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1994 & 1995 Agricultural Energy Efficiency Incentives

Sixth Year Retention Evaluation

March 2001



Study ID Nos. 931 & 967

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**1994 & 1995 AGRICULTURAL ENERGY EFFICIENCY INCENTIVES:
SIXTH YEAR RETENTION EVALUATION
STUDY ID NOS. 931 & 967**

Program Description

SDG&E's PY94 & PY95 Agricultural Energy Efficiency Incentives Program was designed to help customers reduce energy costs and increase energy efficiency at their facilities while providing positive resource value to society.

A customer who participated in SDG&E's Agricultural Energy Efficiency Incentives Program received a rebate upon completed installation of the equipment. Information regarding customer name, address, phone number, installed measures, measure costs, energy savings and participation date were kept in SDG&E's project tracking system. The retention sample for this study was drawn from this database.

Sampling and Data Collection

The M&E Protocols require that retention studies evaluate the top 10 measures or 50% of the estimated resource value, whichever number of measures is less, excluding miscellaneous measures. In PY94, all measures in the Agricultural Energy Efficiency Incentives Program were classified as miscellaneous, so no measures are required for a retention study. For PY95, one measure, a variable frequency drive on a trickling filter pump motor accounted for 60% of program TRC. This measure was evaluated for retention.

SDG&E contracted with Xenergy, Inc. to conduct a survey of this customer to verify that the measure was still in place and operable – the definition of effective useful life per the M&E Protocols.

A copy of the survey is provided at the end of this study.

Measures/"Like" Measures

In order to apply any changes in EUL to measures not studied, M&E Protocols require that the utility identify any "like" measures within the program. For SDG&E's PY94 & PY95 Agricultural Energy Efficiency Incentives Program, there are no "like" measures, since no other measures in the program have characteristics similar to the variable frequency drive on a trickling filter pump motor. The *ex ante* estimated EUL for this measure is 15 years.

Econometric Framework

Since there is only one measure to evaluate and it was found to be in place and operable each time it was verified, there are no "failures" in the database. Therefore, an attempt to model EUL is not useful.

Results

The one measure in the study, a variable frequency drive on a trickling filter pump motor, was found to be in place and operable. SDG&E will retain the *ex ante* EUL estimate of 15 years.

M&E PROTOCOLS TABLE 6

RESULTS USED TO SUPPORT

PY94 FOURTH EARNINGS CLAIM

FOR

AGRICULTURAL ENERGY EFFICIENCY INCENTIVES

PROGRAM

SIXTH YEAR RETENTION EVALUATION

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TABLE 6 for RETENTION STUDIES
PROGRAM: AgEEI
YEAR(S): PY94 & PY95

1. End use	1. Measure	2. ex ante EUL	2. ex-ante EUL Source	3. ex-post EUL from Study	4. ex-post EUL for 3rd & 4th claim	5. Standard Error	6. Upper & lower bounds @ 80% Conf Int		7. P Value	8. Realization Rate	9. "Like" Measures to be Adjusted
Pumping	VFD on Tricking Filter Pump Motor	15	*	NA	15	NA	NA	NA	NA	1.00	none

*M&E Protocols Appendix "F"

Note: NA indicates that no failures were observed

M&E PROTOCOLS TABLE 7

DATA QUALITY AND PROCESSING

DOCUMENTATION

FOR

AGRICULTURAL ENERGY EFFICIENCY INCENTIVES

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M&E PROTOCOLS TABLE 7

DATA QUALITY AND PROCESSING DOCUMENTATION

For Agricultural Energy Efficiency Incentives Program

Sixth Year Retention Evaluation

March 2001

Study ID Nos. 931 & 967

1. OVERVIEW INFORMATION

- a. **Study Title and Study ID:** 1994 & 1995 Agricultural Energy Efficiency Incentives Program – Sixth Year Retention Evaluation, March 2001, Study ID Nos. 931 & 967.
- b. **Program, Program Year(s), and Program Description (Design):** Agricultural Energy Efficiency Incentives Program for the 1994 and 1995 program years. The Program was designed to help customers reduce energy costs and increase energy efficiency at their facilities while at the same time providing positive resource value to society.
- c. **End Uses and Measures Covered:** Pumping; one measure: variable frequency drive on a trickling filter pump motor
- d. **Methods and Models Used:** N/A
- e. **Analysis sample size:**

Program Year	Measure	# of Customers in Program	# of Installations in Program	# of Measures Installed in Program	# of Measures in Sample Frame	Date of Retention Studies
1995	VFD on Trickleing Filter Pump	1	1	1	1	April-1998 December-1999 June-2000

2. DATABASE MANAGEMENT

- a. **Data sources:** the data came from the following sources:
 - Customer name, address, phone number, installed measures, and participation date from the program tracking database
 - Measure was determined to be in place and operable by the survey described in the section of the report entitled Sampling and Data Collection.

The data were merged together to form the dataset for the analysis leading to the estimated Effective Useful Life

- b. **Data Attrition:** While the intention was to perform an on-site audit of the customer facility in all three inspections, in 1998, after repeated telephone calls and an unscheduled site visit failed, a telephone interview was conducted. At that time, the plant operator verified that the variable frequency drive on a trickling filter pump motor was still operating. On-site audit verification was successfully completed in 1999 and 2000.
- c. **Data Quality Checks:** The data sets for the analysis were merged in SAS by the appropriate key variables. Counts of the data sets before and after the merges were verified to ensure accurate merging.
- d. **All data collected** for this analysis was utilized.

3. SAMPLING

- a. **Sampling procedures and protocols:** The one customer with the one measure that is in the analysis was contacted to determine if the measure was still in place and operable. A census was attempted and successfully completed.
- b. **Survey information:** A copy of the Survey is attached at the end of the report. The survey completed response rate was 100%.
- c. **Statistical Descriptions:** N/A

4. DATA SCREENING AND ANALYSIS

- a. **Outliers and Missing Data Points:** N/A
- b. **Background Variables:** N/A
- c. **Screened Data:** N/A
- d. **Model statistics:** N/A
- e. **Specification:**
 - 1) **Heterogeneity:** N/A
 - 2) **Omitted Factors:** N/A
- f. **Error in Measuring Variables:** N/A
- g. **Influential Data Points:** N/A
- h. **Missing Data:** N/A
- i. **Precision:** N/A

MEASURE RETENTION SURVEY

FOR

AGRICULTURAL ENERGY EFFICIENCY INCENTIVES

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SDG&E AgEEI Survey

April 1998, December 1999, June 2000

**SDG&E PY95 Agricultural EEI Program
Measure Retention Survey**

Site_nbr: Site_sec: PART:
 Site_mnr:
 Rank: Address:
 Site_Cty:
 Bldg_sz: Bldg_lgt:

Site Contact (DB): _____
 Contact Ph: _____

Alternate contact name: _____
 Alternate contact phone: _____

Surveyor: _____
 Survey Date: _____

ENDUSE:

Contract	MSR#	NEWDESC	kWh Sav	kWRed	Th. Sav	MSR LOC	Ins. Qty	Run Hrs	VerSchedule (incl.date of change in schedule)

SDG&E PY95 Agricultural EEI Program
Measure Retention Survey

Site_nbr: Site_sec: PART:
Site_nm:
Rank: Address:
Site_Cty:
Bldg_sz: Bldg_lgt:

Site Contact (DB): _____
Contact Ph: _____

Alternate contact name: _____
Alternate contact phone: _____

Surveyor: _____
Suvey Date: _____

ENDUSE:

SURVEY DISPOSITION

Audit Completed?: Yes No (check one)

Reason for not completed:

- 1 = Unable to reach/contact.
- 2 = Changed mind about participation in study.
- 3 = Premise closed/not operating.
- 4 = Site/contact info incorrect and could not find alternate contact.
- 5 = Requested to call back, could not complete call.
- 6 = Rescheduled upon arrival at site.
- 7 = Other: Describe:

DISCREPANCIES

Reason for discrepance in counts (check one and describe if necessary)

- =Removed, not replaced (include date of removal),
- =Never installed
- =Exceeds tracking system counts (describe reasons for additional eqmt, eg, retrofits part of SDG&E Program in
- =Removed, replace with more efficient
- =other, describe situation fully

Description/Comments:

SDG&E PY95 Agricultural EEI Program
Measure Retention Survey

Site_nbr: Site_sec: PART:
Site_nm:
Rank: Address:
Site_Cty:
Bldg_sz: Bldg_lgt:

Site Contact (DB): _____
Contact Ph: _____
Alternate contact name: _____
Alternate contact phone: _____
Surveyor: _____
Suvey Date: _____

Facility Tenancy/Ownership:

Have Tenant and Owner remained the same? Yes No (check one)
If NO, what best describes the situation (select one, describe below)

1. New tenant-same owner.
2. Same tenant-New owner
3. New tenant-New owner
4. Premise closed.

Description/Comments:

Building/Facility Configuration:

Check one box that represents the facility layout (check all that apply, describe below):

- Same as time of installation.
- Same tenant, had tenant improvements
- Same tenant, increased floorspace
- Same tenant, decreased floorspace
- New tenant, no tenant improvements
- New tenant, and had tenant improvements
- New tenant, increased floorspace
- New tenant, decreased floorspace, ie, there is empty floorspace.

Description/Comments: