

RESIDENTIAL ENERGY AUDITS

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ABSTRACT

A series of events coupled with the last five years experience performing Residential Conservation Service (RCS) audits have resulted in renewed efforts by utilities to evaluate the role of residential energy audits. There are utilities where the RCS program is considered very successful; however, the majority of utilities have found that the costs far exceed the benefits. Typically, the response rates are low (less than 1% per year for Texas utilities), the audits primarily reach upper income persons, and consumers only implement the low-cost recommendations. The Texas PUC is on record as being opposed to the RCS as well as the Commercial and Apartment Conservation Service (CACS) and now requires Energy Efficiency Plans with detailed cost and savings information on utility end user programs.

While Congress continues to debate the future of the RCS program, Texas utilities are offering walk-through audits, new home inspections, questionnaire audits, and low income weatherization audits.

The result is that utilities are beginning to carefully analyze the impacts of residential audit programs on utility load profiles, as well as the benefits to the program participants and the non-participants. Many utilities are also trying to verify if their customers want an audit service, which type they prefer, and who should pay for the cost of the audit.

Cost-benefit analysis reveals the uniqueness of Texas utilities and their various approaches to residential energy audit programs. The critical factors affecting the extent and success of the audit programs appear to be:

- * management commitment
- * geographic concentration
- * kWh price
- * average kWh consumption
- * customer attitude
- * avoided cost
- * competition

In the future there are three likely scenarios:

- I. Congress extends the RCS program.
- II. Congress extends the RCS program with a provision which allows substitution of more effective programs.
- III. Congress repeals the RCS program.

Scenarios II and III would be preferred by most utilities and would allow design of audit programs which best meet customer and stockholder needs. Stockholder needs are usually best served by those programs which favorably impact load profiles or result in more favorable rate treatment by regulatory agencies. Customer interests are best served by determining what the customer needs and wants (e.g., information, reduced bills, increased comfort) and then designing an effective delivery mechanism.