

Now is the time to schedule your cooling maintenance!



Booking Maintenance Now!

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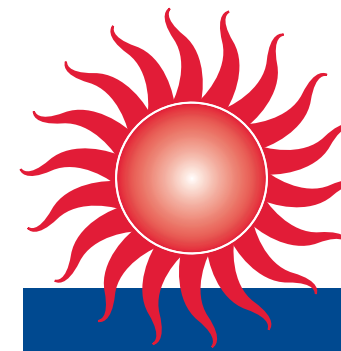
Ask about our automatic scheduling or Maintenance Agreements and never worry about forgetting to call again! You will also receive priority scheduling for all emergency service when you sign up for auto-scheduling or Maintenance Agreements!

Roger Lamy, President
Karen DeSousa, Editor & Operations Manager
Rob Leal, Project Manager

Phone: 508-763-3738
Fax: 508-763-8541
Email: info@advanceair.net
www.advanceair.net



For changes of address, or if you'd like to receive this newsletter via email, please contact Karen DeSousa at karen@advanceair.net or 508-763-3738.



ADVANCE

AIR & HEAT COMPANY INC.



Spring Newsletter 2010

New Rooftop Units Revive HVAC Efficiency Rebate Programs

After nearly two years of waiting, the stars have finally aligned to make HVAC rebate programs exciting again! Since efficiency standards increased, major manufacturers like Trane and Carrier have been working hard to catch up. Though high efficiency products were available, the cost was prohibitive to the average consumer even with rebates. With new units coming onto the market in 2010, the rebates have become valuable again. But you must act now, because in our experience, this alignment of price and rebate won't last long.



14 SEER WeatherMaster Series Rooftop Unit from Carrier

Efficiency requirements stayed the same between 2009 and 2010, giving consumers a window of opportunity to qualify for rebates before standards are increased again. But if past experience holds true, the rebate will likely be readjusted next year, eliminating the rebate for 14 SEER units. Those who take advantage of the program in 2010 will be able to purchase a 14 or 15 SEER unit for the same or even less than a 13 SEER unit (the current standard for new units), and reap all of the extra energy savings benefits along with a nice rebate from your local utility! For more information on SEER, see the article below.

When utilities put together rebate programs for HVAC equipment, they shoot for pie-in-the-sky efficiency ratings in order to encourage manufacturer's to push the envelope. It takes some time for manufacturers to produce a product that meets both the required efficiency rating AND an affordable price tag. So the units are out there, but even with the rebate the return on investment takes longer than most of us are willing to wait for. The "green" folks who don't mind a longer payback schedule may choose to make the upfront investment for the long-term energy savings, but typically the average consumer can't wait that long. With this new equipment, the ROI is shortened to the point where, "green" or not, the investment simply makes sense.

-See Rebate Schedule on Page 3

Advance Air Earns Prestigious STAR Qualification from Leading Trade Association



The Mechanical Service Contractors of America, MSCA, has raised the bar for training and professionalism with their new MSCA STAR Qualification program. The association initiative of excellence offers proof to building owners and facilities managers that the STAR qualified contractor is providing the highest level of skill, quality, value, and professionalism in the industry. Recently, Advance Air was designated as a STAR after surpassing stringent business and HVAC service standards set forth by MSCA.

Contractors that achieve MSCA STAR Qualified status have verified that they uphold a strict code of business ethics, employ the best trained and most qualified workforce, maintain a safety record above the industry average, offer outstanding customer service and focus on continuing education and training for all employees. A third party review committee set up through the National Inspection, Testing and Certification Corporation (NITC), a leading testing and certifying organization that is ISO 9001:2000 certified and an ANSI accredited certifier, determines qualification based on documented proof of criteria submitted by contractors. When the health, safety, and comfort of building occupants are on the line, it's vital to hire a highly competent MSCA STAR contractor.

What's Inside:

New Rooftop Units Revive HVAC Efficiency Programs

What are SEER and EER?

Are you ready for High Efficiency HVAC?

*Advance Air & Heat, Inc
177 Bullock Road
E. Freetown, MA 02717
508-763-3738
www.advanceair.net*

ADVANCE AIR & HEAT COMPANY INC.
177 Bullock Road
East Freetown, MA 02717
www.advanceair.net

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What are SEER and EER?

SEER is a common term in air conditioning which stands for Seasonal Energy Efficiency Ratio. SEER is essentially a rating system to measure the efficiency of an air conditioning system by comparing the cooling capacity generated to the electricity used to create it.

The higher the SEER number, the more efficient the system. For example, a 15 SEER unit uses less energy to achieve the same amount of cooling as a 13 SEER unit.

EER, which stands for Energy Efficiency Ratio, is also a measurement of efficiency using cooling capacity and energy used. The difference between SEER and EER is that the SEER calculation uses measurements over a whole cooling season whereas EER uses the energy consumed at a specific controlled outdoor air temperature (95° F).

SEER is basically an average efficiency over a range of temperatures, where EER is the unit's efficiency at 95 degrees Fahrenheit.

Typically units 5 tons and smaller will be measured in SEER and larger units in EER. Since EER and SEER are measured under a set of different conditions, they are not interchangeable or accurately convertible, but the general rule of thumb is that a unit's SEER rating will be about 12-15% higher than its EER.

Annual Energy Savings vs. 10 SEER

Replacing one 5 Ton rooftop unit (10 SEER rating) with a higher efficiency unit will save you energy. Adding a programmable thermostat or building automation system to shut off your systems when the building is unoccupied will make your savings grow even more.

Energy Savings per Season

13 SEER	\$172.80 to \$727.75
14 SEER	\$213.94 to \$901.03
15 SEER	\$249.60 to \$1,051.20

Assumptions: Five ton rooftop unit during one cooling season of 26 weeks. Energy cost of 12 cents per kWh. Range begins with 40 runtime hours per week (typical night setback schedule) up to 168 hours per week (no setback).



Since January 2006, all newly manufactured air conditioning units were required to have a minimum SEER rating of 13 per the US Dept. of Energy. Many units still operating have a SEER rating of 10-12, though actual operating efficiencies are likely much lower due to the age or condition of the unit. The average annual energy savings for a replacing a 10 SEER rooftop unit is illustrated above. The illustration shows a 5 ton unit, which is about the size of two residential units, or good for a small office building. The savings grow as the tonnage grows.

The range shown in the savings illustrator above is based on a range of unit runtimes. The low end conservatively figures a 40 hour work week of runtime with a night setback. The high end is a system that runs constantly 24/7. Though it's great to have larger savings, the key thing to remember is that you don't NEED the cooling when the building is unoccupied, so why pay for it at all? No matter what SEER rating you have, one of the smartest investments that you can make is in a programmable thermostat or building automation system that will allow you to reduce your cooling/heating demand when your building is unoccupied. With a setback of at least eight hours, you will save 1% on your energy bill for every degree you setback your temperature controller. For example, at Advance Air we set our cooling thermostat at 72 degrees during the daytime, but after 5 pm and on weekends, we set it to 82 degrees. The ten degree setback saves us at least 10% on our cooling bill annually. You don't need to replace your unit to get setback savings.

Are You Ready for High Efficiency HVAC?

One important thing to remember is that just because your shiny new unit has a high efficiency sticker on it, doesn't mean you're getting the high efficiency you paid for. If not installed according to manufacturer's specifications, commissioned properly and regularly maintained, you may end up with an operating efficiency lower than your old clunker!

High efficiency units require a little more expertise to install and a consistent ongoing maintenance program to keep them running efficiently.

The bells and whistles on high efficiency units are also more complicated to install and can be very detrimental to efficiency if not installed properly. When making the decision to install a high efficiency unit, make sure you are prepared to hire a qualified installer and commit to a regular maintenance program. Otherwise you'll be throwing your money away. Your installer should not only install your unit, but also commission it properly, making sure that it is connected to your controls system properly and works as it is supposed to. A minimum twice per year preventative maintenance plan for your unit(s) will keep them running properly. A dirty unit will not run efficiently, no matter what it's rated. Bottom line is, if you treat your unit well, it will return the favor to your wallet.

If your units are nearing the end of their useful life, or like that old beat up clunker of a car, are beginning to cost more to fix and/or operate, now might be just the right time to take a look at your replacement options. A 13 SEER unit might be the best fit, but if you act now, you have the option to price compare a 14 or even 15 SEER unit at the most competitive pricing that has ever been available.

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These HVAC rebates are available in several areas in Massachusetts, sponsored by NSTAR Gas & Electric, National Grid, Cape Light Compact, Unitil and Western MA Electric. The rebate schedule is listed below. To determine the tonnage of your unit and unit efficiency rating of your existing unit, check the nameplate attached to the unit or consult with your current contractor. Advance Air maintains equipment lists for all of the maintenance contract customers. If we don't have a current listing of your units, we would be happy to come out and take a look. Keep in mind that the listed efficiency may not be the actual efficiency. The age and condition of the unit play a big role in the actual operating efficiency.

HVAC Unit Rebate Schedule

Rebates available through NSTAR Electric, National Grid, Cape Light Compact, Unitil & Western MA Electric

	14 SEER Level	15 SEER level
HVAC Unit Size (Tons)	Incentive per Ton	Incentive per Ton
5 Tons and Under	\$125.00	\$175.00
6 - 11 Tons	\$ 80.00	\$ 95.00
12 - 20 Tons	\$ 80.00	\$ 95.00
21 - 63 Tons	\$ 50.00	\$ 70.00
Over 63 Tons	\$ 50.00	\$ 70.00

Add-on Rebates		
Dual Enthalpy Economizer	Allows cooling with the use of outside air on cool dry days.	\$250/Unit
ECM Fan Motors	More efficient motor which can be installed in equipment.	\$150/Motor
Energy Management System	Centralized computer-based control of HVAC and other systems (lighting, refrigeration, etc.)	\$2-300 per Data Point

* Add-on rebates are for optional equipment which can increase the efficiency of your HVAC equipment and your rebate.



15 SEER Precedent Series Rooftop Unit from Trane (3-10 Tons)