

City of Charlottesville Fiscal Year 2020 Annual Energy and Water Performance Report- Executive Summary

December 2020



In line with the City Council vision to be “A Green City”, the City of Charlottesville has developed programs that reduce the impact of energy and water usage in the community. One of the efforts supporting municipal sustainability performance was the establishment of the **City’s Energy and Water Management Program (EWMP)** in 2018, which monitors and manages energy and water usage at over 70 municipal (City and CCS) sites. The July 2019 adoption of the City’s **Energy and Water Management Policy** set clear standards and expectations for management of energy and water efficiency. Earlier that year, the EWMP partnered with the Charlottesville City School (CCS) Administration on the **CCS Energy and Water Performance Resolution**. In July 2019, the City adopted community-wide climate goals of a 45% reduction in greenhouse gas emissions by 2030 and carbon neutrality by 2050, recognizing the importance of improving efficiency, realizing cost savings, and decreasing greenhouse gas emissions.

This report provides an overview of the EWMP and related actions that contributed to improving energy and water performance of municipal facilities throughout the 2020 fiscal year (FY20). The actions highlighted in the report show the City’s progress and multiple approaches toward meeting our climate and efficiency goals and implementing essential improvements and upgrades to the municipal facilities. The data and trends outlined in this report can inform management decisions around the municipal operations and spending related to utility costs, facility improvements, and the associated savings.

Fiscal Year 2020 – Key Performance Findings

FY20 has been a unique year for tracking utility performance, primarily due to COVID-19 impacts. On an annual average, **the municipal portfolio spend for energy and water utilities (excluding select streetlight accounts with incomplete cost data), is nearly \$2.3 million** and has been on a slight upward trend over past years with the exclusion of FY20 (Figure 1). This increase is due in part to increasing utility rates but also changing operations year to year of the various facilities. FY20 had the lowest cost and usage for each utility since FY2015 as COVID-19 impacts reduced the use of most City and CCS facilities starting

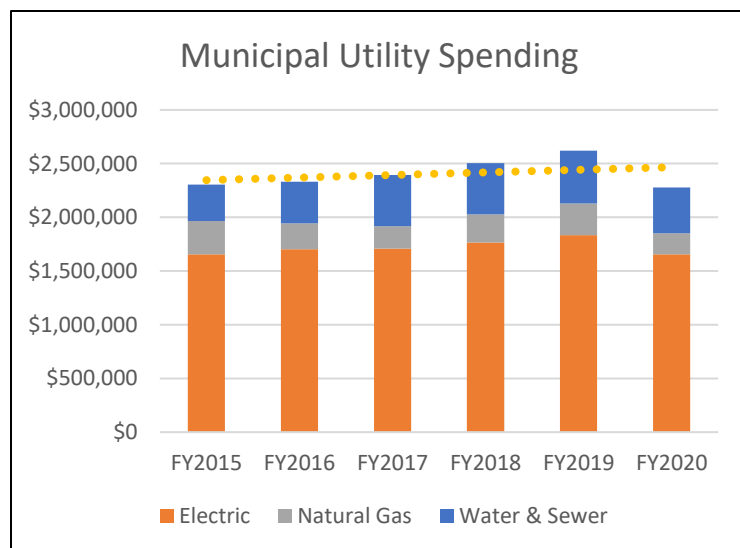


Figure 1: Total municipal utility spending for the past 6 years for each commodity type.

around mid-March 2020 and continuing through the end of the fiscal year. In FY20, schools represented 47% of the total municipal utility spending with the majority of costs (73%) associated with electric costs (Figure 2).

2011 has been established as a baseline for tracking greenhouse gas emission reductions. Since 2011, the municipal portfolio's performance has seen some fluctuation but mostly a downward trend (18.4% reduction by FY2015 and 37.5% by FY2020). This reduction is in part due to transitions in the electric grid generating energy from lower emission sources, so although electricity usage has remained fairly steady over the past 6 years, the electricity used is producing less emissions.

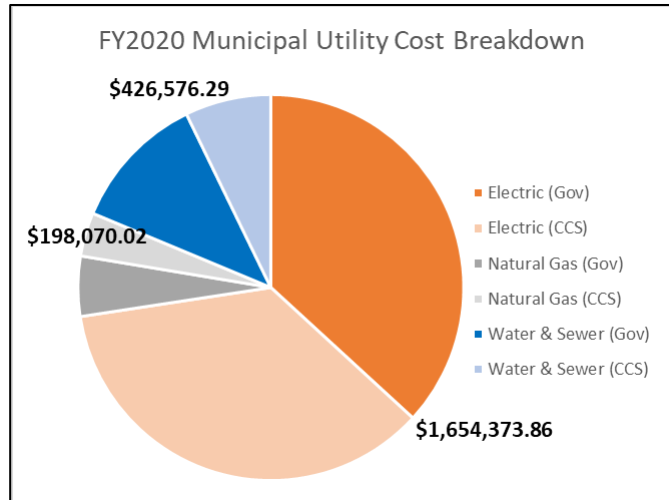


Figure 2: The FY20 utility spending broken down by commodity type and CCS and Government (Gov) facilities. The bold numbers show the total spending for the commodity type (combining CCS and Gov).

FY20 Program Actions and Highlights

Operational Actions

- Establishment of the **Energy and Water Management Team** to provide a comprehensive approach to energy and water management.
- Monthly **utility tracking** of municipal facilities to help identify and address abnormal or inconsistent trends in utility usage. This has been and will continue to be particularly helpful during the COVID-19 pandemic to understand facility usage and track impacts.
- Reviews of and improved communication around **HVAC schedules** to ensure municipal facilities have HVAC support when needed and allow for adjusted schedules and associated energy savings.

Technological Actions

- **Installation of LED Lighting** in municipal facilities, exterior locations, and their inclusion in CCS classroom modernization projects.
- **Upgrades to the Building Automation Systems (BAS)** at municipal facilities (typically one facility annually), allowing for more energy management strategies to be implemented and monitored.
- **EnergyCAP Utility Tracking Software** is used to track and manage all utility accounts. A data dashboard can be viewed at [EnergyCAP FY2020 City Performance Report Dashboard](#).

Behavioral Actions

- **Employee Outreach and Engagement** is an essential component of the EWMP. Checklists, informational flyers, and email updates were used to engage staff around program efforts.
- **Energy and Water Management Campaign at CCS** launched with quarterly educational outreach efforts through announcements and posters for students and staff which included helpful information and tips on what they can do to save.