

# CLIMATE ACTION PLAN



QUINEBAUG VALLEY  
COMMUNITY COLLEGE





# CLIMATE ACTION PLAN

Quinebaug Valley Community College

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Prepared by the President's Climate Commitment Committee  
April 2016

*Cover photography by Susan Breault, Margie Huoppi, and Gino LoRicca*

*Photo of Carlee Drummer by Michael Drummer*

*Student photos courtesy of John Lewis*



## I. STATEMENT FROM PRESIDENT DRUMMER



In 2013, Quinebaug Valley Community College signed the President's Climate Commitment – an initiative for the campus to become more sustainable with a carbon neutral future. To be environmentally responsible, QVCC is addressing six key areas: conservation and efficiency; electrical power utilization; purchasing; food and food service; commuting; and curriculum. The following pages detail progress with respect to advancing sustainability efforts and programs.

As early as 2009, QVCC took a proactive approach to evaluate its energy management system (EMS). An assessment revealed the EMS was improperly set to meet the College's true heating and cooling loads. Ensuing changes enabled the College to reduce natural gas purchases by 61 percent and lower kilowatt hour usage from 1.6 million to 1.2 million. A further study of the new Quinebaug Middle College (QMC) wing indicated the need for similar adjustments that recognized a 62 percent savings in natural gas purchases and a 44 percent reduction in kilowatt hour usage. Having remote access to the EMS played a vital role in enabling the College to achieve the proper energy balance.

Further savings have been realized with the installation of more efficient rooftop units in 2015. Moreover, the Quinebaug Middle College wing and the Advanced Manufacturing Technology Center slated to open in 2016 meet the Leadership in Energy and Environmental Design (LEED) Silver certification standards or better.

Although much remains to be accomplished, I am grateful to the President's Climate Commitment Committee for its dedication and leadership in setting forth a blueprint that will result in minimizing QVCC's environmental footprint and instilling an awareness in employees and students about the responsibility of being exemplary stewards of the environment. In the words of architect Richard Rogers, "The only way forward, if we are going to improve the quality of the environment, is to get everybody involved."

A handwritten signature in black ink that reads "Carlee Drummer". The script is cursive and fluid.

Carlee Drummer, Ph.D.  
President



## II. CLIMATE ACTION PLAN AUTHORS AND CONTRIBUTORS

With permission from Norwalk Community College, Quinebaug Valley Community College's Climate Action Plan (CAP) evolved from NCC's existing document.

### **QVCC President's Climate Commitment Committee**

John L. Lewis  
*Professor of Chemistry*  
*Chair, President's Climate Commitment Committee*

Jennifer Green  
*Executive Assistant to the President*

Mary Kay Knox  
*STEM Instructional Coach, Quinebaug Middle College*

Paul Martland  
*Dean of Administration*

Robert Therrien  
*General Trades Worker, Maintenance*

Neil Wippert  
*Skilled Maintainer, Maintenance*

*In addition to the contributors named above, QVCC and QMC faculty, staff, and students submitted suggestions, amendments, and comments incorporated into the final draft of this Climate Action Plan.*

### III. EXECUTIVE SUMMARY

Quinebaug Valley Community College takes climate change and environmental sustainability seriously. In developing this Climate Action Plan (CAP), the College focused on two overarching goals:

- 1) To integrate concepts of sustainability throughout the curriculum; and
- 2) To become a climate-neutral College by the year 2050.

To achieve these broad goals, QVCC has established 16 discrete outcomes as well as specific strategies to be employed. Additionally, the College has created metrics to measure each outcome. The outcomes fall into six basic areas:

- Conservation and Efficiency
- Electrical Power Utilization
- Purchasing
- Food and Food Service
- Commuting
- Curriculum

QVCC's Climate Action Plan reflects a collective endeavor of the College's faculty, staff, and students. The College's committee on sustainability—the President's Climate Commitment Committee (PCCC)—began drafting the plan in May 2015. After completing the initial draft, the Committee presented the plan to faculty and staff at the March 2016 All-College Meeting and subsequently to the QVCC Student Government Association. The Committee invited feedback to the initial draft between March and April 2016. The response was overwhelmingly positive: individuals submitted suggestions, amendments, and comments to the CAP. The Committee incorporated these amendments in the final draft. The President's Advisory Council subsequently approved the final document.

Finally, it is important to recognize that the Climate Action Plan is a living document. As time passes, each outcome will become more fully defined and developed. Although fiscal restraints beyond the control of the College may, at times, impede the expeditious implementation of some of the strategies enumerated in this plan, the Committee underscores its commitment to achieving environmental sustainability at the College and will work tirelessly to achieve that goal.

#### IV. ABOUT THE COLLEGE

Quinebaug\* Valley Community College is more than a college. QVCC is a community that focuses on student success. Whether earning a degree, preparing for a four-year college or university, acquiring new job skills, or simply quenching a thirst for learning, QVCC students discover boundless opportunities to enrich their lives.

As early as 1946, a group of area citizens sought to establish a two-year college in northeastern Connecticut to meet the educational needs of returning World War II veterans. Their vision finally became a reality in 1965 when the state organized the community college system. In 1969, Connecticut legislators authorized the establishment of a community college in Danielson.



Under the leadership of President Dr. Robert E. Miller, the College began offering classes on September 27, 1971, at Harvard H. Ellis Technical School and Killingly High School with 215 students, eight full-time professional employees, and a few office support personnel. Within a few years, the state acquired 68 acres of land on Upper Maple Street, and Quinebaug Valley Community College welcomed students to its new campus in 1983. Three years later, QVCC opened a center in Willimantic to serve residents in southern Windham County.

Following the retirement of Dr. Miller, Dianne E. Williams became the College's second president in May 1992. Dr. Ross Tomlin succeeded her and served from 2010 until 2012. Dr. Miller returned as Interim President from 2012 to 2013, and Dr. Carmen Cid, Dean of Arts and Sciences at Eastern Connecticut State University, served as Interim President during 2013 and 2014. Dr. Carlee Drummer became QVCC's fourth president in July 2014.

QVCC provides affordable, high quality education and training to the diverse residents of northeastern Connecticut. Beyond credit degrees and certificates, QVCC's Continuing Education program offers non-credit job-focused and customized business courses for personal enrichment, LiR (Learning in Retirement), and more.

In the "Quiet Corner", northeast Connecticut residents exhibit a rare passion for their community college, with alumni, business partners, and the QVCC Foundation providing ardent support.

\* "Quinebaug", a Native American word meaning "crazy river", refers to the meandering river that flows through northeastern Connecticut.



### **Mission Statement**

Quinebaug Valley Community College provides innovative educational, social, and cultural opportunities in a welcoming and supportive environment. We improve the quality of life in northeastern Connecticut by engaging learners in the classroom, developing leaders in the workplace, and creating partners in the community. *Adopted: May 2011*

### **Strategic Goals 2015-2020**

1. Engage students in a robust academic environment that supports their individual goals.
2. Strengthen and expand courses, programs, and other services to meet the needs of the community.
3. Enhance resources and support for faculty and staff to enrich the working and learning environment.
4. Expand QVCC's presence in the community through outreach, advocacy, and partnerships.
5. Strengthen the physical and organizational infrastructure of the College to ensure its long-term sustainability.

### **Accreditation**

Quinebaug Valley Community College is accredited by the New England Association of Schools and Colleges (<https://www.neasc.org/>) through its Commission on Institutions of Higher Education.

Accreditation by the New England Association of Schools and Colleges indicates the institution meets or exceeds criteria for the assessment of academic quality, periodically applied through a peer review process. Accreditation also addresses institutional integrity.

### **Program/Professional Accreditation**

#### **Medical Assisting**

The medical assisting associate degree program at QVCC is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon recommendation of the Medical Assisting Education Review Board (<http://maerb.org/>).

#### **Early Childhood Education**

QVCC's early childhood education program is accredited by the National Association for the Education of Young Children (<http://www.naeyc.org/>).

<b>Type of Institution</b>	Public, two-year, coeducational, nonresidential Two locations: Danielson and Willimantic Semester calendar Founded in 1971	
<b>Annual Credit Enrollment</b>	2015-2016	2,111
	2014-2015	2,506
<b>Student Profile (2015-2016)</b>	34% full-time students, 66% part-time students 40% male, 60% female 26 average age	
<b>Tuition (2016-2017)</b>	\$2,099 - Tuition and fees per semester, for full-time, in-state student \$565 - Tuition and fees for one three-credit course Tuition and fees subject to change	
<b>Financial Aid (2015-2016)</b>	67% receive financial assistance. Federal and State financial aid programs available in addition to scholarships provided by the QVCC Foundation. 51% receive federal Pell grants	
<b>Programs</b>	Associate Degree (two-year) Programs - 23 Transfer and Articulation Pathways - 15 Certificate Programs - 25 English as a Second Language (Willimantic Center) Pre-college and Basic Skills courses Credit for Prior Learning	
<b>Non-credit Enrollment</b>	974 (2015-2016)	
<b>Non-credit Options</b>	Careers in Healthcare Computer Training Learning in Retirement Motorcycle Training	Personal Enrichment Professional Development Real Estate Training for Businesses
<b>Library</b>	30,000 volume book collection 100 print periodicals Online periodical databases and e-book collections Media services for class instruction Research instruction	

## V. PREVIOUS ACCOMPLISHMENTS

On November 19, 2015, the White House launched the American Campuses Act on Climate (ACAC) initiative “to amplify the voice of the higher-ed community in support of a strong international climate agreement in the United Nations COP21 climate negotiations in Paris”. Notified of this initiative prior to its launch, QVCC made the pledge on November 11, and was represented at the Paris Conference.

The pledge reads as follows:

*As institutions of higher education, we applaud the progress already made to promote clean energy and climate action as we seek a comprehensive, ambitious agreement at the upcoming United Nations Climate Negotiations in Paris. We recognize the urgent need to act now to avoid irreversible costs to our global community’s economic prosperity and public health and are optimistic that world leaders will reach an agreement to secure a transition to a low carbon future. Today our school pledges to accelerate the transition to low-carbon energy while enhancing sustainable and resilient practices across our campus.*

Information about the launch of the ACAC initiative can be found at: <https://www.whitehouse.gov/the-press-office/2015/11/19/fact-sheet-ahead-conference-climate-change-more-200-colleges-and>

By December 11, 2015, 318 colleges and universities had signed the pledge: ([https://www.whitehouse.gov/the-press-office/2015/12/11/american-campuses-act-, climate](https://www.whitehouse.gov/the-press-office/2015/12/11/american-campuses-act-,climate))

On December 12, 2015, world leaders reached an historic Climate Change agreement. See President Obama’s statement on the historic deal at: <https://www.whitehouse.gov/climate-change>

Check out the World Climate Summit website at: <http://cop21.org/>

QVCC is proud to have played a small part in this historic event.





*QVCC students participating in reforestation project in Santa Elena, Costa Rica - June 2015*



## **Past Climate Action Highlights**

### ***Conservation***

- Inaugurated hazardous waste disposal program
- Eliminated 10,000-gallon underground heating oil storage tank
- Installed automatic faucets and flush toilets in rest rooms
- Developed Natural Hazard Mitigation Plan
- Transplanted ornamental and shade trees displaced by construction projects to other areas of the campus

### ***Recycling Programs***

- Batteries
- Bottles/cans
- Cellphones
- Compact fluorescent light bulbs
- Electronics
- Lighting ballasts
- White paper

### ***Electrical Power and Energy***

- Installed photovoltaic cells on Quinebaug Middle College wing
- Installed energy efficient boilers for Quinebaug Middle College wing
- Installed energy efficient condensing boilers in main building
- Achieved Silver LEED certification for Quinebaug Middle College wing
- Specified geothermal energy to heat/cool the Advanced Manufacturing Technology Center
- Upgraded parking lot lighting to LED
- Upgraded building lighting to T8 and T5 fluorescent bulbs
- Replaced 30-year-old roof top air conditioning/air handling units on the main building
- Replaced all antiquated pneumatic controls for the Variable Air Volume (VAV) boxes that control airflow throughout the building. The new Direct Digital Controls (DDC) improve efficiency and control of the system
- Added additional VAV boxes to enhance control of specific areas of original building
- Installed remote access to building management for seven-day monitoring

### ***Purchasing***

- Implemented system-wide policy requiring purchase of Energy Star labeled equipment

### ***Food and Food Service***

- Upgraded to energy-efficient kitchen equipment in the cafeteria

### ***Commuting***

- Installed two electric car charging stations

### ***Curriculum***

- Created new Associate's Degree in Technology Studies option in Environmental Science
- Created new Environmental Science Field Lab course

### ***Other***

- Launched investigation into making QVCC a tobacco- and inhalant-free campus

## VI. CLIMATE ACTION PLAN

QVCC's Climate Action Plan comprises six areas identified in the diagram below. The first four areas relate, broadly speaking, to buildings and behaviors. More specifically, these detail how to make buildings - and the products and items found in them - more energy efficient and environmentally friendly. The fifth item pertains to student, faculty, and staff behaviors including travel between homes and the College. The final item focuses on education and curriculum updates to promote sustainability. The action areas appear in a rough order of priority beginning with the most urgent.

**Conservation and Efficiency:** Increase awareness of conservation and efficiency issues; promote recycling; reduce energy, water and paper consumption; and install high-efficiency lighting.

**Electrical Power Utilization:** Install photo-voltaic solar panels; efficiently utilize Energy Management System (EMS)/Building Management System (BMS) systems; reduce energy for heating and cooling; support renewable energy sources; and purchase carbon offsets.

**Purchasing:** Require Leadership in Energy and Environmental Design (LEED) certification for all new construction; purchase only Energy Star appliances and energy efficient computers. Use recycled paper whenever possible.

**Food and Food Service:** Increase consumption of local, organic, Fair Trade, and sustainably harvested food.

**Commuting:** Promote ride sharing, carpooling, and use of high efficiency vehicles for travel to the College.

**Curriculum:** Integrate concepts of sustainability throughout the curriculum; develop a module for first-year experience course that addresses sustainability; and continue to support existing environmental programs.

The QVCC Climate Action Plan that follows contains 16 outcomes and associated implementation strategies. In addition, each outcome includes metrics to measure whether the College attains the stated objective. The overall goal for the College is to become climate neutral—emitting no net greenhouse gases—by the year 2050.



## CONSERVATION AND EFFICIENCY



### **Conservation and Efficiency Outcome #1:**

Increase awareness of energy and resource conservation, waste management, and recycling on campus.

#### ***Strategies***

1. Introduce these concepts through curriculum changes at the Middle College and the College.
2. Introduce these concepts in orientation sessions for students, faculty, and staff as appropriate.
3. Increase visibility of recycling bins.
4. Develop campaigns and promotions to increase recycling awareness.
5. Continue recycling program for household batteries, CFLs, and small electronic devices.
6. Post charts in public areas to indicate electric, gas, and water usage.

#### ***Measurable Results***

1. Document promotion campaigns and orientations conducted.
2. Establish a baseline on amount of current recycling and develop goals to increase the level of recycling in coming years.
3. Collect data on the amount of materials being recycled and participate in future RecycleMania (<http://recyclemaniacs.org/>) competitions.

### **Conservation and Efficiency Outcome #2:**

Decrease paper, water, and energy usage.

#### ***Strategies***

1. Encourage use of duplex printing.
2. Increase use of recycled paper whenever possible.
3. Encourage faculty and staff to use online programs such as Google Docs, SharePoint, et al. to share documents and forms.
4. Install “low-flow” faucets and flushometers, and “low-flow” or waterless urinals in all bathrooms, laboratories, and kitchens on campus.
5. Institute a “behavioral change” campaign to eliminate the use of space heaters.
6. Explore options available to cut “phantom loads” overnight and when not needed (i.e. turning off power strips), and other energy conservation actions; coordinate and troubleshoot with IT to reduce the hours that computers must be left on for night-time virus scanning and updates.

**Measurable Results**

1. Establish the baseline of current paper consumption in the coming year.
2. Decrease the amount of purchased paper (per student FTE) by 10% in the next decade.
3. Decrease the amount of water used (per student FTE) 10% by 2025.
4. Set office printers to default duplex printing by 2017, where applicable.
5. Demonstrate the use of Blackboard and other online programs during workshops for faculty and staff.
6. Install “low flow” faucets and flushometers in all bathrooms, laboratories, and kitchens on campus.
7. Replace traditional urinals with “low flow” or waterless fixtures.

**Conservation and Efficiency Outcome #3:**

Increase energy efficiency throughout the Danielson campus and the Willimantic Center.

**Strategies**

1. Investigate LED lighting fixture replacement for more energy efficient lighting.
2. Complete installation of occupant sensors to reduce lighting when unoccupied.
3. Install more efficient LED exterior lighting and investigate feasibility of installing energy “watt-misers” on campus vending machines.
4. Purchase Energy Star equipment whenever possible.
5. Turn off all lights at night, except required safety lighting.
6. Track and publicize energy usage and savings.

**Measurable Results**

1. Replace all incandescent bulbs and less efficient fluorescent lighting with compact fluorescent lights (CFLs), more efficient fluorescent lighting, or light-emitting diodes (LEDs).
2. Install “watt-misers” on all campus vending machines by 2017.

## ELECTRICAL POWER UTILIZATION



### **Electrical Power Utilization Outcome #1:**

On-site power generation at the Danielson campus.

#### **Strategies**

1. Utilize existing photo-voltaic solar panels to reduce electrical load for the building.
2. Explore installing combined heat and power (CHP) generation unit(s).

#### **Measurable Results**

1. Produce 14,000 kilowatt-hours of electricity for the College annually through photo-voltaic solar panels.
2. Document greenhouse gas emission reductions.

### **Electrical Power Utilization Outcome #2:**

Manage Energy Management System (EMS) and Building Management System (BMS) to achieve maximum efficiency at the Danielson campus.

#### **Strategies**

1. Determine the building's annual heating and cooling loads.
2. Understand and measure the energy consumption of devices in the building.
3. Adjust inputs and outputs, programs, and set points to efficiently meet building needs.

#### **Measurable Results**

1. Continue to utilize and monitor energy management systems and upgrade systems regularly as appropriate.
2. Document reduction in electrical consumption.
3. Document greenhouse gas emission reductions.

### **Electrical Power Utilization Outcome #3:**

Support the development of renewable energy sources for electricity, heating, and cooling.

#### **Strategies**

1. Purchase electricity from vendors who verify the percentage of their product generated by renewable energy resources. The goal is to acquire 25% of all electricity from renewable energy resources by 2020.



**Measurable Results**

1. Become an EPA Green Power Partner (<http://www.epa.gov/greenpower/basic/index.htm>) by 2016.

**Electrical Power Utilization Outcome #4:**

Purchase necessary offsets to achieve climate neutrality.

**Strategies**

1. Reduce all greenhouse gas emissions and purchase offsets to obtain climate neutrality (defined as emitting no net greenhouse gases).

**Measurable Results**

1. Become climate neutral by 2050.

## PURCHASING



### **Purchasing Outcome #1:**

Any new construction will meet a high level of environmental sustainability.

#### **Strategies**

1. Require all new buildings to meet Leadership in Energy and Environmental Design (LEED) (<http://www.usgbc.org/LEED/>) Silver certification standards or better.

#### **Measurable Results**

1. Engage the U.S. Green Building Council to certify all new buildings on campus.

### **Purchasing Outcome #2:**

Purchase environmentally friendly appliances.

#### **Strategies**

1. Purchase appliances that carry the Energy Star (<http://www.energystar.gov/>) label.

#### **Measurable Results**

1. Document savings from Energy Star appliances.

### **Purchasing Outcome #3:**

Purchase only environmentally friendly computers and paper with high recycled content.

#### **Strategies**

1. Purchase computers that meet Electronic Product Environmental Assessment Tool (EPEAT) (<http://www.epeat.net/>) Silver standards or higher whenever feasible.
2. Purchase paper for printers and photocopiers made with the highest recycled content possible while maintaining proper machine operations.

#### **Measurable Results**

1. Reduce energy consumption by purchasing computers meeting Silver standards.

## FOOD AND FOOD SERVICE

### Food and Food Service Outcome #1:

Increase purchase of local, organic, Fair Trade, and sustainably harvested foods.

#### Strategy

1. Partner with cafeteria services to offer a larger selection of local, organic, Fair Trade (<http://fairtradeusa.org/>), and sustainably harvested foods.
2. Discuss ways to reduce use of food packaging and increase recycling.

#### Measurable Results

1. Increase the consumption of local, organic, Fair Trade, and sustainably harvested foods.



## COMMUTING



### **Commuting Outcome #1:**

Promote ride sharing/carpooling and use of hybrid, electric, and other high-efficiency vehicles by students, faculty, and staff.

### **Strategies**

1. Implement a public relations campaign to encourage students, faculty, and staff to use ride-sharing services to commute to the College.
2. Create more special parking spaces for high-efficiency vehicles near the front entrances of College buildings.
3. Install additional charging stations for electrical vehicles.

### **Measurable Results**

1. Increase ride sharing by 2020.
2. Designate parking spaces for high-efficiency vehicles as required for LEED Silver Certification.
3. Install additional electrical charging stations.



## CURRICULUM

The outcomes of curricular development as related to environmental sustainability and global climate change are threefold:

1. Provide a basic environmental “literacy” to all students.
2. Provide an understanding of how concepts of sustainability relate to students’ specific majors or areas of study.
3. Provide the necessary skills and knowledge to those students who will be at the forefront of addressing the environmental challenges of the 21st century.



### **Curriculum Outcome #1:**

Explore the possibility of creating a Building Efficiency and Sustainable Technology (BEST) Certificate Program (see an example of a BEST program at: <http://www.ncc.commnet.edu/aad/best/>).

#### **Strategy**

1. Provide necessary resources to explore and initiate BEST certificate and/or degree programs.

#### **Measurable Results**

1. Create BEST certificate and/or degree program.

### **Curriculum Outcome #2:**

Develop a module for the First-Year Experience course (IS 103) that will introduce concepts of environmental sustainability and QVCC’s efforts toward sustainability and climate neutrality.

#### **Strategy**

1. Create a lesson plan and develop materials for a module on environmental sustainability.

#### **Measurable Results**

1. All First-Year Experience courses will contain a learning module on environmental sustainability by fall 2018.

**Curriculum Outcome #3:**

Integrate concepts of sustainability and climate change into curricula across all disciplines.

***Strategies***

1. Develop a system to designate courses that devote class time to environmental sustainability and/or global climate change.
2. Encourage faculty members to design modules/lessons for their courses that address environmental and sustainability issues.

***Measurable Results***

1. The College will designate ten courses as containing environmental sustainability and/or global climate change content by fall 2018.

**Curriculum Outcome #4:**

Expand environmental classes and concentrations within existing Associate of Arts/Science degree programs.

***Strategies***

1. Continue efforts to support, promote, and expand the environmental science program at QVCC.

***Measurable Results***

1. Increase course offerings and program enrollment in the coming years.



*QVCC students participating in reforestation project in Santa Elena, Costa Rica - June 2015*



## **VII. APPENDICES**

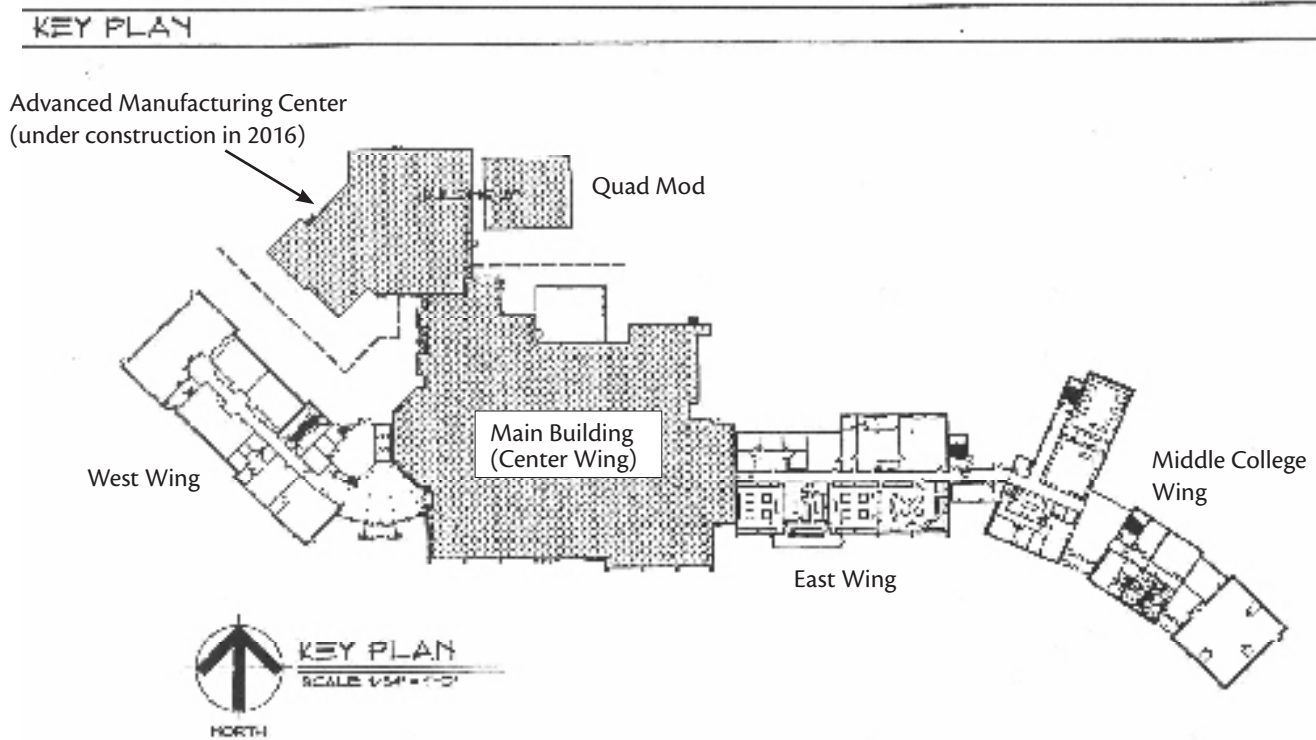
Appendix A – College Floor Plan

Appendix B – Aerial View of College

Appendix C – Greenhouse Gas Inventory/Report



## Appendix A – College Floor Plan





Appendix B – Aerial View of College



## Appendix C – Greenhouse Gas Inventory/Report

### 2013 GHG REPORT FOR QUINEBAUG COMMUNITY COLLEGE (CT)

Submitted January 2015

Making fair comparisons between academic institutions is always challenging because of the rich diversity of higher education. The unverified nature of the information in this database and unavailability of unbiased normalization metrics means such comparisons are even more difficult. Users should therefore approach direct institution to institution comparisons with caution and recognize that all comparisons between institutions are inherently biased.

#### Emissions Inventory Methodology and Boundaries

Start date of the 12-month period covered in this report	<i>June 1, 2013</i>
Consolidation methodology used to determine organizational boundaries	<i>Operational control approach</i>
If any institution-owned, leased, or operated buildings or other holdings that should fall within the organizational boundaries are omitted, briefly explain why.	<i>The new wing which houses the Middle College was not included since it was under construction and not operational at the time of the data collection. Quinebaug rents an operational building in Willimantic which is not included in the GHG report.</i>
Emissions calculation tool used	<i>Clean Air-Cool Planet</i>
Please describe why this tool was selected	<i>It is the recommended carbon calculator for ACUPCC greenhouse gas reports.</i>
Please describe the source(s) of the emissions coefficients used.	<i>The Clean Air-Cool Planet Campus Carbon Calculator's default emissions coefficients were used.</i>
Which version of IPCC's list of global warming potentials did you use?	<i>Third Assessment Report</i>
Who primarily conducted this emissions inventory?	<i>Student researcher(s)</i>
Please describe the process of conducting the inventory	<i>Sightlines data was collected and imported into the Clean Air-Cool Planet Campus Carbon Calculator.</i>
Please describe any emissions sources that were classified as de minimis and explain how a determination of the significance of these emissions was made.	<i>No emission sources were classified as de minimis; however, there were limitations in finding Scope 3 data such as air travel and commuting.</i>
Please describe any data limitations related to this submission and any major assumptions made in response to these limitations.	<i>There were limitations in finding Scope 3 data because of a lack of data for student commuting and air travel.</i>

**Emissions Data**

<b>Scope 1 Emissions</b>	
Stationary Combustion	89.56 metric tons of CO <sub>2</sub> e
Mobile Combustion	0.0 metric tons of CO <sub>2</sub> e
Process Emissions	0.0 metric tons of CO <sub>2</sub> e
Fugitive Emissions	0.0 metric tons of CO <sub>2</sub> e
Total Scope 1 Emissions	89.56 metric tons of CO <sub>2</sub> e
<b>Scope 2 Emissions</b>	
Purchased Electricity	434.46 metric tons of CO <sub>2</sub> e
Purchased Heating	0.0 metric tons of CO <sub>2</sub> e
Purchased Cooling	0.0 metric tons of CO <sub>2</sub> e
Purchased Steam	0.0 metric tons of CO <sub>2</sub> e
Total Scope 2 Emissions	434.46 metric tons of CO <sub>2</sub> e
<b>Scope 3 Emissions</b>	
Commuting	0.0 metric tons of CO <sub>2</sub> e
Air Travel	0.0 metric tons of CO <sub>2</sub> e
Solid Waste	0.0 metric tons of CO <sub>2</sub> e
Total Scope 3 Emissions	0.0 metric tons of CO <sub>2</sub> e
<b>Biogenic Emissions</b>	
Biogenic Emissions from Stationary Combustion	0.0 metric tons of CO <sub>2</sub> e
Biogenic Emissions from Stationary Combustion	0.0 metric tons of CO <sub>2</sub> e

**Mitigation Data**

<b>Carbon Offsets</b>	
Carbon offsets purchased	N/A
Offset verification program(s)	N/A
<b>Renewable Energy Certificates (RECs)</b>	
Total RECs purchased	0 kWh
Percent of total electricity consumption mitigated through the purchase of RECs	0 %
Emissions reductions due to the purchase of RECs	N/A

## Mitigation Data continued

Sequestration and Carbon Storage	
Sequestration due to land owned by the institution	-24.888 metric tons of CO <sub>2</sub> e
Description of how sequestration was calculated	The algorithm utilized to calculate GHG emissions/sequestration for acres of U.S. forest was provided by the EPA. Specifics are located at: <a href="http://www.epa.gov/cleanenergy/energy-resources/refs.html">http://www.epa.gov/cleanenergy/energy-resources/refs.html</a> -1.22 metric tons of carbon sequestered per acre per year X 20 acres of forest on the QVCC campus.
Carbon storage due to composting	0.0 metric tons of CO <sub>2</sub> e

## Normalization and Contextual Data

Building Space	
Gross square feet of building space	106,574.0 sq ft
Net assignable square feet of laboratory space	0.0 sq ft
Net assignable square feet of health care space	0.0 sq ft
Net assignable square feet of residential space	0.0 sq ft
Population	
<b>Total Student Enrollment (FTE)</b>	1846.0
Residential Students	0
Full-time Commuter Students	661
Part-time Commuter Students	1185
Non-Credit Students	647
Full-time Faculty	30
<b>Part-time Faculty</b>	121
Full-time Staff	51
Part-time Staff	32
Other Contextual Data	
Endowment Size	No information provided
Heating Degree Days	3537
Cooling Degree Days	588

**Summary Statistics**

	<b>Total</b>	<b>Per Full-Time Enrollment</b>	<b>Per 1000 Square Feet</b>	<b>% Offset</b>
Gross emissions (Scopes 1 + 2)	<i>524 metric tons of CO<sub>2</sub>e</i>	<i>3.5 metric tons of CO<sub>2</sub>e</i>	<i>0.18 metric tons of CO<sub>2</sub>e</i>	0%
Gross emissions (Scopes 1 + 2 + 3)	<i>524 metric tons of CO<sub>2</sub>e</i>	<i>3.5 metric tons of CO<sub>2</sub>e</i>	<i>0.18 metric tons of CO<sub>2</sub>e</i>	0%
Net emissions	<i>524 metric tons of CO<sub>2</sub>e</i>	<i>3.5 metric tons of CO<sub>2</sub>e</i>	<i>0.18 metric tons of CO<sub>2</sub>e</i>	N/A

**Auditing and Verification**

Has this emissions data been audited, verified, or peer-reviewed?	Yes			
Please briefly describe this verification, if any.	<i>Reviewed by the Institute of Sustainable Energy and by the President of Quinebaug Valley Community College.</i>			





*QVCC students engage in a “rapid bioassessment” project to determine the water quality of the Five Mile River on the QVCC campus – Fall 2011*





QUINEBAUG VALLEY COMMUNITY COLLEGE  
742 Upper Maple Street, Danielson, CT • 729 Main Street, Willimantic, CT  
[www.QVCC.edu](http://www.QVCC.edu)