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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

ENERGY AND MINERALS DIVISION

March 29, 1982

B-205365

The Honorable Lowell P. Weicker
Chairman, Subcommittee on Energy Conservation and Supply
Committee on Energy and Natural Resources
United States Senate

The Honorable Richard L. Ottinger
Chairman, Subcommittee on Energy Conservation and Power
Committee on Energy and Commerce
House of Representatives

118041

Subject: The Residential Conservation Service: Issues Affecting the Program's Future (EMD-82-70)

In response to your December 15, 1981, request, we are providing the results of our examination of the Department of Energy's (DOE's) Residential Conservation Service (RCS) program. You specifically asked us to address

--whether DOE has adequately administered the program and enforced the requirements contained in the National Energy Conservation Policy Act (NECPA) and the Energy Security Act (ESA);

--the effect of recent budget and staffing reductions on RCS program activities;

--the current status and experience of State RCS programs; and

--the potential effects of key changes contained in DOE-proposed revisions to RCS program regulations, and whether the changes are consistent with congressional intent.

The RCS program requires large electric and gas utilities to provide various energy conservation services to their residential customers. As currently designed, the central feature of this program is an onsite inspection of a consumer's home by a qualified energy auditor. Based on energy conservation opportunities identified through the inspection, specific conservation information is then presented to the homeowner. The program also includes a number of ancillary services to assist consumers in implementing recommended measures.

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More than 3 years after RCS was created, a wide diversity exists in the operational status of State programs and much uncertainty and confusion surrounds the program's future. DOE's inadequate program management, especially over the past year, has severely hampered progress in achieving the type of nationwide program envisioned by the Congress. Furthermore, DOE's revised program regulations, as proposed in November 1981, will probably not reduce program costs as expected by DOE, and could adversely affect the program's effectiveness. Although the proposed regulations are consistent with the statutes, two of the changes do not reflect the conferees' intent. Enclosure I discusses our objectives, scope, and methodology and provides details on the results of our work, which are briefly summarized below.

Our work has shown that DOE failed to fulfill its administrative and enforcement responsibilities under the RCS program. Specifically, DOE has failed to (1) review State plans and issue necessary regulations in a timely manner, (2) implement a monitoring system needed to determine program status and applicable use of its enforcement authority, and (3) enforce its Federal Standby Authority as required by statute. As a result, nearly half of the States either do not have an RCS program or are not implementing the program consistent with existing regulations or approved State plans.

Limited program budgets and inconsistent staffing support have hampered RCS program development and implementation. The Congress originally authorized $15 million to carry out the RCS program during fiscal years 1979-81. For fiscal years 1979 and 1980, DOE obligated about $5.6 million for RCS activities. In fiscal year 1981, the Congress appropriated $5.2 million, however, about $2.2 million was subsequently deferred. With respect to the fiscal year 1982 RCS budget, the previous administration's requested budget was $6.8 million. The current administration, however, revised that budget and requested no RCS funding. Although the House included no RCS funds in its version of DOE's fiscal year 1982 budget, the Senate approved $7 million in deferred funds for RCS. Following the House/Senate conference on the budget, about $3.4 million was made available for fiscal year 1982 RCS activities. We also found that despite increasing program responsibilities since the program began, staffing has been reduced from 22 to 8, including several reassignments exchanging experienced RCS personnel for non-experienced staff.

States with ongoing RCS programs have had widely differing program experiences. In addition, we question how the RCS program is affecting consumers. We found that (1) States, and utilities within States, experienced significantly different program participation rates; (2) program costs varied widely among utilities; (3) some utility programs appeared inconsistent with program regulations; (4) audit results in some areas were questionable; and (5) information on consumers' use of program arranging services was limited. Our findings suggest that utilities are exercising a large degree of flexibility in carrying out the RCS program. In some cases this flexibility has resulted in additional program services, while in other cases, it has resulted in RCS programs being implemented in a manner inconsistent with the regulations.

Proposed revisions to RCS program regulations will not likely generate expected cost savings, and may adversely affect the program. 1/ According to DOE, by (1) applying a 7-year payback criterion to reduce the number of program measures included in the RCS audit, (2) eliminating post-installation inspection requirements, and (3) reducing program announcement requirements, 50 percent of the program's cost could be reduced.

Our work indicates that DOE's cost-saving expectations are overstated, even if adopted by the States. Moreover, to the extent States adopt DOE proposals to (1) alter requirements for audit comprehensiveness, (2) eliminate in-person, onsite presentation of audit results, and (3) eliminate post-installation inspections, they could decrease the quality of the RCS audit and thus reduce the program's effectiveness.

Although the proposed regulations are consistent with the statutes, proposed changes concerning the (1) prohibition on who may prepare the list of approved suppliers, contractors, and lenders, and (2) requirements for post-installation inspection are inconsistent with the conferees' intent.

CONCLUSIONS

Overall, we are concerned about the RCS program's current status. Most of the problems we found could be substantially resolved by appropriate DOE actions. However, over the past year, DOE has exhibited an unwillingness to carry out the program, expressing its view that there is no longer a need for the Federal Government to require the RCS program. We believe this unwillingness has been a major influence on the decisions of 19 States--and particularly 9 States with approved plans--not to implement the RCS program at all.

An overall Federal position on the RCS program has not been made clear. We recognize that DOE's position on RCS is consistent with administration efforts to reduce the cost and burden of Federal regulations. The administration's fiscal year 1983 budget provides no funds for further RCS program implementation or enforcement. With respect to congressional actions, no new funds were appropriated for RCS in fiscal year 1982. On the other hand,

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1/DOE's proposed revisions generally limit the program only to requirements contained in the statutes.

the Senate overwhelmingly rejected a proposal to prohibit all RCS funding in fiscal year 1982. Subsequently, the Congress made about $3.4 million available for fiscal year 1982 program activities.

The RCS program is at a crossroad. Budget and legislative decisions now before the Congress will determine whether the program will continue to exist, and if continued, the types of consumer services to be provided by utilities under the program. However, if the Congress decides to continue the program in its current form and DOE persists in its reluctance to implement it, States are likely to continue abandoning RCS or exercising a great degree of flexibility in carrying out the program. In either case, congressional expectations for the program are not likely to be met.

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As requested by your offices, we did not obtain official agency comments on the matters discussed in this report. As arranged with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of the report. At that time we will send copies to interested parties and make copies available to others upon request.

J. Dexter Peach

J. Dexter Peach
Director

Enclosure

Contents

ABBREVIATIONS

DOE	Department of Energy
ESA	Energy Security Act of 1980
FTC	Federal Trade Commission
GAO	General Accounting Office
NECPA	National Energy Conservation Policy Act of 1978
OMB	Office of Management and Budget
RCS	Residential Conservation Service

THE RESIDENTIAL CONSERVATION SERVICE: ISSUES AFFECTING THE PROGRAM'S FUTURE

INTRODUCTION

The National Energy Conservation Policy Act of 1978 (NECPA), as amended by the Energy Security Act of 1980 (ESA) requires large electric and gas utilities, 1/ through the Residential Conservation Service (RCS) program, to provide various energy conservation services to their residential consumers. As currently designed, the central feature of this program is an onsite inspection of a consumer's home by a qualified energy auditor. Based on energy conservation opportunities identified through the inspection, specific energy conservation measures and related information are presented to the homeowner, including contractor and/or do-it-yourself installation costs, expected energy savings, and anticipated payback periods for each measure. The program also provides ancillary consumer services. These services include (1) identifying State-approved installers, suppliers, and lenders which can assist consumers in undertaking suggested conservation measures, (2) arranging for the installation or financing of suggested conservation measures, (3) inspecting completed conservation measures in certain instances, and (4) providing conciliation services for consumer complaints. The program allows a $15 maximum direct customer charge for the audit with remaining program costs generally treated as a utility's cost of providing service.

During the past year, the future of the RCS program has been in doubt. In early 1981, DOE indicated its intention not to request funding for the program. The uncertain future of RCS heightened in March 1981 with the administration's identification of RCS, through the Presidential Task Force on Regulatory Relief, as a burdensome and costly Federal program. In April 1981, a Senate bill to repeal RCS legislation was introduced, followed by a similar House bill in July 1981. Following these unsuccessful legislative attempts to repeal RCS statutes, the administration, in October, supported an amendment to the Department of the Interior and related agencies 1982 appropriations bill to prohibit expenditure of fiscal year 1982 funds on RCS. The Senate overwhelmingly rejected such a funding restriction. These events, however, raised serious concerns about the program's future.

In November 1981, DOE proposed a major revision to the RCS program regulations based on its belief that the Federal Government no longer needed to mandate the provision of services required by the RCS program. These proposed rules significantly

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1/Utilities with annual sales exceeding 10 billion cubic feet of natural gas or 750 million kilowatt-hours of electricity.

relaxed or eliminated many existing program requirements and set forth DOE's intention to provide no funding for further program implementation or enforcement. Moreover, DOE invited the States to submit changes to their existing programs prior to public hearings and rule finalization.

Prior GAO report on residential energy conservation

Last year we reported on DOE's residential energy conservation outreach activities. 1/ We identified the RCS program as having potentially significant benefits as a residential energy conservation outreach program because of its comprehensive personalized energy audit. Specifically, we pointed out that if consumers do not have comprehensive information, and are not effectively provided such information, the extent to which they can or will realize available energy conservation opportunities will be limited. Moreover, combining individualized information with personalized delivery of that information has been shown to result in the greatest amount of voluntary energy conservation by each individual. We concluded that DOE could contribute to achieving greater voluntary residential energy conservation by assuring that consumers effectively receive such comprehensive information.

Objectives, scope, and methodology

The objective of our review was to respond to four issues relevant to DOE's implementation of the RCS program as specified in the December 15, 1981, letter request from the Chairman, Subcommittee on Energy Conservation and Supply, Senate Committee on Energy and Natural Resources, and the Chairman, Subcommittee on Energy Conservation and Power, House Committee on Energy and Commerce.

To meet our objective, we (1) interviewed DOE, State, and utility officials responsible for developing, planning, and implementing the RCS program; (2) discussed with Office of Management and Budget (OMB) and Federal Trade Commission (FTC) representatives their involvement in the RCS program; (3) analyzed legislation and existing and proposed program regulations; (4) examined program documents from DOE, States, and utilities; and (5) observed the performance of an RCS audit in each of two States.

Not included in the scope of our work were issues regarding unfair and deceptive practices or other consumer protection issues. These issues were not addressed because FTC has performed extensive work in this area as required by Section 225 of NECPA and is currently reporting its findings to the Congress.

1/"Residential Energy Conservation Outreach Activities--A New Federal Approach Needed" (EMD-81-8, Feb. 11, 1981).

In order to determine program status and experience, we contacted a number of States and visited selected States. Specifically, we interviewed by telephone 46 State RCS program officials (including the District of Columbia and Puerto Rico) to collect basic information on each State's program status and results and each State's likely response to different elements of DOE's proposed regulations. To obtain a more detailed understanding of RCS program operations, we visited California, Nevada, Iowa, Minnesota, Massachusetts, and Connecticut. We selected these States because, in our judgment, they represented a cross-section of RCS programs nationwide. Of the six States we visited, all had approved RCS plans, and all but Nevada had implemented their programs. Of the five States with ongoing programs, all had performed a large number of RCS audits, four States (California, Connecticut, Massachusetts, and Minnesota) had either some type of supporting legislation or other incentives to encourage residential conservation, and two States (Massachusetts and Connecticut) had utilities which joined together to form a separate organization to carry out their program responsibilities.

Time and data limitations did not allow us to independently verify the data obtained from both the telephone survey and the States visited. However, much of the data obtained was consistent among the States and utilities we visited, and generally confirmed the information received from the telephone survey. Therefore, we were reasonably confident in drawing some generalized conclusions about the nationwide RCS program.

To determine the potential effects of DOE's proposed program regulations, we selected several key proposed changes that affected either program costs or effectiveness. This selection was based on statements made by DOE and our own judgment.

Our work was performed in conformance with GAO's current "Standards for Audit of Governmental Organizations, Programs, Activities, and Functions."

DOE'S ADMINISTRATIVE AND ENFORCEMENT RESPONSIBILITIES HAVE NOT BEEN CARRIED OUT

DOE has failed to fulfill its administrative and enforcement responsibilities under the RCS program. While DOE is responsible for ensuring that the program is implemented consistent with the procedures and schedules specified in the statutes and program regulations, it failed to (1) review State plans and issue amending regulations in a timely manner, (2) implement a monitoring system needed to determine program status and applicable use of its enforcement authority, and (3) enforce its Federal Standby Authority as required by statute. These actions have caused serious program delays and, in our opinion, contributed to the uncertainty and confusion surrounding the program's future.

Delays in program implementation

The RCS program has not been implemented according to schedule. Slow development and approval of State plans and DOE's failure to promulgate new regulations to implement the ESA amendments to NECPA have delayed the program's progress. With only one year remaining before the initial program announcement and audit offer requirements were to be completed, the program is far from being fully implemented nationwide.

Final RCS program regulations were promulgated in November 1979 and effective one month later. Under NECPA, to avoid enforcement action, States were to submit a proposed plan to DOE within six months or by June 1980 and, unless granted an extension, were to have plans approved by DOE within three months or by September 1980. Following plan approval, utilities had 6 months to implement the program by initially providing eligible consumers with a program announcement. Within 2 years after the announcement, all utilities were to have offered program audits and related services to consumers.

Required target dates for plan approval were not met because (1) the complexity of the program regulations and State plans required DOE to take more time than originally envisioned for review and (2) staffing shortages hampered the review process. (See pp. 11 to 13.) Although the first State plan was approved one month beyond the September deadline, only nine States received plan approval by the end of 1980. The plan approval process continued during the following year, with the most recent approval occurring in September 1981. Two States which submitted plans in 1980 have not yet received DOE's approval; three other plans are awaiting approval pending State responses to DOE inquiries. In total, 41 of 51 eligible States 1/ have received plan approval.

Delays in approving plans have, in turn, prevented most States from meeting the March 1981 target date for issuing program announcements. Moreover, our telephone survey of State program officials indicated that at least one participating utility in 23 States had not issued such announcements within the 6-month deadline after plan approval.

Finally, DOE's failure to issue program regulations within the required time has delayed meeting the target date for the RCS program's expansion. In June 1980, ESA amendments provided among other things, that the RCS program expand its definition of eligible buildings to consumers living in multi-family dwelling units of five or more which are not centrally heated or cooled.

1/Includes the District of Columbia and Puerto Rico and excludes Nebraska which does not have a State plan because its utilities do not meet minimum sales requirements. (See p. 6.)

Regulations to incorporate ESA program revisions were to have been issued by the end of October 1980, with changes to be implemented by January 1982. Although DOE issued proposed regulations in January 1981 incorporating ESA provisions, they were later withdrawn by the new administration and reproposed in November 1981. However, one month later, DOE sent a letter to State program managers stating that participants would not be required to implement such an expansion until final regulations were issued. These final regulations have still not been issued.

Necessary program monitoring and evaluation not conducted

DOE's limited program monitoring and evaluation efforts have not provided the type or amount of information necessary to assess how efficiently and effectively the program has been implemented. Furthermore, the lack of appropriate information impeded DOE's ability to carry out required enforcement actions.

Although DOE has stated its belief that the RCS program is no longer needed, it continues to have administrative and enforcement responsibilities under NECPA, ESA, and existing regulations. To date, DOE's program monitoring and evaluation efforts have been limited to an annual report on program status based on reports submitted by the States, and case studies of RCS programs in selected States performed by two contractors. These activities have been of minimal value. For example, while the regulations require States to annually submit to DOE specific program information, only about half the States responded. Moreover, according to DOE, the information provided varied widely in quantity and quality, and DOE was unable to draw meaningful conclusions about program operations.

DOE has not adequately fulfilled its program monitoring and evaluation responsibilities to ensure that the RCS program is implemented efficiently and effectively and in compliance with the regulations. Moreover, DOE officials stated that the monitoring necessary to support required program enforcement has not been performed and is not currently planned as part of any future RCS activities.

Program enforcement responsibilities ignored

NECPA generally requires DOE to exercise its Federal Standby Authority when a State does not have, or is not adequately implementing, an approved RCS State plan. Although DOE officials acknowledge several cases where such authority could be used, DOE has failed to take enforcement actions. DOE's refusal to exercise its authority is apparently being viewed by some States as support for deviating from existing program regulations including, in some cases, refusing to implement an approved plan at all. Our review indicates that DOE's Federal Standby Authority may be applicable in nearly half of the States.

According to NECPA, the Secretary of DOE must exercise Federal Standby Authority when

(1) a State does not have an approved plan within 270 days after final rules are issued or within an extension period granted by the Secretary on request of the State or utility for good cause, or

(2) the Secretary determines after notice and opportunity for a public hearing that an approved plan is not being adequately implemented in a State.

If either condition is met, DOE is required to order utility compliance with a DOE developed RCS plan. As a precondition to using its enforcement authority, DOE developed and published for public comment a proposed standby plan in January 1981. However, events over the next several months (see pp. 6 and 7) precluded the plan's finalization, and in November 1981 the proposed plan was officially withdrawn. During this period, DOE officials acknowledged that four States which did not submit plans and an undetermined number of other States not adequately implementing approved plans were subject to enforcement actions under its Standby Authority. However, according to DOE officials, even if the plan had been approved no enforcement action would have been taken because (1) program regulations were being revised and (2) no program funds were requested for fiscal year 1982.

Our work has shown that DOE's Federal Standby Authority may be applicable in nearly half of the States. Specifically, we found 19 States have not implemented an RCS program including

--9 States with approved plans,

--3 States not submitting plans,

--2 States with disapproved plans, and

--5 States with pending plans.

In addition, at least four other States may not have implemented the RCS program according to existing regulations or approved State plans. We believe DOE's failure to enforce its standby authority and not request funds for such activities during fiscal year 1982 is viewed by some States as further support of DOE's intention to discontinue the program and its approval for States to act similarly.

BUDGET AND STAFFING REDUCTIONS HAMPER RCS PROGRAM MANAGEMENT AND ADMINISTRATION

The RCS program has been hampered by a limited budget and inadequate staffing. These problems have contributed to DOE's failure to carry out key program administrative and enforcement activities and, in our view, have severely impacted on the progress of the RCS in achieving nationwide status.

The Congress originally authorized $15 million to carry out the RCS program during fiscal years 1979-81. For fiscal years 1979 and 1980, DOE obligated about $5.6 million for RCS activities. In fiscal year 1981, the Congress appropriated $5.2 million, however, about $2.2 million was subsequently deferred. The current administration requested no RCS funding for fiscal year 1982. Although the House included no RCS funds in its version of DOE's fiscal year 1982 budget, the Senate approved $7 million in deferred funds for RCS. Following the House/Senate conference on the budget, about $3.4 million was made available for fiscal year 1982 RCS activities. This funding level is significantly below the previous administration's fiscal year 1982 budget request of $6.8 million, which was to allow for implementation of key program activities. The administration has not requested any RCS program funding for fiscal year 1983.

The number of staff committed to the RCS program as well as staff changes and reorganizations have been significant problems since the program began. During the rulemaking process in 1979, RCS personnel consisted of 22 professional staff (including 3 full-time and 6 part-time RCS staff and 13 non-RCS support staff). By 1980, the RCS program had numerous additional responsibilities such as: reviewing and approving State and nonregulated utility RCS plans, acting on over 100 requests for exemptions from different provisions in the regulations, providing technical assistance, and incorporating in program regulations the requirements of the ESA amendments to the RCS program.

To meet its responsibilities, RCS program officials made three requests for more staff. In late 1979, 10 regional staff positions were requested to allow adequate program monitoring and enforcement. The request was approved at the Assistant Secretary level and was a part of an overall request for additional personnel submitted to OMB. Although OMB approved part of the total personnel request, the staff positions for RCS program activities were never filled.

In the summer of 1980, a second request was made for early hiring of staff for recently approved positions as well as for filling previously existing vacancies. This request resulted in hiring two people for the RCS program. By this time, the staffing level for 1980 had been reduced to 16 professionals. The third request was made several months later--again for 10 regional staff--and was not approved within DOE.

By August 1981, aside from an acting division director and an acting branch chief, both of whom were detailed from other programs, the RCS staff had been reduced to six, of which only one was full time. Additional staff changes occurred during the remainder of 1981, including the loss of 5 staff from a reduction-in-force and several staff reassignments that exchanged experienced RCS staff for non-experienced staff. As of February 1982, RCS personnel consisted of eight professional staff. According to a DOE official, 15 to 20 full-time staff supported by contractors are needed to fulfill RCS program responsibilities.

We believe that limited staff and DOE's failure to use the funds it had available for RCS program activities have severely impacted on the progress of the RCS program in achieving nationwide status. In addition to staffing and budgetary difficulties, three major reorganizations and at least three physical moves of the RCS office since 1979 contributed to a disruption in RCS activities.

STATE RCS PROGRAM EXPERIENCES VARY

States with ongoing RCS programs have had widely diverse program experiences. In addition, we question how the program is affecting consumers. We found significantly different consumer participation rates among States and utilities within States; varying utility RCS program costs; some utility programs which appear to be inconsistent with program regulations; questionable audit results in some locations; and limited knowledge about the use being made of program-arranging services, and subsequently, compliance with post-installation inspection requirements. These findings suggest that States and/or utilities are exercising a large degree of flexibility in carrying out the RCS program. In some cases this flexibility has resulted in enhanced program services, while in other cases, it has resulted in RCS programs being implemented in a manner inconsistent with the regulations.

Program participation rates differ by State and utility

Consumer participation in the RCS program has varied widely among States and individual utilities. While these experiences cannot be fully explained, a number of factors are probably affecting participation rates.

Original DOE expectations for program participation averaged 7 percent per year if the audit was free of charge and 1.5 percent per year if the audit charge was $15. A comparison of consumer participation in 6 States which do not charge for the audit and 18 States which have established charges for the audit (either $5, $10, or $15) disclosed overall participation rates of 3.5 percent and 2.2 percent, respectively.

With respect to individual States, program participation rates ranged from 0.1 percent to 6.9 percent. We also found significantly different participation rates for individual utility programs within States. For example, we found that program participation levels for Minnesota utilities varied from 0.7 percent to 5 percent. In Iowa, participation rates for utilities varied from 0.6 percent to 2.6 percent.

A number of factors could be affecting consumer participation rates. Prior utility experience in residential energy audit programs may be resulting in better marketing of RCS program services and, subsequently, higher consumer participation. The two California utilities we visited had prior experience in audit programs and were experiencing participation rates of over 5 percent. One of these utilities also offered zero interest loans for consumers who wished to implement audit recommendations. Such additional program services are also likely to have a positive effect on program participation rates.

We also found that State laws may affect program participation rates. In Minnesota, State law requires homeowners to obtain an energy evaluation prior to selling their home. Since Minnesota's RCS program energy audit meets the State law audit requirements, individuals who consider selling their homes have an increased incentive to request an RCS audit. Minnesota's program participation rate as of December 31, 1981, was about 2.8 percent.

Finally, the cost of the audit to the consumer may be affecting participation. As discussed above, States where the audit is provided free to consumers are generally experiencing higher participation rates than States where consumers are charged for the audits.

Program costs vary by utility

Utility costs incurred in carrying out the RCS program varied widely, both in total and on a cost-per-audit basis. While costs per audit in some cases appeared unreasonably high, such costs were expected to decrease as the number of audits performed increased.

Most of the utilities we contacted provided us data on their RCS program costs. Based on these data, utilities were experiencing overall RCS program costs ranging from less than $100,000 to about $10 million. With respect to RCS programs in Connecticut and Massachusetts, 1981 RCS program budgets indicated total statewide costs of over $4 million and $7 million, respectively.

Cost per audit also varied in locations we visited. Based on either projected or actual 1981 program costs from six locations, costs per audit ranged from $106 to about $1,000 and averaged around $170. The higher cost per audit figures generally reflected situations where high program startup costs were being allocated to a small number of audits completed. In three cases where utilities were contracting with private firms to conduct the audits, contractors were charging about $63 per audit.

RCS program costs to utilities result from a number of activities. Program costs include expenditures for such items is auditors' salaries, equipment for audits, audit processing, auditor training, program marketing, program administration, and recordkeeping. These variations in costs result from different individual utility costs in these program areas.

Some programs appear inconsistent with DOE regulations

We noted instances where ongoing programs appear to be inconsistent with RCS program regulations. These situations raise questions about the extent that programs underway nationwide are complying with the program regulations.

RCS program regulations require that utilities provide, on request, assistance to help the consumer implement recommended energy conservation measures. The assistance includes arranging for installers, suppliers, and lenders who will finance measures. We found that the RCS program in Massachusetts does not require utilities to provide, and utilities are not providing, such services. State program officials told us they were aware that this aspect of their program is inconsistent with DOE program regulations.

Aspects of individual utility programs in Iowa and California also did not appear to be fully consistent with program regulations. In one case, a utility auditor told us that he did not always include all required program measures in his audits. The auditor explained that past audit results for certain program measures had disclosed very long payback periods and, unless a consumer specifically requested information on these measures, he did not include them in the audit. In the other case, arranging services of one utility were limited to providing the consumer lists of suppliers, installers, and financial institutions which would assist the consumer in carrying out conservation measures recommended from the audit. This action does not appear to fully comply with the RCS program requirement that utilities offer to assist the consumer in obtaining suppliers, installers, and financial assistance.

Questionable audit results provided to consumers

Questionable data are resulting from audits in different locations. These data are routinely being provided to consumers in the form of audit results. We are concerned about the validity of this information.

We compared average payback periods for many program measures from completed audits in Iowa, California, and Massachusetts. The data resulted from experiences of two utilities in Iowa, one utility in California, and from statewide information in

Massachusetts. Our comparison disclosed that significant differences in average payback periods resulted from these audits as illustrated in table 1.

Table 1

Average Payback Periods for Selected Conservation Measures

Measure	Iowa utility	Iowa utility	Massachusetts, Statewide	California utility
	(years)			
Ceiling insulation	16.5	20.5	6.9	9.8
Storm or thermal doors	32.0	34.3	5.7	13.5
Electric ignition system	20.7	21.0	10.7	6.0
Replacement furnace	13.3	17.3	24.4	9.8
Glass shading	49.2	26.1	15.6	16.1
Water heater insulation wrap	2.2	8.9	2.0	0.8
Solar pool heating	28.1	36.2	14.7	12.4
Passive solar-direct	51.4	57.5	12.3	14.2

Although payback periods may differ because of such factors as weather, energy costs, and material and installation costs, the range of values we found appear unreasonable. For example, as shown above, payback periods for ceiling insulation range from 6.9 years to 20.5, years while payback periods for water heater insulation wrap ranged from 0.8 years to 8.9 years. While the differences in average payback periods for ceiling insulation could, in our view, be explained if the energy efficiency of the existing housing stock in these two areas is substantially different, we cannot reasonably explain the wide variance in water heater insulation average paybacks.

We are concerned that the wide disparity in audit results raises questions about the validity of information being provided to consumers. With respect to the data from the two Iowa utilities, of 24 energy conservation measures we reviewed, average payback periods for 11 measures varied by more than 25 percent. In one case, the average payback varied by over 300 percent. Such differences appear unreasonable. While the average payback period disparity for some measures may be reasonably explained, the disparity in payback periods for others may be resulting from other causes such as inappropriate calculations methodologies or questionable raw data being used for payback calculations.

Extent of program-arranging and post-installation inspection services unknown

Few States have information on the number of consumer requests for program-arranging services. Without such information, it is impossible for a State to determine when post-installation inspections are required to be performed.

RCS program requirements for post-installation inspections are closely related to instances where consumers request a utility's help in implementing recommended energy conservation measures. When utilities provide such assistance to consumers, they become responsible for conducting post-installation inspections under certain conditions. However, because many States do not know how often utilities have assisted customers in arranging services, there is no basis for determining whether utilities are fulfilling post-installation inspection requirements.

Based on our survey of 32 States which have programs underway, 15 could not provide us information on the number of times consumers requested program-arranging services. Of the remaining 17 States, 11 reported that no consumers requested program arranging services and one had not conducted any audits as of December 31, 1981.

Overall, few post-installation inspections are being performed. Based on responses from 27 States where information was available, 14,724 such inspections have been performed. However, about 90 percent of those inspections were performed in California, and one utility accounted for over 90 percent of these. A total of 17 States reported that no inspections had been performed.

Given the limited amount of information on consumers' use of arranging services, we cannot determine the extent that post-installation inspection requirements are being met. Moreover, we are concerned that nearly half of the States could not provide us information on the use of arranging services by consumers. Such information should be an essential part of program monitoring, particularly because of its relationship to post-installation inspections, and furthermore, it is required to be provided to DOE under program regulations.

PROPOSED RCS REGULATIONS UNLIKELY TO ACHIEVE EXPECTED RESULTS

Two years after final program regulations were issued, DOE proposed revised RCS regulations which eliminated existing regulatory requirements not explicitly included in the statutes and reduced and relaxed existing rules to meet minimum statutory requirements. According to DOE, if these changes were adopted by the States, 50 percent of the program costs would be saved. In our view, the proposed regulations are unlikely to achieve the cost savings DOE expected. Moreover, to the extent the proposed rules are adopted, program effectiveness could be adversely affected. Finally, two proposed regulations, while consistent with the statutes, are inconsistent with intent expressed by the conferees in the Conference Committee reports.

Expected costs savings are questionable

DOE believes that the proposed revisions to the RCS program, if adopted, would result in a 50-percent cost savings over the life of the program. DOE officials stated that the principal cost reductions would result from eliminating items from the audit, eliminating post-installation inspections, and reducing program announcement requirements. Based on our analysis, major cost savings from these changes are unlikely to be achieved.

DOE proposes to exclude all program measures currently included in an RCS audit that do not result in a payback period of 7 years or less. DOE expects that by limiting the number of audit items required, audit costs would be reduced. This 7-year payback criterion appears to represent the predominant cost-savings element of the three items identified by DOE. 1/ We found that major cost savings from this proposed change are questionable and that DOE's application of the 7-year payback criterion may eliminate some measures from an RCS audit which should be included.

Although data to assess likely cost savings resulting from the 7-year payback criterion are limited, California officials estimated that eliminating one-third of the conservation measures from their current audit, consistent with applying the 7-year payback criterion, would reduce audit time by 15 percent. These officials estimated that such a reduction in audit time would only reduce total program costs between 2 and 7 percent. Our observation of RCS audits conducted in Iowa and Massachusetts generally confirmed California's estimate of the likely reduction in

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1/Although DOE officials could not provide any documentation to support projected cost savings, a preliminary analysis conducted by Oak Ridge National Laboratory in June 1981, identified seven possible RCS program changes which, if adopted, could result in a 44-percent reduction in program costs. While we could not determine to what extent, if any, this analysis was a basis for DOE's cost-saving expectations, application of the 7-year payback criterion in this analysis accounted for 80 percent of the total reduction in program costs.

audit time resulting from application of DOE's 7-year payback criterion.

With respect to the application of the 7-year payback criterion, DOE assumed that all fuel prices would remain constant at 1981 levels. Since increasing fuel prices reduce a conservation measure's payback period, some conservation measures which exceed a 7-year payback based on 1981 prices could meet the payback criterion years if fuel prices increased. However, under DOE's application of the criterion, such program measures would not be required as part of the audit. Since, in our view, fuel prices are likely to increase in future years, DOE's application of this criterion could inappropriately eliminate items from an RCS audit.

With respect to post-installation inspections, costs of such inspections under the existing regulations were expected to be only about 1 percent of total program operating costs. Moreover, as discussed on page 17, few post-installation inspections have actually been conducted. Therefore, the elimination of this program requirement would likely have only a negligible impact on program operating costs.

The third item cited by DOE as contributing to its 50-percent cost-savings estimate was reduced requirements in issuing program announcements. In our view, program announcement costs would involve primarily development, printing, and mailing. Development costs are usually nonrecurring initial costs and thus would offer limited opportunity for additional cost savings where the program has already been implemented. Printing costs could be reduced slightly if the length of announcements are reduced, however, some utilities may have already printed enough program announcements to at least partially cover required future mailings. Thus, cost-saving opportunities are further limited. Finally, costs associated with mailing would not appear to be affected since mailings would take place in any event. Therefore, there appears to be little opportunity for cost savings from the proposal to reduce program announcement requirements.

Program effectiveness likely to be reduced for States adopting changes

Most of six proposed rule changes we reviewed, if adopted, could adversely affect the RCS program's effectiveness. Because limited program results data exists and the extent to which States would ultimately adopt such changes is unknown, we were not able to quantify probable impacts. However, our work indicates that proposed changes in the areas of audit comprehensiveness, presentation of audit results, and post-installation inspections could, where adopted, decrease the quality and thus the effectiveness of the audit and ancillary services without a corresponding decrease in program costs. Furthermore, proposed changes in reporting and recordkeeping may impede efforts to monitor and evaluate the program. Proposed changes to auditor training requirements are unlikely to have an impact on the program.

DOE's proposals to reduce audit comprehensiveness is likely to adversely affect the RCS program's effectiveness. Adoption of these proposals, which include the 7-year payback criterion and deleting requirements for informing homeowners of applicable low- and no-cost energy conservation practices, tax credits, and the weatherization program could significantly reduce information available to program participants. Since conservation opportunities not identified and explained to the homeowner are not likely to be realized, we believe that States' strict adherence to the proposed regulations could reduce the program's perceived or actual effectiveness. As indicated in table 2, although most of the 32 States with ongoing RCS programs do not intend to delete requirements for providing information on applicable conservation practices, it is less clear whether they will maintain conservation and solar and renewable program measures not satisfying the 7-year payback criterion.

DOE's proposal to delete the current requirement that audit results be presented in-person and onsite is also likely to have an adverse affect on program effectiveness. Presenting audit results in-person, along with the onsite inspection process, are basic elements in the type of audit this program was designed to provide. As we concluded in a previous report, 1/ combining individualized information with personalized delivery of that information has been shown to result in the greatest amount of voluntary energy conservation by each individual. Therefore, we believe this proposed change would undermine the quality and effectiveness of the RCS audit for those States adopting the change. (See table 2.)

Another change DOE proposed that may adversely affect the RCS program is eliminating the required mandatory and random post-installation inspections. As previously discussed on page 17, few States have an active post-installation inspection program. However, in California which has conducted over 13,000 inspections, problems with materials or installation were identified in over 20 percent of the inspections. Rhode Island also reported finding problems in 152 of 342 inspections conducted.

As an alternative to post-installation inspections, some States are relying on local building codes or consumer complaints to identify possible problems. Based on information obtained in States we visited, relying on local building codes may not represent an effective check on either materials or installation

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1/"Residential Energy Conservation Outreach Activities--A New Federal Approach Needed" (EMD-81-8, Feb. 11, 1981).

practices. We found that recommended conservation measures are not always included in such codes, and the extent such codes are enforced is unclear. With respect to using consumer complaints to identify problems, we are also concerned that defective products or installation procedures will not often be apparent to the homeowner. For example, identifying problems in the installation of electrical ignition systems and wind energy devices would require a level of specialized knowledge. Furthermore, homeowners would not generally have available the equipment needed to inspect such measures as floor and wall insulation and solar space or water heating systems.

Table 2

Responses of 32 States with Ongoing RCS Programs to Likelihood of Adopting Selected Proposed Changes

Proposed change	Definitely or probably yes	Uncertain	Definitely or probably no	No answer
	(number of respondents)			
Eliminate post-installation inspection	14	5	11	2
Eliminate onsite presentation of audit results	8	2	19	3
Reduce numbers of program measures required for audit:				
--solar and renewables	13	7	9	3
--conservation	11	5	13	3
Eliminate or reduce number of energy conservation practices	5	1	24	2
Reduce auditor training requirements	0	3	26	3
Reduce reporting and recordkeeping requirements	15	4	11	2

DOE's proposal to relax auditor-training requirements is not likely to reduce program effectiveness. This proposal adopts a basic requirement that an auditor must be qualified in place of current specific DOE qualification requirements. Under the proposed basic requirement for auditor qualification, the State developing such a list shall not be a regulated utility. Therefore, although DOE's proposal to delete the restriction on regulated utilities from preparing this list does not violate statutory requirements, the proposed change does not reflect the conferees' intent.

In another instance, the proposed regulations do not reflect the conference committee's expectations under the ESA amendments. Specifically, the ESA conferees expected that the States would use information from post-installation inspections to assure that high-quality work was performed and to protect consumers against fraud. Existing regulations provide for post-installation inspections as a means to ensure that material and installation standards and other listing requirements are being met. NECPA does not require that States provide post-installation inspections, and the conference report is also silent with respect to such inspections. The proposed regulations eliminate post-installation inspections and instead require each State to implement whatever enforcement mechanism it deems most effective.

The conference report for the ESA amendments, however, states that the conferees did not include any additional statutory requirements for post-installation inspections because they believed that in complying with NECPA's anti-fraud provisions, States are required to adopt procedures to protect consumers. The conferees believed that at least during the first year of any utility program, it is essential to perform some post-installation inspections to ensure that a high-quality performance is provided by installers or suppliers.

Neither conference committee report addresses the other proposed changes we reviewed, including deleting energy conservation practices and the requirement for in-person presentation of the audit results. Therefore, although the proposed regulations are less stringent than existing regulations, they are not inconsistent with NECPA or any conferees' statement of intent.

SUMMARY AND CONCLUSIONS

More than 3 years after RCS was created, a wide diversity exists in the operational status of State programs, and much uncertainty and confusion surrounds the program's future. DOE's inadequate program management, especially over the past year, has severely hampered progress in achieving the type of nationwide program the Congress envisioned. Furthermore, DOE's revised program regulations, as proposed in November 1981, are unlikely to reduce program costs by 50 percent as expected by DOE and could adversely affect the program's effectiveness.

Our work has shown that DOE failed to fulfill its administrative and enforcement responsibilities under the RCS program. Specifically, DOE has failed to (1) review State plans and issue necessary regulations in a timely manner, (2) implement a monitoring system needed to determine program status and applicable use of its enforcement authority, and (3) enforce its Federal Standby Authority as required by statute. As a result, nearly half of the States either do not have an RCS program or are not implementing the program in a manner consistent with existing regulations or approved State plans.

Limited program budgets and inconsistent staffing support have hampered RCS program development and implementation. The Congress originally authorized $15 million to carry out the RCS program during fiscal years 1979-81. For fiscal years 1979 and 1980, DOE obligated about $5.6 million for RCS activities. In fiscal year 1981, the Congress appropriated $5.2 million, however, about $2.2 million was subsequently deferred. About $3.4 million was made available for planned fiscal year 1982 program activities. This funding level is significantly below the previous administration's fiscal year 1982 budget request of $6.8 million, which was to allow for implementation of key program activities. We also found that despite increasing program responsibilities since the program began, staffing has been reduced from 22 to 8, including several reassignments exchanging experienced RCS personnel for non-experienced staff.

States with ongoing RCS programs have had widely differing program experiences. In addition, we question how the RCS program is affecting consumers. We found that (1) States, and utilities within States, experienced significantly different program participation rates; (2) program costs varied widely among utilities; (3) some utility programs appeared inconsistent with program regulations; (4) audit results in some areas were questionable; and (5) information on consumers' use of program-arranging services was limited. Our findings suggest that utilities are exercising a large degree of flexibility in carrying out the RCS program. In some cases this flexibility has resulted in additional program services, while in other cases, it has resulted in RCS programs being implemented in a manner inconsistent with the regulations.

Proposed revisions to the RCS program regulations are unlikely to result in expected cost savings and may adversely affect the program. Our work indicates that DOE's cost-saving expectations are overstated even if they are adopted by the States. Moreover, to the extent some proposals are adopted by the States, they could decrease the quality of the RCS audit and thus reduce the program's effectiveness.

Although the proposed regulations are consistent with the statutes, proposed changes concerning the (1) prohibition on who may prepare the list of approved suppliers, contractors, and lenders and (2) requirements for post-installation inspection do not reflect the conferees' intent.

Overall, we are concerned about the RCS program's current status. Most of the problems we found could be substantially resolved by appropriate DOE actions. For example, if DOE were to effectively monitor ongoing programs and use its Federal Standby Authority as required by statute, we believe the RCS program would achieve nationwide operational status without the wide degree of program experiences and inconsistencies that now exist.

Over the past year, however, DOE has exhibited an unwillingness to carry out the program, expressing its view that the Federal Government no longer needs to require the RCS program. We believe this unwillingness to carry out the program has been a major influence on the decision of 19 States--and particularly 9 States with approved plans--not to implement the RCS program at all.

An overall Federal position on the RCS program has not been made clear. We recognize that DOE's position is consistent with administration efforts to reduce the cost and burden of Federal regulations. The administration's fiscal year 1983 budget provides no funds for further RCS program implementation or enforcement. With respect to congressional actions, no new funds were appropriated for RCS in fiscal year 1982. On the other hand, the Senate overwhelmingly rejected a proposal to prohibit all RCS funding in fiscal year 1982. Subsequently, Congress made about $3.4 million available from deferred fiscal year 1981 funds for fiscal year 1982 program activities.

The RCS program is at a crossroad. Budget and legislative decisions now before the Congress will determine whether the program will continue to exist, and if continued, the types of consumer services to be provided by utilities under the program. However, if the Congress decides to continue the program in its current form and DOE persists in its reluctance to implement it, States are likely to continue to abandon RCS or excercise a great degree of flexibility in carrying out the program. In either case, congressional expectations for the program are not likely to be met.