



2018 VEEP Sustainability Partner



Virginia Beach City Public Schools

Current Goals

- Develop a sustainable building infrastructure
- Integrate sustainable practices throughout the division
- Educate the public about sustainability

“Chasing the Custodians”

- **Description:**
 - Previously, buildings programmed through the building automation systems would universally go into a night setback mode at 9:00 pm on school days to accommodate night crew custodians and evening activities
 - By better defining the HVAC zones, and working with the custodians and their team cleaning activities, times have been refined down significantly so that some HVAC zones go into setback as early as 2:00 pm and only a percentage stay on occupied temperatures as late at 9:00 pm
- **Results:**
 - 477,259 MMBtu of energy used

Solar for Schools

- **Description:**
 - In partnership with the National Energy Education Development Project (NEED), Landstown High School and their associated STEM academy were part of the inaugural “Solar for Schools” program
 - Involved the installation of an approximately 1 kW solar “tree” at the school, which is used mostly for teaching purposes, particularly integrated with the STEM Academy

HVAC Retrocommissioning

- **Description:**
 - VBCPS has invested to focus on “tweener” buildings that were built in the 1990s and 2000s to ensure that HVAC systems are running at peak efficiency and are optimally running for both occupant comfort and energy management
 - The Energy Star score in at least one elementary school increased from the high 40s to 81 on a 100-point scale

Geothermal Retrofits

- **Description:**
 - Last summer, VBCPS converted the HVAC systems in three schools from chiller and cooling tower systems to ground-source, which is more efficient and cleaner
 - Two systems were part of energy performance contracts that were bundled with lighting retrofits (to LED) and HVAC retro commissioning