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Funds: The California Experience**

Edward Vine, Jayant Sathaye and Arthur H. Rosenfeld

Applied Science Division

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PLANNING FOR OIL OVERCHARGE FUNDS: THE CALIFORNIA EXPERIENCE[†]

Edward Vine and Jayant Sathaye

Applied Science Division, Lawrence Berkeley Laboratory, Berkeley, CA 94720 USA

and

Arthur H. Rosenfeld

Physics Department, University of California, Berkeley, CA 94720 USA

and

Applied Science Division, Lawrence Berkeley Laboratory, Berkeley, CA 94720 USA

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ABSTRACT

Within the next few years, states will be receiving some of the largest amounts of funds (\$3-5 billion) ever released by the U.S. government to be spent on energy conservation and renewable energy programs and projects. The source of these funds is the Petroleum Violation Escrow Account (PVEA). The PVEA is derived from judgements against oil companies (and negotiated settlements with them) stemming from legal actions by the federal government for price overcharges during the period from September 1973 to January 1981. California has already received \$25.5 million and may receive over \$500 million in the next few years. In anticipation of these funds, a PVEA planning process was developed in California to assist the Governor and the State Legislature in allocating the PVEA money. This paper reviews the evaluation process undertaken in California and presents the evaluations of ten energy programs as examples. The lessons learned in this process should be of interest to all states planning for these anticipated funds.

Energy projects proposed by state agencies and those generated from public workshops were evaluated on comparable bases according to sixteen different criteria in order to facilitate decision making. The evaluation criteria included certain unusual items (feedback and monitoring provisions, low-income impacts, and programmatic/technological innovations) that we believe are important in proposals. We introduced these items to stimulate agencies to consider them in the development of their proposals for this evaluation and in future program development. Proposals were not prioritized and criteria were not weighted leaving it to policymakers to use their own values to rank the proposals.

The evaluation process was unusual in several ways. First, this was the first time in California that all state agencies with energy conservation and renewable energy interests came together to express their views and priorities for developing energy programs. Second, through public workshops the general public was able suggest ideas for the allocation of these funds. And third, the evaluation was an iterative process in which the evaluators and the proposers were in close contact with one another in the development and final evaluation of the proposals.

While the evaluation process has been completed, the impact of the Evaluation Report continues. The Governor, State Legislature, and several state agencies have already made use of the findings of the report, and other states are reviewing the report to determine how they should determine their distribution of oil overcharge funds.

I. INTRODUCTION

Within the next few years, states will be receiving some of the largest amounts of funds (\$3-5 billion) ever released by the U.S. government to be spent on energy conservation and renewable energy programs and projects. The source of these funds is the Petroleum Violation Escrow Account (PVEA). The PVEA is derived from judgements against oil companies (and negotiated settlements with them) stemming from legal actions by the federal government for price overcharges during the period September 1973 to January 1981. California has already received \$25.5 million and may receive over \$500 million in the next few years. In anticipation of these funds, a planning process was developed in California to assist the Governor and the State Legislature in allocating the PVEA money. This paper reviews the evaluation process undertaken in California and presents the evaluations of ten energy programs as examples.[†] The lessons learned in this process should be of interest to all states planning for these anticipated funds.

II. HISTORY OF PVEA

The PVEA is derived from judgements against oil companies (and negotiated settlements with them) stemming from legal actions by the federal government for price overcharges during the period September 1973 to January 1981. The federal government is in the process of collecting and disbursing oil company profits resulting from the violations of federal price regulations. Monies collected and not yet disbursed are held in a Department of Energy (DOE) escrow account.

Decisions at the federal level on how to disburse PVEA funds have been made through a series of court cases, out-of-court settlements between DOE and the oil companies, and one directive from Congress (the Warner Amendment). The most frequently used forms of disbursement have been direct payment to identifiable injured parties (generally larger users, such as utilities) and supplemental funding for state energy programs. Under DOE's Subpart V process (generally used for out-of-court settlements), direct payments to injured parties are made first, with the residual going to the states. Because of the way the entitlements program operated, crude oil overcharges were spread approximately equally among all refiners. For this reason, distributions of PVEA funds from crude oil cases to the states are made according to the percentage of refined petroleum products consumed in each state.

[†]The "California's Petroleum Violation Escrow Account (PVEA) Evaluation Report" (P110-85-001) and "Technical Support Document" (P100-85-001A) are available from the California Energy Commission (Accounting Office, MS-2, 1516 Ninth Street, Sacramento, California 95814, for \$5.30 and \$26.75, respectively).

As of November 1985, the federal government has distributed approximately \$800 million: \$82 million through the Chevron consent order, \$200 million through the Warner Amendment, and the remainder went directly to injured parties that could be identified by DOE. Two cases pending before the courts, the Exxon and Stripper Well cases, have the potential of providing significantly greater PVEA funds to the states.

The Warner Amendment (Public Law 97-377, or Section 155 of the Further Continuing Appropriations Act, 1983) restricted the use of most of the PVEA funds to supplement current levels of funding in the following five existing programs: Weatherization Assistance Program, Low-Income Home Energy Assistance Program, Energy Extension Service Program, Institutional Conservation (Schools and Hospitals) Program, and the State Energy Conservation Program. The mechanism and guidelines for the disbursement of future funds are not entirely clear and may be different from those under the Warner Amendment. However, the appellate court decision on the Exxon case (now under appeal to the U.S. Supreme Court) will use the Warner Amendment restrictions for disbursing these funds.

III. STATE ALLOCATION OF EXISTING PVEA FUNDS

During the summer of 1984, we surveyed nineteen states to examine how existing oil overcharge funds were being used.^{†,1} We found that most of the initial petroleum overcharge money entering the states had been allocated according to the guidelines set forth by Congress and the U.S. Department of Energy under the Warner Amendment. Accordingly, many states have allocated oil overcharge funds to existing programs in anticipation of reaching a greater number of people. These activities include: energy audits, energy education programs, television programs on home energy conservation, energy management workshops and demonstrations for local governments as well as for commercial and residential structures, home weatherization programs, and technical assistance.

Some states, however, have developed unique programs that tie back to consumers' consumption of petroleum. This reflects the philosophy that the oil overcharge payments should serve as restitution to injured parties, and is also a response to a recent court decision (the Amoco decision) which emphasized transportation projects in order to benefit consumers of motor gasoline and/or middle distillates. The following programs are examples of this philosophy: traffic signal synchronization and management programs, oil burner retrofit programs, and ridesharing programs.

[†]The nineteen states were: Arizona, Connecticut, Florida, Idaho, Illinois, Indiana, Iowa, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New York, Ohio, Oregon, Pennsylvania, Texas, and Wisconsin.

The oil overcharge funds have also been used for creating innovative energy programs and projects in residences, small business, public buildings, local government, schools, transportation, and agriculture. Examples of these projects include neighborhood/community approaches for promoting energy conservation, fuel cooperatives for local governments, traffic signal optimization, energy data management systems, and shared savings programs.

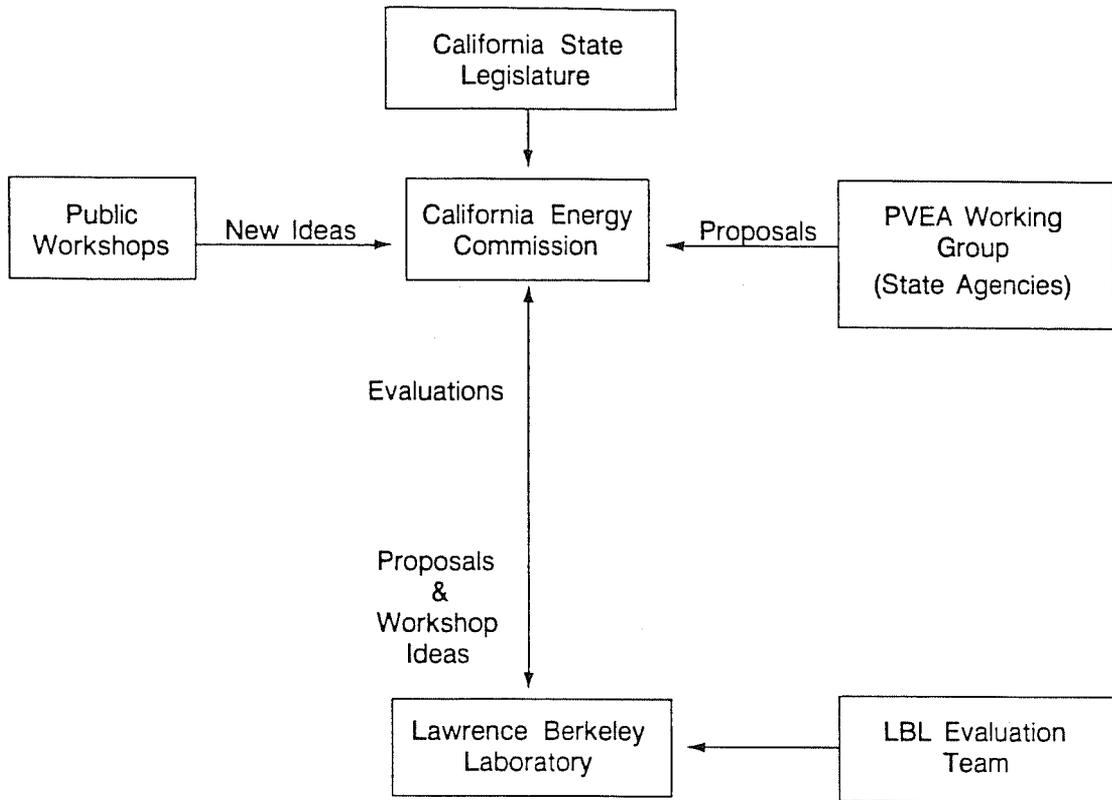
IV. PVEA EVALUATION PROCESS

Figure 1 presents the evaluation process described in this paper. In 1983, in anticipation of oil overcharge funds, the California State Legislature directed the California Energy Commission (CEC), in cooperation with two other state agencies, to define a scope and select a contractor for studying the energy conservation potential for all possible uses of PVEA funds (California Budget Act of 1983).[†] The CEC selected the Lawrence Berkeley Laboratory (LBL) to evaluate energy projects proposed by state agencies and those generated from public workshops. The evaluation process lasted eight months, from July, 1984 to March, 1985.

The CEC began the evaluation process to assure the broadest possible participation by state agencies and the general public in developing ideas for expenditure of PVEA funds. The actual development of proposals and evaluation criteria was undertaken by an advisory committee to the CEC (the PVEA Working Group) composed of representatives from sixteen state agencies. These agencies represented a wide range of views and concerns related to energy. At the beginning of the process, we organized an evaluation team (the LBL Evaluation Team) to assist in the development of evaluation criteria and in the evaluation of state agency proposals and projects proposed in the public workshops. This team was composed of thirteen individuals from LBL, the University of California (Berkeley and Davis campuses) and four private consultants who had considerable knowledge and expertise in energy conservation and renewable energy sources.

One of the principal objectives of the evaluation process was to ensure an objective and consistent evaluation of all proposals. One mechanism for achieving this objective was to have all agencies respond to the same criteria, information requests, and assumptions for developing their proposals. The PVEA Working Group first developed evaluation criteria and included a set of instructions for preparing proposals. It was agreed to emphasize proposals for generic statewide programs under which actual projects would be selected later through competitive processes. LBL evaluators studied the resulting proposals and often requested additional information from these

[†]As of October 1985, California had received and allocated approximately \$25 million in PVEA funds (\$6.6 million from the Chevron consent order and \$18.9 million through the Warner Amendment). In addition to the \$5 million potentially available from small cases in the near-term, California may receive \$170 million from the Exxon case, \$100 million from the Stripper Well case, and possibly as much as \$300 million from other cases less advanced.



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Figure 1. PVEA Planning Process

agencies to develop better and more complete proposals. Members of the LBL Evaluation Team also received explanations and clarifications of these additional information requirements which included assumptions about fuel price escalations, inflation and discount rates, benefit-cost calculations, etc. Thus, the evaluation process was seen as an iterative process: evaluators received and evaluated proposals from state agencies, requested additional information and modifications or clarifications to existing data, received additional information, and completed their evaluations of the proposals.

The PVEA Working Group met during a period of more than nine months and considered more than 200 proposals. Proposals that appeared to be premature or unworkable were withdrawn. Several agencies worked together to develop joint proposals and eliminate duplication. Ultimately, 73 PVEA proposals were submitted to LBL for evaluation.

During this period, the CEC conducted a series of statewide workshops for the general public to encourage their participation in the PVEA planning process and the development of their own proposals. The public workshops generated close to 550 proposals from local governments, constituent organizations, and members of the general public. In reviewing the public workshop ideas, we concentrated on identifying important energy opportunities that were missed by the state agency proposals. Based on this review, new proposals were formulated and, in some instances, agencies expanded their proposals to accommodate new ideas. LBL evaluated the public workshop suggestions and allocated the great majority of them to state agency proposals or other public proposals. Drawing from 57 ideas received at public workshops, ten new proposals were prepared and evaluated. In sum, a total of 83 agency and public workshop proposals were submitted to LBL for detailed evaluation (the proposals are listed in Appendix A).

V. EVALUATION CRITERIA AND FINDINGS

The proposals were evaluated according to sixteen criteria (Table 1). The proposals were compared with one another based on these criteria, but they were not given an overall ranking. The information collected in response to these criteria was intended to be used by the governor and the state legislature for developing their own priority list of projects to be funded.

The criteria are examined in greater depth in the evaluation report.³ However, four criteria deserve special attention. First, in examining cost-effectiveness, great efforts were made to reduce the energy benefits and project costs from each proposal into comparable benefit-cost ratios. The benefit-cost ratios were calculated by discounting future energy benefits and project costs back to their present value (a real discount rate of 6% was used). This adjusts the results to account for the time value of money; for example, at a real discount rate of 6%, a dollar today is worth 1.34 times the dollar amount to be received five years from now. The societal energy benefit-cost ratio

Table 1 Evaluation Criteria

1.	Projected energy savings or production, over time
2.	Projected direct non-energy benefits, over time
3.	Projected cost, over time
4.	Cost-effectiveness (societal and leveraged)
5.	Leverage of private funds
6.	Conformance with U.S. Department of Energy rules
7.	Level of expansion over current efforts
8.	Monitoring and feedback provisions
9.	Minimum level of effort for project to be viable
10.	Other programs serving the same clients simultaneously
11.	Level of programmatic or technological innovation
12.	Plans to continue the project after PVEA funding
13.	Likelihood of continued financial obligation beyond PVEA
14.	Low-income impacts
15.	Environmental impacts
16.	Job development

included all costs to implement energy savings measures -- both PVEA and participant shares. This ratio indicated the return per dollar spent from the standpoint of the entire economy. The leveraged energy benefit-cost ratio included only the PVEA-funded costs. This ratio indicated the benefits per dollar of PVEA funds expended.

Second, monitoring and feedback provisions were important criteria because many of the existing energy conservation programs were being implemented without any knowledge of their energy and cost effectiveness. Accordingly, this criterion was used as a stimulus for agencies to include monitoring and feedback provisions in their proposal so that better data would be available for conducting program and project evaluations.

Third, the advent of PVEA funds represents an opportunity for state agencies and the general public to develop new and innovative energy programs. Accordingly, the criterion of programmatic or technological innovation was used as a stimulus for the development of proposals that would be different from traditional energy programs and projects. In addition, innovative energy projects and ideas from nineteen states outside California were provided in one of our reports to the state agencies during the initial development of the proposals.¹

Fourth, the low-income population was considered to be in need of special assistance based on data indicating that low-income people bear a proportionately greater burden of rising energy costs than other income groups. Accordingly, we prepared a report on the energy characteristics of low-income households in California (see below) so that state agencies would attempt to develop programs and projects targeted to low-income groups.²

The detailed evaluations of each proposal included information on the above criteria and additional proposal features, such as the kinds of organizations involved in the actual delivery of services ("service providers": e.g., utility companies, industries, state agencies, local governments, schools, consumer groups, and contractors) and the groups that would use the services ("target end users": e.g., low-income households, schools, residential sector, state agencies, businesses, transportation sector, local governments, and agricultural sector).

After preparing detailed evaluations, we provided summary evaluations of each proposal and a large table briefly describing the key characteristics of the proposals that would be relevant for decisionmakers. Table 2 of this report presents an excerpt from this table showing ten proposals. These ten proposals were not chosen to reflect the authors' preferences. Rather, they were chosen as examples of the criteria mentioned above. Brief descriptions of these proposals are presented in Appendix B.

Table 2 Summary Table Example

Proposal (see Appendix B)	Service Provider	Target User	New/ ^a Expn.	Program Duration (Yr.)	Benefit/Cost ^b		Energy Saved	Cost(Million dollars)		
					Soci- etal	Lever- aged		PVEA	Matching	Participant ^c
1. Energy program for low-income/ underserved clients	Contractor Local govt.	Low-income Resid.	Exp.	3	M	H	L	5.77(M)	0.18(M)	20.3(H)
2. Irrigation of agricultural land	State	Agric.	New	3	M	M	VL	0.3(VL)	0.07(L)	None
3. Revolving loan fund	State	Business Agric.	New	10	M	H	H	30.0(H)	0.8(M)	127(VH)
4. Fuel efficient fleet maintenance	Local govt.	State Local govt. Transp.	Exp.	3	H	H	M	1.5(L)	0.06(L)	None
5. K-12 energy management centers	County School	Schools	Exp.	3	H	H	M	5.3(M)	0.06(L)	2.1(M)
6. Telecommuting/telework project	Contractor	State Local govt. Business	New	2	L	L	U	3.2(M)	0.03(VL)	None
7. Cogeneration in university and college facilities	State	State	Exp.	3	M	VH	L	1.1(L)	0.18(M)	None
8. Transit bus remanufacturing	Local govt.	Transp.	New	3	L	L	VL	8.0(M)	1.0(M)	None
9. Transportation system manage- ment for local government	Local govt.	Transp.	Exp.	5	H	H	M	20.0(H)	None	2.5(M)
10. Home energy rating system	Local govt.	Resid.	Exp.	4	H	H	H	4.0(M)	U	36.0(H)

NOTE:

VL - Very Low, L - Low, M - Medium, H - High, VH - Very High, U - Unknown, Resid. - Residential, Transp. - Transportation, Agric. - Agriculture

^aNew idea or Expansion of existing project.

^bDefinitions of benefit/cost ratios: Societal ratio = Net energy benefits/(PVEA costs + all other costs); Leveraged ratio = Net energy benefits/PVEA costs

^cParticipant is the same as target user.

In Table 2, each proposal is characterized, in successive columns, by the following information: (1) Title of proposal, (2) Service provider, (3) Target end-user, (4) New/Expansion (whether the proposal is a new idea, or an expansion of an existing project or program), (5) Program duration (in years), (6) Societal energy benefit-cost ratio, (7) Leveraged energy benefit-cost ratio, (8) Energy benefits, (9) PVEA funds, (10) Matching funds, and (11) Participant costs. For the last six characteristics (6-11), categories from "very low" to "very high" were constructed using the data from the summary evaluations. The projects were grouped into approximate thirds (low, medium, and high). The extreme groups were then subdivided at logical breakpoints (very low and low, very high and high). For benefit-cost ratios, we eliminated the "very low" category in order to identify all projects below 1.00 (a standard economic criterion) as "low". It is important to note that the boundaries between groups were only rough approximations and were used primarily to distinguish groups of proposals (rather than one proposal from another). Hence, in certain instances, adjacent ratings were extremely close and, in light of the uncertainties in quantitative estimates, the differences may be overstated.

In general, we found that certain types of proposals had higher benefit-cost ratios than others due to the nature of their program. For example, energy education/information programs that were focused on changing people's behavior typically had minimal costs (especially, if the program infrastructure was already in place) and large benefits spread over time. In contrast, capital intensive projects (e.g., bus remanufacturing) had high initial costs and moderate benefits spread over time. These types of projects often had small benefit-cost ratios.

VI. OTHER EVALUATION TOPICS

In addition to the evaluation of individual proposals, we investigated the use of petroleum products by various sectors of the California economy, and energy use patterns of low-income households in California. These considerations did not lend themselves to the development of individual values for each proposal, but they may provide insight as to how the final distribution of PVEA funds meets these two concerns.

1. Distribution of Petroleum Products in California

In order to understand how the proposed projects and programs affect the various sectors in California's economy, we examined the distribution of petroleum products in California between 1973 and 1981, based on the sales (or deliveries) of petroleum products from suppliers.

The following five sectors were examined: residential, commercial, industrial, agriculture, and transportation. The transportation sector had by far the largest share of total expenditures (72.9%) and total Btu sales/deliveries (65.2%) in the 1973-1981 period. The share of expenditures is higher than Btu sales/deliveries because the products used by the transportation sector

(particularly motor gasoline) had a higher price per unit of energy than was the case for the other sectors. The industrial sector, the second largest sector, accounted for 14.5% of total expenditures and 15.8% of total Btu sales/deliveries in this period.

All of the other sectors accounted individually for less than 10% of total Btu sales/deliveries and less than 6% of total expenditures. In the residential and commercial sectors, approximately 60% of expenditures on and Btu sales/deliveries of petroleum products were indirect, that is, occurring through the use of electricity.

In summary, almost three-quarters of petroleum expenditures in California were consumed in the transportation sector, approximately 15% in the industrial sector, and the remaining 10 to 15% in the residential, commercial, and agriculture sectors. The differences among sectors remained almost constant during the nine years examined (1973-81).

Information was not available on the final end users of petroleum products, so that the above data give only a partial picture of the amount of petroleum used by consumers. Moreover, the extent to which commercial, industrial, and agricultural users of petroleum products may have passed on the costs of these products to consumers through prices charged for goods and services was not identified. Nevertheless, this information should be helpful for those interested in examining the distribution of PVEA funds in California.

It is also important to note that the distribution of petroleum products is only one of several criteria, external to those used in the PVEA evaluations, one can use in identifying how PVEA funds should be disbursed. Others might include geographic location, population density, or socioeconomic background (including income level). Whatever the approach, the effectiveness of proposed programs will still play an important role in the distribution of the PVEA funds.

2. Energy Use and Low-Income Households²

The low-income population constitutes 10-20% of California's population, and almost 20% of these people live in the rural areas of California. While home energy use (primarily electricity and natural gas) and payments of low-income households are less than those of other income groups, the former's "payment burden" (fraction of income spent on home energy) is as much as 350% greater than the burden for high-income households.

In comparison to the average household, the average low-income household owns only one vehicle, and it is likely to be an older and inefficient model. Low-income people drive their cars less than other people and usually use the car only for necessary trips. They also live closer to work and use public transit more often than other groups. However, while the low-income population does spend less money on gasoline than other income groups, low-income households spend 200 to 300% more (as a fraction of income) on transportation energy than do high-income

households. Of course, low-income households also spend proportionately more of their income on public transportation than other income groups.

The differences in the consumption of goods (market basket) between low-income households and the average household are not large, although it appears that low-income households in California spend proportionately more of their budget on food and shelter and less on recreation, health care, and food consumed away from home than the average household. Indirect energy consumption (i.e., the energy use contained in products consumed by households) for low-income households is 45% less than for the average household. However, as a percentage of total expenditures, the total amount of energy required for providing the market basket is similar for both income groups with slight regional differences in California. The indirect energy consumption of all income groups would be affected by changes in the cost of electricity and natural gas since these two fuels constitute almost 60% of the total cost of energy needed to produce the California market basket (petroleum costs contributed 32% and coal costs contributed the remaining 8% of the total cost of energy).

Data were not available to examine the determinants of energy use among low-income households. Based on previous work in analyzing energy use in the residential sector for all income groups, we believe that the following variables are important in affecting energy use among low-income households: poorly constructed housing with little or no insulation in the walls and ceiling and large air infiltration rates; inefficient heating and cooling appliances; and energy intensive behavior. Appropriate remedies include promoting the use of energy conservation measures: e.g., efficient appliances, low-flow showerheads, night thermostat setbacks, and insulation of water heaters. In addition, special outreach programs involving education, technical assistance, and financial incentives are necessary for promoting the use of energy-conserving measures and making information on less energy intensive lifestyles more accessible to low-income households. This is especially important for the rental sector in which low-income renters have little incentive for installing energy-conservation technologies in dwellings that are owned by landlords. Comprehensive programs are needed to complement some of the on-going state agency programs in which financial subsidies are the common remedy for assisting low-income people.

As indicated above, low-income households own older and less efficient cars. Appropriate remedies include the provision of car care clinics that include car tune-ups and advice on car care for fuel efficiency, and the expansion of ridesharing and public transit systems for low-income neighborhoods or for businesses that employ large numbers of low-income workers.

VII. DISCUSSION

The process of evaluating energy proposals in California in anticipation of large amounts of oil overcharge funds was characterized by several distinctive features. First, this was the first time in California that all state agencies with energy conservation and renewable energy interests came together to express their views and priorities for developing energy programs. As a result of this interaction, agencies were able to coordinate some of their current programs and to cooperate in joint ventures in the planning and possible utilization of the oil overcharge funds.

Second, the general public was able to suggest ideas through public workshops for the allocation of these funds. They were given the opportunity to comment on proposals and the process used to develop and evaluate these proposals. The public generated over 500 ideas for proposals.

Third, the evaluation was an iterative process in which the evaluators and the proposers were in close contact with one another in the development and final evaluation of the proposals. This was not an evaluation in the classical sense in which a proposal (or program or project) is submitted and the evaluation is conducted on the final product. In the PVEA evaluation, proposals changed as a result of initial evaluations, and the final evaluations changed as the proposals were finalized. We believe this iterative process resulted in better information and led to better proposals and evaluations with minimal loss in objectivity.

Finally, we included in the evaluation criteria certain unusual items (feedback and monitoring provisions, low-income impacts, and programmatic/technological innovations) that we believe are important in proposals. We introduced these items to stimulate agencies to consider them in the development of their proposals for this evaluation and in future program development. We also wrote reports on innovative projects in other states and energy use and low-income households to emphasize the importance of these criteria.^{1,2}

While the evaluation process has been completed, the impact of the Evaluation Report continues. Major new PVEA funds available to California will be allocated by the Governor and the State Legislature through the state's budget process. The regular budget process will be assisted by the PVEA planning process implemented through the California Energy Commission (CEC) and by the Governor's PVEA Task Force (composed of eight of the state's main agencies). Utilizing the evaluations contained in this report, the Governor's PVEA Task Force has already developed a plan of expenditure for these funds. The detail of those decisions was incorporated in a series of budget change letters submitted to the Legislature on March 1, 1985.

California state agencies have also utilized this report in funding several of their projects with existing PVEA funds and in exploring potential programs and projects suggested in the report. Other states are also examining the report to determine how they should determine their distribution of oil overcharge funds.

In summary, the evaluation process outlined in this paper appears to be having a positive impact on how state agencies spend oil overcharge funds to promote the use of energy conservation and renewable sources of energy.

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APPENDIX A

LIST OF PROPOSALS

1. End-use and load survey of key sectoral electricity users.
2. Time-of-use survey for the residential sector.
3. Advanced load management demonstration - Consumer information center.
4. Responsive (time-of-use) meters.
5. Efficient refrigerator proposal (#1).
6. Efficient refrigerator proposal (#2).
7. Gas heater retrofit program.
8. Cost-shared installation audits for low-income households.
9. Native American community energy services.
10. Energy program for low-income/underserved clients.
11. Weatherization and energy conservation measures to supplement low and moderate income housing programs.
12. Home energy assistance program.
13. Low income energy assistance weatherization.
14. Energy crisis intervention program.
15. Local government community energy services and energy management program.
16. Local government community energy services.
17. Incentive programs for construction of energy efficient non-residential buildings.
18. Commercial, industrial, and agricultural energy production and efficient energy utilization programs: Financial incentives for construction of energy-efficient non-residential buildings.
19. Energy projects in state-owned and operated transportation facilities.
20. Energy analysis and efficiency upgrading of California Conservation Corps facilities.
21. Energy technology transfer in correctional facilities.
22. Energy conservation measures-conservation in forestry facilities.
23. Energy conservation measures-renewables (wood stoves and solar heaters) in forestry facilities.
24. Energy conservation program for state-owned facilities.
25. Photovoltaics and other renewables in state facilities.
26. Operations and maintenance for energy efficiency improvement at state-supported university and college facilities.
27. Energy system modifications at state-supported university and college facilities.
28. Development of cogeneration projects on state-supported university and college facilities.
29. Local government assistance program.
30. Local government facilities and operations.
31. Schools and hospitals matching grants.
32. Regional energy management/energy education centers for K-12 schools.

33. Energy conservation in non-profit organizations.
34. Small business energy accounting incentives.
35. Small business energy cooperative.
36. Small loans to small business.
37. Commerical, industrial, and agricultural energy production and efficient energy utilization programs: Revolving loan fund.
38. Commerical, industrial, and agricultural energy production and efficient energy utilization programs: Rental retrofit.
39. Energy management for commercial rental space.
40. Agricultural technical assistance program.
41. Integrated farm energy assistance program.
42. Forest products energy fund: The forest products industry energy conservation fund.
43. Forest products energy fund: The California forest improvement program.
44. Forest products energy fund: The biomass tree farm program.
45. Forest products energy fund: Biomass management unit project.
46. Forest products energy fund: Technical assistance program.
47. General educational program on conservation and alternate energy sources in the agricultural sector.
48. Computer program for evaluating costs and benefits to farmers for using electric load management for irrigation.
49. Conservation tillage practices.
50. Night harvest of warm season produce.
51. Energy conservation in the irrigation of agricultural land.
52. Demonstration of technologies for converting biomass to energy.
53. Agricultural energy and water conservation.
54. Oroville watershed precipitation enhancement -- energy production.
55. Urban water audit, leak detection, and repair program.
56. Energy technology demonstration fund.
57. University of California campus energy conservation: education and demonstration.
58. Conversion of state highway lights in Los Angeles to energy-efficient high pressure sodium lamps.
59. Energy conservation in runway lighting.
60. Fuel-efficient fleet maintenance for local governments.
61. Transit bus remanufacturing.
62. Transportation system management assistance program for local and regional governments.
63. Marketing of state-supported passenger rail services.
64. School bus repowering.
65. Computerized fleet routing and scheduling.
66. Demonstration of methanol fuel in medium and heavy-duty vehicles.
67. Commercialization of methanol in light-duty vehicles.
68. Freeway service patrol demonstration.

69. Expansion of California statewide ridesharing program.
70. Fuel-efficient traffic signal improvement program.
71. Commuter bicycle promotion program.
72. Transportation system management projects for state highways.
73. Development of an energy-efficient component for high school driver training.
74. Car care clinics for low-income clients.
75. Fuel-efficient fleet management.
76. Commercial fishing fleet fuel consumption.
77. "Super Street" demonstration.
78. Port of Long Beach petroleum coke pipeline.
79. Electric transmission planning task force.
80. Home energy rating system.
81. Demonstration solar pond power plant.
82. Telecommuting/telework demonstration project.
83. Evaluation of PVEA projects using a data center supported by resource experts.

APPENDIX B

EXAMPLE PROPOSALS

- 1. Energy efficient program for low-income/underserved clients.** This proposal would increase the energy self-sufficiency of low income households. A comprehensive, one-step energy assistance program would be developed in each community for providing low-income people with information on their energy use patterns, personalized energy management techniques, energy education, rebates for replacement of inefficient appliances, and "big six" conservation applications (e.g., low-flow showerheads and water heater blankets). The program would also inform participants of existing assistance programs and conduct informational "how-to" workshops. Much of the outreach would include traditional social service agencies who are likely to have a "trusted" relationship with hard-to-reach clients.
- 2. Energy conservation in the irrigation of agricultural land.** This proposal would promote and demonstrate the cost-effectiveness of improved pumping plant efficiency. Irrigation pumps at 30 sites would be evaluated, and changes such as repairing inefficient pumps, replacing mismatched pumps and reducing pressure requirements would be implemented. The results would be evaluated and disseminated to farmers who are reluctant to invest money on capital improvements unless a clear net savings over the lifetime of the investment can be shown.
- 3. Revolving loan fund.** This proposal would establish a low-interest revolving loan program to fund energy projects in farms and industries. The loans would only be available to purchase equipment and would be secured by title to the equipment. The loans would be available for the construction and shakedown period, so that the funds would be recycled several times. The primary focus of these loans would be utilization of biomass wastes for energy production, geothermal direct heat, cogeneration, photovoltaics, wind systems, and conservation technologies. This proposal would provide loans to 250 firms.
- 4. Fuel efficient fleet maintenance for local government.** This proposal would increase the fuel efficiency of public agencies' vehicle fleets through the use of improved vehicle tuning equipment. Tuning equipment would be loaned to 75 jurisdictions, and another 120 would be encouraged to obtain equipment. Training in the use of this equipment would be provided.
- 5. Regional energy management/energy education centers for K-12 schools.** This proposal would establish 16 regional energy extension "centers" serving from two to four counties. The "center" would not be a place per se, but two or three agents or consultants selected from staff currently operating programs in a given region. Staff would work with individual schools/districts to develop blueprints for school energy management/education programs, or assist in fine-tuning existing programs. The initial target schools would be those that have expressed an interest in energy management, but have not yet established a program.
- 6. Telecommuting/telework demonstration project.** This proposal would demonstrate the potential energy conservation benefits from performing many office functions at home or at satellite work centers rather than at centralized offices. Approximately 200 state employees work at home or in satellite office centers. A similar arrangement would be made with other public and private entities.
- 7. Development of cogeneration projects on state-supported university and college facilities.** This proposal would fund a "Request for Proposals" process to identify third party developers for cogeneration systems. The cogeneration plants would provide electricity and waste heat generated steam or hot water. The developers would design, construct, operate, maintain, and manage the cogeneration plants for the term of the agreement.
- 8. Transit bus remanufacturing.** This proposal would increase the fuel efficiency of rural and small urban transit systems by purchasing and remanufacturing 100 older transit buses (adding new engines and drivetrains and complete refurbishing).

9. Transportation system management assistance program for local and regional governments. This proposal would improve the energy and operating efficiency of existing transportation systems through low cost operational, regulatory, and pricing techniques to maximize overall system performance. Local and regional governments would be provided with grants and technical resources to establish or expand comprehensive transportation system management (TSM) programs. TSM is directed towards programs with low capital outlays. These include transit management, user subsidies, operational improvements, car pooling, shared ride taxis, bicycles, etc.

10. Home energy rating system. This proposal would build upon and expand California's existing Home Energy Rating System (HERS) by using existing utility information to automatically rate homes already inspected by utilities, establishing utility personnel and non-profit groups as providers of energy ratings on an on-going basis, incorporating multi-family structures into the existing single-family rating program, providing education to the public about energy ratings, and improving the comprehensiveness and accuracy of California ratings.