



PG&E Third Party HVAC Program AIR CARE PLUS Overview

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PG&E's 2006-08 Third Party Program:

- Air Care Plus, (ACP) was added into PG&E's 3rd Party portfolio to target HVAC maintenance needs in the hard to reach commercial market sector.
- Commercial customers with millions of roof top units are not operating at maximum efficiency and capacity.
- ACP offers a state of the art technology to help serve these customers better than ever before.
- Air care plus was a successful 2006-08 program exceeding goal expectation for the program cycle.
- The Air Care Plus program is 1 of 50 Third Party programs that will be offered by PG&E in the upcoming 2010-12 program cycle.

Program Design

- ACP is contractor driven and incorporates training, marketing, and incentives to help contractors understand and communicate the value of HVAC energy efficiency to customers.
- ACP can complement the customer's routine preventative maintenance practices.
- Using the most current diagnostic tools and technology, ACP provides an enhanced HVAC tune-up designed to optimize performance of all major energy using components of roof top units and split systems.
- Continual training is an important aspect of the program; service managers, dispatchers, technicians, and other operational staff members participate.
- Key factors that make the program successful; no cost to customers, it rewards the contractors, and it benefits from a strong relationship between the program and the PG&E service and sales reps.

- Air Care Plus protocols identify tune-up opportunities for the HVAC rooftop unit, and include:
 - Collection of building and RTU data
 - Refrigerant Charge and Airflow optimizing
 - Programmable thermostat adjustment and replacement
 - Economizer Functionality
- Measures:
 - Basic Package Without Economizer
 - Basic Package With Economizer
 - Refrigerant Pre-test
 - Refrigerant Charge and Airflow (1 and 2 compressors)
 - Thermostat Adjustment and replacement
 - Economizer Control Package





ACP Incentive Structure for Contractors

AIRCARE PLUS

2010-2012 CONTRACTOR INCENTIVE GUIDE

Retrofit Measure	Description	
Basic Package	<ul style="list-style-type: none"> Completion of zone and RTU modules using AirCare Plus software 	\$25
	<ul style="list-style-type: none"> Installation of brass Schrader valve cap and economizer changeover adjustments when prompted by AirCare Plus software. 	
Refrigerant Pre-Test	<ul style="list-style-type: none"> Refrigerant pre-test – as-found conditions are recorded and evaluated. Based on the evaluation, an airflow and refrigerant tune-up may be recommended. 	\$25
	<ul style="list-style-type: none"> This pre-test can not be accurately conducted unless the ambient temperature is above 55° F. 	
	<p><i>(The customer provides the air filter for the contractor if the air filter requires replacement.)</i></p>	
Refrigerant Charge and Airflow	<ul style="list-style-type: none"> Make necessary adjustments as prompted, including charge adjustments and coil cleaning. 	\$175 One Comp. Unit
	<ul style="list-style-type: none"> Record all changes made and complete a post-test. 	\$250 Two+ Comp. Unit
Programmable Thermostat Adjustment	<ul style="list-style-type: none"> Record as-found thermostat settings. 	\$25
	<ul style="list-style-type: none"> Make energy savings adjustments as prompted by the software, including revising schedules and adjusting unoccupied setpoints and fan modes. 	



ACP Incentive Structure for Contractors

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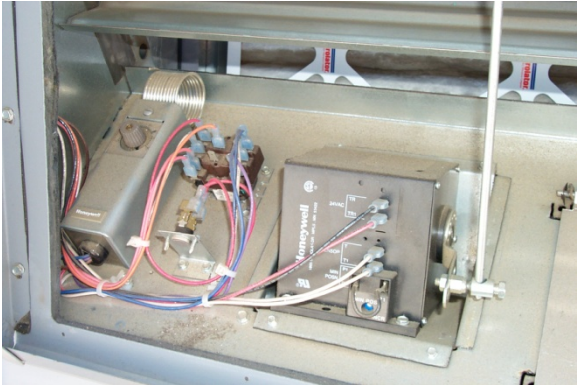
Retrofit Measure	Description	
Programmable Thermostat Replacement	<ul style="list-style-type: none"> Record as-found settings. Installation of a new programmable thermostat. 	\$150
Economizer Adjustment	<ul style="list-style-type: none"> Perform economizer functional tests to identify failure. If economizer is functional proceed to make optimizations to setpoints if not, proceed to Create a Functional Economizer. 	\$175
Creating a Functional Economizer	<ul style="list-style-type: none"> Perform economizer functional tests to identify failure. Optimize control strategy and setpoints. Economizer must pass functional tests when complete. 	\$175
Economizer Control Package	<ul style="list-style-type: none"> Replace the dry bulb transmitter or snap disc with an outside capillary style remote dry bulb thermostat. Adjust the changeover setpoints to meet program protocols. 	\$100

RAFT

Maximize efficiency of refrigeration cycle



Install or optimize programmable thermostat settings



Optimize economizer controls & sensors



Outcomes For Air Care Plus Program 2006-08 and 2009

- *Average savings per unit is 2,200 kWh*

- *For the 2006-08 program cycle:*
 - *Total kW: 2,551*
 - *Total kWh: 19,853,767*
 - *Total therms: 32,529*
 - *Total measures rebated: 23,912*

- *For 2009 Bridge Funding: (through Nov. 2009)*
 - *Total kW: 730*
 - *Total kWh: 12,300,000*
 - *Total therms: 23,402*
 - *Total Measures Rebated: 13,000*

* *Program goal for 2006-08 was 12,713,943*

** *Program goal for 2009 Bridge Funding is: kW: 835 kWh: 8,775,000*



Future Direction of Air Care Plus Program

- The Air Care Plus Program will continue into the new 2010-2012 program cycle.
- Program will consider additional cost effective measures.
- Within the current structure, the program will continue to offer the program to customers at no cost.
- New and ongoing marketing will continue and be enhanced.
- Program will be establishing a more in depth audit process looking at units from the past to evaluate measure persistence.
- Will be working with other industry professionals to evaluate and sharpen program's outcomes.



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