

# ARRA HVAC Opportunity

1) HVAC Tax Credit  $\$1,500 \times 500,000 \times 2 = \$1.5B$   
 2009 – 2010 Only

Launch Upstream Incentives Now - 93% of A/Cs are Less than 15 SEER

AHRI shipping data for California

	2004		2005		2006		2007	
9 SEER	1,663	0.2%	1,107	0.1%	185	0.0%	157	0.0%
10 SEER	416,433	60.2%	445,680	58.0%	97,382	16.2%	17,063	3.4%
11 SEER	21,593	3.1%	21,599	2.8%	9,715	1.6%	7,621	1.5%
12 SEER	176,224	25.5%	193,435	25.2%	30,786	5.1%	5,283	1.0%
13 SEER	46,243	6.7%	73,221	9.5%	388,286	64.6%	388,072	77.1%
14 SEER	18,942	2.7%	20,186	2.6%	49,875	8.3%	51,226	10.2%
15 SEER(+)	11,041	1.6%	12,780	1.7%	16,015	2.7%	17,670	3.5%
16 SEER					4,532	0.8%	9,775	1.9%
17+ SEER					3,916	0.7%	6,318	1.3%
<b>Grand Total</b>	<b>692,139</b>		<b>768,008</b>		<b>600,692</b>		<b>503,185</b>	

# California Statewide Residential Upstream HVAC Program

	Tax Credit Level $\approx$ A/C +15%
<b>1. Program Budget – 3 Years</b>	
PG&E	\$154,622,200
SCE	\$234,951,050
SDG&E	<u>\$73,572,759</u>
<b>Combined IOUs</b>	<b>\$463,146,009</b>

<b>2. Program Impacts</b>	<b>Annual GWH/Yr</b>	<b>% of Goal*</b>	<b>MW/Yr</b>	<b>% of Goal**</b>
PG&E	61.5	5.7%	112.2	16.3%
SCE	124.2	10.7%	178.9	24.1%
SDG&E	<u>32.3</u>	<u>12.3%</u>	<u>48.7</u>	<u>31.3%</u>
<b>Combined IOUs</b>	<b>218.</b>		<b>339.8</b>	
* % of 2011 GWH/ Yr Goal    **% of 2009 – 2011 MW				

w/ Goal of 75% improvement by 2030 budget & savings increase 500%

## No TRC errors found in IOU or Energy Division initial reviews

<b>PG&amp;E</b>	<b>TRC 3.68</b>	<b>PAC 1.00</b>
<b>SCE</b>	<b>TRC 3.93</b>	<b>PAC 1.01</b>
<b>SDG&amp;E</b>	<b>TRC 4.24</b>	<b>PAC 1.21</b>

## What Changed vs Prior A/C TRC

- 1) Upstream Program Cuts Incremental Cost 62% vs Downstream - \$570 achieves \$1,500**
- 2) Federal Tax Credit Reduces Cost \$1,500**
- 3) Non Incentive Costs Reduced to 15% instead of 50% by working with HVAC Industry**

# HVAC Industry Participation

## Convert all Home Depots

## 70% Market Transformation 1<sup>st</sup> Year

Rocky Bacchus  
Utility Program Manager  
Efficiency PowerPlants  
6501 Tarascas  
El Paso, Texas 79912

November 20, 2008  
Re: Interest In California Incentive Program

Dear Mr. Bacchus,

We appreciate you meeting with one of our people and explaining the opportunity for a 2009-2011 up stream air conditioning incentive program in California. You have conveyed that the program is proposed to:

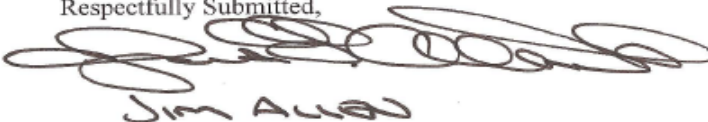
- 1) Pay \$100/ ton for 15 SEER /12.5 EER air conditioning units (unitary units up to 65,000 btu) in the Investor Owned Utility territories (PG&E, SCE, and SDG&E).
- 2) Pay the incentive upstream to the Manufacturer or Distributor, whichever is more productive.
- 3) The program to make payments promptly and have adequate funding for the full 3 years 2009 – 2011, without any funding gaps.

In response to your request to know if the \$100/ ton incentive is cost effective for us, we assure you that our current manufacturer's incremental cost of increasing from a basic 13 SEER to a basic 15 SEER /12.5 EER model, which qualifies for the Federal Tax Credit, is not more than \$100/ ton.

A promptly paid \$100/ ton incentive we can rely on, will motivate us to move all 13 SEER sales to 15 SEER sales. Our best "guess-estimate" of the conversion percentages with the above program is that we will convert 70% of our sales in 2009, 90% in 2010, and 95% in 2011. If we have notice in early 2011, that a statewide program will be renewed for 2012 – 2014, we will probably eliminate inventory with less than 15 SEER efficiency, in California.

While we cannot make firm commitments until we see the final program, we are interested in participating in the program. We commit to review the incentive processing procedures and give you feedback to help reduce administration costs. Please keep us informed as this program progresses.

Respectfully Submitted,



Jim Auer

2) Leverage ~\$250M  
DOE & LIHEAP  
Weatherization funds  
“Deep Energy  
Efficiency” improve  
50%+



**CHEERS Rating Report**

Prepared for: John Doe's Residence

CHEERS	CHEERS Certificate ID: EH254DAF960033	Rater: CHEERS Rater	Rater ID: CCNCR9999999	Date of Rating: 3/13/2009
Site Address: 123 Main St. Sacramento, CA		<b>About Your Home</b>		
Customer: John Doe's Residence 123 Main St. Sacramento, CA (123) 123-1234		Program:	FHA	
Owner: John Doe's Residence 123 Main St. Sacramento, CA (123) 123-1234		Interest Rate:	5.00%	
		California Climate Zone:	CZ12	
		Year Built:	1980	
		Electric Utility:	Electric PG&ES_Yes	
		Gas Utility:	Gas PG&ES	
		Cond. Floor Area:	1380	
		Volume:	11040	
		Front Orientation:	0	
		Stories:	1	
		Type:	SingleFamily	

*Energy use and measure savings calculated using EnergyPro (Version: 4.415).  
Data imported from transfer file: '1980 Vintage 1380 sft Single Family.dat'*

**CEC  
Certified  
Programs**

Recommended Improvements	Useful Life	Annual Savings	Lifecycle Savings / Present Value	Estimated Cost to Install
Roof insulation upgradeto R-38	30.0	\$76	\$1,165	\$825
Seal HVAC ducts for leakage reduction to 58 CFM	30.0	\$103	\$1,581	\$275
Duct insulation upgradeto R-6	30.0	\$116	\$1,786	\$375
Reduce air infiltrationto 1265-CFM	30.0	\$10	\$146	\$450
HVAC system upgrade-Heating: Furnace AFUE 0.95; Cooling: Split SEER 16	30.0	\$239	\$3,678	\$4,500
Water heating system upgrade-EF: 0.62; Dist: StandardNoPipeIns	15.0	\$48	\$503	\$725
Upgrade to 80-percenthigh efficacy lighting	7.0	\$20	\$116	\$250
<b>Totals:</b>		\$612	\$8,974	\$7,400

**Reports kWh,  
kW, & Therms  
Saved by  
Measure**

Annual Operating Costs	Existing	Improved
Heating	\$762.20	\$458.47
Cooling	\$416.59	\$198.19
Water Heating	\$323.95	\$258.77
All Other Uses	\$147.88	\$123.08
<b>Total</b>	\$1650.62	\$1038.50

<b>Existing HERS Score:</b>	<b>190.5</b>
<b>HERS Score with Improvements:</b>	<b>119.5</b>
<b>Percentage Improvement:</b>	<b>37.3%</b>

A ZERO energy home has a HERS score of "0". A home built to the 2005 California Title 24 Energy Code has a HERS score of 100.

Disclaimer: The estimated operating costs shown in this report are dependent upon many factors. The construction and conservation features of the home clearly is important. Equally important is the thermostat setting. How the thermostat is used, appliance use, and occupant interaction all influence the annual operating cost. The estimates provided in this report are based on typical conditions, your actual usage will vary.