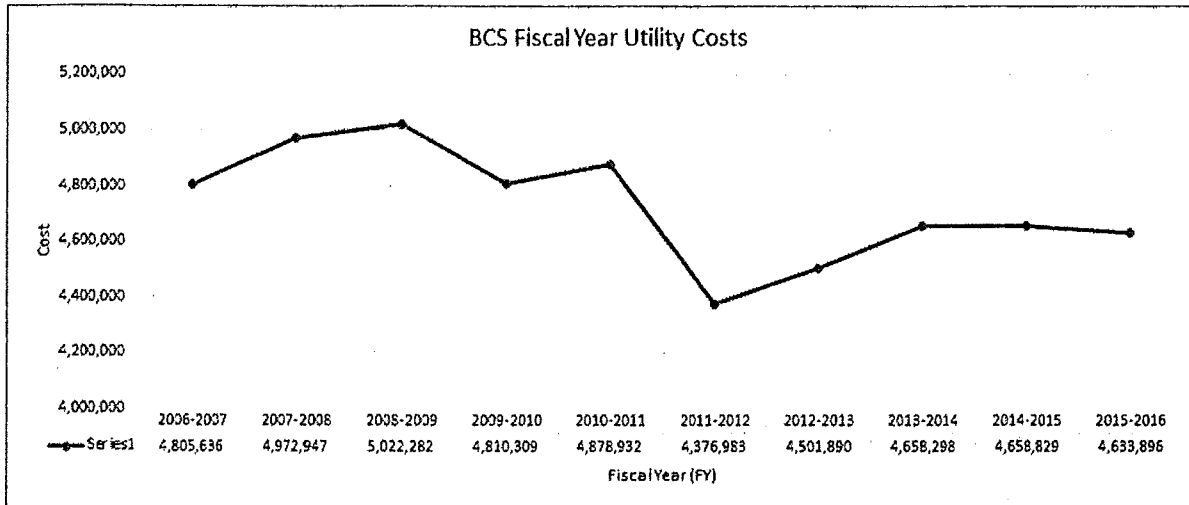


Buncombe County Schools Energy Management

BCS Fiscal Year Costs:



BCS Energy Efficiency Highlights:

- 37 BCS schools Energy Star Certified (2012-2013)
 - Places 37 schools in the top 25% most energy efficient schools nationwide
- Two LEED certified schools: Eblen and Koontz Intermediate (2013)
- Since 1992 BCS has had a Board Policy (560) for energy conservation
- Since the early 1990s Energy Management Systems have been installed to control energy use
 - Set points and run times (occupied and unoccupied)
 - Trouble shoot and identify HVAC issues
- Cenergistic, an energy conservation company that works with school districts across the country, advised BCS in the fall of 2016 that a partnership would not produce enough additional savings to support the effort required.

BCS Energy Efficiency Accomplishments:

- Since 2009 BCS has received \$575,000 in Duke Energy Progress
- Exit lights and wall packs converted to LED, occupancy sensors installed
- 17,720 ballasts converted to more energy efficient T8 ballasts
- 31 school gyms converted to T8 fluorescents with occupancy sensors
- Water meter size reduction at 11 schools saving \$112,000 in capital fees
- Installation of water-saving flush valves county-wide
- Chiller, boiler and domestic hot water heater upgrades, variable frequency drives
- Converted parking area lights to LED in partnership with Duke Energy
- 4 LED retrofit projects launched (4,500 fixtures and estimated savings of \$60,800 annually)
- BCS re-roofing of 200,00 square feet (1-2 schools) per year from R-10 to R-30

Energy Efficiency Partnerships & Grants:

- State Energy Office, \$200,000 (2010)
- Land of Sky Regional Council, \$175,000 (2011)
- UNCA SEIP Internship program (2011)
- WNC Communities Grant, \$68,000 (2014)
- WNC Communities Grant, \$60,000 (2016)
- Waste Reduction Partners
- NC Green Schools Program: Reading Riding Retrofitting

Energy Efficiency Goals FY 17-18:

- Proposed district-wide LED energy efficiency conversion
 - Estimated to save \$877,000 in energy and maintenance costs with 3.6 year payback
- Create district's first Energy Management Plan
- Goal of 20% reduction in 5 years or 4% reduction per year
- Focus on 6 schools where we can achieve the highest energy savings (TBD)
- Summer shut-down reviewed, improved and implemented
- Retro-commissioning projects (TBD)
- Form energy conservation committees in 6 schools
- Install PC Power Management software across district
- Energy-efficient HVAC equipment replacement where funding is possible