

Connecticut College
Greenhouse Gas Emissions Inventory
FY 2008-2009

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Introduction

Conducting a Greenhouse Gas Emission Inventory at Connecticut College

Conducting an inventory of the greenhouse gases generated by Connecticut College serves to identify the sources and amounts of campus emissions and to reduce generation of greenhouse gases. Campus emissions have been annually tracked since 1990. Because Connecticut College has a reputation for being an environmentally conscious campus, it is hoped that this inventory will serve to further increase awareness of climate change issues and desired behaviors amongst students, staff, faculty and administration.

Methodology of Inventory

The methods used for this greenhouse gas (GHG) emissions inventory were based on the Intergovernmental Panel on Climate Change (IPCC) guidelines for the formulation of nation-wide greenhouse gas inventories. The non-profit organization Clean Air-Cool Planet (CA-CP) adapted these IPCC methods of inventory specifically for use at a college or university. The inventory findings are reported in metric tonnes of carbon dioxide equivalents according to each gas's Global Warming Potential, in order to demonstrate their relative contribution to climate change. The emissions calculations are reported in terms of fiscal years (i.e. July 1-June 30) rather than calendar or academic years.

Included in this inventory are the GHG emissions that can be directly influenced by Connecticut College. For example, the college can control the fuel types it uses to produce heat. Given that this inventory employs the protocol established by the IPCC, it provides adequate basis to formulate possible emission reduction practices and policies at Connecticut College.

Emissions by Source

Connecticut College's greenhouse gas emissions can be divided into three major categories: energy emissions (on campus stationary fuel sources and purchased electricity), emissions from off-campus incineration of solid waste, and fuel emissions from on-campus transportation. The majority of Connecticut College's GHG emissions can be attributed to Scope 1 and Scope 2 sources. Scope 1 sources encompass the college's direct greenhouse gas emissions and include the stationary combustion of natural gas, distillate oil, residual oil, and propane, emissions from the campus fleet, and nitrous oxide emissions from fertilizer application. Scope 2 sources include emissions from energy that is purchased off-campus. Scope 3 sources cover a much broader category and can include anything from commuting habits of faculty, staff and students to emissions associated with transportation of products. Because this information is difficult to acquire and previous years' data do not exist, the college has mainly focused on Scope 1 and Scope 2 sources.

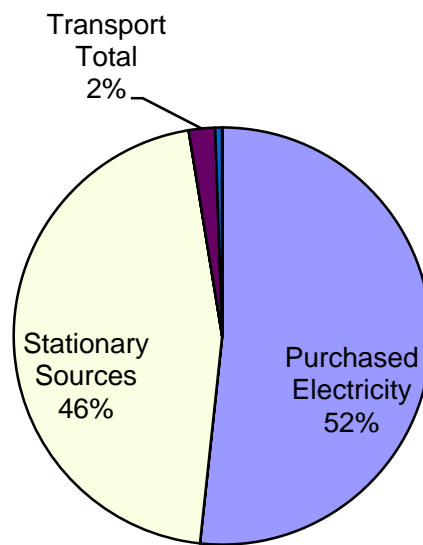


Figure 1. Percentage emission sources for Fiscal Year 2008-2009.

On Campus Stationary Sources

As shown in Figure 1, Connecticut College's on-campus stationary sources (distillate oil, residual oil, natural gas, and propane) are some of the biggest contributors to campus GHG emissions. They comprise approximately 48% of the college's greenhouse gas emissions. These fuels are used primarily for heating the campus, but they are also used to heat water for showers and for cooking purposes. The types of fuels used play a large role in the campus' total emissions and vary from year to year due to weather factors as well as financial factors. For example, no residual oil was used in the year 2000.

Instead, natural gas was used to run the boilers. This explains why the total emissions for the year 2000 are low in comparison to other years. However, in 2001, 493,580 gallons of #6 oil were used, and this number steadily rose until 2005. This increase in residual oil most likely explains the upward trend in greenhouse gas emissions from 2001 to 2005.

Connecticut College contracts with Hess Corporation and purchases its fuel mix from this supplier. Fortunately, the College has adequate control over which fuels it purchases. Connecticut College has recognized that #6 oil contributes most strongly to greenhouse gas emissions and has therefore begun to phase out #6 oil in favor of natural gas¹. However, increased natural gas consumption is a temporary fix, and there is talk of installing on-site renewable energy sources.

Figure 2 shows the emissions generated by on-campus stationary sources from 1990 to 2009. The recent decline in emissions can be attributed to the college's efforts to wean off of #6 fuel oil in favor of natural gas.

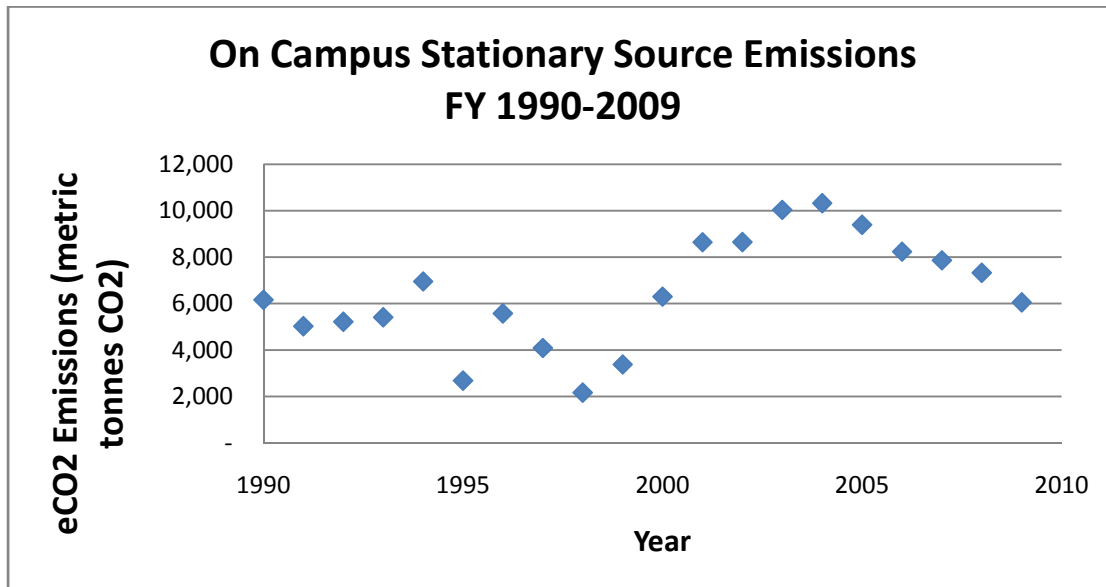


Figure 2. Emissions generated by on-campus sources from 1990 to 2009 in metric tonnes of CO₂

¹ Personal Communication. Peter Horgan, Connecticut College Engineering Systems Manager.

Campus Electricity Purchases

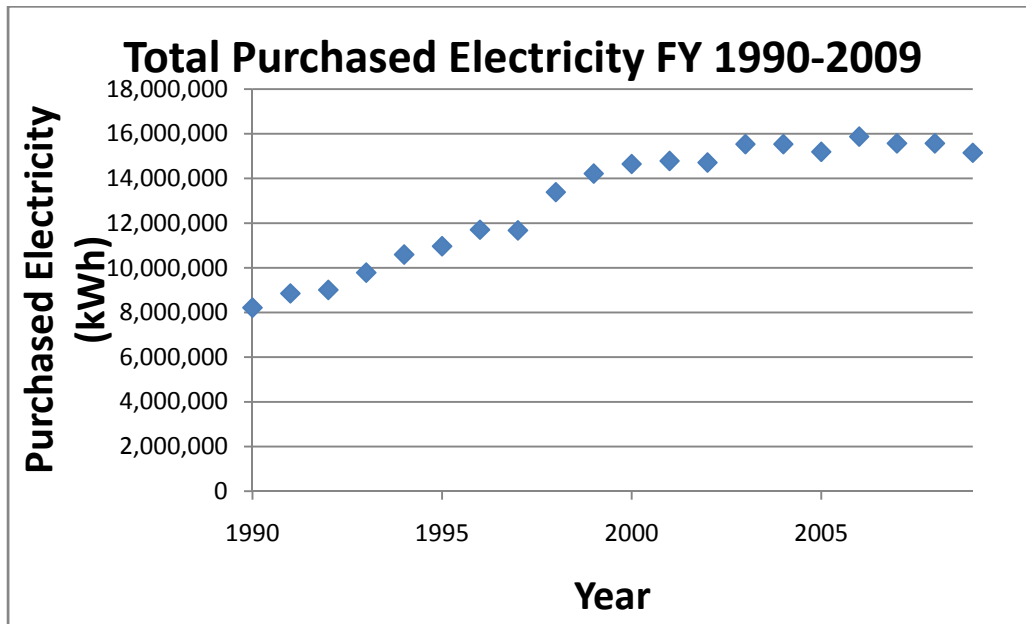


Figure 3. Total Purchased Electricity in kWh for FY 1990-2009.

Total Purchased Electricity FY 1990-2009

Date	Purchased Electricity (kWh)	Date	Purchased Electricity (kWh)
1990	8,213,857	2000	14,653,075
1991	8,856,356	2001	14,782,706
1992	9,010,846	2002	14,712,876
1993	9,783,079	2003	15,534,784
1994	10,594,803	2004	15,534,784
1995	10,964,467	2005	15,192,077
1996	11,706,895	2006	15,871,678
1997	11,673,272	2007	15,570,704
1998	13,390,214	2008	15,570,728
1999	14,217,094	2009	15,154,459

Table 1. Total Purchased Electricity in kWh for FY 1990-2009

Purchased electricity is Connecticut College's next largest contributor of greenhouse gases. In 2009, purchased electricity accounted for 52% of the College's emissions.

Table 1 shows that the College’s purchase of electricity has increased by over 84% since 1990. This significant increase in purchased electricity can be attributed to the increased electrical consumption of the college as a whole. Additional students, faculty, staff, buildings and amenities have greatly increased the demand for electrical energy. It is difficult to ascertain which group of people is primarily responsible for the increase in electrical energy consumption. While an obvious consumptive population is the student body, Table 2 shows that electrical energy consumption in the residential halls during the eight months from September 2008 to April 2009 only comprised 7% of the total purchased electricity. This implies that the majority of purchased electricity goes to lighting the academic buildings and cooking. Non-residential on-campus buildings with high electricity consumption levels are Fanning Hall, Bill Hall, Olin, Hale Laboratory, and the Dining Halls². The College hopes to install energy sub-meters to better target energy use and to pinpoint where energy conservation and efficiency would be the most effective.

Dorm kWh Usage

month	Dorm kWh usage
September 2008	101,565
October 2008	171,687
November 2008	156,719
December 2008	124,866
January 2009	123,929
February 2009	154,037
March 2009	99,355
April 2009	146,711
Total	1,078,869

Table 2. Dorm kWh usage September 2008-April 2009.

The College’s purchase of electricity has decreased by 5% since 2006.

Net Emissions from On-campus Stationary Sources and Purchased Electricity

Figure 4 illustrates the overall greenhouse gas emissions from purchased electricity and on-campus stationary sources. Emissions from purchased electricity and on-campus stationary sources are both on the decline. Emissions from purchased electricity declined by 3% from the previous year, and on-campus stationary emissions decreased by 17%. However, it is Connecticut College’s use of GHG emission offset actions (e.g. Renewable Energy Certificates and a carbon sequestration afforestation project in Costa Rica) that compensate for an actual increase in emissions from these two fuel sources by about 29% since 1990.

² Personal Communication. Peter Horgan, Connecticut College Engineering Systems Manager.

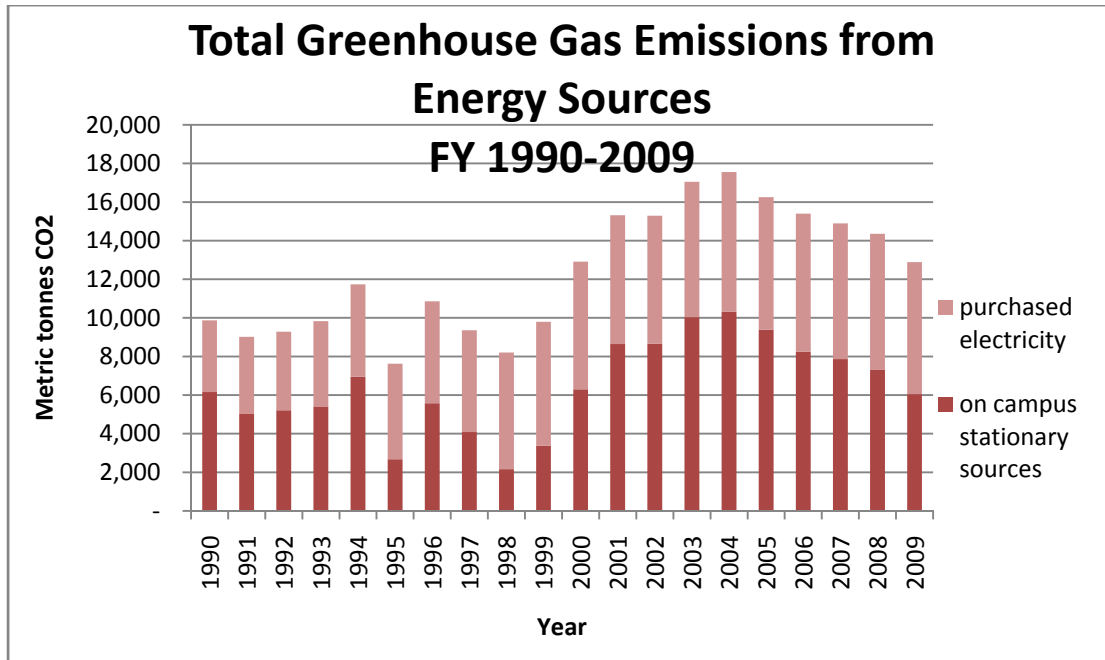


Figure 4. Overall greenhouse gas emissions generated by campus energy use from 1990-2009 in metric tonnes of CO₂.

Gross and Net Emissions

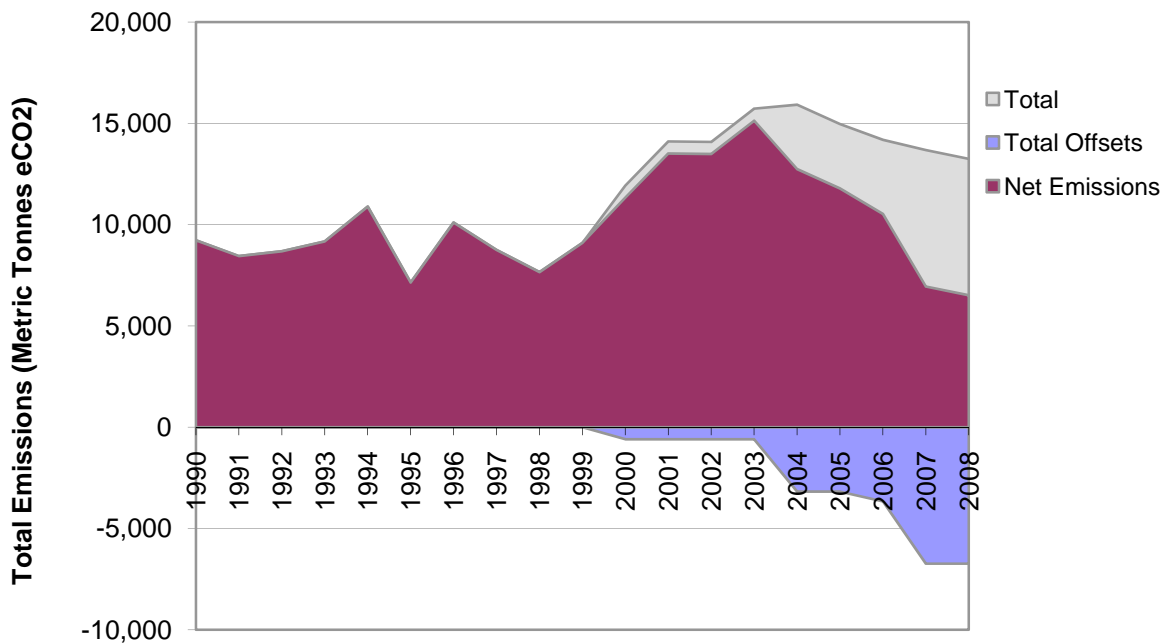


Figure 5. Gross direct emissions, net emissions, and total offsets from 1990-2009 in metric tonnes of CO₂.

Connecticut College's carbon dioxide emissions have increased by about 29% from 9,226 metric tonnes of carbon dioxide in 1990 to 11,887 metric tonnes in 2009.

The college's emissions have most likely increased by 29% since 1990 as a result of on-site construction, dormitory and academic building renovations and additions, and an increase in electrical energy demand. Several buildings have been constructed since 1990, including the Olin Science Center and the Lott Natatorium. An addition was put on the Hale Laboratory including a chiller, and the Crozier-Williams Student Center and four North Residence Halls were renovated to include air-conditioning. Cable television has been installed in the dormitories since 1991, and Hamilton and Marshall were recently equipped with air-conditioning in 2007. These installations and renovations have greatly increased the College's demand for energy, thus increasing the college's greenhouse gas emissions. Additionally, students are bringing more and more technology on campus. In a survey administered by the Renewable Energy Club in 2006 with a response rate of 29%, 41% of students surveyed reported bringing 6-10 electrical appliances from home. A third of the respondents (31% of students) reported bringing 11-15 appliances, and a staggering 8% bring 16-20 appliances. Connecticut College went wireless in 2007, which most likely led to an increase in personal laptop use. Laptops consume less energy than desktop models. However, it is impossible to discern whether or not going wireless increased the total purchased electricity or if the number of laptops over desktops helped to keep it lower. From 2007 to 2008, the increase in electricity was 24 kWh (0%).

Connecticut College's GHG emissions have decreased by about 25% since 2004, and have been steadily decreasing ever since as a result of the College's efforts toward energy conservation and improved efficiency. Net emissions have decreased substantially because, in addition to decreasing its GHG emissions, Connecticut College has also been offsetting emissions by making use of renewable energy sources. Since 2007, the College has been purchasing 15,000,000 kWh of Renewable Energy Certificates (RECs) annually. In 2008 these certificates, along with the carbon sequestration program in the Klinki Forest Preserve, offset 57% of the College's total emissions.

Emissions and Energy Use per Student

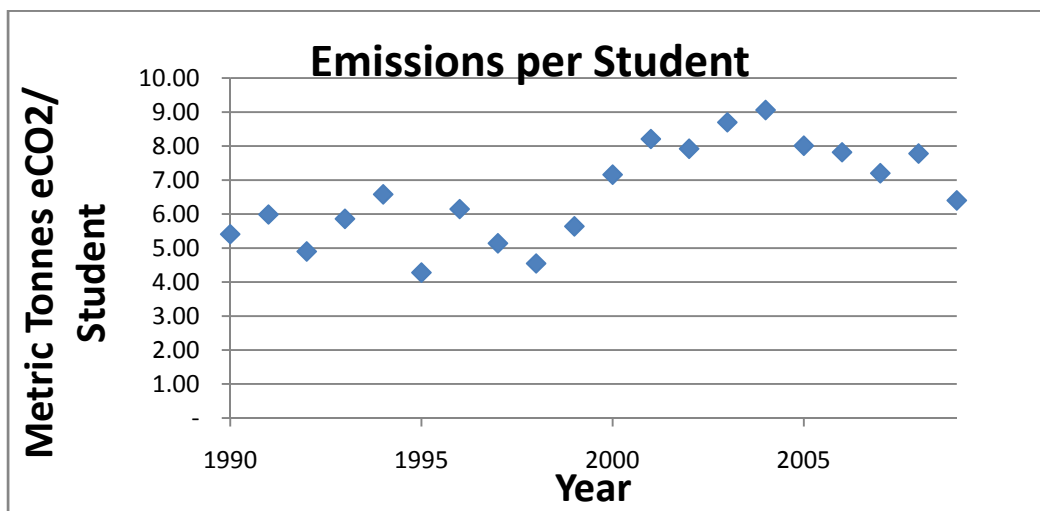


Figure 6. Total emissions per student in metric tonnes CO2 equivalents/student per year 1990-2009.

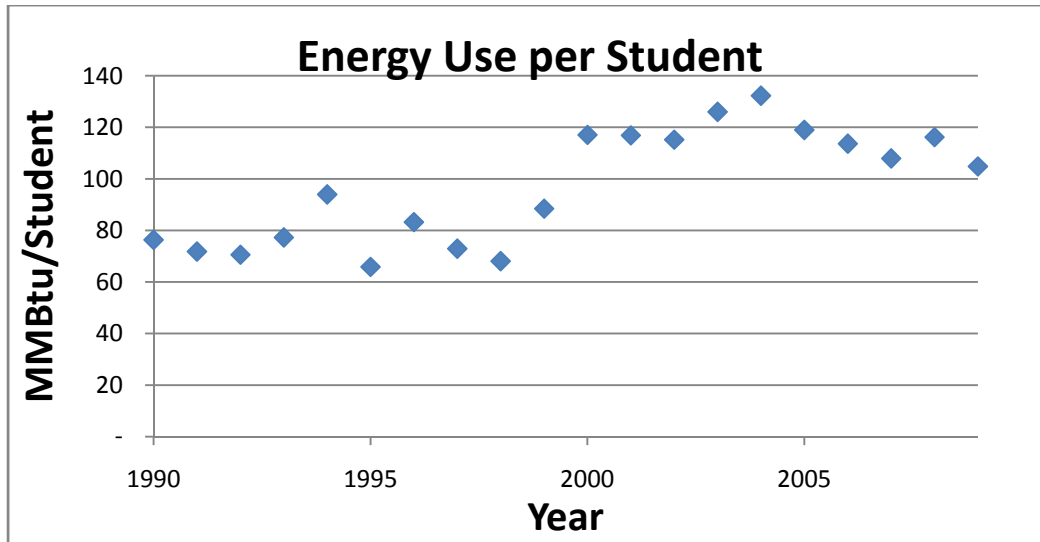


Figure 7. Total energy use per student in MMBtu/ student per year 1990-2009.

Connecticut College’s undergraduate population has fluctuated between a minimum of 1,614 students in 1999 and a maximum of 1,900 students in 2007. Averaging about 1,735 students over the past twenty years, the student population has been slowly increasing since 1990. With 1,856 students enrolled in the 2008-2009 academic year, the greater student body population is most likely to increase the campus energy use.

The increase in energy use can also be attributed to the growing number of staff. While the number of faculty has remained relatively constant throughout the years, the number of staff has grown by approximately 176 (42%) since 1990. Heating, cooling and providing electrical energy to office buildings requires substantial energy.

According to Figure 6, the emissions per student have increased by .99 metric tonnes of carbon dioxide, (18% since 1990). These emissions are directly related to the energy use per student shown in Figure 7, which has increased by 28.86 MMBtu (38%) since 1990. This estimate gives a relatively accurate representation of the energy consumption rate per Connecticut College student. Increased amenities in the dorms, such as air-conditioning, along with the increased usage of personal electrical appliances and the careless waste of electricity all contribute to the increase in energy consumption per student.

It should be again noted that emissions per student appear to be on the decline as a result of the college’s recent energy conservation and efficiency efforts and offsets.

There has been a recent decline in the College’s overall energy use. As shown in Figure 8, energy consumption peaked in 2004 with 238,493 MMBtus of energy utilized. Since then, energy use has declined by 17% as a result of conservation efforts and increased technology efficiency.

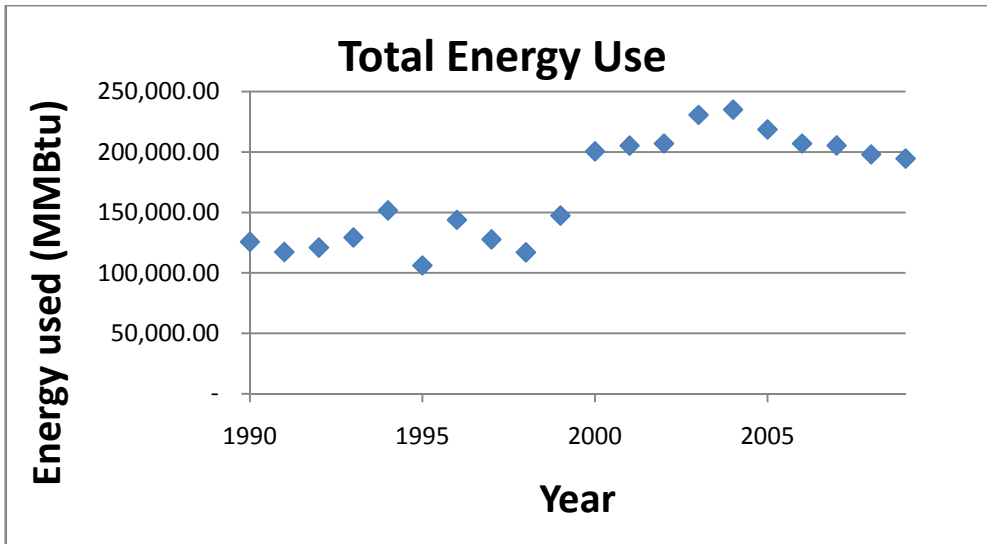


Figure 8. Total Energy Use in MMBtu 1990-2009.

The following table provides a breakdown of the emissions generated by Scope 1, Scope 2 and Scope 3 sources. The data was computed using the Clean Air, Cool Planet (NH) program, “e-calculator,” an Excel spreadsheet. Emissions are measured in metric tonnes of carbon dioxide equivalents (CO₂e).

2009 GHG Emissions Summary

Scope 1 Emissions	
Stationary Combustion	5,487 metric tonnes of CO ₂ e
Mobile Combustion	245 metric tonnes of CO ₂ e
Total Scope 1 emissions	5,732 metric tonnes of CO₂e
Scope 2 Emissions	
Purchased Electricity	6,206 metric tonnes of CO ₂ e

Total Scope 2 emissions	6,206 metric tonnes of CO2e
Scope 3 Emissions	
Solid Waste	48 metric tonnes of CO2e
Total Scope 3 emissions	48 metric tonnes of CO2e

2009 GHG Offset Summary

Renewable Energy Certificates (RECs)	
Total RECs purchased	15,000,000 kWh
Percent of total electricity consumption mitigated through the purchase of RECs	99%
Emissions reductions due to the purchase of RECs	6,142 metric tonnes of CO2e
REC verification program(s)	Green-e
Description of RECs purchased (including vendor, project source, etc.)	
100% wind energy Renewable Energy Certificates, 3Phases Energy Services, CA	
Sequestration and Carbon Storage	
Sequestration due to land owned by the institution	593 metric tonnes of CO2e
Description of how sequestration was calculated	
Collaboration with Reforest the Tropics (Mystic, CT) to work with farmers in Costa Rica to plant fast-growing Klinki (<i>Araucaria huntsteinii</i>) to compensate for the 593 tons of CO2 emitted annually by electricity use in the College Center over a 30-year period (note: forest not owned by Connecticut College).	

Carbon storage due to composting

5.52 metric tonnes of CO₂e offset

2009 GHG Report Summary Statistics

	Total	Per Full-Time Enrollment	Per 1000 Square Feet	% Offset
Gross emissions (Scopes 1 + 2)	11,938 metric tonnes of CO ₂ e	6.4 metric tonnes of CO ₂ e	8.4 metric tonnes of CO ₂ e	56.4%
Gross emissions (Scopes 1 + 2 + 3)	11,986 metric tonnes of CO ₂ e	6.5 metric tonnes of CO ₂ e	8.5 metric tonnes of CO ₂ e	56.2%
Net emissions	5,251 metric tonnes of CO ₂ e	2.8 metric tonnes of CO ₂ e	3.7 metric tonnes of CO ₂ e	N/A

The data indicates that the majority of Connecticut College's GHG emissions come from Scope 1 (on-campus stationary) and Scope 2 (purchased electricity) sources. In order to lower emissions caused by Scope 1 sources, the College has been gradually phasing out #6 fuel oil in favor of natural gas. While this is a commendable short-term goal, the College may also want to consider a longer-term goal of installing an on-campus cogeneration plant. An on-campus cogeneration plant reduces emissions because it simultaneously generates electricity and heat³.

Connecticut College has begun to lower its purchased electricity through conservation campaigns and technology efficiency. However, the College's purchase of electricity generated the highest amount of GHG emissions at 6,206 metric tonnes of carbon dioxide in 2009. It is important that the College install energy sub-meters to identify the buildings with the greatest electrical energy use. This information will indicate the areas of the College that are most in need of energy efficiency.

³ "Decentralized Energy."

http://www.dekb.co.uk/home/index.php?option=com_content&view=category&id=82&Itemid=93.

Waste Management

Municipal solid waste (MSW) generated by the College is hauled to the City of New London Transfer Station. Later it is taken to the 690-tons-per-day mass-burn trash-to-energy, Preston incinerator. The incineration of solid waste is an extremely carbon-intensive process that releases nearly all of the carbon stored in solid waste in the form of carbon dioxide. In addition to carbon dioxide, the incineration of solid waste has a number of other harmful emissions, including fly ash and flue gas⁴.

For Fiscal Year 2008-2009, 498.43 tons of waste was hauled to the New London Transfer Station and burned in the Preston incinerator. The amount of waste generated on campus has increased by 25% since 1990. However, waste generation at Connecticut College is on the decline as a result of increased recycling due in part to an intercollegiate competition, RecycleMania, to reduce waste. The amount of waste incinerated has decreased by 15% since last year. The transport and incineration of Connecticut College's solid waste to the Preston incinerator generate an average of 55 metric tons of greenhouse gas emissions annually.

The College has a five-year contract with Tinnerello, a private contractor that acts as supplementary waste and recyclables management. From 2008 to 2009, Tinnerello hauled 96.47 tons of cardboard/paper products. Mixed paper collected from the College is baled and sold to recycling centers around and outside of New London⁵. Tinnerello also deals with bulky waste and scrap metal. The bulky waste is taken to a facility just outside New London where it is sorted by hand into recyclables and waste while the scrap metal is recycled. This year, Tinnerello recycled 17.57 tons of scrap metal.

The College also recycles bottles and cans and refrigeration units such as refrigerators and air conditioners. For the fiscal year of 2008-2009, 53.95 tons of bottles and cans were brought to a facility in Groton and recycled. 35 refrigeration units, amounting to 1.14 tons, were recycled by the College. The total amount of waste generated decreased significantly from last year, and waste generation has been on the decline since 2006.

Tons of Off-Campus Incinerated Waste

Date	MSW (tons)	Date	MSW (tons)
1990	397	2000	463
1991	427	2001	480
1992	439	2002	526
1993	422	2003	525
1994	406	2004	502
1995	433	2005	565
1996	466	2006	480
1997	433	2007	438
1998	367	2008	584
1999	457	2009	498

Table 2. Tons of Off-Campus Incinerated Waste FY 1990-2009

⁴ Rabiner Yuriy. "The Analysis of Existing Methods for Refuse Processing." <http://www.new-garbage.com/?id=10235#help2>. 2002.

⁵ Personal Communication. James Luce, Connecticut College Grounds Supervisor

Tons of Recycled Material

Date	Recyclables (tons)	Date	Recyclables (tons)
1990	199	2000	No data
1991	194	2001	209
1992	231	2002	213
1993	217	2003	No data
1994	225	2004	156
1995	216	2005	154
1996	214	2006	690
1997	201	2007	207
1998	216	2008	368
1999	No data	2009	348

Table 3. Amount of Recycled Material FY 1990-2009.

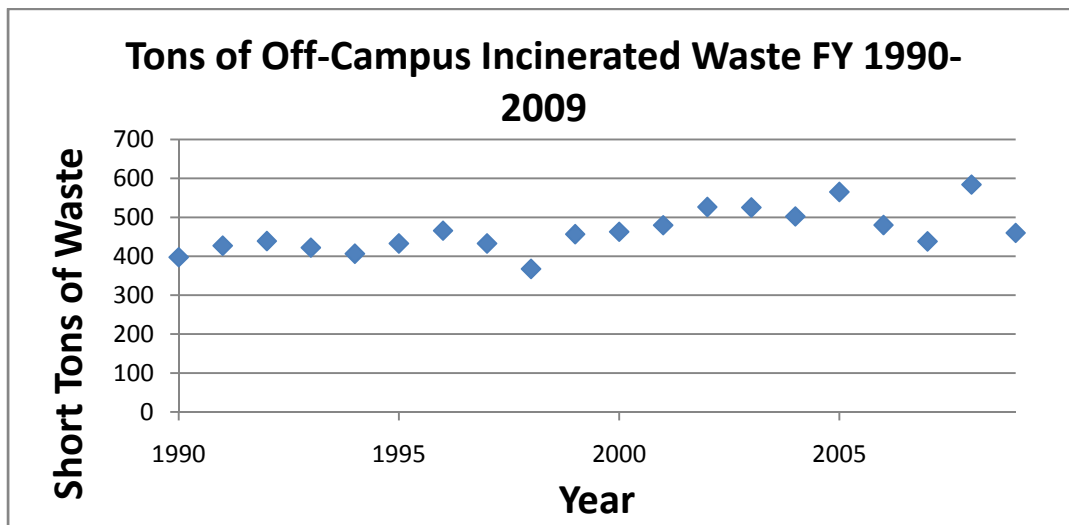


Figure 9. Short tons of off-campus incinerated waste from 1990-2009.

Transportation

The Connecticut College fleet, or “motor pool,” accounts for 2% of Connecticut College’s overall greenhouse gas emissions annually. The fleet is comprised of 30 minivans, 8 trucks, 5 full-size vans, 3 box trucks, the president’s car, 4 athletic center vans (2 mini and 2 full-size), 1 pickup truck, the trash truck, and the arboretum truck⁶. The campus fleet also includes various a variety of small landscape maintenance equipment. This equipment is fueled by both diesel and gasoline at on-campus pumps. Campus fleet emissions have decreased by 23% since 1990 and 11% since last year. The college has achieved this steady decrease in campus fleet emissions by trading in many of the older vehicles for

⁶ Personal Communication. George Yuhas, Head Garage Mechanic

more fuel-efficient vehicles over the past 20 years. This year, at least 4 older vehicles were discarded and replaced with newer vehicles.

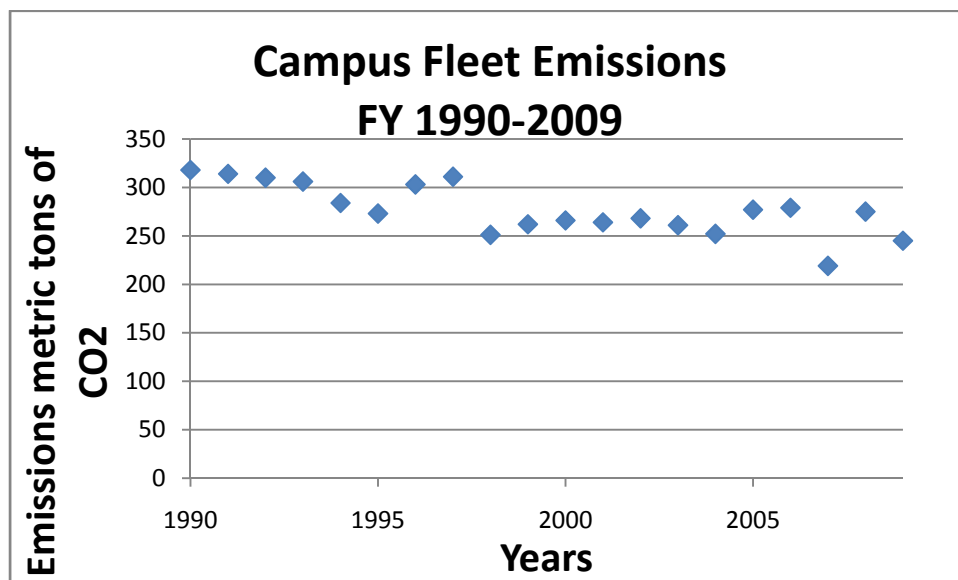


Figure 10. Campus Fleet Emissions in metric tons of CO2 for FY 1990-2009.

Students, Faculty and Staff Commuting

Due to a lack of historical data, the student, faculty and staff commuting data were not factored into the overall greenhouse gas emissions. However, it is estimated that the students traveled a total of 60,160 miles and the faculty and staff a total of 3,234,000 miles⁷. An additional 18,575 miles can be attributed to air miles traveled due to athletics. Had these figures been factored into the report, they would have added a combined 1346.7 metric tons of GHG emissions, which would have accounted for 10% of the total GHG emissions. This information shows that, while the majority of Connecticut College greenhouse gases can be attributed to Scope 1 and Scope 2 sources, emissions caused by Scope 3 sources should be factored into the equation. Mitigation strategies should be put into place to encourage students, faculty and staff to take alternative transportation.

Refrigerants

Connecticut College keeps records of the amount of refrigerants that are lost during the recharging of refrigeration units along with any leaks that occur. All universities must report their fluorocarbon release to the US Environmental Protection Agency. During the fiscal year of 2008-2009, there were a total of four chlorodifluoromethane (R-22) leaks⁸. R-22 is a colorless gas once commonly used as a propellant in air-conditioning. Now it is being phased out because of its ozone depletion potential⁹. Two of these leaks occurred in the Natatorium Dryotron System with 90 lbs released on January 23rd 2009 and 50 lbs

⁷ "Campus Commuting Habits." Connecticut College Environmental Sustainability Baseline Audit. Woodard & Curran June 2009.

⁸ Personal Communication. Steve Langlois, Director of Environmental Health and Safety

⁹ "Chlorodifluoromethane." International Labour Organization.

http://www.ilo.org/public/english/protection/safework/cis/products/icsc/dtasht/_icsc00/icsc0049.htm. July 2002.

released on February 17th 2009. 30 lbs were released on April 27th 2009 from the Crozier-Williams chiller. Finally, 120 lbs were released on September 17th 2008 from the Olin Science Center chiller.

In addition to R-22 leaks, there have also been numerous Freon leaks. Freon is another colorless gas used for air-conditioning and refrigeration. The majority of the Freon leaks have occurred in the Natatorium Dryotron System. A total of 367.387 lbs of Freon were released over the fiscal year of 2008-2009.

Greenhouse Gas Mitigation Strategies

In January 2007, President Leo Higdon became a charter signatory of the American College & University Presidents Climate Commitment (ACUPCC). As a charter signatory, President Higdon formalized Connecticut College's dedication to work toward climate neutrality by using GHG mitigation strategies, carbon offsets and other strategies. Connecticut College is committed to developing a Climate Action Plan (CAP) that will focus on lowering campus GHG emissions and implementing mitigation strategies. Current mitigation strategies include a "dial down campaign" that consists of turning down the heat in buildings during the winter, installing more energy efficient technology in buildings newly renovated or constructed, supporting renewable energy on and off campus, an afforestation project in Costa Rica, and other initiatives taken up by students, faculty and staff.

Energy Conservation and Efficiency

Connecticut College has the lowest electrical energy intensity (i.e. total purchased electricity divided by total cooling degree days) and electrical energy intensity consumed per student amongst its peers¹⁰. The College has accomplished this by relying on student environmental representatives and student initiatives to encourage dorm residents to lower electrical energy consumption. The College also has a Green Building Policy that requires that new construction use green building guidelines such as Leadership in Energy and Environmental Design (LEED). According to the Policy, the guidelines must address building materials, energy efficiency, water conservation, and indoor air quality¹¹. Departments are gradually replacing old technology with Energy Star equipment when possible. For example, the Computer Lease Program has provided Energy Star computers to the library.

Renewable Energy

As a result of a student body petition, Connecticut College began to support energy from renewable sources beginning in the spring of 2001. Students agreed to pay an additional \$25 in fees in accordance with the College's Renewable Energy Policy. Renewable energy certificates (RECs) have been funded with the student fee. For three years, nearly 100% of our electricity purchase has been offset by Green-e Certified 100% wind RECs.

In 1999, a 10 kW array of solar panels was installed on the roof of the Park residence hall. The electricity generated amounts to 42.86 kWh/year. The conversion of sunlight is utilized to offset the power required to operate a boiler plant added the same year. Connecticut College hopes to install additional solar panels in the future in order to further convert the campus to "green" sources of energy

¹⁰ "Energy Use." Connecticut College Environmental Sustainability Baseline Audit. Woodard & Curran. June 2009.

¹¹ "Green Building Policy." Connecticut College Environmental Sustainability Baseline Audit. Woodard & Curran. June 2009.

Renewable energy options for on-campus generation have been explored and include a wind feasibility study for a 100 kW turbine. This was not deemed economically feasible. A student independent study group undertook a small wind feasibility study in 2009 by erecting two wind gauge poles (i.e. anemometers to track wind speed) on campus.

Reforest the Tropics

In 1998, a forest in Costa Rica was sponsored via a generous donation of \$37,000 from Connecticut College to Reforest the Tropics. The forest was planted during the 1999-2000 period. The purpose of this project is to “provide a unique and practical approach to helping solve critical environmental and social problems, and it appears likely to succeed in creating sustainable, economic forests capable of efficient, long-term carbon storage” (Mike Ferrucci, Forester and President). Reforest the Tropics is a program that combines the carbon capture of the sponsors with the wood production of the local farmers to promote sustainability. Reforest the Tropics signed a twenty-five year agreement with the Connecticut College farmer in 1999, leaving sixteen years left in this agreement.

Recycling Program

To mitigate the generation of waste, newspapers, magazines, corrugated cardboard, office paper, co-mingled containers, light bulbs, polystyrene packing material, food waste, and cooking oil, each are recycled. Each student room has a bin for recyclable mixed paper and each floor has at least one central recycling location for paper and for bottles and cans. Every dorm has a student-elected House Environmental Representative to oversee its recycling program, inform other students of the recycling procedures, and other environmental initiatives such as assisting with the switch-over to compact fluorescent light bulbs. The academic and administrative buildings also have office bins for mixed paper and common area bins for bottles and cans.

Concert from Conservation

“Concert from Conservation 2008” was a student initiated and directed campaign designed to reduce the consumption of heating fuel and electricity on campus with the incentive of a concert funded by a percentage of the money saved from conservation. Based on a five-year average use for the months between November and March, Connecticut College students decreased their energy usage in the campus residence halls by 16 percent in the last five months. The savings were 155,160 kWh, a 44% increase from 2008!

Conclusion

Overall Trends in Emissions

Connecticut College's greenhouse gas emissions have increased by about 29% since 1990. This increase in GHG emissions can most likely be attributed to on-site construction and demolition, dorm and academic building renovations and additions, and an increased demand for electrical energy. The student population has been steadily increasing, and student emissions have increased by .99 metric tonnes of carbon dioxide (about 18%) since 1990. The increase in student emissions on a per capita basis is actually larger than it has been in previous years due to the increased amount of electrical appliances in student dorm rooms, the installation of cable television, and the installation of air-conditioning in Hamilton and Marshall. The 25% decrease in emissions since 2004 is most likely a result of the college's decreased electrical energy consumption and switch from residual oil to natural gas. The emissions from the campus fleet and the incineration of solid waste both contribute to Connecticut College's overall emissions. Fortunately, the campus fleet emissions have been steadily decreasing thanks to the replacement of older vehicles with more fuel-efficient ones. While the amount of solid waste incinerated has increased substantially over the past twenty years, events such as Recyclemania and the collection of 'mixed paper' rather than paper separated by type, have begun to cut down the amount of trash disposed of on campus. Connecticut College has made a commitment to "green living" and has therefore taken a number of proactive steps to lower and offset its impact on the global climate. The American College and University President's Climate Commitment energy conservation and efficiency measures such as a the dial down campaign and a compact fluorescent bulb exchange, purchase of renewable energy certificates and a carbon offset project in Costa Rica, demonstrate some of the highlights of these efforts.

Acknowledgements

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