



Climate Commitment Strategic Plan 2016-2021

MISSION STATEMENT

The purpose of this Climate Commitment Action Plan is to articulate a pathway forward for further reducing the College’s carbon footprint and working towards carbon neutrality. The Climate Commitment Plan outlines short and long term strategies to reduce our footprint in three key areas: Transportation & Campus Operations, Curricula, Co-Curricular programming and Community Outreach. This Plan is intended to be a living document, and as market and technology conditions change, the plan will be adjusted. However, our commitment to advancing the overarching goals of the plan, to reduce our carbon footprint, will remain steadfast.

VISION

Montgomery County Community College pledges to be a leading model of sustainability and environmental stewardship.

INTRODUCTION

Montgomery County Community College has a long standing commitment to promoting and practicing responsible environmental behavior and in 2005; the College codified this commitment in its strategic plan to 2010, “Great Expectations,” by setting as one of its six goals “investing in campus renewal and sustainability.” It was this early commitment that fueled the College’s interest and the Board of Trustees’ endorsement in becoming one of the original 2007 signatories of the American College and University President’s Climate Commitment pledge. The college committed to Carbon Neutrality in 2050. In signing the pledge, the College agreed to draft, and put into action, a plan aimed at reducing our carbon footprint.

STRATEGIC GOAL SUMMARY

- Reduce MCCC'S Carbon Footprint
- Incorporate Sustainability into Academic Course Programming
- Engage the Community

STRATEGIC GOAL #1 REDUCE MCCC'S CARBON FOOTPRINT

Invest in projects that reduce consumption and overall carbon production. Understanding the College is a commuter campus, take an innovative approach to transportation that leads the efforts in reducing our carbon footprint.

Objective A: Ensure that MCCC is providing good conservancy of the environment

- (1) Revisit past goals on the Sustainability Strategic Plan & review the outcomes for decreasing our carbon footprint
- (2) Continue to decrease the College's energy usage
- (3) Change our Behaviors. Reduce before we produce energy, and consume energy and water wisely
- (4) Establish a Green Fund for future initiatives
 - (a) Utilize energy rebates from PECO and proceeds from the ENERNOC demand response program. This fund will be used to pay for the replacement of fluorescent lights with LED lights. It will also be used to fund approved energy management initiatives.
 - (b) Explore grant opportunities

Objective B: Reduce MCCC's Energy Usage

1. Continue to promote energy efficient options
 - a) Replace all existing fluorescent fixtures with LED. The LED lights will use 40% less power, are mercury free, and will last 50,000 hours as compared to 30,000 for the fluorescent units.
 - b) Pilot use of a robotic floor cleaner and measure the reduction of utility savings, which may reduce electrical and water consumption during the cleaning process.
2. Retro Commissioning of all recently renovated buildings
3. Replace inefficient fume hoods
 - a) The existing 40 year old fume hoods are outdated and inefficient. The planned renovation of the Science Center will replace the inefficient units with state of the art Energy Star units that will reduce energy consumption.
4. Install window film on Fine Arts Center
 - a) Install Low-E ecofriendly window film on the windows in the Fine Arts Gallery. The low E film allows the sun to warm the space in the winter and blocks heat gain in the summer. Reduce heat gain associated with Southern exposure.
5. Establish an Energy Star program
 - a) ENERGY Star is the government-backed symbol for energy efficiency. It helps save money and protect the environment through energy-efficient products and practices. An Energy Star policy will guide the purchase for all applicable new and replacement appliances and equipment on campus.
6. Considering practices that restrict the usage of personally supplied inefficient items such as, heaters, refrigerators and fans.
7. Research installing green roofs

- a) investigate grant opportunities
- 8. Investigate opportunities to expand the use of alternative solar energy
 - a) Create a sub-committee to explore further options to optimize use of solar energy.
 - b) Explore the option of purchasing a chiller plant for the Art Barn that runs on solar energy.
 - c) Discuss possibilities of heating water with solar energy.
 - d) Explore potential solutions for increasing self-generated energy on both campuses (e.g., expansion of solar arrays, wind-generated, and/or geothermal energy).

Objective C: Address the impact of transportation on the Colleges' carbon footprint

As defined in the inaugural Transportation Committee plan, continue to invest in efforts that will reduce total commuter emissions by 50% by 2030.

- 1) Make Public Transit Passes available for College Students
 - a) Research the feasibility of the university pass program which will offer a 10% discount to students using SEPTA services to access the campus. This initiative may require a College subsidy.
- 2) Provide Biking and Walking options
 - a) Explore the utilization of a 'park-and-rides' to encourage the use of public transportation and ride-sharing
 - b) Provide bicycle service facility for repairs and tune-ups.
 - c) Continue application for a grant to complete the engineering and specifications for the Campus trail system.
 - d) Develop web-hosted map images that identify all important bike routes. Develop web-hosted, text-based route notations to the college campuses
 - e) Investigate the possibility of a grant for a safer biking path from nearby train stations with the potential support of SEPTA.
- 3) Consider Alternative Work Schedule
 - a) Explore and recommend work from home options to reduce staff commuting to campus.
 - i) Various methods that other institutions currently have in place include:
 - (1) 4 day work weeks.
 - (2) 3 day work weeks.
 - (3) Working from home one day a week.
- (4) Faculty and Course Scheduling
 - (a) Explore replacing the 55 minute morning periods with 85 minute periods on Mondays and Wednesdays (eliminating a third meeting on Friday). The first three sessions would be the same time on Tuesday/Thursdays. Down-time on Monday and Wednesday would be from 12:35 to 1:30 PM. Then classes would follow the schedule. The college would only be losing one period of M/W/F instruction a week and it would still have a downtime for M/W.

Objective D: Continue to increase MCCC's Waste Diversion Rate

- 1) Reduce the use of One Time plastic water bottles and plastic cups
 - a. Raise awareness of water filling stations.
- 2) Recharge enthusiasm in and around Recycle mania
 - a. Collaborate with Marketing to increase awareness around Recyclemania, by using outlets such as the college website, email marketing, and social media.

- 3) Investigate the possibility of replacing or redesigning the trash cans and recycling bins in the cafeteria.
- 4) Evaluate programs around the college that use paper applications/brochures, such as Municipal Police Academy and Continuing Education.
 - a. Implement a plan to move these documents to an electronic format.
- 5) Re-investigate a refillable markers program. MCCC had piloted this program a few years back, with success.

STRATEGIC GOAL #2 INCORPORATE SUSTAINABILITY INTO ACADEMIC COURSE PROGRAMMING

Incorporate resiliency, green and sustainable thinking into academic course programming.

- 1) Develop and implement additional green and environmentally friendly learning opportunities
 - a) Provide additional events for students to attend after class or during down time to help raise awareness about Sustainability.
 - b) Consider the development of “green” curriculum components into existing core courses that furthers the College’s commitment of sustainability.
- 2) In support of the College’s White House Pledge, promote local sustainability industries & employment within County
 - a) Identify sustainability industries within Montgomery County and establish Job Fairs highlighting such companies.
- 3) In support of the College’s White House Pledge, continue to focus on textbook free (non-textbook supplemental materials)/open source textbooks into course delivery
 - a) Provide research and education to facilitate faculty buy-in.
- 4) Raise awareness and increase involvement surrounding the Aquaponics lab at West Campus
 - a) To promote awareness of water quality, deploy a database and startup of water quality data collection and sensor monitoring systems.
 - b) To provide power for the lab and demonstrate open source accessibility of simple, efficient system design and implementation methods, install an alternative/renewable energy harvesting system.
 - c) Expand strawberry study to include maintaining crop viability and output throughout the winter months.
 - d) Expand baseline system study from 1 square meter to 4 square meters and set up of crop rotation - to determine holistic system stress. (The purpose of this program is to begin providing CAI with a reliable source of produce, we’re essentially going to push the limits of the current system and see what it can produce).
 - e) Design and build simple, attainable, and productive Aquaponics and hydroponic systems.
 - f) Develop a non-credit course, Alternative Growing Basics - an 8 hour course covering the history, design, set-up, maintenance of Aquaponics systems. Topics include, deciding on the best type of system, water chemistry in a functioning system, fish and plant species selection, lighting requirements for plants, troubleshooting common problems, and system maintenance.
- 5) Investigate more sustainable food resources that permit the reduction of the footprint by The Culinary Arts Institute
 - a) Create a living wall in the cooking lab that would contain the herbs that the students use to create dishes during class.
 - b) Partner with the Aquaponics lab at West Campus to use the produce that’s grown in the culinary classes.
- 6) Consider implementation of the proposed “Green Kiln” Program (something that has not been done previously at other colleges or universities).

- a) Currently, ceramics program fires kilns using natural gas. Firing student works in these kilns to 2350 degrees not only has a large economic impact on the College, but the process leaves a carbon footprint that can be reduced by an innovative project such as this one. By using this proposed “Green Kiln”, not only will students learn about the material process through working in ceramics, they will gain a better understanding about what goes into their bodies, as well as into the environment, when learning about the use of recycled waste oil (veggie oil) to fire their creations. This proposed waste oil (veggie oil), soda kiln will be a valuable teaching tool for the faculty and students. In addition, constructing this kiln will serve as a global resource for colleges and universities to learn from, as the College would be on the forefront in developing this green element for the art curriculum.
- 7) Finish our nearly completed Fair Trade Certification through www.fairtradecampaigns.org.
 - a) Evaluate the initiatives that we have yet to complete, and see if we have completed them. The last update to this campaign was 3/18/2015. We may have completed additional qualifications since then.

STRATEGIC GOAL #3 ENGAGING THE COMMUNITY

Strengthen and engage our internal community by mainstreaming sustainability in a fun and innovative manner that reaches a broad number of the College community.

- 1) Maintain the sustainability branding campaign and web presence to promote sustainability
 - a) Create a Sustainability section in the current website redesign.
 - b) Provide a form that allows MCCC faculty/ staff and students to provide input and new ideas to add to our Sustainability initiatives.
 - c) Update content yearly to reflect our progress and future endeavors.
- 2) Incorporate sustainability and climate change messaging into our various media outlets. Some of these outlets include the newly designed website, MCCC Radio, social media and newsletters. In collaboration with the Student Environmental Sustainability Club, develop guidelines and outlets for green messaging on campus
 - a) Define which audiences should receive information concerning MCCC’s sustainability activities and tailor the messaging when appropriate.
 - b) Designate one video screen on each campus for dedicated green messaging and develop procedures for posting material. Execute pilot for at least one semester.
 - c) Include updates on our progress in alumni outreach materials, giving materials, etc.
- 3) Increase student volunteer opportunities focused on Sustainability and Climate Change
 - a) Utilize the new Content Management System by creating a form for businesses with volunteer opportunities. These volunteer opportunities could be posted on the website for students to access.
- 4) Continue to implement education campaigns on campus to promote awareness of sustainability practices and get more students involved in practicing Sustainability
 - a) Work with Campus Life to expand the student awareness of Sustainability on campus.
- 5) Continue to assist and guide (when needed) the Environmental Sustainability Club
 - a) Increase membership by promotion and recruiting students.
- 6) Develop and implement green service learning opportunities
 - a) Provide additional events for students to attend after class or during down time to help raise awareness about Sustainability.
- 7) Explore the idea of annually hosting artists from various disciplines to participate in a Sustainable art show in the fine Arts Center

- a) Explore the possibility with Art Faculty to discuss the possibility of having a Sustainable art project. These projects can be on display during Earth Week or Sustainability Day.
- 8) Develop a Green Map of campus
 - a) Create an overlay to go on the campus map to display all of the green items and areas on campus. This could include water filling stations, bike racks, tree tour, solar panel, windmills, Innovation Hub, etc.
- 9) Form partnerships with local farms, food growers, processors and makers for use within the Culinary Arts Institute
- 10) Increase campus tree coverage and maintain existing trees on campus
 - a) Invest in initiatives that support our goal of 30-40% tree coverage across campus (as of 2014 Central Campus has a 7.4% tree coverage).
 - b) Target to plant 50 trees per year, for 5 years.
 - c) Investigate funding opportunities for this initiative.
 - d) Identify areas of campus with unused lawn, suitable for either trees within the lawn matrix, or to be reverted.
 - e) Identify already-existing trees that will “soon” need to be replaced.
 - f) Identify suitable species to plant in the narrow borders within and around parking lots.
 - g) Work with the Whitpain trails folks to identify areas along the proposed and soon-to-be-designed loop trail around the campus, to improve tree cover and screening aesthetics along the proposed trail route.
- 11) Host an Arbor Day Event on Campus
 - a) Consider becoming a member of Tree Campus USA.
 - b) Involve college and county community members to incorporate this event into our Earth Day celebration.
 - c) Event focus awareness of our campus tree canopy cover initiatives.

MANAGEMENT & IMPLEMENTATION

STRUCTURE ROLES AND RESPONSIBILITIES

Clear roles with assigned responsibilities and levels of authority are necessary for ensuring that the goals of this Climate Action Plan are met. The following groups within the college will collectively guide the Climate Plan’s implementation.

- **President’s Office**
 - The President’s office will review information provided by the Sustainability Council and will oversee the progress toward meeting the Climate Action Plan goals.
- **Sustainability Council**
 - The Sustainability Council is responsible for ensuring that the Climate Action Plan activities support the College’s broader sustainability goals.
- **Sustainability Committee**
 - MCCC’s Sustainability Committee provides a forum for faculty, staff and students to plan various campus sustainability initiatives, including the annual Earth Day and Sustainability Day events. They will also be responsible for providing materials about Sustainability to Marketing to increase the web and social media presence.