



Shadowwood Condominium Association  
11639 Stoneview Square  
Reston, VA 20191-2952

703-620-5444 / voice  
703-620-4233 / fax  
www.shadowwoodcondos.com  
[president@shadowwoodcondos.com](mailto:president@shadowwoodcondos.com)

## HVAC Change Is Coming - Bulletin Two

As you know, the Association is replacing its HVAC systems. In this bulletin, we will answer questions from unit owners.

**Question (Q): I've heard from a resident that everything works and that there is no crisis. So why is the Association spending money on something that works?**

**Answer (A):** In reality, *nothing could be farther from the truth.* The Association's HVAC infrastructure is aged and has been noted in professionally completed reserve studies going back more than 20 years as being poorly maintained. In addition, the Association commissioned two studies by independent HVAC engineering firms. Both firms independently concluded that the HVAC systems had been improperly installed and poorly maintained - from the initial construction of the SCA and through the first 30 years of self-management and operation.

Our HVAC systems have been maintained in-house by handymen with limited training and skills, and the results of that strategy have been documented and reported to the community at this year's unit owners' meeting. A more detailed presentation is on file with the management agent and can be viewed on an appointment basis.

In the last three years, the Association has hired professional HVAC maintenance companies to operate and maintain our HVAC systems. This is a prudent expense as the law requires certified technicians and proper refrigerant chemical handling. In addition, professional vendors have access to a dwindling supply of parts and, especially, refrigerants that cannot be purchased on the open market and are used in our ancient systems.

As a result, our management agent staff, in comparison to self-management, has been reduced by three for summer work - savings that are directly passed to owners in the form of lower monthly maintenance assessments and greater contributions to reserves. We pay a fixed, negotiated, below-market fee for HVAC service. That fee is discounted at least 40 percent from base retail rates, and we pay that fee only when service is needed.

**Q: But a resident went on to explain to me that everything was superbly maintained by in-house staff?**

**A:** Again, *we are letting the facts speak for themselves.* If the systems were so superbly maintained, why are they failing? Why are pipes corroded and leaking? Where is the water-treatment system that was supposed to be installed? Why were boilers and water heaters not redundantly installed so that when there was an outage, a backup would be in place? Why have the few management and energy-saving controls that were originally installed been bypassed and deactivated? Why can you not switch between heating and cooling at your choosing? Why are your gas bills over \$200 each winter when you may not use any heat at all?

**Q: But my HVAC unit works perfectly and it's the original one! Why replace it at all?**

**A:** "Your" HVAC unit belongs to the Association as a common element and it is not all original equipment. The HVAC system is composed of many elements: Boilers, that were built to last at least 50 years, have been replaced at least twice. Water heaters have all been replaced at least twice. Many A/C unit components are original, but parts are no longer available to repair or upgrade them. The entire HVAC system is extremely inefficient and wastes expensive and limited energy, and, most importantly, money that OWNERS have to pay for through increased assessments.

The new HVAC system will restore control to the unit owners, and allow each to decide how and when to condition their units and assess owners correctly and accurately for the energy each consumes in making those decisions.

Owners will never, ever, again be paying for those who leave their windows open and operate their HVAC equipment or for an unoccupied clubhouse that is comfortably conditioned to 70 degrees 24 hours a day, 365 days a year while you suffer in your overheated or under-cooled unit.

**Q: How do owners claim the \$1500 tax credit if the Association is paying for the project?**

**A:** The SCA has received clarification from the IRS and its legal counsel and auditors that most unit owners may be able to take the credit even through the Association will be paying for the HVAC upgrade. Once the final equipment

selections have been made and certified by the vendor and the IRS, you may receive a certificate and indication of the upgrade cost. It will be up to each individual unit owner to seek competent counsel on how to properly prepare tax returns to take advantage of the tax credit, which is dependent on many factors beyond the scope of this bulletin.

**Q: I've heard that the heat pumps will be installed on the ground? Is that so?**

A: Yes. Today's ultra-high-efficiency equipment is much larger than the 35-year old apparatus currently in place. There is no heat pump or air conditioning equipment manufactured today that will fit in the existing building penetrations currently housing the air conditioning condensers. The only other available place for the condensers is on the ground. The new condensers are the same size whether they are heat pumps or air conditioners, so regardless of what heating system is put in place, all condensers have to, and will, be ground mounted.

The existing building penetrations will be sealed in a manner consistent with the SCA building architecture and acceptable to the Reston Association. The new heat pumps will be installed with locations varying depending on building location, terrain, end or middle unit and electrical and plumbing constraints. Fences will be installed around the heat pumps protecting and shielding them from view and affording additional privacy to ground floor unit owners. The fences will be wooden, probably of a construction similar to the Dumpster enclosures, and approved by the Reston Association. The enclosures will be locked and accessible to authorized Association contractors only.

The Association is purchasing condensers (the outdoor part of the heat pump) with special sound-deadening technology built into them. The fan blades are designed to minimize noise, the compressors are wrapped in several sound-, noise- and energy-insulating blankets, and the condenser enclosure is made of a sound- and vibration-absorbing material. The condensers are so quiet that most people cannot hear them operating - and these units will all be enclosed in wooden enclosures further reducing any remaining noise.

**Q: Once the new system is installed, will I be able to use the closet on my balcony for storage?**

A: No. Those closets remain common elements under the control of the Association and will house the new, larger, HVAC apparatus. There will be less, not more, room available in the closets which also house electrical, telephone, energy management, metering and cable TV apparatus.

**Q: So where am I supposed to store my stuff?**

A: Storage rooms are available on the ground floor of each building. Each storage room contains one locker for each unit in that building. In addition, the Association has a limited supply of 8' x 10' storage rooms that are available for rental - contact the management agent for more information on either option. Off-site storage facilities are located in Herndon and Reston and can be contracted directly.

**Q: What is this "energy-management system" and why does it limit my a/c?**

A: The energy management system ("EMS") is a component of the HVAC system. It's been in place for decades and has saved SCA unit owners hundreds of thousands of dollars in electricity costs. The new system will be much more sophisticated than the current system and will impact users far less than the current system does. What's more, the new systems are so much more efficient, that the limiting effect will be dramatically lessened and should not be present but on the hottest days of the year.

**Q: So how does the EMS work?**

A: The EMS operates by limiting the amount of electricity used on the property at any given moment in time. In most private residences, electricity is billed based on the number of units of electricity (kilowatt-hours) consumed in a given month. In the case of SCA, we are billed for the kilowatt-hours we use in a given month **AND** the maximum number of units we use at any given time. This is called the "demand" factor and it is what the EMS limits. Each kilowatt-hour SCA uses costs less than a penny (but costs 13-14 cents at a private residence). Each unit of demand, however, costs \$18.00, or more, and the demand charge for an entire 24-month sliding window is based on the single highest demand peak during the 24-month sliding window - regardless of how low the actual demand is during that billing cycle. So, the crucial element of saving on electricity charges is to limit demand. The EMS limits demand by cycling HVAC compressors off for short period of times. As the compressors are very large "demanders" of electricity, limiting the number of them operating at any given time keeps the demand, and, therefore, the electricity bill, low for everyone. The new EMS, through a very sophisticated algorithm based on indoor and outdoor temperatures, humidity levels and thermostat set points, selects HVAC compressors to turn off for varying amounts of time. The system will be programmed so that discomfort levels will be minimized and most unit owners will not even realize that their compressor has been deactivated. The Association has contracted for a professional engineer to operate and maintain the new EMS.

**Q: I can't live with that; how can I get an exemption from the EMS?**

A: You can't. As part of the SCA covenants, every unit must be connected to the EMS 365 days a year. See the governing documents and your resale disclosure documents for more details.