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Applied Learning Associates, Inc.

Improved Performance Through Applied Learning

To: HVAC Salespersons and Service Technicians

From: Tom Piscitelli

Re: **Estimating Energy Savings for Residential Gas/Oil Furnaces and AC**

INSTRUCTIONS AND COMMENTS

This worksheet is intended to give you a sales tool to estimate the potential cost savings that may occur when the homeowner replaces an old furnace or air conditioner with today's products. There are three reasons why you can not guarantee these savings: 1) you cannot predict the weather, 2) you cannot predict changing utility rates and 3) you cannot predict how the customer will operate their system. That being said, these estimates are realistic based on comparisons to energy savings data produced by Energy Star and equipment manufacturers. The user is required to satisfy themselves that these data are realistic before presenting them to their customer.

- ◆ Explain the repeated use of “estimated” and “approximate” to the customer.
- ◆ On the left hand margin, circle the current equipment’s estimated/approximate efficiency and circle the efficiency rating of the proposed equipment.
- ◆ On the top margin circle the homeowner’s current approximate Current Annual Heating/Cooling Cost. Ask the customer for this information or use your judgment, again explaining your rationale to the customer. Remember, this is net heating and cooling costs...not the total gas or electric bill.
- ◆ Staying in the same column, go down and circle the approximate annual heating/cooling cost that is across from the proposed equipment efficiency number that you circled.
- ◆ Complete this for both heating and cooling and show the Estimated Annual Heating/Cooling Savings in the space provided.
- ◆ Tell the customers there are some Variable Speed Fan Savings but I recommend you do not include these since the savings data are harder to calculate and we actually don’t need those savings to make our point.
- ◆ Total the Estimated Annual Heating Savings and the Estimated Annual Cooling Savings in the space provided and calculate the Monthly Savings Estimate and 10 Year Savings Estimate.
- ◆ If you would like to show a simple Return On Investment calculation to your customer then use the formula at the bottom of the page. Remember that anything better than 2% is pretty good these days!

ESTIMATED ENERGY SAVINGS

ALL COST AND SAVINGS DATA ARE ESTIMATES.

HEATING

AFUE % RATING	APPROXIMATE CURRENT ANNUAL HEATING COST							
60	400	500	600	700	800	1000	1200	1400
65	370	460	555	650	740	920	1110	1300
70	345	430	515	605	690	860	1030	1210
80	300	375	450	525	600	750	900	1050
90	265	335	400	465	535	670	800	930
92	260	328	392	456	524	656	784	910
93	257	324	388	452	519	649	776	900
95	255	321	384	447	514	642	768	890
96	250	315	376	438	504	630	752	880

ESTIMATED ANNUAL HEATING SAVINGS: \$ _____

COOLING

SEER RATING	APPROXIMATE CURRENT ANNUAL COOLING COST							
6	200	300	400	500	600	800	1000	
7	170	260	345	430	515	690	860	
8	150	225	300	375	450	605	750	
10	120	180	240	300	360	485	600	
11	110	165	220	275	330	440	550	
12	100	150	200	250	300	405	500	
13	90	135	185	230	280	370	460	
14	85	130	170	215	260	345	430	
15	80	120	160	200	240	320	400	
16	75	115	150	190	225	300	380	
18	65	95	130	165	195	260	330	

ESTIMATED ANNUAL COOLING SAVINGS: \$ _____

ESTIMATED ANNUAL VARIABLE SPEED FAN SAVINGS: \$ _____

ANNUAL HEATING AND COOLING SAVINGS ESTIMATE: \$ _____

MONTHLY SAVINGS ESTIMATE: \$ _____

10 YEAR HEATING AND COOLING SAVINGS ESTIMATE: \$ _____

RETURN ON INVESTMENT (ROI) FROM ENERGY SAVINGS: _____ %

(ROI = ANNUAL SAVINGS \$ / TOTAL SYSTEM INVESTMENT \$)