



Private School

# CLEAN BUILDINGS SPOTLIGHT



## Private School Opts to Go Electric

### Project Goal:

Reduce school’s carbon footprint, lower operational costs, and follow the HVAC industry’s best practices for K-12 institutions.

“Our commitment to decarbonization has strengthened the long-term sustainability of our campus and bolstered our resolve to being more environmentally responsible.”

- Valerie Kohles, CFO & Director of Operations, Harford Day School

### Background

Founded in 1957, Harford Day School is the oldest independent school in Harford County that serves preschool to 8th grade. Its middle school building is a 27-year old, 14,250 square foot structure that educates grades 6-8 during the school year, and provides camps and community access during the summer.

The school’s original HVAC system consisted of two gas-fired boilers that powered a hot water radiator heating system and associated pumps, and two air-to-air chillers. After almost thirty years of use, the systems reached their end-of-life in 2025, presenting an opportunity for the school to explore **efficient and electric HVAC alternatives** that align with Harford Day’s campus sustainability goals.



Visit Maryland’s Clean Buildings Hub Website





## Project Components

Leveraging a Maryland Energy Administration grant and a rebate incentive from BGE, Harford Day made the following investments in its building:

**Gas-to-Electric HVAC Replacement:** Harford Day replaced gas boilers and chillers with a high efficiency inverter driven compressor. The school selected an electric variable refrigeration flow heat pump system with integral heat recovery, which provides electricity-based heating and cooling, with the added benefit of precise, individual control, and high levels of efficiency.

**Building Automation System:** The school opted to also invest in an integrated building automation system in conjunction with the new HVAC technology. This system allows each room to be independently controlled and monitored by its own thermostat, enhancing occupant comfort. Additionally, the HVAC system's heat recovery capabilities, in combination with the automation system, allow for otherwise wasted heat to be efficiently redistributed across the building.

## Final Results

The efficient HVAC electrification upgrades and new building automation system are expected to significantly decrease gas operational expenses and reduce Scope 1 CO<sub>2</sub>e emissions by 71,208 annually. Additionally, students and staff will benefit from improved indoor air quality and reduced local pollutants, creating a healthier learning environment.

Contact the Hub to spotlight your building:

[cleanbuildingshub@maryland.gov](mailto:cleanbuildingshub@maryland.gov)



**Maryland**  
Energy Administration

Visit Maryland's Clean  
Buildings Hub Website

