a single payment within 30 days following a satisfactory inspection of the installed measures.

n. A renter's application for a credit shall be accompanied by a signed waiver from the property owner releasing his claim for utility credits on those measures installed on his property.

o. Edison shall advise all applicants for credits of the nature and extent to which their state income tax credit can be affected by choosing this incentive.

p. Edison shall provide increased RCFP to eligible low-income customers, based on a total average credit of $502 for attic and duct insulation, caulking, and weatherstripping. For purposes of RCFP, a "low-income" person shall be defined as any person meeting the standards set by the U.S. Bureau of Labor Statistics for eligibility to receive payments under the Federal Energy Assistance Program. The low-income program shall conform to the provisions of Chapter XIV of the RCS State Plan.

q. Edison shall make available to all low-income customers a $200 credit for improvements to the "building envelope," so long as such improvements have been found cost-effective in the course of a prior energy audit. At the election of a low-income participant, Edison shall process his application for a building envelope credit upon applicant's furnishing Edison a cash deposit receipt identifying the purchase and stating the actual price of the item. Edison shall then directly pay the retailer up to the lesser of either the actual price of materials for building envelope repairs or the $200 credit.

r. Edison shall process the RCFP applications of do-it-yourselfers upon being furnished with a cash deposit receipt for eligible measure (Ordering Paragraphs 2 and 3) materials. The cash deposit receipt must specifically identify the material being purchased and the total price of that material. Edison shall finance only the lesser of either the actual price of the measure or the applicable credit. The do-it-yourselfer shall have the ability to forgo this option in favor of receiving the full amount of the applicable credit upon installation and inspection of the measure.

s. Edison shall not process second or subsequent applications for a loan or credits by the same homeowner until the current list of first-time applicants has been processed.

t. All work financed shall be installed in accordance with California RCS standards and by a state licensed contractor or the customer.

u. Edison shall promptly inspect all do-it-yourself weatherization work installed and financed under RCFP and all work installed by contractors who have not yet demonstrated their proficiency. Edison shall develop procedures to allow for the inspection of as little as 20% of the work of contractors who have demonstrated their proficiency.

v. All work financed under RCFP shall be covered by repair or replacement warranties equaling or exceeding those required by the RCS State Plan, including a three-year manufacturer's warranty for free repair or replacement of materials and devices financed under the program, but including labor costs only for the first year as provided in the RCS State Plan.

w. All dwellings constructed prior to the effective date of this order will be eligible to qualify for 8% loans and credits.

x. No 8% loan or CIP shall be made by Edison for weatherization measures included in the present program if installed after December 31, 1986.

6. Edison shall use its best efforts to promote RCFP and RCS and achieve satisfactory levels of participation in both programs for its low-income, elderly, non-English-speaking, and renter customers. Within 30 days of the effective date of this order, Edison shall file a report consistent with this decision detailing and explaining its entire plan for promoting low-income participation in RCFP and RCS. This filing shall be served on all appearances in these proceedings.

7. Edison is authorized to increase its CLMABR to recover first year expenses of RCFP in the amount of $8.9 million. The expenses can be accumulated as a specified program under Edison's CLMAC.

8. Edison is authorized to incorporate a California corporation as its subsidiary to undertake RCFP.

9. Edison is authorized to project finance RCFP and to file project letters and advice letters in accordance with General Order 96-A to obtain Commission approval of financial arrangements between Edison and its financing affiliate, and between the financing subsidiary and lenders and to obtain Commission approval of adjustments to the CLMAC. Edison's project financing shall be subject to the following additional requirements:

a. Edison shall use its best efforts to achieve an 80/20 debt-to-equity ratio for the financing subsidiary. A ceiling of $150,000,000 shall be placed on the total capital (debt and equity) to be provided through the financing subsidiary over the duration of RCFP.

b. The rate of return on the equity investment in the financing subsidiary shall equal the return on equity authorized for Edison in its pending general rate case, A.61138.

c. The CLMABF balancing account shall not be terminated so long as RCFP borrowings remain outstanding.

d. Edison is authorized to assign RCFP-related CLMABF revenues to the financing subsidiary.

10. To implement RCFP as authorized above, Edison is authorized, as of January 1, 1983, to accumulate RCFP expenditures as a specified program under Edison's CLMAC.

11. The subsidiary through Edison is authorized to recover 100% of the debt service in a timely manner and under all circumstances through the CLMABF tariff for all Commission-approved subsidiary borrowings over the life of the borrowings.

12. For debt service only, Edison is authorized to make changes through advice letter filings for all Commission-approved subsidiary borrowings. Once a specific borrowing has been approved by project letter and committed, subsequent hearings will not be initiated by the Commission related to that specific borrowing.

This order is effective today.

Dated NOV 17 1982, at San Francisco, California.

JOHN E. BRYSON
President
RICHARD D. GRAVELLE
LEONARD M. GRIMES, JR.
VICTOR CALVO
PRISCILLA C. GREW
Commissioners

We dissent on that portion of the decision that authorizes Edison a return on its equity investment in the financing subsidiary equal to its 1983 return on equity. We believe that the return should be limited to Edison's overall rate of return since it is Edison's choice as to how it raises funds to support the equity portion of the subsidiary.

/s/ RICHARD D. GRAVELLE
/s/ VICTOR CALVO
Commissioners