

2011 Climate Action Statement of Progress
January 1, 2012



Warren Wilson College is four years into the implementation of our Climate Action Plan. One thing has become clear, there is a lot of work to do. The good news is that we have arrived at the realization that to meet the goal of climate neutrality, WWC will need to leverage every bit of support, creativity and problem solving capability we've got.

Context: Our educational program, the Triad, is singular in higher education. The Triad consists of three interwoven strands of experience: academics in the liberal arts tradition, a campus-wide work program, and service learning. The Triad is infused with a sustainability ethic and cross-cultural understanding-integral parts of the College's history and founding philosophy. Through the Triad, students gain a meaningful education that feeds their intellectual hunger and guides them to collaborate and solve problems during and after college. Led by faculty and staff, students learn in the classroom, in the forest and fields and in the wider community-locally and internationally. Academics, work, and service connect to create a holistic, experiential education.

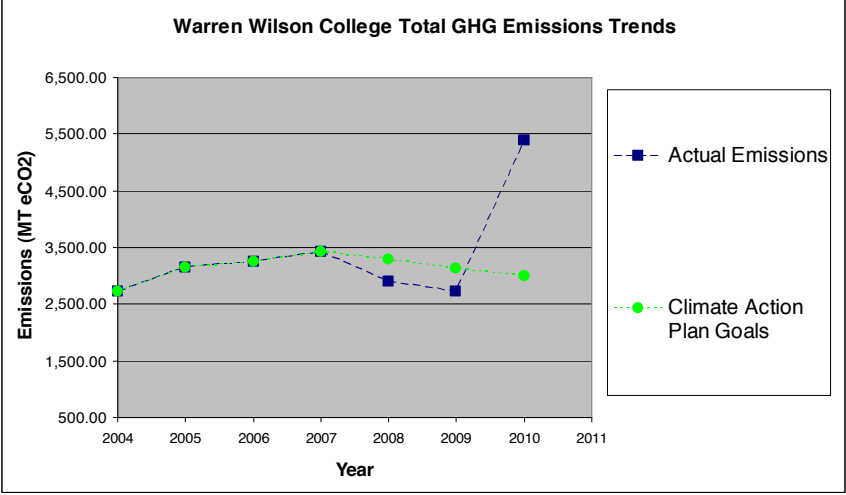
In the context of the Triad, We engaged our student work crews such as Rentals and Renovations Crew to conduct energy efficiency upgrades to campus buildings; Campus Greening Crew to monitor energy use and compile the annual greenhouse gas emissions inventory; Native Grass Crew to plant native grasses in stead of turf to reduce lawn mowing; Garden Crew to grow more vegetables and Farm Crew to grow more beef and pork for the cafeteria; Recycling Crew to increase compost capacity;

On the academic side, we received a grant from the Arthur Vining Davis Foundation to create interdisciplinary courses focused on sustainability, such as *Learning from Coal* (<http://cargocollective.com/learningfromcoal/>). We also created a faculty Director of Sustainability Education position to build capacity among the faculty.

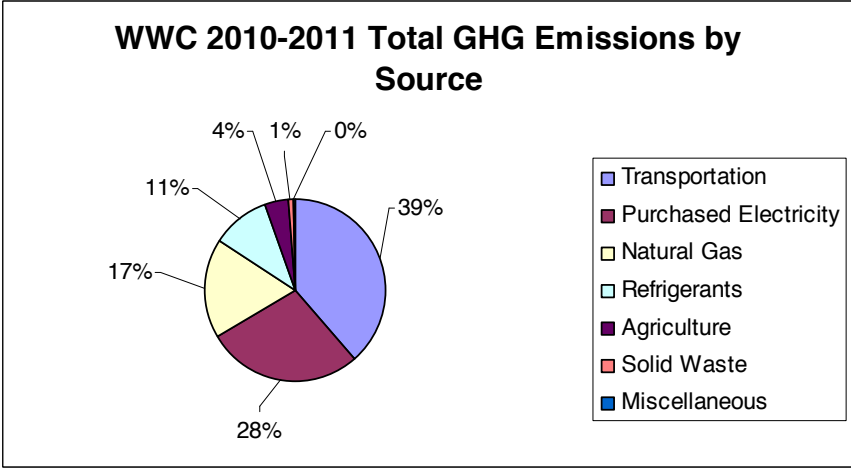
And in the Service Learning arena, we created issue-based courses that focus on all realms of food security. This gives students the opportunities to engage in community problem solving around poverty, environmental quality, equity, justice, nutrition, racism—issues at the heart of sustainability.

Additionally we passed policies ensuring that all buildings are built to the highest green standards, campus vehicles are replaced with more efficient alternatives, all appliances are Energy Star, and that 50% of our dining hall food is sustainable. We launched behavior change programming aimed at both student life in residence halls and employees in the office. We produced Green Living, Green Office and Sustainability Guides. We created a website to house everything under the WWC sustainability umbrella. We created an Climate Action logo in an attempt to brand energy reduction efforts.

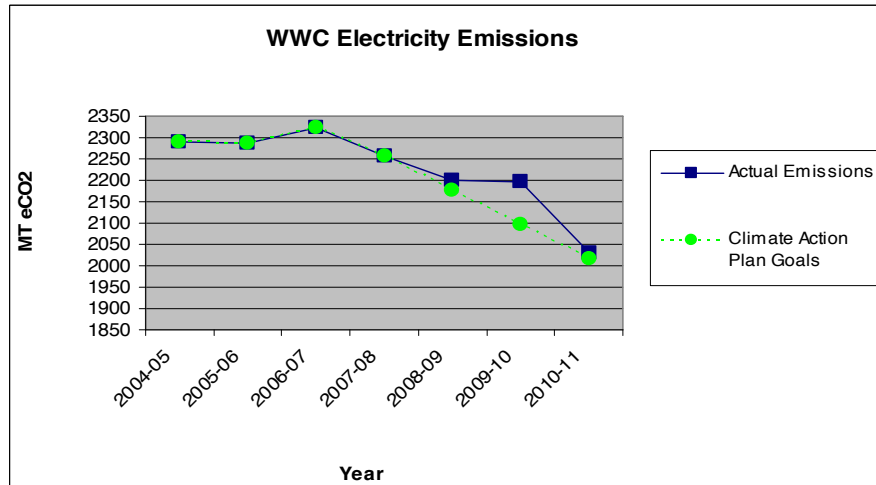
Despite those efforts, we got a surprise last year—our 2010-11 emissions skyrocketed to an all time high.



Two factors contributed to this increase. The first was tragic: 5 refrigerant leaks caused 770 MTeC02 to be released into the atmosphere, compared to the previous 6 year average of 176 MTeC02. The second was an increase in study abroad, which is a core part of the WWC mission. The increase in international travel boosted out transportation emissions from a 6 year average of 1010 MTeC02 to 2784 MTeC02. To deal with these isolated events, the College is seeking means to understand these links in order to prevent them from happening, and ultimately eliminate HFC refrigerants from campus. The International Programs Office is working to expand their carbon offset program including opportunities in-country for students to engage in service projects that quantifiably reduce greenhouse gas emissions.



The good news as we enter year 5 of our Climate Action plan is that our purchased electricity reduction goals are being met. This is significant because electricity use is something that is in the hands of every students and employee at the College. We turn on lights, computers, electronics, we either use power strips or enable phantom loads to happen, etc. It is the energy realm that provides for the most community engagement and is most indicative of successful campus behavior change.



It is also significant because all of the electricity that we use comes from mountain top removal mines in southwest Virginia and West Virginia. North Carolina is the nations number one consumer of mountain top removal coal. Our progress to date has resulted in us going from burning 1 ton of dirty coal every 4 hours to operate the College to burning 1 ton every 5 hours. That's 438 tons of coal per year not burned! That's cause for celebration.

To drive down electricity consumption further, we are installing high efficiency Genesys GHID ballasts that will significantly reduce our gymnasium lighting-related electricity use. These installs will serve as a research opportunity to further analyze how well this new technology works in a gymnasium application.

Going forward, our greatest opportunities for Climate Action progress are in campus heating and cooling. We are beginning an investment-grade energy audit that will be completed this semester by Snyder Electric. That audit will help us determine the scope of work we will undertake to bring our buildings energy efficiency up to green building standards, which will then enable us to implement renewable energy solutions that will provide significant economic, social and environmental return on investment,. We have already invested in geothermal heat pumps for 3 campus buildings, and are looking into the possibility of transitioning our entire core campus from natural gas boilers and electricity powered air conditioners, to a centralized geothermal HVAC system. We estimate that doing so will reduce our total campus greenhouse gas emissions by 40 percent.

We recognize that reaching climate neutrality will require big vision and thorough execution. We've seen how hidden refrigerants in our dehumidifiers and chillers can wreak climate havoc. And we've seen how a campus can work together to reduce the consumption of mountain top removal coal. As Bill McKibbin is fond of saying these days, we're already living on a different planet. Surviving as a higher education business on this new planet will require building resilient academic, facility and community relations infrastructure that is able to adapt to the inevitable changes coming, and withstand the shocks and pressures that will result.