

Quinebaug Valley Community College

President's Climate Commitment - 2016 Annual Progress Report

I. General Statement of Progress

Since signing the ACUPCC agreement in 2013, QVCC has continued to demonstrate its commitment to sustainability. Looking back over the intervening years, some of our highlights include:

- Installed two new boilers in the main QVCC building replacing our less efficient 30-year-old oil/gas boilers to more efficient gas fixed condensing boilers - 2013.
- Maintained household battery, compact fluorescent light bulb, and hand-held electronics recycling programs open to faculty, staff, students, and the general public throughout the entire period.
- Maintained College programs for recycling bottles, cans, white paper, and lighting ballasts throughout the entire period.
- Signed on to the White House American Campuses on Climate Initiative (ACAC): (<https://www.whitehouse.gov/the-press-office/2015/12/11/american-campuses-act-climate>) – November 2015.
- Installed more efficient rooftop HVAC units - 2015 (\$1.5 million project).
- Completed and formally approved a Climate Action Plan (CAP) for the institution - April 2016.
- Updated building management system (BMS) to provide 24/7 offsite access.
- Published the CAP on the Second Nature website at: (<http://reporting.secondnature.org/search/?abs=&q=Quinebaug%20Valley%20Community%20College>) and printed hard copies for local distribution.
- Created a sustainability page on the QVCC website (<http://qvcc.edu/academic-programs/science/sustainability/>) to highlight environmental issues including the approved Climate Action Plan.
- Opened the QVCC Middle College wing with LEED Silver certification.
- Opened the Advanced Manufacturing wing with geothermal energy systems and anticipated LEED Silver certification – September 2016.
- Installed two functioning electric vehicle-charging stations – December 2016.
- Updated all parking lot lighting to LED fixtures – 2016.
- Stride program updated its vehicle fleet to include two electric vehicles (Chevrolet Volts).
- QVCC became a smoke-free and vape-free campus – January 2017.
- Initiated updated Greenhouse Gas Inventory (GHG) to include the two new buildings.

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II. GHG Emissions and Reduction Targets

Climate Neutrality Target Date: 2050

Interim Milestone Emission-Reduction Target	Target Date	Baseline
No interim goals have been set	N/A	Relative to baseline in 2015
100 % reduction in Total Scopes 1, 2, 3 emissions	2050	Relative to baseline in 2015

GHG Summary

GHGs for Quinebaug Valley Community College

Reporting Year	Gross Emissions	Net Emissions	Full Time Enrollments	Total Bldg. Sq. Ft.	Links
2014	524.02	524.02	1846	106,574	N/A

Change in GHG gross emissions: Assessment of this change is incomplete at this time. Since approving our CAP in April of 2016, QVCC has completed construction and occupied two new buildings (the Quinebaug Middle College and the Advanced Manufacturing Technology Center). The latter of these two buildings has not been open for a full year making our data set incomplete.

Change in GHG gross emissions per 1000 sq. ft. building space: See above.

Change in GHG gross emissions per full time enrollment: See above.

III. Education, Research, and Community Engagement

Curriculum

How is your institution making climate neutrality and sustainability a part of the curriculum and other educational experiences for all students?

The Climate Action Plan calls for sustainability to be integrated across all disciplines; however, since the College adopted this plan less than a year ago, no significant curricular changes have been made yet. QVCC does offer a number of sections of Intro to Environmental Science each semester where students explore these issues in depth.

On April 18, 2017, QVCC co-sponsored an enhanced Earth Day Program, which involved students and many local community organizations (see <http://www.norwichbulletin.com/search?text=QVCC Earth Day&start=1>).

Education Methods in Use

Traditional lecture and science laboratory methods are currently in use along with some online and hybrid offerings. In the future, QVCC envisions new classes and new learning outcomes for existing classes.

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Does your institution offer an undergraduate program(s) related to climate change/sustainability?

Yes. QVCC offers a Technology Studies: Environmental Science degree program. The link to this program is as follows: http://qvcc.edu/academic-programs/science/environmental_science/

Does your institution offer a graduate program related to climate change/sustainability?

No. QVCC does not offer any graduate programs.

Co-Curriculum

Does your institution have a central sustainability web site that consolidates information about the institution's sustainability efforts?

QVCC has a sustainability web page located at: <http://qvcc.edu/academic-programs/science/sustainability/>. This page includes the Climate Action Plan, and the plan is to add additional information in the future.

Does your institution include sustainability prominently in New Student Orientation?

The QVCC President has asked the Student Services team to consider adding a component about sustainability during New Student Orientation beginning in fall 2017.

Research

If applicable, how is your institution expanding research efforts toward the achievement of climate neutrality research?

QVCC is a two-year college whose main emphasis is on teaching; QVCC is not a research institution.

Does your institution have a program to encourage student climate and/or sustainability research?

N/A. See answer to above question.

Does your institution have a program to encourage faculty climate and/or sustainability research?

N/A. See answer to above question.

Community Engagement

How is your institution expanding community outreach efforts toward the achievement of climate neutrality?

In November 2015, QVCC signed on to the White House American Campuses on Climate Initiative. The goal of this initiative is 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. See website at: <https://www.whitehouse.gov/the-press-office/2015/12/11/american-campuses-act-climate>

Does your institution participate in community climate change and/or sustainability partnerships?

See answer to previous question.

Has your institution advocated for federal, state, and/or local public policies that support sustainability or that otherwise advance your goal of climate neutrality?

See answer to previous question.

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IV. Energy & Finances

Energy Efficiency Projects

Number of Energy Efficiency Retrofit Projects planned but not yet implemented:

Two retrofit projects are planned, but not implemented:

- There is a plan to retrofit all lighting fixtures in the main QVCC building (east, center, and west wings) converting traditional fluorescent lighting to LED lighting.
- QVCC will be partnering with GE and the entire CSCU system to install solar panels in all logical places on the college roof as well as freestanding panels on a frame on the hillside abutting the college. The goal is to generate in excess of 50% of the electricity needed at the College. Installation target is 2018 with a projected savings of \$60,000 per year or \$1.2 million over 20 years.

Number of Energy Efficiency Retrofit Projects completed since signing the ACUPCC:

Five projects have been completed since signing the ACUPCC, as follows:

- Solar panels on Middle College wing
- Geothermal energy in the AMTC building
- New HVAC roof units - 2015
- New electrical charging stations for automobiles – 2016
- Installation of energy efficient boilers

Number of buildings that have received a green building certification since signing the ACUPCC:

One – Quinebaug Middle College.

Number of green buildings planned or scheduled for completion in the next 2 years:

One – The Advanced Manufacturing Technology Center completed in the summer of 2016 is awaiting LEED Certification.

For all buildings, the green building certification used is:

USGBC:LEED

Renewable Energy

Annual output (in kWhs) for each renewable energy system utilized by QVCC

Solar	15,000 kWhs / year
Fuel Cell	0 kWhs / year
Geothermal output	N/A kWhs – too soon to determine accurately. This information will be available in next year's report.

Financial Data

Has your Climate Action Plan and/or sustainability efforts saved your institution money so far, e.g. by reducing operation expenses?

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CAP: yes

Sustainability efforts: yes

Amount spent on CAP projects:

N/A

Estimated amount saved to date from implementing your CAP projects

\$75,000 per year (includes electric and gas) - Annual dollar amount of energy cost savings due to updated BMS software and the ability to access system from offsite.

Estimated total savings from implementing entire Climate Action Plan

This value is unknown, beyond what is noted in the above question.

Financial resources (dollar amount) secured from outside sources to support mitigation efforts related to the Climate Action Plan (grants, gifts, etc. ...)?

\$56,504. Obtained from three power company rebates from the following three projects

- new boiler project,
- work on the QMC building, and
- the HVAC project

Financing Methods utilized for Mitigation or Renewable Energy Projects

Funding received at QVCC for these various projects is obtained from a number of sources:

- State of Connecticut budget allocations,
- State of Connecticut bonding funds for infrastructure and maintenance projects,
- Locally paid tuitions, and
- The aforementioned power company rebates.