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Check Me! In Southern California Edison Company's (SCE) Territory

Prepared for:
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Final Report

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Creators of CheckMe!®

Section I. Program Summary

1. Program Overview

This outreach and incentive program used Proctor Engineering Group's CheckMe!® system to provide duct testing and sealing, and air conditioning testing and verified tune-ups within Southern California Edison's service territory. The CheckMe system saves energy and reduces peak load by addressing the problems of leaky duct systems, and air conditioners which are either incorrectly charged, and/or operating with low airflow. These problems are widespread. CheckMe is a one of a kind combination of in-field technician training, computer diagnostics, and immediate test verification and feedback.

This program enrolled and certified licensed heating, ventilation, and air conditioning contractors who implemented the program in the underserved sectors -- residential and small commercial customers within SCE's service territory. Working through HVAC contractors allowed the program to both achieve the immediate energy efficiency goals, and contribute to improved service practices for the long term.

Proctor Engineering Group's scope of work included:

- Contractor identification and recruiting
- Service technician training/certification
- Collecting data through the CheckMe call center
- Quality assurance and technician support
- Performance verification and incentive payments
- Data management and analysis
- Contractor marketing support and customer awareness
- Customer relations and response
- Standards enforcement
- Program reporting

An independent evaluation of the program was conducted by Itron, Inc. and kW Engineering. Their final report has been forwarded to the California Public Utilities Commission and Southern California Edison. The results of their investigation are presented in the following section of this report.

2. Program Goals and Results

The primary goal of the CheckMe program was to cost effectively reduce peak load and save energy by increasing the efficiency of ducts and air conditioners for hard-to-reach SCE customers.

The ITRON report entitled "Final Report for the CheckMe" Program, dated December 20, 2004 presents the following Impact Evaluation conclusions:

"The HVAC contractors participating in the program enlisted 2,909 sites and tested 15,126 units. Table 4 compares the program goal with the number of units actually serviced. The program exceeded its goals for number of units serviced in all areas".

Quantity of Measures Applied

	Program Unit Goals	**Number of Units Completed**	**Number of Sites**
Commercial AC >5 tons Diagnose/Repair	1,380	1,517	295
Commercial AC <5 tons Diagnose/Repair	6,310	6,425	638
Residential AC Diagnose/Repair	5,920	5,946	1346
Residential Ducts Diagnose/Repair	1,330	1,429	631

"The CheckMe! Program exceeded its goals for demand reduction (kW), energy savings (kWh), and gas (therms) energy savings. A comparison of program goals and measured results for first year savings follows".

First Year Energy Savings and Demand Reduction

	Program Goal	**Adjusted Results**
Net Demand Reduction (kW)	7,553	8,103
Net Energy Savings (kWh)	8,407,144	9,105,890
Net Energy Savings (Therms)	94,115	104,726

The expected lifetime of ex ante savings estimates was 20 years for residential ducts and eight years for all other measures. Lifetime results are:

Lifetime Energy Savings

	Lifetime Goal	**Lifetime Savings**
Net Energy Savings (kWh)	70,798,753	76,593,032
Net Energy Savings (Therms)	1,724,997	1,917,139

The ITRON report EM&V report presents the following Process Evaluation conclusions:

Process Evaluation – Customer Surveys

“Customers viewed increased system performance, enhanced energy efficiency, and cost savings as the most compelling reasons to participate in the program."

“Surveyed respondents indicated a high level of overall satisfaction with the program. The most frequently cited favorable aspects of the program included energy/cost savings and simplicity”.

“Participants were asked to rate several aspects of the program using a 1 to 5 scale, with 5 being most favorable. The highest rating was the friendliness and professionalism of the contractors, which averaged a 5. This was followed by the quality of the work done, the use of an advanced computerized system, the knowledge or skill of the contractor, the promptness of the contractor, the information provided by the contractor, the information provided by an independent third party, the energy savings from the program, and the educational portion of the program. On average, customers ranked their overall satisfaction with the program a 4.5. No category rated below a 3 overall”.

Process Evaluation – Contractor Surveys

“Participants were asked to describe the benefits they expected to receive from participating in the program. Most respondents indicated that incentives were the main deciding factor in joining the program. Secondary reasons for joining the program were ensuring that their customers’ equipment was functioning properly, increasing customer base, and gaining the knowledge to correctly charge improperly functioning equipment”.

“Participants were asked to rate several aspects of the program using a 1 to 5 scale, with 5 being most favorable. Program design and the process of calling in measurements to the CheckMe! call center during a customer visit received the highest average ratings of all program aspects, at 4.7. Respondents stated that they experienced little to no waiting time on the phone, and that the entire process was typically completed in less than three minutes to five minutes. Quality of training received the next highest ranking of all program aspects, with an average rating of 4.6. All respondents indicated that training was useful since it greatly increased the ability of technicians to correctly tune-up air conditioners”.

“All groups of contractors surveyed were enthusiastic regarding training provided through the program. All groups cited free training as a key program benefit”.

Section II. Program Summary Data

1. Deemed Energy Savings and Demand Reduction

Table 1 Deemed Net Demand Reduction (kW)

	Total Demand Reductions
Net Demand Reductions - Program to Date	7,791
Program Net Demand Reductions Goal	7,553
Percent of Program Net Demand Reductions	103.2%

Table 2 Deemed Net Energy Savings (kWh)

	Total Energy Savings
Net Energy Savings - Program to Date	8,756,296
Program Net Energy Savings Goal	8,407,144
Percent of Program Net Energy Savings	104.2%

Table 3 Deemed Net Energy Savings (therms)

	Total Energy Savings
Net Energy Savings - Program to Date	100,747
Program Net Energy Savings Goal	94,115
Percent of Program Net Energy Savings	107.0%

2. Unit Count

Table 4 Quantity of Measures Applied

Measure / Activity Description	Total Number of Units Completed	Program Unit Goals	Percent of Program Goal
Commercial AC>5ton diagnose/repair	1,518	1,380	110.0%
Commercial AC <=5ton diagnose/repair	6,424	6,310	101.8%
Residential AC<=5ton diagnose/repair	5,946	5,920	100.4%
Residential Ducts diagnose/repair	1,429	1,330	107.4%

3. Rebate and Direct Install Program Summary

Table 5 Total Rebate Funds (Budgeted and Expended)

Budgeted Incentive Funds	Total Funds Committed & Expended To Date	Percent of Funds Expended
$2,292,660.00[1]	$2,291,400.00	100.0%

The average processing turn-around time for incentives during the program was 19 days. Proctor Engineering Group maintained a very good contractor pay turn around time during the program. Contractors were very pleased with this aspect of the program and indicated this in the surveys completed for the ITRON EM&V report.

4. Training

1. Proctor Engineering Group delivered training on location at the participating contractor's shop. Each attendee received classroom training, hands-on field training, and a training binder containing information on program policies and procedures. In all cases, the field section of the training was held on site at residences or businesses so that the technicians learn to correctly take the diagnostic readings, and to make needed repairs during the course of training. Proctor Engineering Group provides three types of training:

2. Air Conditioner Testing and Tune Up training. The course is a full-day training with a maximum of four AC technicians attending. The training includes a one to two hour classroom session and six to seven hours of field training.

[1] The budgeted incentive funds amount for the PEG program changed effective May 21, 2004 when a contract change order was executed. The original budgeted incentive funds amount was $2,282,510.

3. Combustion Safety Testing and Repair training. The Combustion Safety Testing and Repair training serves as the first day of the Duct System Testing and Repair training. It consists of a half day classroom training and one half day in the field with a maximum of four technicians attending.

4. Duct System Testing and Repair training. This training consists of a half-day classroom training and one and one half days in the field with a maximum of four duct technicians attending. If the contractor personnel have previously been trained in duct testing and repair, the training is condensed to a one-day training.

Table 6 Training Activities

Type of Training	**Total Number of Technicians Trained**
AC Testing and Tune Up	133
Combustion Safety	77
Duct Testing and Repair	77

Section III. Customer Summary Data

1. Customer Count

Table 7 Customer Data Summary

Type of Customer	Total Number of Customers
Residential	6916
Commercial	774

2. Customer Details

Table 8 Primary Language

	Total Number	Percent of Total
English	7420	96%
Other	270	4%

Table 9 Business Size (Commercial Only)

	Total Number	Percent of Total
Very Small	281	36%
Other	493	64%

Table 10 Housing Type (Residential Only)

	Total Number	Percent of Total
Multi Family	5128	74%
Mobile Home	136	2%
Other	1652	24%

Table 11 Geographic Location

	Total Number	Percent of Total
LA Basin	887	12%
Other	6803	88%

Table 12 Home Ownership / Leased Business Space

	Total Number	Percent of Total
Renter	5465	71%
Owner	2225	29%

3. Hard to Reach

The CheckMe program surpassed the goals established for serving the Hard to Reach customer segments. Eighty eight percent of the customers served under the program are located outside of the LA basin, 76% of the residential customer base are either multifamily or mobile home, and 71% of the customers serviced are renters. It should be noted that the primary language category in PEG's CheckMe software defaults to

English if the contractor does not know the correct answer. It is believed that a fair percentage of the customers served in apartment complexes under the residential component of the program do not speak English as a primary language, but we cannot confirm this since the contractors were not able to interview the customers. Having a large percentage of the production take place in apartment complexes helped us serve the hard to reach customers.

Section IV. Program Implementation Status

1. Status of Program Delivery

Production under the CheckMe program was completed in August 2004. The CheckMe program was implemented in accordance with the CPUC approved PIP. The program got a late start and was granted an extension for production through October 31, 2004 by CPUC Administrative Law Judge Malcolm on June 3, 2004

2. Program Accomplishments

The Proctor Engineering Group CheckMe program:

- Completed 1,518 air conditioner diagnose/repair jobs on systems with a cooling capacity of over 5 tons under the commercial component of the program, exceeding the program goal of 1,380 systems (110% of goal).
- Completed 6,424 air conditioner diagnose/repair jobs on systems with a cooling capacity of 5 tons or less under the commercial component of the program, exceeding the program goal of 6,310 systems (102% of goal).
- Completed 5,946 air conditioner diagnose/repair jobs under the residential component of the program, exceeding the program goal of 5,920 systems (100% of goal).
- Completed 1,429 Duct Testing & Sealing jobs under the residential component of the program, exceeding the program goal of 1,330 systems (107% of goal).
- Surpassed the program goals for serving the hard to reach target populations in both the residential and commercial components of the program.
- Exceeded the planned cost effectiveness of the program for both the TRC test and the participant test. The program's actual TRC ratio was 1.7028. The planned TRC ratio was 1.5836. The program's actual participant test ratio was 2.9141. The planned participant test ratio was 2.8939.

3. Program Challenges

The primary challenge faced by the program was effective promotion of the program by the contractors. PEG worked with the contractors to develop effective marketing materials within the restrictions placed on the program with regard to referring to either the CPUC or SCE. It has been a challenge for the contractors to explain the need to get the customer's utility account number without being able to inform the customer that SCE is administering the program.

Another challenge we faced was convincing the contractors who participated in previous PEG administered CheckMe programs that the paperwork associated with

this program is necessary. Contractors who have participated in previous CheckMe programs are used to using the all electronic, paperless system developed by PEG. Reluctance on the part of the contractors to accept the current program requirements for paperwork has made recruiting contractors more of a challenge.

4. Customer Disputes

Proctor Engineering Group is pleased to report that there was only one customer dispute during the program. Proctor Engineering Group worked quickly with the customer and the HVAC contractor to remedy the situation and alleviate the customers concerns.