SDG&E Small Business Energy Efficiency (SBEE) SoCal Gas Non-Residential Financial Incentives Program (NRFIP)

2004-05 Evaluation Results

Steve Grover

ECONorthwest

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2004-05 Evaluation Tasks (SBEE and NRFIP)

- Evaluations done by ECONorthwest and Quantum
- Participant and nonparticipant phone surveys
- Utility and program staff interviews
- On-site verification audits
- Billing analysis
- Self-report free ridership analysis
- Review of engineering calculations
- Operating hour analysis (SBEE only)
- Final reports available on CALMAC website

SBEE Program

Direct install program for small commercial customers in San Diego area.

Measures include:

- T8/T5 (66% of 2004-05 net savings)
- CFL (30%)
- Sensors (2%)
- Exit Signs (2%)

Operating Hours Analysis

Used on-site verification results (n=101) to derive operating hours and load shapes.

Result:

- T8/T5: OH = 2,572 (original = 4,434)
- CFL: OH = 1,872 (original = 4,255)
- CFL: Coincident Diversity = 0.57 (original 0.83)

Note: SCE Small Business HTR Evaluation (on-site and logger data) confirms SBEE results:

- T8/T5 = 2,565 hours
- CFL = 1,881 hours

SBEE Billing Regression

- Used billing model with sample of parts and nonparts to produce net results
- Measures include T8/T5s, CFLs, CFL Fixtures, Exit Signs, and Sensors
- Adjusted savings for verification and operating hours prior to estimating model
- Result: T8/T5 Realization Rate = 0.93 (Other measures not statistically significant)

SBEE Self-Reported Free Ridership

Based on participant phone survey results (n=221)

Adjusts for partial free riders (50% weight) and delayed free riders (25% weight).

Result:

- T8/T5s = 4%
- CFLs = 10%
- Both results consistent with initial net-to-gross ratio (0.96) used for the program.

SBEE Net Realized kWh Impacts

Measure	*Ex Post* kWh Net Realization Rate (Share of *Ex Ante* Gross)
T8/T5	0.52
CFL	0.36
Exit Sign	0.92
Sensor	0.96

SBEE Conclusions and Recommendations

- Revise operating hour assumptions for CFLs and T8/T5s for small businesses.
- Revise coincident diversity factor for CFLs for small businesses.
- Conduct study to modify operating hour assumptions in the DEER database for small businesses.

NRFIP Program

NRFIP offers financial incentives for gas efficiency measures and targets small and medium-sized commercial customers.

Program Components:

- Food Service (15% of net savings)
- Non-residential Energy Conservation (NREC, 15% of net savings)
- Non-residential Energy Replacement (NRER, 70% of net savings)

NRFIP Billing Regression

Food Service regression used sample of parts, nonparts, and selected survey variables.

NRER / NREC regression used parts only, results adjusted post-model to derive net impacts.

Results:

- Food Service: RR = 0.50
- NRER / NREC RR = 0.75

NRFIP Self-Reported Free Ridership

Based on participant phone survey results (n=129)

Adjusts for partial free riders and delayed free riders, several different weighting schemes used.

Result:

- NRER / NREC = 30%
- Food Service = 30%
- A 10% spillover factor is assumed, NTG = 0.8
- Note: billing regression results used instead of self-reported free ridership for Food Service.

NRFIP Net Realized Therm Impacts

Program Component	*Ex Post* Net Realization Rate (Share of *Ex Ante* Gross)
Food Service	0.55
NRER	0.60
NREC	0.60

NRFIP Conclusions and Recommendations

- Satisfaction with the program is high and utility sponsorship is important to participants.
- Better documentation needed for initial savings values (program has improved this for 2006-08).
- Free ridership is likely higher than currently assumed (0.8 - 1.0 NTG historically).
- Initial savings estimates may be too high based on the billing analysis results and engineering review of a small sample of projects.