

Cool Change Program

1. Projected Program Budget	\$	733,002
2. Projected Program Impacts		
MWh		3,494
MW (Summer Peak)		0.55
3. Program Cost Effectiveness		
TRC		3.26
PAC		4.19

4. Program Descriptors

Market Sector:	Non-Residential
Program Classification:	Local
Program Status:	New

5. Program Statement

The primary purpose of the Cool Change Program is to promote annular refrigerant flow devices (ARFDs) to SCE's agricultural and food processing customers. ARFDs are easily installed on existing refrigeration systems, provide significant energy savings (15-20% on average) and have short simple paybacks relative to other refrigeration measures.

ARFDs increase the cooling capacity of the evaporator coil and refrigeration system and significantly decrease the defrost cycles. This technology is compatible with a wide range of direct expansion refrigeration systems such as milk cooling equipment, warehouse freezers, small coolers and air conditioning systems. The Cool Change Program will offer customer rebates and midstream incentives on ARFDs and will promote the program by working closely with manufacturers and a network of equipment dealers and installers.

6. Program Rationale

This is a generally applicable technology that will produce significant energy savings with a short payback time and relatively little hassle for customers.

7. Program Outcomes

Outcomes include increased adoption of ARDF technology in refrigeration systems and increased awareness of this technology and energy efficiency practices within the agricultural and food processing industries, as well as with manufacturers and equipment dealers. This program will also reduce emissions at the utility level through energy savings.

8. Program Strategy

The greatest barrier facing this program is lack of awareness and communication.

EnSave uses a program delivery method that establishes fluid communication with manufacturers, equipment dealers, and the agricultural and food processing community to consistently update them with program news and encourage applications. This process ensures that producers and processors hear about the program and puts the strength of the entire marketplace behind the promotion of these technologies.

9. Program Objectives

The program's goal is to install 260 ARFDs for an energy saving of 3,493,912 kWh and 553 kW over a 24 month program period.

10. Program Implementation

Task 1: Build Tracking System

EnSave will create a database that will be used to compile information on measurable energy efficient activity and expenses and will be available upon request to SCE.

Task 2: Develop Marketing Materials and Obtain Approval from SCE

Marketing materials developed by EnSave will include information packets for ARFD manufacturers, equipment dealers, and the food processing and agricultural communities. Examples of information included in these packets are program announcements, program applications, steps to follow, and program contact information. Dealers will also receive an installation completion form, sample invoice and invitation to register with EnSave's Dealer Webpage.

In addition, marketing materials will be created for distribution by participating food processing and agricultural groups. This will include a program letter for participants, an application, a program announcement, and a "ten steps to installation" brochure.

Other marketing materials will include program newsletters and EnSave web pages pertaining to the program

Task 3: Implement Marketing Campaign

The Cool Change Program will use a multi-pronged approach to marketing that reaches out to the agricultural and food processing communities. The agricultural community includes key players such as the USDA Resource Conservation and Development Councils, the University of California Cooperative Extension, and the California Department of Agriculture. The broader food processing community includes commodity organizations and broad-based food organizations, such as the California League of Food Processors. The program team will work closely with the ARFD manufacturers and its dealer network in order to spread information about the technology to both key sectors. The overall marketing rationale for this program is to use a comprehensive outreach approach that establishes fluid communication with all players in the market to constantly update them with program news and encourage application.

Marketing techniques will include face-to-face marketing directly to producers, processors, their equipment dealers, and the agricultural and food processing community,

and will include a training session and networking trips. In addition, the program will implement a phone marketing campaign at the beginning of the program, encouraging food processing and agricultural groups to market the program to its members.

Task 4: Enroll Customers

As a result of marketing, the producers and processors will apply to the program by submitting an application form. EnSave will contact the applicants to clarify or add information as necessary and will then determine whether or not the customer qualifies for the program, using pre-set standards. If qualified, EnSave will notify the customer by mail and will also include an Information Verification Form that will contain a rough estimate of the projected energy and dollar savings to result from measure installation. Once the completed form is returned to EnSave, the installation can proceed. In the event the customer does not qualify, they are notified by mail and given a list of other available programs.

Task 5: Install Energy Efficient Hardware, Issue Customer Rebates, and/or Perform Program Services

Participants will purchase and install equipment through a dealer of their choice, and will receive their rebate through EnSave. In addition, EnSave will offer a midstream incentive of \$50 per ARFD installed to the refrigeration dealer. Although EnSave will not be responsible for installation, they will oversee both the installation process and the rebate payment to ensure the equipment is actually installed.

Task 6: Inspect Installed Jobs

After the receipt of the Installation Completion Form and a copy of the invoice, EnSave will inspect each installation to ensure the ARFDs have been installed and are functioning correctly. SCE may also complete inspections on a percentage of installations. Any customer complaints will be routed to EnSave.

Task 7: Remedy Installation Issues

If a complaint regarding installation arises, EnSave will contact the appropriate dealer and inform them of the situation. If the complaint is related to the ARFDs themselves, EnSave will contact the manufacturer. Any complaints regarding EnSave will be resolved internally. All complaints will be tracked in a log.

Task 8: Perform Customer Satisfaction Surveys

Along with the rebate payment, each participant will receive a survey requesting feedback on customer satisfaction with the program. The survey will address issues such as ease of filling out forms, satisfaction with EnSave, availability of information on other related programs, potential future energy efficiency projects, and suggestions for improvement.

Task 9: Address Customer Satisfaction Issues

The program will address customer satisfaction issues by analyzing the results of its Customer Satisfaction Survey, which will occur following installation. Any warranty concerns will be the responsibility of the equipment dealer/installer. As a result of the

survey, EnSave will create a matrix of the response that clearly identifies the degree of satisfaction and an action plan for exceeding expectations.

Task 10: Perform Program Reporting

EnSave will submit a monthly report to include a brief narrative summary, invoices, E3 calculator, budget workbook and flat files. They will perform ad hoc reports upon request.

Task 11: Program Ramp Down

In August 2007, EnSave will send a program deadline reminder to all potential participants and will post it on its website. On October 1, 2007, applicants will be sent a certified letter, notifying them of the December 1, 2007 deadline to submit all installation paperwork. This will also be the deadline for all applications. December 1, 2007 will be the closing date for all installations and the last day to submit verification paperwork. December 15, 2007 will be the last day to complete EnSave installation verifications, and December 31, 2007 will be the last day to complete SCE installation verifications.

Task 12: Shut Down the Program

The program will be completed by December 31, 2007. EnSave will send its final report to SCE by March 30, 2008. They will continue to accept queries about the program and any warranty issues from program participants for at least three years after the program closes.

Task 13: Follow up With Remaining and New Customer Issues

EnSave will address customer satisfaction issues after the program shut down. This plan does not address hardware warranty issues, as EnSave is not responsible for installation/maintenance. As stated above, EnSave will continue to accept questions from program participants up to three years after the program closes.

Task 14: Submit Final Program Report

EnSave will submit a final program report at the conclusion of this program that will include program achievements and challenges, goals attained, lessons learned, improvement recommendations, "next steps" proposed, mainstreaming of the program, continued development and end program concept.

11. Customer Description

This program is designed for non-residential SCE customers, specifically medium (100 to 500 kW), small (20 to 100 kW), and very small (less than 20 kW) agricultural and food processing customers with existing refrigeration systems. EnSave will target upstream, midstream and downstream players by targeting ARFDs manufacturer, refrigeration equipment dealers and installers, and the producers and processors.

12. Customer Interface

Customer interface will include face-to-face marketing with producers, processors, equipment dealers, and the agricultural and food processing community. Customers will also interface with the program through networking trips and training sessions initiated

by EnSave. In addition, the program will interface with customers via phone marketing, in order to inform the agricultural and food processing community of the benefits of participation. EnSave will also use direct mail marketing by sending information packets to manufacturers and dealers, as well as food processing and agricultural producers.

13. Energy Measures and Program Activities

13.1. Measures Information & Energy Savings and Demand Reduction Level Data

Measure Name	Gross Unit Annual Electricity Savings (kwh/unit)	User Entered kW Savings per unit (kW/unit)
ARFD - Food Processors Freezers up to 59,999 BTU	4165	0.49
ARFD - Food Processors Freezers 60,000 - 107,999 BTU	15492	1.82
ARFD - Food Processors Freezers 108,000 - 143,999 BTU	23238	2.73
ARFD - Food Processors Freezers 144,000 - 215,999 BTU	33197	3.91
ARFD - Food Processors Freezers 216,000 - 299,000 BTU	47583	5.6
ARFD - Food Processors Coolers up to 59,999 BTU	2486.532288	0.48660123
ARFD - Food Processors Coolers 60,000 - 107,999 BTU	7815.425344	1.52943745
ARFD - Food Processors Coolers 108,000 - 143,999 BTU	11839.94336	2.31701436
ARFD - Food Processors Coolers 144,000 - 215,999 BTU	17059.24017	3.33840316
ARFD - Food Processors Coolers 216,000 - 359,999 BTU	24105.14114	4.71724875
ARFD - Dairy Refrigeration up to 59,999 BTU	2486.532288	0.48660123
ARFD - Dairy Refrigeration 60,000 - 107,999 BTU	7815.425344	1.52943745
ARFD - Dairy Refrigeration 108,000 - 143,999 BTU	11839.94336	2.31701436
ARFD - Dairy Refrigeration 144,000 - 215,999 BTU	17059.24017	3.33840316
ARFD - Dairy Refrigeration 216,000 - 359,999 BTU	24105.14114	4.71724875
ARFD - Agriculture Other than Dairy Coolers up to 59,999 BTU	2486.532288	0.48660123
ARFD - Agriculture Other than Dairy Coolers 60,000 - 107,999 BTU	7815.425344	1.52943745
ARFD - Agriculture Other than Dairy Coolers 108,000 - 143,999 BTU	11839.94336	2.31701436
ARFD - Agriculture Other than Dairy Coolers 144,000 - 215,999 BTU	17059.24017	3.33840316
ARFD - Agriculture Other than Dairy Coolers 216,000 - 359,999 BTU	24105.14114	4.71724875

13.2 Non-energy Activities (Audits, Trainings, etc.)

Not Applicable

13.3 Subcontractor Activities

EnSave will be hiring a subcontractor through a request-for-proposal process to complete the site inspections.

13.4 Quality Assurance and Evaluation Activities

EnSave will maintain quality control throughout the program by scheduling a site

inspector to inspect the installation to ensure that the ARFDs have been installed and are functioning correctly. The process will consist of 100% inspection for verification, completion of verification site form attesting to installation, and SCE inspection on percentage of installation, as necessary. Customer complaints will be routed to EnSave. In addition, EnSave will send a customer satisfaction survey with the rebate and will present the results and a customer satisfaction action plan to SCE on a monthly and quarterly basis, respectively.

13.5 Marketing Activities

The Cool Change Program will use a multi-pronged approach that reaches out to the agricultural and food processing communities. The agricultural community encompasses organization such as the USDA Resource Conservation and Development Councils, University of California Cooperative Extension and others. The broader food processing community is comprised of commodity organizations. EnSave will work closely with the ARFDs manufacturer and its dealer network in order to spread the information.

EnSave will market the Cool Change Program using information packages targeted at ARFD manufacturers, equipment dealers, and the food processing and agricultural communities. In addition, the food processing and agricultural producer communities will receive marketing materials to pass on to their customers, such as a program letter, application and “ten steps to installation” brochure. The Cool Change Program will also use program newsletters, web pages, training sessions, phone marketing, and networking trips to market its program.