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(Complete decision)

Decision 93894 DEC 30 1981 ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of SAN DIEGO GAS & ELECTRIC COMPANY for authority to increase its gas and electric rates to recover the costs of a Zero Interest Program and to include this program in the CALPAC and CPAC Clauses in its electric and gas tariffs.	Application 60546 (Filed May 11, 1981; amended July 20, 1981)

(Appearances are listed in Appendix A)

O P I N I O N

San Diego Gas & Electric Company (SDG&E) filed Application (A.) 60546 on May 11, 1981 seeking authority to implement a Zero Interest Program (ZIP) and to include the ZIP in both the Conservation and Load Management Programs Adjustment Clause (CALPAC) in its electric tariffs and the Conservation Programs Adjustment Clause (CPAC) in its gas tariffs. SDG&E filed an amended application on July 20, 1981 to substitute a 1982 ZIP for the 1981 program previously proposed, and to request a general rate increase to fund the program.

Amended A.60546 requests an increase of $1.552 million for the 12 months commencing January 1, 1982, consisting of an increase of $1.353 million in natural gas rates and an increase of $0.199 million in electric rates.

Summary of Decision

This decision does not authorize the ZIP program proposed by SDG&E. The Commission instead authorizes an expansion of SDG&E's existing 8% program to include the additional conservation measures and procedural innovations proposed in the ZIP application. SDG&E's limited experience to date with its current 8% program, and the poor quality of its showing in this proceeding, do not provide information sufficient to convince the Commission that a ZIP should now be adopted in the SDG&E service area. Since SDG&E has created a mechanism for an 8% loan program, the Commission finds it more appropriate that the 8% program be pursued. We will adopt modifications which provide for installation of more measures, and which strengthen cost containment features.

SDG&E's expanded 8% program will continue to assist residential customers in obtaining low-interest loans to finance installation of ceiling insulation, weatherstripping, caulking, water heater blankets, low-flow showerheads, and duct wrap, all without any requirement of prior audit. Beginning with the effective date of this decision, low-interest loans will also be available for additional measures which are found to be cost-effective in a customer's residence through a Residential Conservation Service (RCS) audit. These new measures include wall and floor insulation, clock thermostats, lighting conversions, heat-reflective/absorbing window and door materials, and intermittent ignition devices to replace pilot lights.

The 8% loan program will finance reasonable costs of materials and labor provided by independent contractors selected by the customer, and will finance the cost of materials installed by do-it-yourselfers. The program is available to owners of single, multifamily, and mobile homes and to renters who have their landlord's consent.

The program is designed to increase participation by low-income ratepayers. The 60 month repayment period allows relatively low monthly payments, which in many cases will be less than the customer's direct energy savings. However, there is evidence in the record that these provisions might not have been sufficient to reach these customers, even with zero percent loans. The doubts are increased by our movement to 8%. Unless low income ratepayers participate in significant numbers, these customers and ratepayers as a whole will lose the potential benefits of a significant reservoir of cost-effective efficiency improvements. To ensure sufficient participation by low-income customers, the Commission is providing a separate program in SDG&E's general rate case proceeding to assist low-income ratepayers. The low-income program will be administered through local community agencies.

SD&E has proposed to finance 6,000 ZIP loans in 1982, a 500% increase over its present 8% loan program. We adopt this goal for the expanded 8% program adopted today. This is clearly a significant increase; however, it builds on an unacceptably low base. We expect SDG&E to meet this limit. We have provided flexibility, in this decision and in today's general rate case decision, for the utility to reprogram funds among conservation programs. Should SDG&E reach its goal for cost-effective 8% loans, we expect funds to be transferred from less successful activities to continue the pace of loan activities. Should the utility exhaust unspent conservation funds, it can apply for further rate adjustment at a future date. To prepare for this possibility, expenditures on the various conservation programs should receive separate accounting treatment.

We adopt SDG&E's proposed ZIP budget to the expanded 8% loan programs. The program changes confound attempts to predict expenditures with greater certainty. Ratepayers will be protected by SDG&E's ability to reprogram conservation funds cost effectively, and by the requirement that unexpended funds be returned to the ratepayers.

The cost of the program for 1982 is approximately $1.552 million. This amounts to an increase of $1.353 million for the Gas Department and $0.199 million for the Electric Department. A typical monthly customer's monthly share of program costs would be 15 cents per month on consumption of 50 therms of gas, and one cent per month on 425 kilowatt-hours of electricity.

The 8% loan program authorized today will "supply" conserved energy at less than the cost of new fuel supplies. Customers who participate in the program receive the greatest benefit, because their energy consumption is directly reduced. Even those customers who do not participate directly should save money over time, as SDG&E's need to use expensive fuels is reduced.

I. Procedural History

This application was consolidated with the general rate case proceeding A.59788 for hearing purposes only, with a consolidated record. Hearings were conducted by Administrative Law Judge Bertram Patrick, who was assigned to both cases. Joint hearings on the ZIP application and the conservation phase of the general rate case were held from August 30, 1981 through September 25, 1981. Separate briefs were ordered for the two applications. This opinion deals with the provisions and costs of the weatherization program itself, with only passing references to the details of other SDG&E conservation programs which operate in conjunction with the 8% loan program.

Briefs were received from the company, Commission staff (staff), City of San Diego, Executive Agencies of the United States, and The East Los Angeles Community Union (TELACU).

Public Witness Testimony

Public witness testimony was taken on August 30, 1981, and on succeeding days of the first week of the hearing.

The majority of individual citizens who made statements at the hearing and wrote letters to the Commission strongly objected to the program. They argued that ZIP would subsidize home improvement for certain customers at the expense of all ratepayers, including those who had the foresight to insulate their homes out of their own pockets. There was also a strong sentiment that SDG&E should not be allowed to move into the business of loaning money for a profit.

The San Diego chapter of the Sierra Club testified in support of the ZIP proposal, and stated that SDG&E should be even more aggressive in promoting conservation programs of all types. This sentiment was also voiced by a representative of the Community Energy Action Network. Rohr Industries, Inc. appeared through R. R. Miller and recommended that ZIP-type subsidies be provided to industrial and commercial customers. Rohr is currently receiving low-interest financing from utilities in the Northwest and has successfully used the financing to install a great deal of energy-saving improvements.

Testimony by Public Agencies

Meredith N. Cronsell, representing the MAAC Project, a multipurpose social service agency serving the community, testified that low-income people would be unable to take advantage of ZIP no-interest loans since they do not have the means to pay back the principal. Cronsell described in detail the problems faced by elderly low-income people, characterizing their choice to be between eating and paying their utility bill. She enthusiastically endorsed the idea of a plan which would (1) provide weatherization services at no cost to low-income ratepayers and (2) use unemployed Comprehensive Employment and Training Act (CETA) workers trained in insulation techniques.

Cronsell stated that there was complete cooperation by SDG&E in dealing with the utility bill problems of low-income people. Also, she complimented SDG&E on its conservation education programs for the school system, and said that MAAC used these education programs with low-income people.

James Devereaux, representing the JOVE Project, a vocational training program for former criminal offenders, confirmed Cronsell's testimony. According to Devereaux, people served by the JOVE Project would be unable to use the ZIP program, and need a direct subsidy. He confirmed Cronsell's remarks that the company had cooperated fully in its work with low-income customers.

Testimony was presented by TELACU, an organization dedicated to improving the quality of life for the low-income, elderly, and Spanish-speaking community. Carolle Le Monnier, testifying for TELACU, stated that the poor ratepayer could not take advantage of ZIP. She argued that the increase in rates to finance the RCS and the ZIP programs would aggravate the serious problem the low-income ratepayers have in paying their utility bills. According to her, there are approximately 7,000 shutoffs a month in San Diego County now. TELACU submits that to increase the bills that poor ratepayers already have difficulty paying, in order to finance a program they cannot afford, is an onerous injury the Commission should not allow.

We note the testimony of MAAC, JOVE, and TELACU. We share their concerns that many customers may be unable to make use of loan subsidies, even with generous audit and repayment provisions. Accordingly, we are creating a separate weatherization program addressed directly to the needs of low-income ratepayers, as a supplement to the expanded 8% program authorized today. That low-income program, described in today's general rate case decision, will provide free weatherization installations to 4,000 low-income units in 1982.

II. SDG&E's Proposal

SDG&E's proposed ZIP features a bank tie-in arrangement by which it provides residential customers with interest-free loans as an incentive to purchase and install cost-effective conservation devices, equipment, and materials. The terms and conditions of the loan would be as follows:

Loan Amount	$120 to $3,500
Loan Term	Up to 60 Months (5 Years)
Down Payment	Zero
Customer Repayment	Principal Only, Paid in Equal Monthly Installments Over Life of the Loan; Minimum Payment $10 Per Month.
Lien	No Lien Required

SDG&E proposes to finance 6,000 ZIP loans in 1982. These would include 2,500 loans where an RCS audit is performed and financing is desired, and also 3,500 zero interest loans not related to RCS. SDG&E proposes no separate goals for multifamily, low-income, or rental units.

SDG&E proposes to finance a number of measures without prior RCS audit. These measures presently include new or additional ceiling insulation, weatherstripping, water heater blankets, low-flow showerheads, caulking, and duct wrap. In addition, wall insulation, floor insulation, clock thermostats, lighting conversions, heat-reflective/absorbing window and door materials, and intermittent ignition devices would also be financed if found cost-effective by an RCS audit.

SDG&E, through California Heritage Bank (CHB), would finance all or part of the labor and materials associated with the installation of the above conservation measures. Installation would be made by independent contractors or by the customer. When the customer chooses to install the items, only the materials would be financed.

ZIP would be offered to owners or renters (with owner's consent) of single or multifamily dwellings and mobile homes.

SDG&E currently offers its residential customers 8% financing. Upon Commission approval of ZIP, SDG&E would discontinue the 8% loan program and offer its customers with outstanding 8% loans the option of converting the remaining unpaid balance to a 0% loan.

Short-Term Goals

According to SDG&E, the short-term goals of its ZIP Program are as follows:

> - To offer 0% financing as an incentive to purchase and install cost-effective conservation devices, equipment, and materials. Included is ceiling insulation, weather-stripping, caulking, water heater blankets, low-flow showerheads, and duct wrap (hereafter referred to as Items 1 through 6).
>
> - To offer 0% financing, in conjunction with any or all of the above measures, as part of an RCS audit, for wall insulation, floor insulation, clock thermostats, lighting conversions, heat-reflective/absorbing window and door materials, and intermittent ignition devices, if found to be cost-effective (hereafter referred to as Items 7 through 12).
>
> - To test procedures of RCS relative to those items where financing is allowed only after an audit takes place and to allow a smooth and rapid transition when the program is implemented.
>
> Amended Application, Attachment A at 4.

Long-Term Goals

According to SDG&E, the long-term goals of its ZIP Program are as follows:

> - To significantly reduce the demand for nonrenewable energy resources by encouraging and assisting SDG&E customers to implement and maintain conservation measures.

- To promote the sale of cost-effective conservation devices, equipment, and materials.

- To add additional support to the existing residential weatherization conservation programs.

Id. at 3.

Eligible Items - Contractor Installed

SDG&E proposes to provide interest-free loans to finance the following:

Without RCS Audit
1. Ceiling Insulation
2. Weatherstripping
3. Water Heater Blanket
4. Low-Flow Showerheads
5. Caulking
6. Duct Wrap

With RCS Audit
Items 1-6 plus:
7. Wall Insulation
8. Floor Insulation
9. Clock Thermostat
10. Lighting Conversion
11. Heat-Reflective/ Absorbing Window and Door Materials
12. Intermittent Ignition Devices

Eligible Items - Do-It-Yourself

SDG&E proposes to provide interest-free loans to finance cost of materials for all the above items with the exception of wall and floor insulation and intermittent ignition devices. SDG&E states that wall and floor insulation and intermittent ignition devices are not recommended for do-it-yourself installation due to the expertise required.

Existing 8% Loan Program

Since April 1, 1981, SDG&E has offered 8% financing for the six items listed above as available without a prior RCS audit. SDG&E proposes that those customers with outstanding 8% loans at the time the ZIP financing is implemented be provided an explanatory letter and the option to convert to the payment of principal only. Upon exercising this option, a new payment book would be forwarded.

Several of the financing and credit features of the existing 8% program would carry over into the ZIP program. For instance, SDG&E would continue its external banking arrangement with CHB and would maintain the streamlined 48/48 credit approval/contractor payment procedure. These 48/48 features would include:

- 48 hours for bank approval of customer credit from receipt of application; and
- 48 hours for receipt of payment by contractor from time of final inspection of work.

In addition, if SDG&E succeeds in establishing an "instant credit" procedure for its 8% program, this would be incorporated into ZIP.

Finally, CHB has agreed to liberalize certain credit guidelines. A customer's recent credit history will be emphasized, and the term of a loan will be extended to a period of up to five years. While ZIP is not directed specifically at low-income customers, these features are intended to help more customers qualify for weatherization loans.

RCS

Under the National Energy Conservation Policy Act, SDG&E is required to implement an RCS Program. The Act requires the company to provide:

1. A home energy audit upon the residents' request.
2. Information about estimated savings in energy costs for recommended conservation measures and practices.
3. Arrangements upon request for the purchase, installation, financing, and billing of energy conservation and renewable resource measures, with appropriate attention given to consumer protection.
4. Post-installation inspections.

The RCS program is covered in the conservation showing in SDG&E's general rate case A.59788. As explained in the rate case decision, RCS provisions may soon change. Federal legislation may change or eliminate the program nationally. The California Energy Commission is considering changes in the state RCS plan.

We cannot predict the form of RCS changes, although their likely direction is to reduce the costs and administrative burdens. Since SDG&E's weatherization program does not depend on RCS, we will not await anticipated changes. We enact the expanded 8% program, subject to later modifications if made appropriate by changes in RCS.

An RCS audit would not be necessary for a customer to obtain financing for the installation of the first six measures because these items are generally cost-effective. However, Items 7 through 12 would be eligible only if demonstrated to be cost-effective in the residence by an RCS audit.

Financing for the first six items would be offered to customers on a systemwide basis through a variety of channels available to SDG&E, including direct utility contact as well as initiatives by private contractors and community action organizations. SDG&E also proposes to use RCS as a vehicle to encourage the implementation of additional cost-effective measures under the financing umbrella.

SDG&E proposes that when RCS audits are offered systemwide, customers with existing loans for any or all of the original six items (not requiring an audit), who wish to finance additional items found cost-effective as the result of an RCS audit, will be eligible for appropriate financing.

Program Operation

SDG&E's application contains a number of provisions for cost-containment and customer protection. These include:

- A daily review of contractor bids to ensure itemized estimates, specifically to determine that the customer is not being sold a package of overpriced measures far exceeding the reasonable standards for RCS and the industry in general.
- Clear, easy-to-understand customer handouts on how to go about obtaining competitive bids, asking for references, and selecting reputable licensed contractors.
- Guidelines for reviewing bids before notification of credit approval so that a customer does not contract for work before labor and materials have been reviewed by a trained representative of SDG&E.
- Procedures to verify that work is performed satisfactorily and in accordance with written estimates.
- Corrective procedures for marginal or unsatisfactory work to be brought up to standard or corrected to the customer's satisfaction.
- Assistance to the do-it-yourself customer both from the standpoint of installation as well as corrective assistance for satisfaction and participation from this market segment.
- Encouragement of consistently prudent credit underwriting by the bank to ensure a minimum of defaults and related collection expenses and the encouragement of flexible income requirements to promote maximum participation from a wide spectrum of SDG&E customers.

. Inspection of those items which can be financed without an RCS audit (Items 1 through 6) under criteria established for ZIP and of RCS audit-related measures (Items 7 through 12 separate or in conjunction with Items 1 through 6) under RCS inspection criteria.

Several of these procedures will be modified in the program adopted below.

III. Discussion of Issues

A. Aggressive weatherization financing programs are appropriate.

As long ago as 1975, the Commission identified conservation as "the most important task facing utilities today." 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. (D.84902, September 16, 1975.)

At that time, the Commission directed utilities to take aggressive steps to achieve conservation goals:

> We expect utilities to explore all possible cost-effective means of conservation, including... subsidiary programs for capital intensive conservation measures... (Id. at 162a.)

Since 1975 the energy situation has worsened. Prices for primary fuel such as oil and natural gas have more than tripled. U.S. dependence on imported oil has increased. The need for conservation which the Commission identified six years ago therefore has become ever more urgent.

(1) Conservation rate design

The Commission has "inverted" residential energy rates to provide more accurate indications of true "marginal" energy costs while keeping total utility bills down near average system costs (which include much cheaper energy sources, such as hydroelectricity). Under a mandate from the Legislature, the Commission has determined "lifeline" allowances, with climate variations, sufficient to meet the minimum essential gas and electricity needs of a family of four in a reasonably well-designed house. Consumption above lifeline levels is charged progressively higher rates; the highest is set by considering marginal cost of new supply. Customers in the highest rate tier can save roughly system marginal cost by conserving, but the averaging of all tiers in their bill means that overall energy costs are near system average.

Ratepayers have responded to this conservation rate design, and to higher prices in general, by changing energy use patterns and by investing in energy efficiency improvements (attic insulation, etc.). However, a great deal of cost-effective conservation still will not take place, for a variety of reasons. For instance, overall energy bills will never reach marginal cost, so many ratepayers act as though each unit of gas or electricity costs only average cost. Also, the relatively small size of utility bills compared to others living costs means that many ratepayers will not make the effort to change habits or make investments in efficiency improvements. Furthermore, those ratepayers who suffer most from high bills often have the least money available to invest in energy conservation equipment.

Over the last several years it has become increasingly evident that direct utility investment in conservation is cost-effective, beneficial to all ratepayers, and perhaps the best available means to accelerate the installation of proven energy efficiency measures in homes and businesses. Utility involvement is necessary because the limitations described above will otherwise delay or prevent many of these cost-effective investments.

2. Utility information programs:

From the beginning an important aspect of utility conservation work has been simply dissemination of information--an effort to impress the residential customer with the extent to which he or she can curtail increases in utility bills through straightforward techniques to avoid wasting energy. Residential information efforts have been concentrated in home energy audit services, which the Commission has encouraged each utility to offer to its customers at no cost. PG&E, California's largest energy utility, has been conducting on-premises residential audits since September 1978, and has completed over 40,000 such audits, more than 15,000 in the first three months of this year.

The other utilities are commencing comparable programs. The utilities also make more complex audit services available to their commercial and industrial customers. In connection with these energy inspections, the utilities offer their customers information and assistance in selecting and financing energy conservation measures. Substantial public interest has been shown in the energy audit services, and several utilities have experienced substantial backlogs of audit requests.

3. <u>8% weatherization financing</u>

A consumer considering home weatherization investments must decide whether to invest hundreds or even thousands of dollars in improvements which will be cost-effective over a five to ten year span but require an immediate commitment of funds. The Commission has recognized the important role public utilities can play in making such investments more attractive.

The utilities have direct and regular contact with ratepayers, professional expertise regarding energy efficiency measures, and access to financing. They occupy unique positions from which to speed the penetration of energy efficiency devices. Thus, as energy costs have risen steadily, the Commission has moved step by step to adopt policies directing utilities to expand their involvement in conservation financing.

In early 1978, the Commission ordered utilities to provide 8% loans with extended payback periods to finance ceiling and attic insulation, and to offer information and installation services. Statewide, utilities have provided 8% financing to hundreds of thousands of residential ratepayers. PG&E has been the leader in this effort. We note here, however, that Southern California Gas Company (SoCal) is now arranging several thousand 8% loans per week, to finance attic insulation. In contrast, evidence in this proceeding indicates that SDG&E has financed fewer than 500 loans since finally starting its 8% program in April 1981.

4. ZIP

The 8% loan programs have stimulated residential weatherization efforts in utility service territories in which the program has been fully implemented. However, even in the most heavily penetrated territories, considerable potential for cost-effective residential weatherization remains.

Pacific Power & Light Company (PP&L) and Pacific Gas and Electric Company (PG&E) now operate ZIP programs, in their service territories. The experiences of these two utilities demonstrate that ZIP can be highly cost-effective, at least in the climate zones they serve.

The Commission has concluded that a utility financing program which imposes minimal obligations on recipients would provide a significantly greater stimulus to residential conservation investments. Costs to the utility and its ratepayers should still be far lower than alternative measures for generating new supply. However, 8% programs should be allowed to run their course before zero percent programs are authorized. If 8% loans provide sufficient incentive, the ratepayers need not be offered generous utility programs.

B. SDG&E should postpone ZIP

Despite our satisfaction with the continuing success of the PP&L and PG&E ZIP programs, we are led by a number of considerations to defer ZIP for SDG&E. These considerations involve differences between SDG&E and its service territory, on the one hand, and the situations presented by PP&L and PG&E, on the other.

Until the latest round of energy price increases, the mild San Diego climate made home heating and cooling a relatively inexpensive task. Consequently, the past four years of expanding conservation activity have largely by-passed SDG&E's service territory. The record in this proceeding presents no evidence of significant homeowner-financed conservation. Neither has the utility undertaken an aggressive program to interest its customers in the benefits of conservation.

In contrast, northern California homeowners, and PP&L and PG&E, have insulated hundreds of thousands of attics, and spent millions of dollars on additional conservation efforts. PG&E has operated a successful 8% attic insulation program for four years, and the record in the latest PG&E ZIP proceedings indicates that privately-financed conservation levels are even higher.

Southern California Gas Company (SoCal) matched SDG&E's inactivity until recently. In the past year, SoCal has instituted an aggressive program providing 8% loans for attic insulation.

SoCal's customers have responded by contracting for over one hundred thousand loans, at a present rate of several thousand per week. We note this coincidence in time of sharply higher rates, utility activism and spectacular increases in weatherization activities.

Because there has been almost no retrofit activity until now in SDG&E territory, the Commission reasons that an 8% program should generate a great deal of conservation. Because financing costs to the utility and its ratepayers are roughly half as high at 8% as at 0%, we will await the results of the 8% program before embarking on ZIP.

C. <u>More information is necessary to answer questions concerning cost-effectiveness</u>

Parties to this proceeding raised many uncertainties which would directly affect the cost-effectiveness of ZIP. The Commission appreciates the thoughtfulness behind these questions. On the other hand, we are disappointed that the record does not fully resolve these uncertainties. We will order SDG&E to embark on its 8% program now, and to improve its answers to these questions as soon as possible.

SDG&E presented several significant uncertainties:

1. The number of customers who are motivated to install conservation products because of the availability of ZIP utility financing, compared with those who take advantage of the program but are motivated primarily by rising prices or other SDG&E's programs (Exhibit 182, page 7; RT 7592);

2. The savings attributable to the various conservation measures (Exhibit 185; RT 7455);

3. The appropriate marginal cost of gas to be employed (A.60546, Attachment A, pages 21-22; Exhibit 183, Attachment A).

Staff also questioned the cost-effectiveness of some of the measures in the proposed ZIP program. Intermittent ignition devices were found by the staff not to be cost-effective on average, and wall insulation would fail on average if very high societal discount rates were used. (Exhibit 186, Table 1). Testimony in the hearings also revealed serious questions about the validity of the assumptions used by both the company and the Energy Conservation Branch (ECB) of the Commission staff regarding costs and energy savings of some measures.

(1) Customer motivations to conserve will be mixed.

Higher prices are certainly increasing the attention SDG&E's customers pay to their utility bills. The record does not reveal how much residential conservation would take place absent utility financing, or how many of these customers will take advantage of low-interest loans once available. Nor has anyone demonstrated convincingly how many consumers will add more measures to a pre-planned package when presented the opportunity of cheap financing.

SDG&E and the Commission staff should continue to search for methodologies with which to isolate price-induced from subsidy-induced conservation. However, we will not delay this program in hope of a resolution. Inability to predict accurately customer responses to price changes bedevils all utility-related activities, including such fundamental ones as supply planning. Utilities and regulators can only press forward with the best information available, while searching for better information.

(2) Savings attributable to measures must be refined.

A critical factor in any calculation of the cost effectiveness of conservation efforts is estimation of the energy savings produced by the measure. Today's 8% program follows the pattern proposed by SDG&E to match previously adopted ZIP programs.

The "First 6" items are on average so cost-effective under any accepted methodology that no residence-specific calculation will be required to justify their installation. In considering the cost-effectiveness of the program as a whole, average savings figures will be used.

For the "Second 6" package of items, cost-effectiveness is not a foregone conclusion, in part because some ways of estimating future savings indicate that costs may ultimately outweigh benefits. Accordingly, the SDG&E financing program will require an RCS audit to determine if any of these items produces sufficient savings to make the measures cost-effective. For these six items, methodological differences in calculation would sometimes determine whether or not the RCS auditor recommends installation.

The RCS auditor will calculate savings using the model provided. SDG&E has asserted that the ENERCOM model, upon which RCS audits will rely, estimates unrealistic savings for some measures. Some of those problems were apparently resolved by modifications in ENERCOM, but the Commission is not yet convinced that all estimates are reliable.

SDG&E will rely initially on savings estimates produced by the modified ENERCOM model, when determining which measures from the Second 6 are cost-effective and so eligible for 8% financing. SDG&E and the staff will be ordered to address remaining uncertainties in methodologies and resultant savings estimates, and to file progress reports to the Commission's Executive Director every 60 days until an acceptable resolution is reached.

(3) Estimates of the marginal cost of gas must be refined.

Another critical step in the estimation of cost-effectiveness is the "marginal" cost of new supplies of natural gas, with which the cost of conserved energy must be compared. SDG&E did not introduce a study on the marginal cost of gas for testing the cost-effectiveness of the program. Rather, the utility relied on a $.590/therm figure, based on an estimate of the weighted nonlifeline residential rate. In the general rate proceeding the utility's marginal cost data for the gas department gave heavy weight to estimates of purchased gas costs from SoCal, which are based on the average cost of gas. None of these data presented by SDG&E are appropriate for testing the cost-effectiveness of the 8% loan program.

Staff witness Walter Cavagnaro presented alternative estimates, based on an appraisal of the marginal costs of new gas supply to the state under the resource-planning criteria of PG&E and SoCal. This methodology more closely approximates that which would provide an accurate assessment. Clearly conservation cost effectiveness should be determined based on the marginal cost of equivalent new supplies if conservation is to rank equally with supply in satisfying SDG&E's customer demands.

SDG&E will therefore utilize the staff's estimate of $.80 per therm as the starting point for its cost-effectiveness calculations. SDG&E will be ordered to provide estimates based on its marginal cost within 60 days. Once approved, the SDG&E-specific estimate will supersede that adopted today. Since nothing in this record indicates major differences between SDG&E's marginal cost and those used to derive the $.80/therm estimate, any inefficiencies which result in the interim will be outweighed by the benefits of prompt initiation of the expanded 8% program.

D. <u>SDG&E should apply its proposed cost containment and program effectiveness efforts to the adopted 8% program</u>

SDG&E has proposed a number of mechanisms to contain direct program costs, such as the "48/48 program". We will direct the utility to apply these streamlining and efficiency provisions to the 8% program. Many sound promising, but cannot yet be considered proven by the low loan processing and financing levels achieved to date. We expect that SDG&E will promptly modify any procedure proven unsatisfactory by full-scale program experience.

(1) Bank financing arrangements

We will adopt SDG&E's proposed bank financing arrangements for use in the expanded 8% loan program. As noted below, however, we will ask SDG&E to investigate the desirability of certain modifications.

The design of the financing arrangements for SDG&E's ZIP Program is supported by staff, as economical and efficient. Certainly this arrangement minimizes the demands that would otherwise be placed on the utility's already strained cash flow by a new financing program. Staff witness Knecht stated that the external financing of loans by CHB "is clearly more attractive than utility project financing" (which is used in other utilities' ZIP programs). (Exhibit 197 at 3.) SDG&E witnesses testified that external bank financing also saves the utility the burden of collection and billing expenses and reduces the cost of credit checks and loan application processing. The bank, which performs these sorts of activities on a full-time basis, can integrate the weatherization loans into its existing loan processing structure far less expensively than an entirely new subsidiary of SDG&E could, and probably more efficiently.

The testimony in the hearings revealed no indication that the SDG&E arrangement with CHB would have any anticompetitive impact on the local banking industry. While it is true that SDG&E did not contact any other banks when the ZIP program was proposed, SDG&E had solicited participation from many local banks for its earlier 12% and 8% low-interest loan programs. CHB was the only bank which expressed interest in the earlier programs, and SDG&E extended its relationship with the bank to include ZIP loans.

SDG&E and the bank have stated that any bank wishing to participate in the loan program would be free to buy the paper from CHB after the loans are made. Staff saw no anticompetitive impact on the local banking industry, so long as local banks are free to participate in the program if they so desire with CHB acting as a clearinghouse for the loans.

In general, we share the staff witnesses' approval of SDG&E's financing arrangements. External financing appears to make effective use of existing private institutions and expertise to minimize utility and ratepayer expense. However, as the number of 8% loans grows, CHB's ability to process and finance the loans may become strained. Any delays experienced by customers or contractors may undermine the popularity and perceived reliability of the 8% program. Also, a successful 8% program can be expected to engender interest from other financial institutions.

Accordingly, we will direct SDG&E to stand ready to execute independent financing arrangements with other institutions which offer terms at least as favorable as these now set with CHB. Further competition among financial institutions may produce still greater innovation and economies.

(2) Customer credit approvals

The expanded 8% program initially will incorporate the credit arrangements proposed for ZIP. However, evidence in the record concerning provisions for uncollectibles raises issues which we will direct SDG&E to resolve in cooperation with CHB (See subsection III,C.3, immediately following). That resolution may require modifications in general credit arrangements.

SDG&E has negotiated with CHB to institute revised customer credit standards for the weatherization program to maximize the participation of as many ratepayers as possible. At SDG&E's behest, CHB now contracts for repayment over up to five years instead of the normal two, thus reducing the monthly payment. This brings the loans within the credit potential of more customers. The bank also has agreed to make its credit decisions based on the most recent credit history of the customer, minimizing the effect of one or two negative credit experiences which the customer may have suffered long before.

SDG&E vigorously denied allegations by intervenor Howard Prager that it engaged in any form of redlining in evaluating loan applications. We note that the loan approval is controlled by CHB. SDG&E reviews the credit policy of the bank and makes suggestions, but it does not make the credit decision. However, we also note below that SDG&E appears to have assumed the risk of uncollectibles. If so, the utility should also assume substantial responsibility for setting approval criteria.

Staff found that the current lack of 8% loans in certain areas is more a reflection of the locations where contractors are soliciting loans than of any pattern of intentional rejection by the bank. SDG&E's current record of approved and disapproved locations shows a wide distribution of both approvals and disapprovals throughout the service territory.

SDG&E does not seek directly to control the cost of measures installed. SDG&E did state in its testimony that when customers inquire about the program, SDG&E employees will conduct ad hoc reviews of any bids received, to ensure that customers are not being offered extremely high bids. Also, RCS auditors will provide average cost data along with post-audit recommendations. Staff concurs that some review of this type for both contractor installations and for materials purchased by do-it-yourselfers is required.

SDG&E has not at this time incorporated into its rejection notices information to advise customers, whose income is insufficient for credit, of alternative sources of funding for insulation. SDG&E did not object to such a procedure, and staff recommends that any customer whose loan application is rejected on the basis of insufficient income be advised of the existence of Department of Energy insulation programs, and of the SDG&E low-income weatherization plan which will be conducted through local community-based organizations.

We agree with staff that any customer turned down for lack of qualifying income should be notified of the low-income programs available. This will be standard procedure.

(3) Loan defaults and uncollectibles

SDG&E does not currently have a written agreement with CHB regarding the allocation of risk for uncollectible loans. Apparently, SDG&E has verbally agreed to sustain these losses; the utility has requested funds in this proceeding to account for these uncollectibles. However, staff was not provided specific information in response to its request for details on why the SDG&E debenture indenture prohibits such an agreement.

It is the position of staff that SDG&E should make every effort to resolve this problem so that a formal written agreement can be obtained on this area. Staff argues that the ratepayers should not contribute funds for uncollectibles if SDG&E is not formally liable for them.

We agree with staff that this "verbal agreement", if it is that, is simply too vague for a major utility and a large commercial bank who share responsibilities to thousands of ratepaying customers who are financing this program. We will direct SDG&E to reach a formal agreement on this subject within 60 days and to inform the Commission in writing. We expect that the utility's degree of risk will be matched by its influence over credit arrangements. We also expect that SDG&E and CHB will provide every reasonable liberalization of credit consistent with acceptable levels of uncollectible accounts.

(4) Low-income program

SDG&E did not originally propose any special low-income program as a part of its ZIP application. Instead it attempted to revise the credit standards so that all ratepayers could participate on the same basis. It is clear that a customer must meet certain income standards to qualify for a loan, even under the more lenient credit standards. By requiring 8% interest payments in weatherization financing, the Commission has exacerbated these problems for SDG&E's poorest ratepayers.

Since SDG&E's program may prove to be deficient in providing for the low-income ratepayer, the ECB has proposed an expanded low-income weatherization program in the conservation portion of the SDG&E general rate case. It is the intention of staff that this supplemental program address some of those customers who cannot qualify for participation in the regular weatherization program.

We are indeed concerned that low-income citizens, who are also ratepayers, should be afforded the opportunity to participate in utility conservation programs. We are therefore authorizing a low-income weatherization program in our general rate case opinion on A.59788. The program provides direct assistance to low-income ratepayers and will be administered by local community development agencies.

E. <u>Additional cost containment provisions will be required</u>

(1) <u>Packages of measures will be required</u>

A good deal of the cost of a weatherization package will be relatively insensitive to the number of measures installed and the dollar size of the loan. These "fixed" costs include travel by the contractor to the participant's home, and the costs incurred by SDG&E and CHB to process and administer the loan. The cost-effectiveness of the 8% program will be improved as the size of installation packages and loans increases; the "fixed" costs can then be spread over more measures and larger loans. To capture these benefits, the Commission will require SDG&E to institute package requirements.

SDG&E has not proposed a formal requirement that Items 1 through 6 (ceiling insulation, weatherstripping, water heater blanket, caulking, duct wrap, and low-flow showerhead) be installed as a package if possible. Staff strongly recommends that these items be installed as a package wherever possible in order to maximize the savings and reduce the total installation costs per item. Individual items would of course be required only where they are not yet in place, and where no unique characteristic of the home prevents their installation. The total package may be installed by a combination of ratepayer and contractor efforts.

We agree with staff, and will apply the package requirement in two ways. No 8% loan will be offered for any of the first six measures unless all not in place or infeasible are installed. No 8% loan will be offered for any of the measures requiring an RCS audit unless all of the first 6 (i.e., non-RCS-requiring) items not in place or infeasible are installed. Contractors and SDG&E should also encourage participants to install all RCS-requiring items found to be cost-effective, but we will not require this.

(2) Flexible inspection requirements for completed work

Staff and the company disagreed upon the necessity of 100% inspections of weatherization jobs performed under the SDG&E program. SDG&E proposed to require inspections of all packages installed on a do-it-yourself basis by customers, but to inspect only 20% of work performed by contractors.

Staff feels strongly that ratepayers should be assured that the work will be done correctly, both to satisfy the homeowner and to reassure the ratepayer that actual energy savings will result from proper installation of the weatherization devices. The 100% requirements match those required by the Commission in PP&L's ZIP program, and in Phase I of PG&E's ZIP program. Staff witness Benjamin estimated that the average cost per inspection would be roughly $77, and that 100% inspections would increase 1982 costs by $300,000 (Exhibit 186 at 10-11).

We agree with staff that initially all contractor work should be inspected. However, as individual contractors prove their proficiency, less frequent inspections will suffice to protect the integrity of the program.

SDG&E will inspect 100% of customer-installed, do-it-yourself packages. When contractors first begin to install packages, all their work will also be inspected. As a contractor develops a demonstrated record of error-free installation, however, SDG&E may reduce inspection toward a limit of no less than 20% of jobs performed. Should errors appear, we expect the utility to raise inspection proportions. SDG&E will develop guidelines for inspections consistent with this decision, and present them to the Commission.

(3) Caps will be imposed on total loan size.

SDG&E has proposed a $3,500 cap on the total size of a loan which will be provided under ZIP. We adopt this overall cap for the expanded 8% program. In addition, we adopt a separate $1,000 cap on 8% loans to be available for packages containing only items from the First 6, non-RCS-requiring items.

These caps are not based on any calculation of cost-effectiveness. A very large house might allow for more cost-effective measures than the caps will fund.

Rather, these caps are employed to distribute the potential benefits of 8% financing. These caps should enable residents of average homes to finance all eligible measures at 8% interest. If cost-effective installation costs more because of characteristics of the home, the resident can provide the difference.

(4) Loans will be provided for only one owner-occupied residence per customer.

SDG&E will provide 8% financing for no more than one owner-occupied residence per customer. This limitation derives from two sources. First, the equity concerns discussed immediately above lead the Commission to limit individuals' total access to subsidized financing. Secondly, movement between two residences confounds all attempts to estimate accurately the annual savings attributable to a particular conservation measure.

These restrictions do not apply to rental property. In these cases, residence renters are the direct beneficiaries of improved energy efficiency. Also, unless the residences are intended to be vacant part of the year, savings calculations are possible.

F. <u>The 8% weatherization loan program will be subject to review.</u>

As discussed above, we will require SDG&E to make a number of filings to the Commission, in order to demonstrate that certain specific concerns are addressed. After these filings are complete, the Commission will still undertake periodic review of the 8% loan program.

SDG&E offered to review the program after six months, using data developed by that time. Staff suggested that a longer period would suffice, without specifying its length. We see no need to accelerate review beyond one year, except for the limited filings requested elsewhere in this decision. Many of the institutional arrangements and procedural mechanisms have already been put in place for SDG&E's existing 8% program.

Today's general rate case decision identifies for SDG&E a target of 25,000 residential conservation retrofits in 1982, to be achieved through a variety of programs including this 8% weatherization program. This decision adopts the 6,000 unit goal SDG&E had proposed for ZIP. In pursuit of its overall target, we expect that SDG&E will reprogram funds to emphasize programs which prove to be most effective at inducing conservation. SDG&E may find that a much larger 8% program is necessary to respond to customer interest. If the utility exceeds its conservation budget through cost effective activities, SDG&E may apply for modifications of this decision, to cover additional reasonable expenditures in the 8% program. We will evaluate all program expenditures, and allow a rate adjustment for those found to be reasonable.

G. Conclusion

If fully implemented, SDG&E's proposed ZIP program, combined with the other recommended weatherization programs, has the potential to achieve significant success in reducing the number of uninsulated homes in the utility's service territory. However, the limited extent of previous residential conservation activity in SDG&E's territory does not convince this Commission to authorize a new zero-interest residential program at this time. There appears to be considerable potential for SDG&E to induce significant conservation with smaller incentives.

Accordingly, the Commission has set aside ZIP and directed SDG&E to demonstrate aggressive and successful implementation of its 8% loan program. We adopt for the 8% program all of the measures and many of the procedures proposed for ZIP. Several filings are required to address inadequacies in the record.

SDG&E will report its program achievements in an annual review of the 8% program. At that time, estimates of cost-effectiveness and projections of market penetration will be refined using program experience and any methodological innovations.

Findings of Fact

1. SDG&E's proposed ZIP program to provide interest-free loans to finance certain conservation measures, combined with its other conservation programs, would have the potential to achieve significant success in reducing the number of uninsulated homes wasting energy in the San Diego service area, were it to be authorized.

2. Relatively few residential units within SDG&E's service territory have been retrofitted with cost-effective weatherization measures.

3. SDG&E's 8% residential weatherization loan program is reasonable, and as modified herein, has the potential to achieve significant success in inducing retrofit investments in residential energy efficiency, at less cost to ratepayers than ZIP.

4. SDG&E's target of 6,000 retrofit loans in 1982 represents a major, but reasonable expansion of the utility's weatherization financing activities, in the context of the expanded 8% loan programs.

5. The 8% loan program should contain the features proposed by SDG&E for its ZIP program, with the changes described herein.

6. The bank financing arrangement proposed by SDG&E is reasonable and does not have any anticompetitive impact on the banking industry, but SDG&E will reconsider efforts to involve other financial institutions as the program expands.

7. SDG&E will formalize its agreement with California Heritage Bank on credit applications and on uncollected loans within 60 days, and should inform the Commission of this agreement.

8. The 8% loan program, as adopted, may not address the needs of low-income ratepayers; the 8% program will be supplemented with a low-income weatherization plan included as part of SDG&E's general conservation program in A.59788.

9. Customers rejected for 8% loans because of low income will be notified of the low-income programs available, as standard procedure.

10. The inspection program proposed by SDG&E is reasonable, and should be adopted, except that work by contractors should initially be subject to 100% inspection, moving toward 20% as each contractor establishes a proven record of competent installation.

11. SDG&E will prepare guidelines to determine the level of inspection appropriate to the experience of contractors, and should inform the Commission of these guidelines.

12. Limits of 8% loans to no more than $3,500 in principal, and no more than $1,000 when only the non-RCS-requiring measures are financed, are reasonable to ensure an equitable distribution of program benefits.

13. SDG&E will provide 8% financing for no more than one owner-occupied home per customer.

14. Use of an estimate of $0.80 for the marginal cost of natural gas is reasonable in the 60 days until SDG&E presents a more accurate method of calculating marginal cost.

15. SDG&E should be granted a general rate increase of $1.552 million commencing January 1, 1982, consisting of an increase of $1.353 million for its Gas Department and $0.199 million for its Electric Department to implement an expanded 8% residential conservation financing program.

16. SDG&E may file annually for rate offsets for its actual level of expenditures related to the 8% weatherization program.

17. At the time of its annual offset filing, SDG&E should present program data reporting numbers of loans and measures installed, expenses accrued, and projected efforts for the following year, as well as refined estimates of cost-effectiveness.

Conclusions of Law

1. The application should be granted to the extent provided by the following order.

2. The following order should be effective concurrently with the order in SDG&E's general rate case A.59788.

O R D E R

IT IS ORDERED that:

1. San Diego Gas & Electric Company (SDG&E) is authorized to expand its 8% interest financing program to provide loans to promote installation of conservation measures to the extent described in this opinion.

2. SDG&E shall file with the Public Utilities Commission, within 60 days:

(a) Revised estimates of average life-cycle and annual energy savings to be provided by measures eligible for 8% financing under this order;

(b) Revised estimates of SDG&E's marginal cost of natural gas, including a detailed description of the assumptions and methodology used;

(c) A copy of a formal agreement with California Heritage Bank allocating the financial burden of uncollectible loan accounts, or an explanation why SDG&E's other contractual obligations prevent such an agreement;

(d) A set of guidelines or internal procedures governing the inspection of conservation packages installed by contractors, for which 8% loan financing has been provided.

3. Initial funding for the 8% loan program, of $1.552 million, is provided in SDG&E's general rate increase Application 59788.

4. SDG&E shall separately record and account for all 8% loan program expenditures; any underexpenditures will be transferred to the supplemental reserve funds established in Decision 92557.

5. SDG&E shall stand ready to execute external financing agreements with financial institutions which offer terms at least as favorable to the utility and its ratepayers as the current agreement with California Heritage Bank, as additions to the existing agreement.

6. The program established today shall be subject to annual review and revision.

This order is effective today.

Dated DEC 30 1981, at San Francisco, California.

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

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

Joseph E. Bodovitz, Executive Director

APPENDIX A

LIST OF APPEARANCES

Applicant: Stephen A. Edwards, Jeffrey Lee Guttero, William L. Reed, and Randall W. Childress, Attorneys at Law, for San Diego Gas & Electric Company.

Intervenor: David X. Durkin, Attorney at Law, for the San Diego Energy Coalition.

Interested Parties: Etta G. Herbach, Attorney at Law, for the Department of the Navy and all Executive Agencies of the Federal Government; John W. Witt, City Attorney, by William S. Shaffran, Deputy City Attorney, for City of San Diego; Antone S. Bulich, Jr., Attorney at Law, for California Farm Bureau Federation; James Tanner and Kenneth Strassner, for Kimberly-Clark Corporation; Burt Pines, City Attorney, by Ed Perez, Deputy City Attorney, for the City of Los Angeles; Harry K. Winters, for the University of California; William L. Knecht, Attorney at Law, for California Association of Utility Shareholders; Riddle, Walters & Bukey, by Halina F. Osinski, Attorney at Law, for California Community Colleges; William D. Smith, Attorney at Law, for the County of San Diego; Richard L. Hamilton, Attorney at Law, for Western Mobilehome Association; Paul J. Kopcha, for Solar Turbines International; James M. Lehrer, Attorney at Law, for Southern California Edison Company; Carolle LeMonnier, Attorney at Law, for The East Los Angeles Community Union (TELACU); James Hodges, for California/Nevada Community Action Association; Steven M. Cohn and Greggory Wheatland, Attorneys at Law, for California Energy Commission; Gary W. Estes, for the United Federation of Small Business; William H. Kronberger, Jr., for San Diego Building Contractors Association; Susan B. Jacoby, Attorney at Law, for CAUSE West; and Howard Prager, for Energy Financial Company, The Energy Company, Therma-Seal Insulation, and the insulation industry.

Commission Staff: Randolph L. Wu and Michael B. Day, Attorneys at Law, and Francis S. Ferraro.

(END OF APPENDIX A)