AN A. O. SMITH CASE STUDY

Historic University Finds Sustainable, Cost-Effective Water Heating with A. O. Smith's Emerge® X Heat Pump Water Heater

Washington and Lee University is a private, historic university nestled in the Shenandoah Valley with some unique water heating needs. The university wanted an energy-efficient, sustainable, cost-effective water heater that would fit into a trickier installation spot—so they turned to A. O. Smith. In the end, they determined that A. O. Smith's Emerge® X Air Source Heat Pump Water Heater (HPWH) was the best fit for the university's new business college building.

> "The Emerge X unit has zero on-site carbon emissions, incredibly high efficiency ratings and a modular design—all of which made the unit a perfect fit for Washington and Lee's needs and priorities."

The building where the Emerge X HPWH was installed came with a unique installation challenge, as the mechanical room had to be built on the top floor due to local building restrictions. Fortunately, the Emerge X HPWH is a split system featuring a modular design, so the team was able to lift up and place the heat pump unit and storage tank separately, making installation a breeze despite the space constraints. Having an environmentally friendly unit was also a top priority for the university, which made a heat pump water heater a great fit. The Emerge X HPWH extracts heat from the ambient air around the unit rather than creating heat, allowing the unit to run more efficiently and at a lower cost to the university. The unit also uses a lower Global Warming Potential Refrigerant (R513A) to further reduce emissions on-site.

"When we started looking at the different options on the market, we wondered if we could be efficient and take care of the environment at the same time. With the Emerge X heat pump water heater, we can," said Chris Blauch, Vice President and Operations Manager at Blauch Brothers Inc. "The unit's low carbon emissions will help Washington and Lee University achieve the Commonwealth of Virginia's green building standards. They want the best for their students and their community, and A. O. Smith has helped them achieve that."

CASE NOTES

Washington and Lee University sought a sustainable, efficient water heater for their new business college building and turned to A. O. Smith to find the ideal solution. The team had to find a unit that would not only provide abundant hot water for students, faculty and staff, but also ensure it fit into a unique space on campus. Thanks to A. O. Smith's Emerge X Air Source Heat Pump Water Heater, they were able to do just that.

Location:
Lexington, Virginia

Products Used:
Emerge® X Air Source Heat Pump Water Heaters (HPWH)

Features & Benefits:
- High efficiency COP of up to 4.6
- Zero on-site emissions
- Modular design allowing for versatile application
- Utilizes a low GWP refrigerant (R513A)
- Maximum set point of 160°F
- Scroll compressor (Copeland) with CoreSense™ protection module
- ECM variable speed pump
- Electronic expansion valve
- Reversing valve
- 480V 3-phase
- Compatible with indoor or outdoor installation
- Remote mountable system control panel

For More Information:
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A.O.Smith®

One of Washington and Lee University's top priorities was making sure the unit was cost effective while still providing plenty of hot water to the students, faculty and staff.

A. O. Smith's Emerge X HPWH incorporates several ECM motors, which operate more efficiently than permanent split capacitor motors. The Emerge X unit runs at a CoP of up to 4.6, which is nearly five times more efficient than a standard electric water heater. The university will see incredible savings without having to sacrifice performance.

"For customers that are particular about energy savings and the environment, heat pump water heaters are a great solution," said Jeff Storie, A. O. Smith's director of brand and field marketing. "The Emerge X unit has zero on-site carbon emissions, incredibly high efficiency ratings and a modular design—all of which made the unit a perfect fit for Washington and Lee's needs and priorities."

The Emerge X unit's control box can be installed separately from the tanks and heat pump units, providing further flexibility. The user-friendly control panel makes it easy for the building managers to adjust settings and monitor performance. It also enhances connectivity for the university, allowing them to integrate additional heat pumps on a single controller should the need ever arise for additional hot water. Learn more about the Emerge X HPWH and other products at www.hotwater.com.