



Fairfax County
PUBLIC SCHOOLS
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Fairfax County Public Schools
Greenhouse Gas Inventory Report
For
Calendar Year 2019

Fairfax County Public Schools

Office of Facilities Management

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2 Background

2.1 Fairfax County Public Schools Policy 8542 on Environmental Stewardship

On November 7, 2008 the Fairfax County School Board adopted policy 8542 on Environmental Stewardship. The policy purpose states:

“The world's leading scientists agree that human-induced greenhouse gas emissions are a significant contributor to global warming and that reducing those emissions is one of the most significant challenges confronting the world today. FCPS is committed to continue to take innovative and cost-effective steps to help our country achieve climate stabilization. This policy is intended to prioritize the practices to be developed and implemented by staff members in order to address global warming and to meet other important environmental stewardship initiatives.”

The policy further states:

“IV. CARBON REDUCTION

Carbon reduction is the most important environmental concern, and FCPS is committed to reducing energy consumption wherever possible both to take advantage of its benefits to the environment and to reduce energy expenses.”

Finally the policy includes:

“XII. PERFORMANCE MEASURES

Staff members shall create an inventory of greenhouse gas (GHG) emissions and implement policies, programs, and operations to further achieve measurable reduction and help contribute to regional reduction targets. Annual performance measures shall be instituted.”

2.2 Fairfax County School Board Resolution on Climate Change Action

At its business meeting on October 11, 2018 the Fairfax County School Board passed the resolution calling for state and federal action on climate change.

The resolution calls on the members of the Virginia General Assembly and the United States Congress to act on climate change and provide a regulatory framework that removes barriers to progress on climate action and encourages the rapid replacement of fossil fuels with renewable energy technology. It also directs the Superintendent to report timely to the Board changes in state and federal policy that support the goal of reducing

carbon consumption, along with staff proposals to make best use of those opportunities in facilities and transportation planning.

According to the School Board chair Karen Corbett Sanders: “Recent reports from the United Nations Intergovernmental Panel on Climate Change are disconcerting and will have an impact on our students” and ...“The Board has been formally committed to leading the way in reducing our carbon footprint through energy conservation and incorporating renewable energy into our capital improvement plan. With this resolution, we recognize the need to work with our State and Federal policymakers to advance a similar policy framework that encourages citizens to embrace renewable energy.”

2.3 What is a Greenhouse Gas Inventory?

A greenhouse gas (GHG) inventory is an accounting of the amount of greenhouse gases emitted to or removed from the atmosphere over a specific period of time (e.g., one year.) A greenhouse gas inventory also provides information on the activities that cause emissions and removals, as well as background on the methods used to make the calculations. Policy makers use greenhouse gas inventories to track emission trends, develop strategies and policies and assess progress. Operations managers use GHG inventories to evaluate a project or program’s impact and to prioritize projects. Scientists use greenhouse gas inventories as inputs to atmospheric and economic models.

2.4 Greenhouse Gas Inventory Protocols

The World Resources Institute (WRI) and the World Business Council for Sustainable Development developed “The Greenhouse Gas Protocol,” an international framework to understand, quantify, and manage greenhouse gas emissions. The Climate Registry worked with the WRI GHG team to develop its “Local Government Operations Protocol,” which provides a consistent framework for local governments across North America to measure and publicly report their greenhouse gas emissions.

3 FCPS Greenhouse Gas Emissions for Calendar 2019

Some highlights for calendar year 2019 are:

- FCPS emitted 167,167 metric tons of CO₂e. This is a decrease in emissions from the 2018 inventory of 6.59%.
- GHG emissions decreased from 2018 to 2019 while decreasing in overall across the twelve years since the first inventory was started for calendar year 2008. From 2008 to 2019 GHG emissions have decreased 30.9%. This overall

decrease has occurred even though the number of students, the total square footage of buildings, and the number of school buses has increased.

- FCPS had over 27 million square feet of building space where utilities were paid and controlled by FCPS. The total area has increased by 696,198 square feet from 2018 to 2019. Leased building spaces where utilities are included in the rent are not included in this inventory.
- The number of students in FCPS increased by 4338 between 2017/2018 and 2018/2019 school years.
- 277 million kWhrs of electricity were used for lighting, heating and air conditioning, kitchen equipment, and plug loads such as computers, televisions, smart boards, and vending machines. This was a decrease in electricity use of 3.68 million kWhrs or 1.3 % from that used in 2018.
- 5.56 million therms of natural gas were used for heating, domestic hot water, kitchen equipment, and emergency power generation. This was a decrease of 2.09 million therms or 3.63 % from the 2018 consumption. GHG emissions resulting from direct combustion have decreased by 4.55% from 2018.
- FCPS had 2,460 in 2019 up from 2,424 vehicles in 2018 that consumed fuel including 1,625 in 2019, equal to the number of school buses in 2018, and 835 in 2019 up from 799 cars, trucks, non-road vehicles in 2018.
- FCPS school buses traveled 17,219,075 miles which is an increase of 151,992 miles or 0.89% compared to 2018
- FCPS school buses used 2.82 million gallons of diesel fuel in 2019, an increase of 7,175 gallons or 0.25% comparing to 2018.
- Over 3.37 million gallons of fuel were used for transportation.
- FCPS Grounds Operations department at FCPS are replacing gasoline powered equipment with diesel powered equipment adhering to Tier 4 (T4) and interim T4 compliance when equipment is due for replacement
- Compared to 2008, FCPS' 2019 GHG emissions were reduced by 74,859 (30.9%) metric tons of CO₂e. This is equal to 16,030 passenger cars not being driven for one year or 1,940,056 tree seedlings being planted for ten years.
- Reforestation is used during new construction and renovation projects to help mitigate water runoff, reduce carbon dioxide emissions, and minimize the region's heat island effect. Drought resistant trees and plants native to this region are used because they are suited for this climate and do not require supplemental irrigation. No trees were planted during 2019 calendar year due to the fact of capital project's gradual phasing, which may span up to three years, with trees being planted during the last phase. Although, more trees are planned

to be planted during 2020 calendar year as a number of projects will be in their final stage.

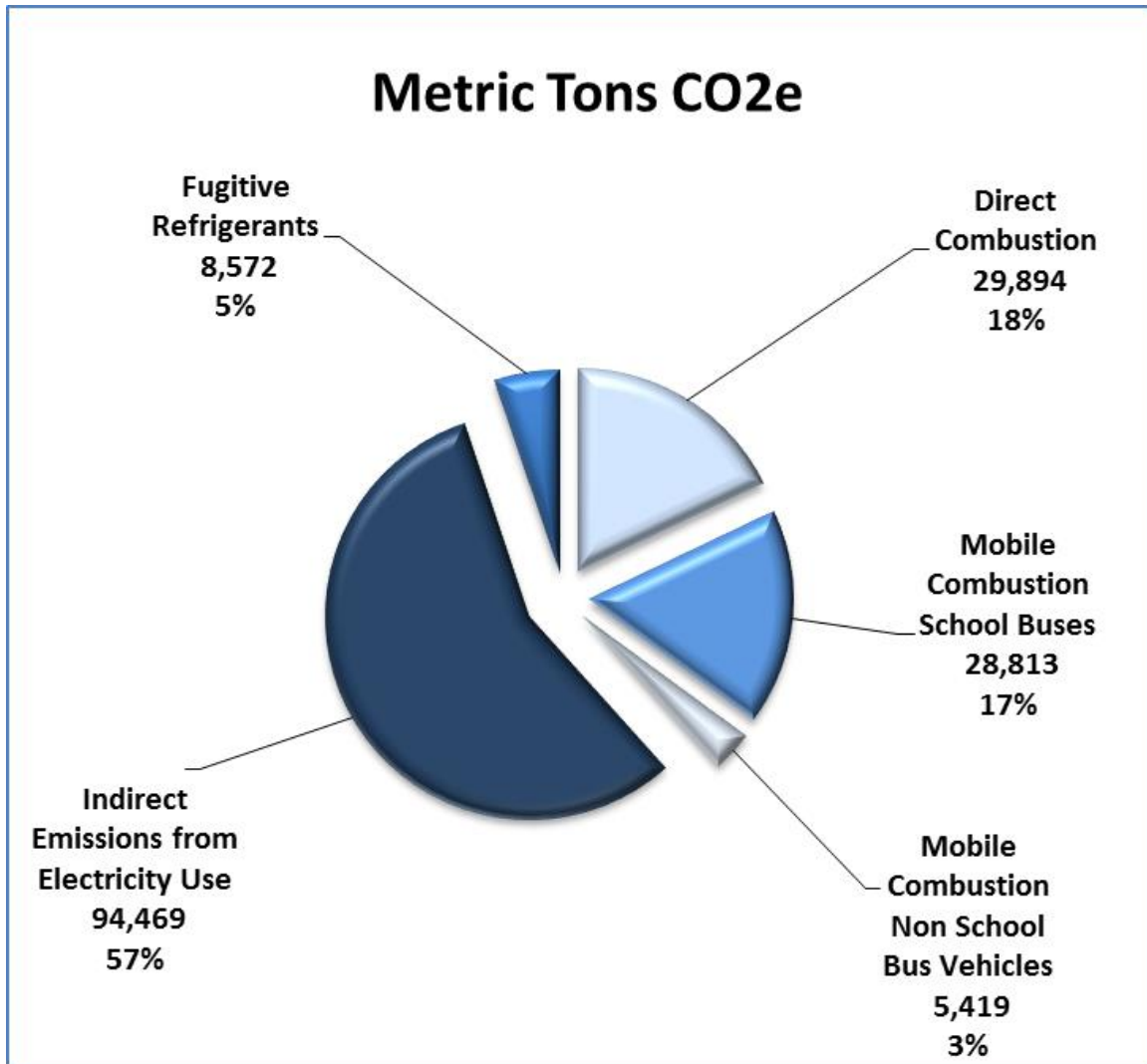
GHG emissions by major categories are shown in Figure 1, with percentages by category shown in Figure 2. Refer to Appendix 1 for scope category definitions.

Figure 1: CO2 2008-2019

FCPS Calendar 2008-2019 Greenhouse Gas Emissions		Metric Tons CO2e											
Source		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Scope 1 Emissions	Direct Combustion	38,761	39,045	35,860	35,142	31,162	37,800	40,112	37,462	27,756	26,820	31,487	29,894
Scope 1 Emissions	Mobile Combustion School Buses	28,981	28,306	28,231	28,234	28,486	29,069	29,095	28,466	28,756	29,867	28,740	28,813
Scope 1 Emissions	Mobile Combustion Non School Bus Vehicles	4,969	4,679	4,977	4,985	4,971	4,965	4,662	4,686	5,045	5,114	5,393	5,419
Scope 2 Emissions	Indirect Emissions from Electricity Use	169,038	164,274	164,777	148,481	146,332	153,553	149,851	123,207	109,894	101,527	103,770	94,469
Scope 1 Emissions	Fugitive Refrigerants	498	1,027	1,602	1,183	1,507	2,067	1,071	1,163	14,103	7,755	8,803	8,572
Total Emissions		242,247	237,332	235,448	218,026	212,459	227,454	224,791	194,983	185,554	171,083	178,192	167,167

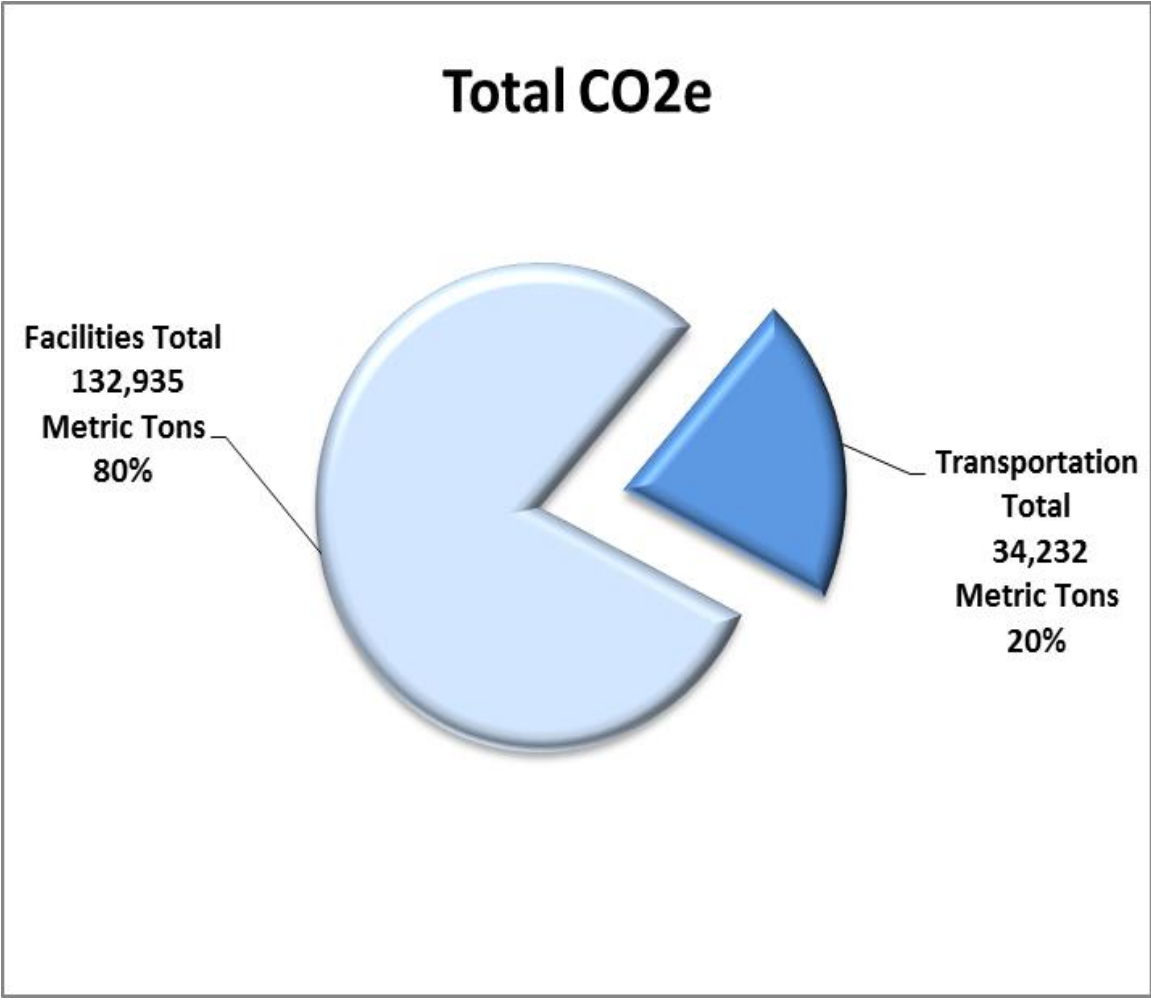
GHG emissions associated with buildings including schools, offices, and support facilities account for 80% of overall emissions. Facility related emissions are made up of indirect emissions from electricity use and direct emissions from burning fossil fuels and a certain amount of fugitive refrigerant leakage from air conditioning and kitchen equipment.

Figure 2:CO2 Breakdown



Burning fossil fuels for transportation accounts for 20% of overall emissions with school buses making the majority of the transportation related emissions. Even though FCPS school buses traveled more than 17 million miles in 2019, the amount of GHG emissions from transportation is small relative to emissions from facilities. The burning of coal and natural gas for electricity generation is by far the largest source of FCPS's GHG emissions.

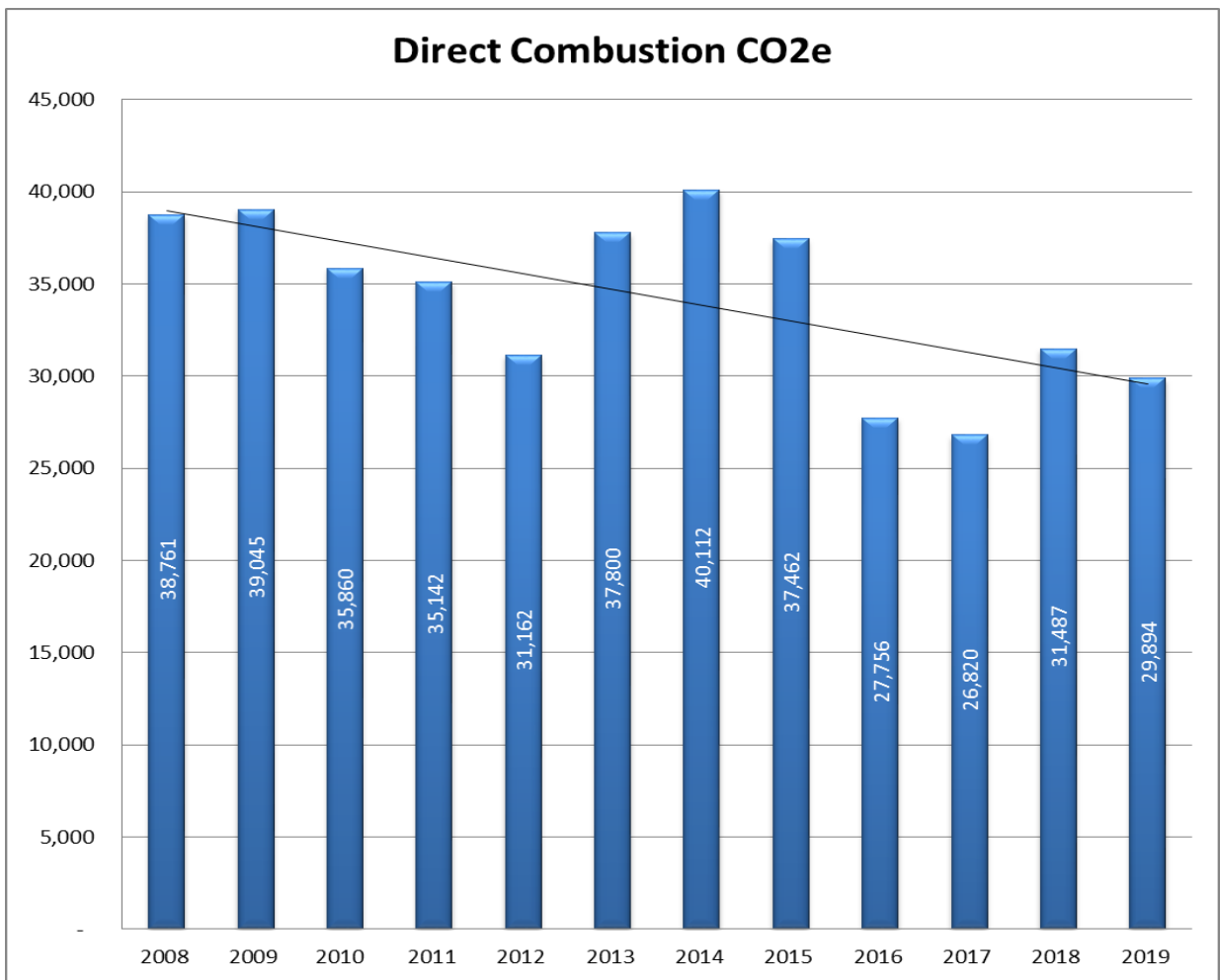
Figure 3: CO2 Facilities vs Transportation



4 FCPS Greenhouse Gas Emissions Eleven Year Trend

Figure 4 shows the eleven year trend for total GHG emissions for FCPS. GHG emissions decreased from 2018 to 2019. From 2008 to 2019 GHG emissions have decreased 30.9%. It is notable that student population, building space, and the size of the transportation fleet have all grown significantly during this eleven year period while emissions decreased. This demonstrates that FCPS has become more energy efficient and lowered its carbon footprint over this eleven year period.

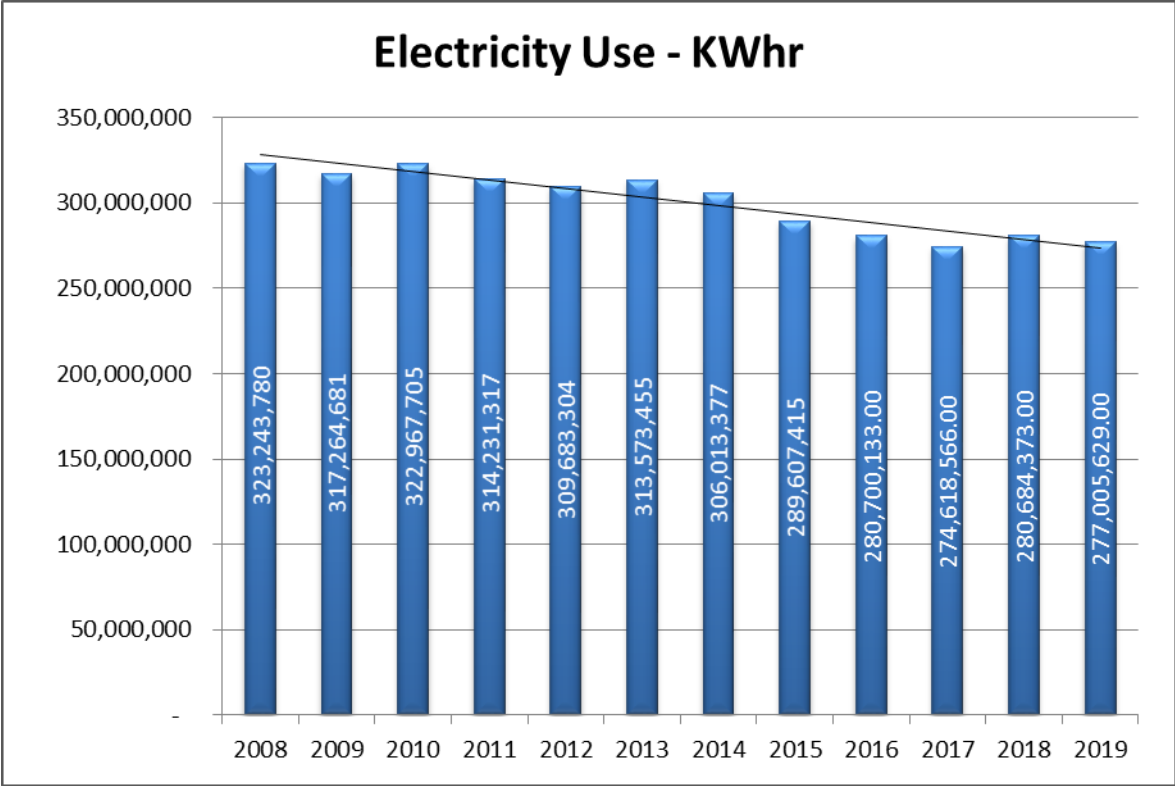
Figure 4: CO₂e Direct Combustion



The total GHG emissions shown in Figure 4 include Scope 1 direct emissions and Scope 2 emissions at electricity generation station as a result of FCPS's electricity consumption. The utility generation fleet has become less carbon intensive over this eleven year period as utilities have increased using natural gas as a fuel source and decreased using coal.

Figure 5 shows the total electricity consumption of all FCPS facilities. A portion of electricity use is dependent upon weather, especially seasonal summer temperatures. It is notable that student population and building space increased significantly during this ten year period. 2018 and 2019 show a decrease due to additional energy conservation projects being implemented.

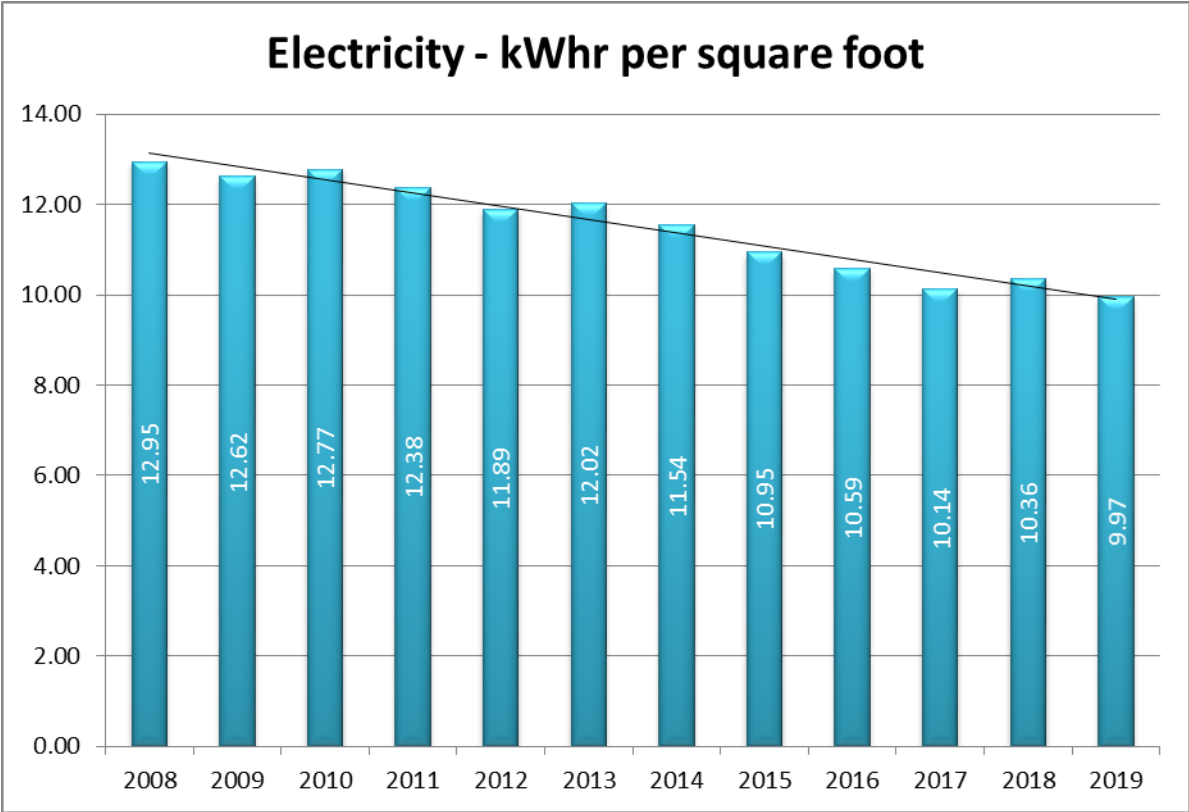
Figure 5: kWhr



The majority of electricity is used in FCPS buildings for heating, air conditioning, lighting, and cooking. The amount of consumption depends on the size of the building space, the occupancy schedule, and the weather. A portion of electricity is used for plug loads like computers, smart boards, photocopiers or vending machines. Electricity is also used for exterior parking lot, security and athletic field lighting.

Electricity use per square foot of building space, shown in Figure 6, is a good indicator of overall building energy efficiency. Even with increases in square footage and student population, site energy usage decreased from 2018 to 2019. This indicates that the FCPS buildings have become more energy efficient over this eleven year period.

Figure 6: kWhr/sqft



Natural gas is used primarily for heating buildings with some small portions used for domestic hot water, cooking, and emergency generators. Natural gas use therefore, is highly dependent upon winter weather conditions.

Figure 7 shows that the total use of natural gas has been decreasing in recent years.

Figure 8 shows that natural gas per square foot of building space decreased in 2019 from 2018.

Figure 7: Therms

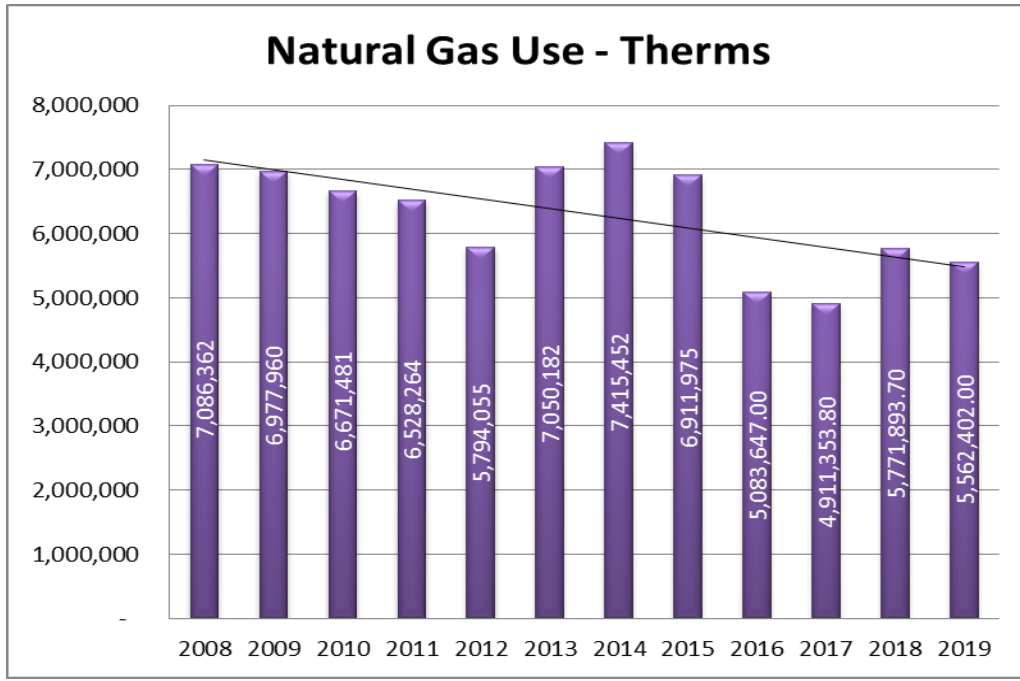
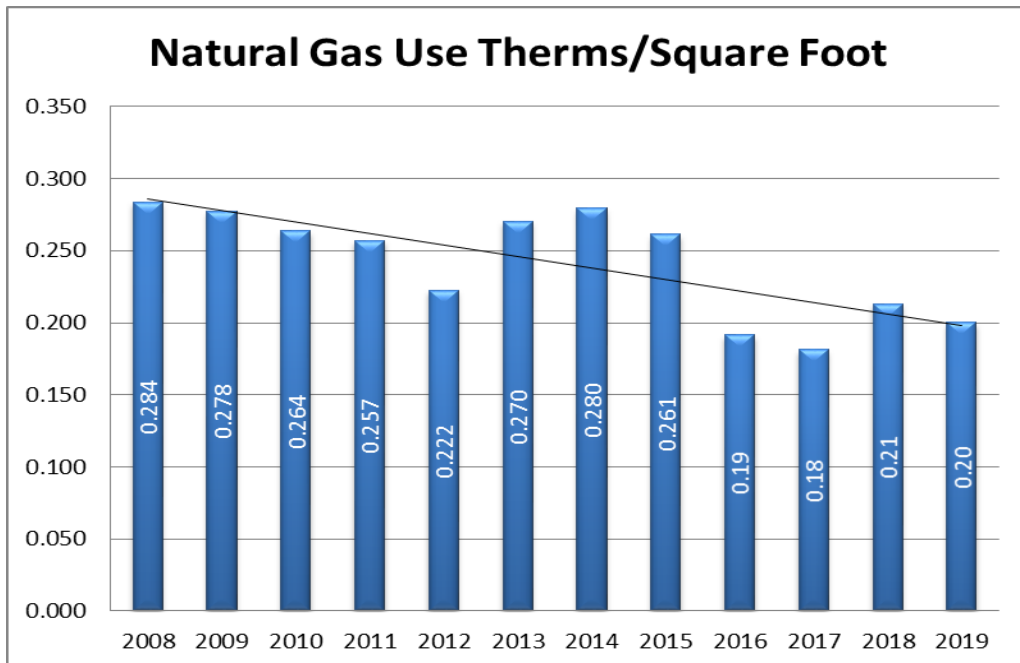


Figure 8: Therms/sqft



FCPS' building energy efficiencies are improving through design strategies and operational improvements. Continued improvements are dependent upon further capital investments in building renovations, infrastructure equipment replacements and energy savings projects. Investment and installation of mechanical and electrical equipment such as chillers, boilers, water heaters, variable refrigerant flow HVAC systems, high efficiency lighting with higher efficiency and energy ratings that significantly exceed minimum industry standards have led to substantial energy cost savings. ENERGY STAR rankings have improved significantly and a measurable increase in energy efficiency has been documented as a result of these building operation improvements.

Figure 9 shows how total greenhouse gas emissions have been steadily decreasing while the square footage has been steadily increasing.

Figure 9: GHG/SQFT

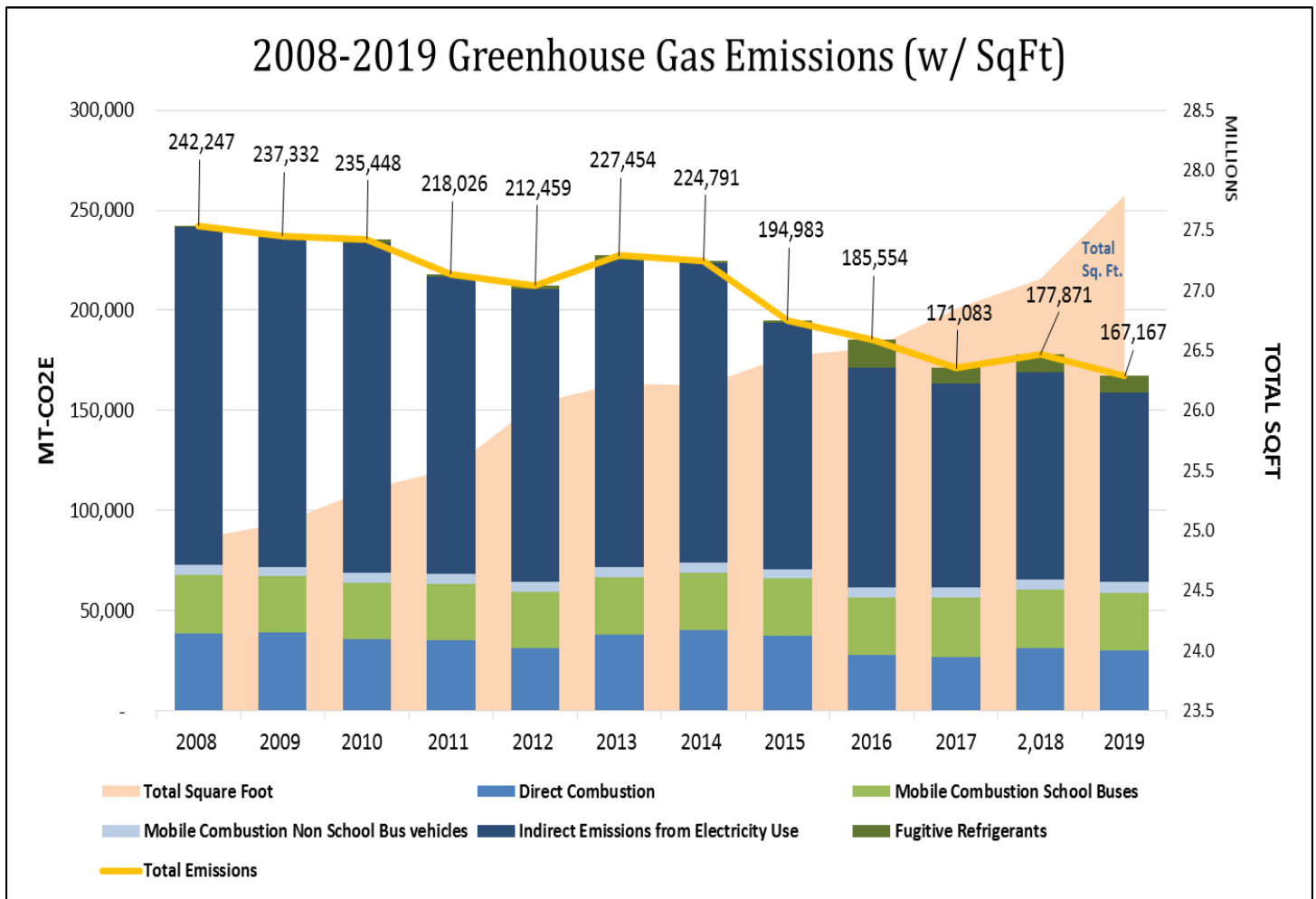
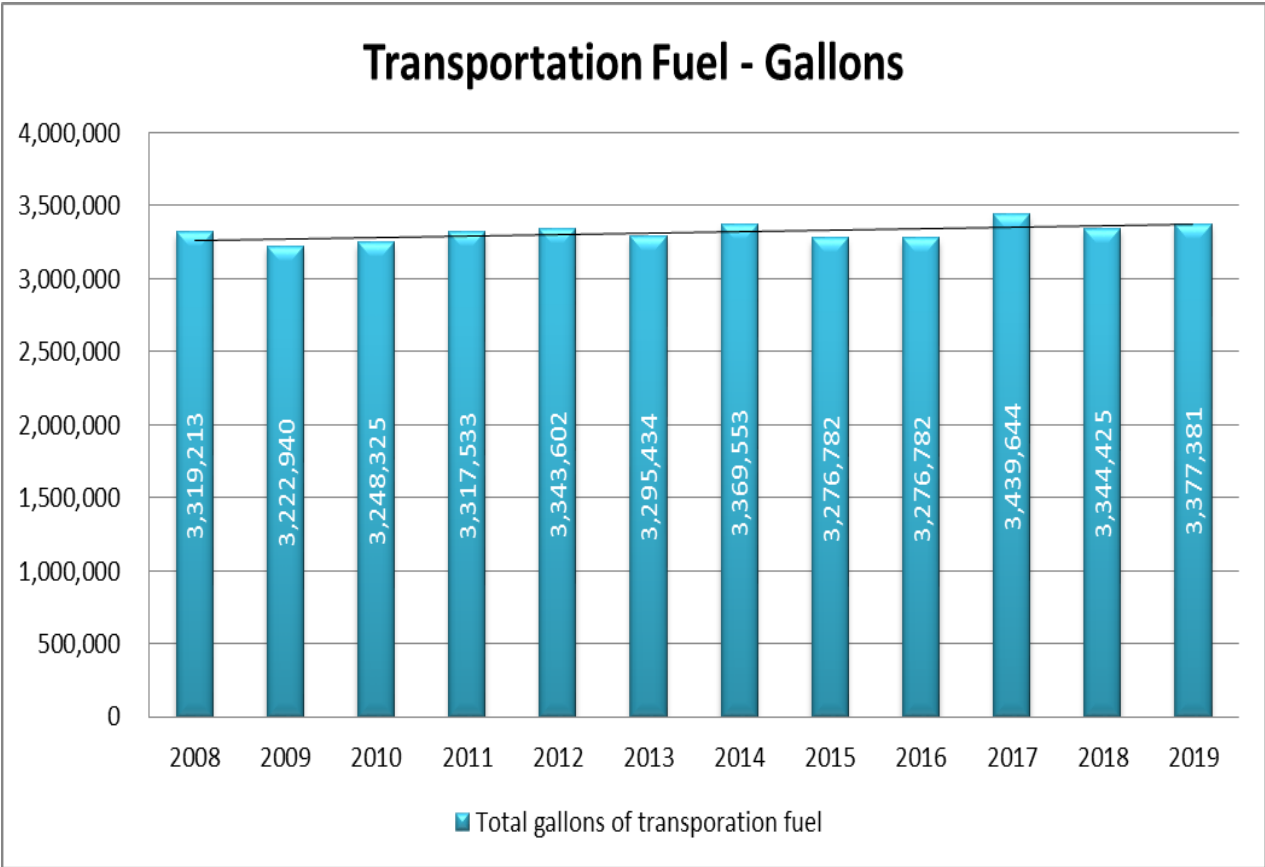


Figure 10 indicates the eleven year trend for transportation fuels. Fuel use increased slightly in 2019. Total miles driven have slightly increased in 2019 from 2018; this is in part due to an escalation in student enrollment and altered traffic patterns as a result of FCPS' new school start times. Better bus routing and reduced transportation for summer programs have largely countered the increases associated with student population and later school start times.

Figure 10: Transportation Fuel



5 Energy Management Section

Energy Management (EM) section represents a cross-functional team consisting of three functional teams. The teams are continuously working on fostering and maintaining a collaborative and positive atmosphere and work environment within the section that will yield highest performance and maximum results. Various team members contribute their unique skills and acumen into the success of the FCPS energy management and conservation program. The functional teams are as follows:

Energy conservation, behavior management, and training team or otherwise energy educators' team is the backbone of the FCPS energy conservation program. The team consistently looks for and implements various energy conservation measures. Its members constantly monitor performance of the assigned buildings by means of physical and virtual audits, and stay in close communication with the schools to ensure that the implemented measures are understood and well received by the occupants and administration. Also, serving as liaisons for comfort and Indoor Air Quality related issues, energy educators thoroughly evaluate them and redirect, if needed, to appropriate entities to be addressed in a timely and effective manner.

Energy education specialists are extensively involved in educating students and community to conserve energy and become environmental stewards. Some of the examples of educational activities include:

- Participating in civic, community, school, and professional engagements by creating special presentations, authoring articles, and/or manning a booth with a hands-on activity.
- Developing and organizing unique programs in cooperation with the appropriate Instructional Supervisor(s) like FCPS GET2GREEN, as opportunities arise
- Coordinating with Principals to support individual students or student groups in developing programs based on their interests and needs.
- Communicating selected third party created environmentally friendly program opportunities to interested FCPS stakeholders. Such programs as: ENERGY STAR National Building Challenge, US Department of Education Green Ribbon Schools, Virginia Naturally Schools Recognition Program, and NoVa Outside.

Capital asset improvement and replacement engineering team consistently works on replacing outdated and antiquated Building Automation Systems (BAS) with new systems that utilize top of the line technology and newest developments in the industry. To employ the capabilities of the newest available technology, as part of the BAS replacement projects energy engineers develop sequences of operations for the

equipment that help buildings to achieve maximized energy savings while ensuring occupants' safety and comfort meeting all the applicable ASHRAE standards.

In addition to BAS replacement projects, energy engineers are involved in other energy conservation projects including Energy Services Performance Contracts (ESPC), Solar Power Purchase Agreement (PPA) as well as ENERGY STAR certifications.

As needed, energy engineers collect data and perform calculations for the purpose of Greenhouse Gas (GHG) reporting and other energy conservation related matters.

Building automation systems operations, controls, maintenance, and repair team consists of field technicians' shop headed by a supervisor and supported by two systems specialists. Field technicians are responsible for maintenance, repair, and calibration of BAS hardware such as controllers, sensors, and control wiring. The main specialization of the system specialists is addressing software and programming related issues as well as small modifications and upgrades to the existing building automation systems.

6 FCPS Sustainability and Energy Conservation Efforts and MWCOG Regional Climate and Energy Action Plan

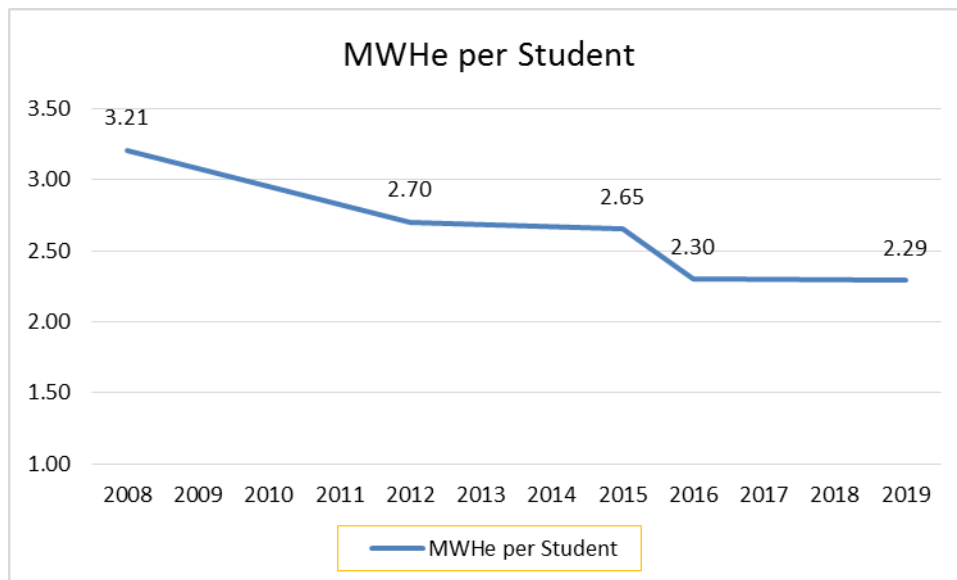
Energy conservation measures and strategies undertaken by FCPS reflect the goals set by the Metropolitan Washington Council of Governments' (COG) Climate, Energy and Environment Policy Committee (CEEPC). CEEPC guides the region of the District of Columbia, suburban Maryland, and Northern Virginia in taking action to meet regional GHG emission reduction goal. The goals and actions are outlined in the Regional Climate and Energy Action Plan. A number of actions taken by FCPS are outlined below.

6.1 Reduce energy consumption

6.1.1 Electricity and natural gas consumption

As stated in the Action Plan, "Sustained continuous reduction of consumption will be a crucial component of meeting the region's GHG emission reduction goals". At FCPS, there has been an overall 30.9% GHG emissions reduction from 2008 to date. As the energy consumption per capita within the region has decreased by 12% between 2005 and 2015, the consumption per FCPS student has been steadily decreasing as well. Between 2008 and 2015, it decreased by 0.56 MWh or 17%. To date, the decrease has been 0.92 MWh or 29%. Figure 11 illustrates this pattern.

Figure 11: Energy Consumption per Student



6.1.2 Prepare GHG inventories and action plans

FCPS has been preparing yearly GHG emission inventory reports since 2008 pursuant to Policy 8542. The policy states that FCPS staff shall implement policies, programs, and operations to further achieve measurable reduction and help contribute to regional reduction targets.

6.1.3 High performance buildings

Energy performance of schools, instructional, and administrative centers is benchmarked using ENERGY STAR Portfolio Manager. Many buildings receive ENERGY STAR certification each year. In 2018, FCPS earned certifications for 173 schools leading every school system in the nation and more than any school system in the last 12 years. Past accomplishments of this sort have helped FCPS to play a key role in Washington DC achieving the EPA's top ranking city for ENERGY STAR certified buildings three out of the last four years. FCPS was a 2017, 2018, and 2019 EPA ENERGY STAR Partner of the Year (POY) award winner for its efforts to improve energy efficiency of its buildings. Even though the energy use intensity (EUI) thresholds for achieving ENERGY STAR certifications were reduced dramatically for 2019, FCPS still achieved a whopping number of 60 certifications last year.

6.2 Renewables

Renewable energy is an increasingly appealing option for school divisions looking to save on energy costs while minimizing environmental impacts. Installing solar panels can decrease schools' electricity rates and shield them from fluctuating energy prices. For teachers, renewable energy is an excellent hands-on educational tool for science, technology, engineering, and mathematics (STEM) subjects that can be incorporated into many content areas. For these reasons, FCPS recently amended its Capital Improvement Program (CIP) to expand the division's commitment towards renewable energy resources.

6.2.1 Solar Installations

FCPS currently has ten schools with solar installations. Roof-mounted photo-voltaic solar arrays paid for through grants and fundraising can be found at Rachel Carson Middle School, Frost Middle School, Canterbury Woods Elementary, Bailey's Elementary School, and Thomas Jefferson High School. Roof-mounted solar installations for solar thermal heating of potable (drinkable) water can be found at Glasgow Middle School, West Springfield High School, and Thomas Jefferson High School. Franklin Sherman Elementary has a ground-mounted photo-voltaic array. Experimental instructional projects integrating technology include a solar powered wind turbine at Lanier Middle School and a chicken coop with solar panel heat at Twain Middle School. Although these projects do not supply large amounts of energy to the schools, they serve as valuable educational tools.

6.2.2 Geothermal Energy in FCPS

Mason Crest ES, a repurposed administrative building, uses geothermal energy for heating and cooling. This geothermal system consists of a well field located under the ball fields near the playground. The geothermal system moves heat from the earth into the building in the winter and pulls heat from the building and discharges it into the ground in the summer.

7 Appendix 1 – Climate Registry

This FCPS GHG emissions inventory for calendar year 2019 as well as the previous inventory for calendar years 2009-2018 were developed using the Climate Registry's "Local Government Operations Protocol" version 1.1 released May 2010. The report for calendar 2008 was based on the more generic Climate Registry "General Reporting Protocol" version 1.1 released May 2008.

Operational Boundaries and Scopes

The protocol categorizes GHG emissions into three "scopes":

- Scope 1: All direct GHG emissions from burning fossil fuels and from refrigerant leakage.
- Scope 2: Indirect emissions associated with the consumption of purchased electricity.
- Scope 3: All other indirect emissions not covered in Scope 2, such as upstream and downstream emissions, emissions resulting from the extractions and production of purchased materials and fuels, transportation related activities in vehicles not owned or reported by the reporting entity (e.g., employee commuting and business travel), use of sold products and services, outsourced activities, recycling used products, waste disposal, etc.

The Climate Registry's "Local Government Operations Protocol" requires reporting Scope 1 and Scope 2 emissions while Scope 3 is optional. This report only includes Scope 1 and Scope 2 emissions.

It should be noted that making operational changes to reduce Scope 3 emissions can be a good strategy to reduce overall GHG emissions from FCPS related activities. For example, a successful program that reduces the use of personal vehicles for students and staff to commute and instead carpool or taking a school bus would reduce GHG emissions. This, however, would not affect Scope 1 and Scope 2 emissions.

In general calculating Scope 3 emissions and the impact of changes is more subjective and difficult to accurately determine than Scope 1 and 2 emissions.

Reporting Into a Database

This GHG emissions inventory was prepared to meet the FCPS School Board policy 8542. There is currently no Federal or State rule or law concerning the emissions of GHG or a requirement to report on GHG emission inventories by FCPS. Reporting and registering GHG emission inventories have been done by organizations on a voluntary basis.

Reporting into the Climate Registry requires formal verification of the data for accuracy and methodology by a third party expert. This generally would be a paid consultant specializing in report verification.

Becoming members and reporting GHG emissions to a national database such as the Climate Registry is an option for FCPS or the entire Fairfax County Government. Because of the fluid nature of reporting and the cost of third party verification, not reporting to a database at this time is recommended. FCPS should continue to collect data and inventory GHG emissions annually in order to meet the goals and intent of policy 8542.

Adaptations required to report into the Climate Registry

Baseline year: The Local Government Operations Protocol requires reporters to select a baseline year. Once this baseline is selected, it should not be changed since progress in reducing GHG emissions are compared to this baseline. Since the intent of an inventory program is to track overall emissions, the baseline is not adjusted due to expansion such as an increased number of students, constructing new building space, or increasing the size of the vehicle fleet. This inventory report does not propose a baseline year. Any year could be selected provided that accurate energy use data is available.

Third party verification: Reporting into the Climate Registry requires the reporter to hire a third party expert to verify that the data is accurate and properly reported. This generally would be a paid consultant specializing in report verification.

Greenhouse Gases Reported

The protocol (Climate Registry “Local Government Operations Protocol” version 1.1, May 2010) requires reporting on the following gases:

- Carbon Dioxide (CO₂):
 - Direct combustion of fossil fuels such as:
 - Natural gas used for heating, cooking, domestic hot water, and emergency power generators power.
 - Fuel oil used for heating and emergency power generators.
 - Propane used for heating and emergency power generators.
 - Diesel and gasoline fuel used for transportation vehicles and grounds keeping equipment.
 - Indirect combustion from the use of electricity at generated at fossil fuel power plants.

- Methane (CH₄): Direct and indirect combustion of fossil fuels as listed above.
- Nitrous Oxide (N₂O): Direct and indirect combustion of fossil fuels as listed above.
- Hydrofluorocarbons (HFCs) – Fugitive emissions (leaks) from certain air conditioning and refrigeration equipment.
- Perfluorocarbons (PFCs) – not emitted from FCPS operations.
- Sulfur hexafluoride (SF₆) – not emitted from FCPS operations.

8 Appendix 2 – Policy 8542 .1

FACILITIES

Facilities and Transportation Services

Environmental Stewardship

This policy supersedes Policy 8542.

I. PURPOSE

The world's leading scientists agree that human-induced greenhouse gas emissions are a significant contributor to global warming and that reducing those emissions is one of the most significant challenges confronting the world today. Fairfax County Public Schools (FCPS) is committed to continue to take innovative and cost-effective steps to help our country achieve climate stabilization. This policy is intended to prioritize the practices to be developed and implemented by staff members in order to address global warming and to meet other important environmental stewardship initiatives. We are also committed to educating students and staff members in environmental stewardship responsibilities and to encouraging them to use their critical-thinking skills and communication skills to debate the appropriate measures we need to take in order to be responsible stewards of our environment.

II. SUMMARY OF CHANGES SINCE LAST PUBLICATION

In section IX., wording has been revised to add fluorescent light bulbs.

III. DEFINITION

Environmental stewardship is defined as those policies that reduce energy use and water consumption and result in a smaller carbon footprint. Responsible environmental stewardship enhances the overall environment as well as the classroom environment by reducing noise and improving air quality. Sound policies focus on minimizing pollution and refuse, reducing facility operating costs, and promoting a healthy environment for citizens, students, and staff members.

IV. MISSION

Operating and infrastructure design policies shall be focused on supporting all environmental initiatives approved by the School Board. FCPS shall collaborate and coordinate with local and regional initiatives in an effort to produce an overall positive community impact on the environment.

V. CARBON REDUCTION

Carbon reduction is the most important environmental concern, and FCPS is committed to reducing energy consumption wherever possible both to take advantage of its benefits to the environment and to reduce energy expenses. Energy-efficient heating and cooling equipment, as well as energy-saving lighting and controls, will be employed to meet this goal. We will continue to look for further opportunities to institute programs adding climate control systems, and initiating window replacements.

V. CLASSROOM ENVIRONMENT

Building design will focus on improving student achievement by reducing ambient noise, optimizing classroom acoustics, maximizing natural lighting, and improving air quality. Staff members will help educators develop sustainable curricula by using features and systems of the school facility as teaching aids in order to educate students in the art and science of sustainable design. In this regard, FCPS recently established new academic goals to include the expectation that students understand and model attributes that contribute to an effective and productive community and to the common good of all. FCPS also set the expectation that students be skilled in environmental stewardship.

VI. INDOOR AIR QUALITY

FCPS is committed to establishing and maintaining a healthy environment conducive to effective learning. FCPS has established new ventilation standards to ensure that temperature and humidity are maintained at comfortable levels. During renovations, indoor air quality (IAQ) is tested before construction in order to establish a baseline and is monitored regularly to ensure that quality levels are maintained. During renovations, FCPS observes more stringent IAQ standards than are required by the Environmental Protection Agency (EPA). FCPS has adopted green cleaning practices for FCPS facilities in order to minimize negative effects on IAQ. We have instituted the use of filtration devices on our buffers and vacuums, the use of special entryway mats at all entrances to prevent the spread of dust, the use of treated dust mops, and the use of microfiber cleaning cloths. In the near future, we will phase in the use of Green Seal cleaning products and products with low to no volatile organic compounds (VOC) as new commodities contracts are let.

VII. OUTDOOR AIR QUALITY

To do its part to improve general air quality in the region, FCPS will maximize the use of school buses with green diesel technology using ultra low sulfur diesel fuels and, when replacing vehicles, FCPS shall give preference to vehicles with improved fuel economy and reduced emissions.

VIII. WATER USE AND MANAGEMENT

Plumbing systems will be designed to minimize water consumption through use of low flow fixtures and metering faucets. New technologies for recycling gray water and rain water for building use and field irrigation shall be evaluated for incorporation into design standards.

IX. RECYCLING

Schools and centers will have mandatory recycling programs for paper products, cans, bottles, and fluorescent light bulbs. Construction waste materials will be separated and recycled. Local recycled-content and rapidly renewable materials will be used in new schools and renovations when readily available.

X. GROUNDS AND LANDSCAPING PRACTICES

Drought-resistant landscaping will be used to conserve water, and maintenance-free landscaped areas will be installed wherever practical to reduce energy consumption and emissions incurred due to mowing and other maintenance activities. Artificial turf will be installed at schools wherever possible. These fields will result in the savings of millions of gallons of water, minimize the introduction of harmful chemical fertilizers into the ecosystem, and reduce greenhouse gas emissions caused by mowing.

XI. PURCHASING

Acquisition of products and services will be done in accordance with state and local laws, and in support of environmental stewardship, whenever possible. Purchasing decisions will include environmental considerations such as reducing waste and greenhouse gas emissions, minimizing environmental impacts, and using products made with recycled materials.

XII. PERFORMANCE MEASURES

Staff members shall create an inventory of greenhouse gas (GHG) emissions and implement policies, programs, and operations to further achieve measurable reduction and help contribute to regional reduction targets. Annual performance measures shall be instituted.

Policy adopted: November 6, 2008

Reviewed and Corrected: September 26, 2013

FAIRFAX COUNTY SCHOOL BOARD

9 Appendix 3 – Fairfax County School Board Resolution on Climate Change Action

At its business meeting on October 11, 2018, the Fairfax County School Board passed the following resolution:

RESOLUTION OF THE FAIRFAX COUNTY SCHOOL BOARD CALLING FOR STATE AND FEDERAL ACTION ON CLIMATE CHANGE

WHEREAS, an overwhelming majority of credentialed scientists, in the U.S. and abroad, support the finding that climate change is happening and that human activity is a key contributor; and

WHEREAS, if left unaddressed, the consequences of climate change will harm all Americans, most especially children and those living in poverty, and saddle future generations with the costly burden of a dangerously damaged planet; and

WHEREAS, climate instability is a global challenge requiring bold, innovative, and sustained actions at all levels of government, local, state, and federal; and

WHEREAS, the size of Fairfax County Public Schools' physical footprint provides an unparalleled opportunity to advance the use of renewable energy sources and reduce greenhouse gas output in Northern Virginia; and

WHEREAS, pursuant to School Board Environmental Stewardship Policy 8542, FCPS leads the nation in energy efficiency, the development of green building design standards, and award-winning classroom opportunities for student advocacy and learning through the Get 2 Green program; and

WHEREAS, the Fairfax County School Board's commitment to the safety, well-being, and future success of all children in our community also demands a high priority on reducing carbon consumption in our decisions regarding capital improvement, energy use, transportation, and other policy priorities within the Board's control; and

WHEREAS, the Fairfax County School Board depends on committed partners in local, state, and federal government to realize our climate action goals, and recognizes the efforts and progress made to date, especially Fairfax County Government's recently announced request for proposals for solar installations on public buildings, to include schools;

NOW, THEREFORE, be it resolved that the Fairfax County School Board: 1) calls on the members of the Virginia General Assembly and the United States Congress to act boldly on climate change and provide a regulatory framework that removes barriers to progress on climate action and encourages the rapid replacement of fossil fuels with renewable energy technology; and 2) directs the Superintendent to report timely to the Board changes in state and federal policy that support the goal of reducing carbon consumption, along with staff proposals to make best use of those opportunities in facilities and transportation planning.

“Recent reports from the United Nations Intergovernmental Panel on Climate Change are disconcerting and will have an impact on our students,” said School Board chair Karen Corbett Sanders. “The Board has been formally committed to leading the way in reducing our carbon footprint through energy conservation and incorporating renewable energy into our capital improvement plan. With this resolution, we recognize the need to work with our State and Federal policymakers to advance a similar policy framework that encourages citizens to embrace renewable energy.”