

SUSTAINABLE GATEWAY

Toward a greener, brighter future for our students, staff and communities

A SUSTAINABILITY PLAN FOR GATEWAY TECHNICAL COLLEGE



2012



A message from
Bryan D. Albrecht, Ed.D.
President

To all Gateway Technical College stakeholders:

A college’s job is to educate, but also to lead – for our students, faculty, staff and communities. Today, that includes leadership in sustainability – creating a culture around saving energy, reducing our carbon footprint, recycling more, wasting less, and generally doing our part toward building a greener, cleaner world.

Although our commitment to sustainability is not new, this is our first published sustainability plan. We’ve developed it in keeping with our own sustainability goals and as part of our obligation as a signatory to the American College and University Presidents’ Climate Commitment. We have also made sustainability a priority in the college’s strategic plan.

- Here we outline what we have accomplished thus far and present our broad goals and specific plans for a more sustainable future. We have much to be proud of, including:
- Our new Center for Sustainable Living
 - Our first greenhouse gas inventory, completed in 2010
 - Our first green building in the Horizon Center for Transportation Technology
 - An aggressive energy management program that includes upgrades to building control and heating, cooling and ventilation systems, college-wide lighting retrofits, external LED lighting, and more.
 - Installation of wind turbines and solar heating and electricity systems, along with sustainable landscape features like rain gardens and stormwater retention ponds.
 - A district-wide recycling program.
 - Degree programs in green careers like freshwater resources, geoexchange technology, sustainable energy systems, wind and solar technology, urban farming, and more.
 - A new Green Scholars recognition program

That’s just to name a few highlights – clearly there is much to do. I welcome you to review this sustainability plan, offer your comments, and suggest other steps Gateway can take toward making our campuses and communities greener.

Sincerely,

Bryan D. Albrecht, Ed.D.
President

SUSTAINABILITY PLAN FOR GATEWAY TECHNICAL COLLEGE

Executive Summary

The Gateway Technical College Sustainability Plan outlines measures the college has taken and will take toward a more sustainable future for our institution, our communities, and the people and businesses we serve. The plan outlines our responsibilities under the American College and University Presidents’ Climate Commitment which recognizes the scientific consensus behind global warming as a significant threat and the importance of reducing global greenhouse gas emissions by 80 percent by mid-century. Gateway’s own vision is to achieve carbon neutrality by 2030.

The plan includes a summary of our first Greenhouse Gas Inventory covering 2009. Gateway produced 34,900 metric tons of carbon dioxide equivalent (CO2e), about 69 percent from travel-related sources and 30 percent from energy use in campus facilities. The balance of the plan describes our sustainability goals, achievements to date, and plans for the future in six key areas.

Energy and Transportation5

Goal: Increase energy efficiency, explore renewable energy options, and reduce our transportation footprint.

Achievements: Installed several small solar and wind energy systems, purchased renewable electricity, expanded distance learning opportunities, accommodated electric and hybrid vehicles and bicycles, improved energy efficiency in computing systems.

Plans: Add more renewable energy systems, upgrade college fleet vehicle efficiency, continue computing efficiency initiatives, further expand distance learning, teleconference and telecommuting opportunities.

Buildings and Grounds7

Goal: Reduce the environmental impacts of Gateway’s campuses by using LEED Silver as the minimum standard and using sustainable practices in the maintenance of buildings and grounds.

Achievements: Built new facility expansions to LEED Silver standards, performed energy audits of all buildings, invested significantly in building efficiency upgrades, retrofitted lighting college-wide, installed water-efficient plumbing fixtures, created landscape features to minimize runoff, planted natural prairie areas.

Plans: Enhance building controls to increase efficiency, explore centralized scheduling to improve space and energy utilization, explore sustainable landscape practices, benchmark facilities against green building operation and maintenance practices.

Policies, Processes and Procurement9

Goal: Apply sustainability in our work environment by adopting clear criteria that will be considered in purchasing and contracting decisions, reducing consumption of goods, and providing training and necessary tools and resources to staff.

Achievements: Established an energy efficiency policy, encouraged purchase of ENERGY STAR equipment, required vendor sustainability policies, encouraged drinking tap water in place of bottled water, required sustainable practices in disposal of property.

Plans: Develop sustainability tracking dashboard for reporting to Board of Trustees, encourage measures to reduce document printing, explore sustainable event planning.

Recycling and Waste Reduction11

Goal: Increase our waste diversion recycling rate by 50% by 2030

Achievements: Aggressively recycled electronic, office materials, building construction and demolition waste, and metals and wood products from industrial programs.

Plans: Track data on waste material content, encourage more recycling from instructional areas, explore reductions in medical waste, create outreach programs encouraging staff and students to recycle, compost vegetative waste from campuses for reuse on grounds.

Academic Instruction and Workforce And Economic Development Division (WEDD) Training13

Goal: Infuse sustainability literacy throughout the curriculum and develop programming to meet the needs of the new green workforce.

Achievements: Created a Center for Sustainable Living; established education programs in geoexchange drilling, sustainable energy, wind energy and fresh water resources; added programs in sustainability principles, urban farming, sustainable horticulture, green interiors and sustainable cooking; created green certifications for faculty.

Plans: Continue developing the Center for Sustainable Living, develop incumbent worker training programs in sustainability fields, encourage more sustainability content curricula, develop more green career programs for local business and industry.

Community and Communication15

Goal: Increase awareness of sustainability issues among campus and community members through education and outreach and empower students, staff and community members to take sustainability actions.

Achievements: Established a Green Scholars recognition program,celebrated Earth Days, created Green Matters workshops, joined community green partnerships, sponsored sustainability lectures and discussions.

Plans: Create district and campus sustainability teams; create a web page, campus maps, and signage around sustainability, increase special events and tours for students and the community, create Sustainability Champion awards.

Sustainability Vision

As a leading provider of technical education, training, and technological resources in our communities and Wisconsin, Gateway Technical College will:

- Establish, promote and monitor a culture of sustainability and economic responsibility throughout our business and educational policies and practices.
- Serve as a community model for embracing respect for the environment and be proactive in embedding related learning outcomes within and throughout all curricular areas.
- Embrace sustainable community development through student engagement and service learning.
- Demonstrate a commitment to the global need for sustainable education through the accountability standards established under the American College and University Presidents’ Climate Commitment.
- Achieve carbon neutrality – emitting net zero greenhouse gases – by 2030.

WHO WE ARE

Gateway Technical College collaborates with communities in Kenosha, Racine, and Walworth counties, offering instructional programs that reach some 26,000 students annually on campuses and through distance learning. About 6,400 full-time-equivalent students are registered in more than 65 career training programs.

Our Mission

We collaborate to ensure economic growth and viability by providing education, training, leadership, and technological resources to meet the changing needs of students, employers, and communities.

Our Vision

We are the community technical college of choice for academic achievement, occupational advancement, and personal development.

Our Values

At Gateway Technical College, we value:

- Diversity of individuals and perspectives
- A positive climate for working and learning
- Innovation and risk-taking
- Honest and ethical behavior
- Quality and excellence in education

Our planet is changing. Across the world, economies are growing, standards of living are rising, education and technologies are advancing. Meanwhile, we face huge challenges in growing populations, pressure on water and food resources, and a changing global climate. In such times, educational institutions like Gateway Technical College have an opportunity – and obligation – to lead.

We can lead by preparing our students to live and work in a world where sustainability is more important than ever. We can lead through changes in our facilities and business and operating practices. And we can lead by providing an example to help members of our communities make a difference in their own home and work lives.

In this context we present this Sustainability Plan for Gateway Technical College. It is part of our legacy of contributions to our communities, and also a part of the American College and University Presidents’ Climate Commitment, to which we have subscribed since 2009. That commitment recognizes the scientific consensus that global warming is real, that humans are largely causing it, and that we must cut global greenhouse gas emissions by 80 percent by mid-century or sooner to avert its worst impacts.

With this Sustainability Plan, we share our successes, ideas and aspirations and encourage our students, families, faculty, staff, sponsors, business partners and community members to join us in moving forward.

The President’s climate commitment states in part:

“While we understand that there might be short-term challenges associated with this effort, we believe that there will be great short-, medium-, and long-term economic, health, social and environmental benefits, including achieving energy independence for the U.S. as quickly as possible.

“We believe colleges and universities must exercise leadership in their communities and throughout society by modeling ways to minimize global warming emissions, and by providing the knowledge and the educated graduates to achieve climate neutrality. Campuses that address the climate challenge by reducing global warming emissions and by integrating sustainability into their curriculum will better serve their students and meet their social mandate to help create a thriving, ethical and civil society...

“We further believe that colleges and universities that exert leadership in addressing climate change will stabilize and reduce their long-term energy costs, attract excellent students and faculty, attract new sources of funding, and increase the support of alumni and local communities.”

OUR COLLEGE CARBON FOOTPRINT

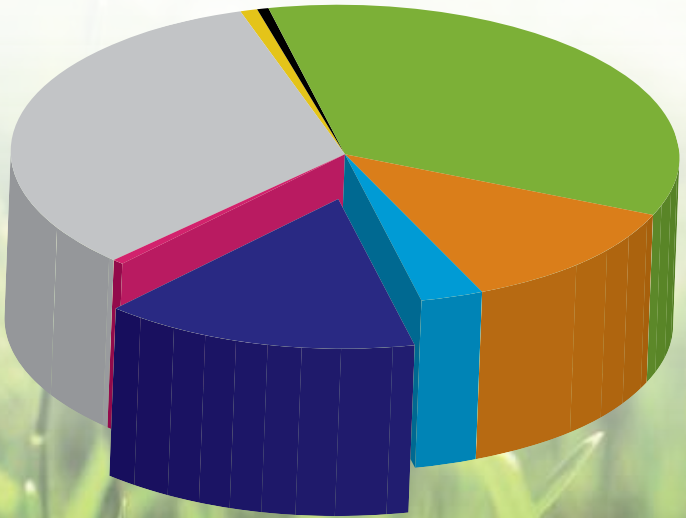


In 2009, Gateway Technical College President Bryan Albrecht along with the Gateway Board of Trustees signed the American College and University Presidents’ Climate Commitment, thus committing Gateway to create a plan to achieve carbon neutrality – emitting net zero greenhouse gases (GHG). The first step in that process was to quantify the GHG the college was already emitting. Our first Greenhouse Gas Inventory describes the college’s emissions, benchmarks the college against similar institutions, and highlights GHG reduction opportunities.

Data was collected during spring 2010, covering the entire fiscal year 2009. Information was gathered from a variety of sources, including:

- We Energies utility bills for electricity and natural gas usage
- A survey of student, faculty and staff commuting habits
- Purchasing cards for air travel information
- Waste Management for solid waste data
- Gateway facilities management staff for data on use of refrigerants and fertilizer

The inventory process considered only GHG emissions from operations under the college’s control. It includes emissions from the campuses in Burlington, Elkhorn, Kenosha and Racine and other college centers associated with Gateway. The data was entered into the Clean Air Cool Planet Campus Carbon Calculator, which the Climate Commitment endorses. We calculated emissions of carbon dioxide (CO2), methane (CH4) and nitrogen dioxide (NO2) and calculated the CO2 equivalence (CO2e), using global warming potential figures from the International Panel on Climate Change Third Assessment Report. Here are the highlights of the inventory:



SOURCE	AMOUNT	% OF TOTAL
Student Commuting	22,694	65%
Faculty/staff commuting	767	2%
Air travel	322	1%
Other work related travel	167	0%
Total Travel related emissions	23,950	69%
Purchased electricity	8,359	24%
Purchased Natural Gas	2,185	6%
Total energy related emissions	10,544	30%
Solid waste	412	1%
TOTAL EMISSIONS	34,906	100%

- **Travel-related emissions.** Student commuting accounted for 65 percent of Gateway’s total GHG emissions. A survey of commuting habits found that 99 percent of students drive to the campuses in their personal vehicles.
- **Energy-related emissions.** Purchased electricity accounted for 24 percent of total GHG emissions and purchased natural gas for 6 percent.
- **Other emissions.** Sources other than energy accounted for only about 1 percent of total GHG emissions. The bulk of this was from solid waste, which when placed in a landfill breaks down to produce the greenhouse gas methane.
- **Benchmarking.** Three other Wisconsin technical colleges (Lakeshore, Madison Area and Western) that have completed GHG inventories produced, on average, about 7.5 metric tons of CO2e per 1,000 square feet of building space per year, while Gateway produced almost 11 tons. This indicates Gateway could save substantial energy by adopting techniques those other colleges use.

The GHG inventory helped illuminate steps Gateway can take to reduce its emissions. These include:

Reducing travel-related emissions:

- Provide a centralized web site where students can set up carpools
- Increase distance learning opportunities and online courses reducing energy-related emissions

Reducing energy-related emissions:

- Purchase more green energy
- Add more renewable energy such as solar and wind
- Encourage students and faculty to adopt energy-saving behaviors (such as turning off lights and computers when not in use)
- Increase building energy efficiency through heating and cooling improvements, better building controls, and lighting retrofits and lighting scheduling

These and other changes over time could reduce Gateway’s GHG emissions by 27 percent, from 34,900 metric tons CO2e to 25,300 metric tons – a reasonable intermediate goal for 2015 or 2020.

NOTE: The GHG Inventory was prepared with assistance from Chris Peters of Sustainable Consultants, LLC, based in the Twin Cities.



Energy and Transportation

Goal: Increase energy efficiency, explore renewable energy options, and reduce our transportation footprint.

Achievements to date

Renewable energy.

Gateway has installed a variety of wind and solar energy systems. They include:

- Kenosha: Solar photovoltaic system (3 kW) at the Horizon Center; solar photovoltaic system at the Center for Sustainable Living (3 kW), solar water heating system at the Center for Sustainable Living (capacity 133 therms per year), rooftop wind generator at the Horizon Center (1 kW).
- Elkhorn: Solar water heating system at the North Building (capacity 222 therms per year)
- Racine: Three wind generators on the main campus (expected output 2,000 kWh per unit per year), solar photovoltaic system at the Technical Building (2.88 kW)
- Wind generator at the Center for Advanced Technology and Innovation in Sturtevant (expected output 2,000 kWh per year).

Total annual savings from the solar and wind systems are estimated at \$2,100.

Purchased renewable power.

The Burlington campus purchases 100 percent of its electricity (about 420,000 kWh annually) from the We Energies Energy for Tomorrow renewable electricity program.

Commuting alternatives.

The college has expanded opportunities for courses via distance learning and for delivery of services on-line, helping to reduce travel.

Seven classrooms on the campuses have advanced facilities for videoconferencing and instruction. Some 743 courses were available via distance learning in 2010-11, versus 261 five years ago. The facilities can also be used for internal meetings so that staff members do not have to travel between campuses to attend.

Sustainable transportation.

The college has taken early steps to encourage students and faculty to drive greener vehicles. Preferred hybrid car parking spaces are available at all facilities. The Horizon Center and the Health and Emergency Responder Occupations (HERO) Center has a credit-card-operated electric vehicle charging station. The Horticulture Department in Kenosha uses a small electric vehicle to move plants and supplies around the campus.

Bicycle accommodations.

All campuses have bicycle racks. A grounds improvement project at the Lake Building in Racine tied that property into the city bicycle pathway.

Computing systems. The information technology department has moved aggressively to reduce power consumption from computers.

- More than 80 physical computer servers have been “virtualized” so that three high-performance blade servers now provide the same computing power. This eliminated an entire computer room, reducing cooling requirements, freeing space for other purposes and saving \$52,000 in annual energy costs.
- The entire college telephone system is now on a centralized voice over internet protocol

(VOIP) system that is much more energy efficient than separate systems at each location.

- The college buys only computers and accessories that are U.S. EPA ENERGY STAR certified and have Silver or Gold ratings under the Electronic Product Environmental Assessment Tool (EPEAT) rating system.

Plans for the future

Renewable energy. The college aims to complete one or two solar, wind or other renewable energy projects per year, supported by rebates and incentives from We Energies and Wisconsin Focus on Energy.

Efficient vehicles. College-owned vehicles are being evaluated with an eye toward replacing older units with newer, more efficient models.

Computing systems. More improvements are being planned to cut electricity consumption from computers. The information technology staff is exploring:

- Installing software that would automatically shut down computers left on after specified hours.
- Energy-saving innovations like thin client and “zero client” hardware and ultra-slim desktop computers, requiring one-half to as little as one-eighth the power of current models.

Travel reduction. Technology has potential to create still more opportunities for distance learning, virtual meetings, and other travel-saving conveniences. Some items being considered:

- Adding videoconferencing routinely when remodeling or expanding meeting rooms.
- Expanding videoconferencing to include remote student services, such as registration and career and course counseling.
- Enabling internal meetings via webcam using GooglePlus to reduce travel and increase telecommuting options.
- Providing virtual desktop interfaces that allow staff members to access their work computers from home to help reduce commuting (first stage for non-academic users to be in place for summer 2012).

Other measures that will be explored to reduce travel are creating alternative class and work schedules, creating a web site to help students and staff arrange carpools, and identifying the most efficient routes for travel between campuses.



Buildings and Grounds

Goal: Reduce the environmental impacts of Gateway's campuses by using LEED Silver as the minimum standard and using sustainable practices in the maintenance of buildings and grounds

Achievements to date

Green buildings. Gateway follows State of Wisconsin policies that require new buildings and expansions to meet the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver standard. While to date the college has not sought actual LEED certification, the Silver standard is being applied on a 5,000- square-foot addition to the Kenosha Horticulture Building and was applied to a 7,200-square-foot library and student services addition at Elkhorn. In addition, the Horizon Center in Kenosha, completed in 2007, was built to achieve energy savings. It also employs cost-saving green practices in cleaning and paper usage in partnerships with local companies JohnsonDiversey and Kranz Inc.

Energy audits. Gateway has partnered with Wisconsin Focus on Energy for energy audits of all buildings.

Facility upgrades. The college is steadily upgrading building mechanical and control systems to improve heating and cooling efficiency and indoor comfort. This includes replacement of aging boilers, chillers, air-handling units and ventilation systems. Additions and remodeling projects include up-to-date, energy-efficient systems. Recent projects include:

- A \$900,000 control automation project at the Racine campus Technical Building; estimated savings are \$32,000 per year.
- Replacement of boilers in the Kenosha campus administration building.

- Replacement of a 65 percent efficient boiler on the Elkhorn campus with a 90 percent efficient unit.
- "Cool roofs" at two Elkhorn campus buildings painted with white coatings to reflect sunlight and reduce summer air conditioning load.

Facility staff members also use continual commissioning – looking constantly at building performance and finding ways to adjust for efficiency. In facilities with building automation systems, staff members detect control and device malfunctions quickly and fix them before they waste substantial energy. Innovations include "fresh air free cooling" – using outside air to cool spaces when temperature conditions are favorable.

Lighting efficiency. A college-wide lighting retrofit program replaced older fluorescent lighting with new high-efficiency fluorescent lamps. On the Racine campus, all exterior lighting consists of highly efficient, long-life LED lamps – some 160 fixtures. A remodel of the Student Life Center in the Lake Building at Racine added windows to improve daylighting, save energy, and improve aesthetics.

Water efficiency. During building expansions and remodels and at other opportunities where feasible, the college installs water-saving fixtures, including low-flow faucets, low-flow or waterless urinals, and dual-flush toilets. New water fountains and some retrofit fountains have bottle fillers to reduce use of commercial bottled water. The grounds in Kenosha have rain sensors tied to the irrigation systems so that sprinklers do not operate when there is already enough moisture in the soil. New plantings use drought-tolerant species that need minimal watering.

Chemical usage. The college uses fertilizers and herbicides only when necessary and uses environmentally friendly salt substitutes, such as potassium chloride and magnesium chloride, to melt ice on sidewalks and some parking areas.

Stormwater control. Where possible, drainage systems on college sites are designed to minimize runoff. For example:

- The Racine campus worked with the Root-Pike Watershed Initiative Network to establish rain gardens at the Lake Building to reduce runoff into storm drains that empty into Lake Michigan.
- On the Burlington and Elkhorn campuses, runoff from roofs and parking lots flows into retention ponds. The Elkhorn ponds encompass several acres and have become attractive landscape features.
- On the Kenosha campus, runoff from the Horticulture Building and greenhouse roofs collects in a 5,000-gallon cistern, used for watering plants in the green house.

Natural areas. There are one-acre native prairie plantings on the Racine and Elkhorn campuses and extensive natural areas around the Center for Sustainable Living on the Kenosha campus.

Plans for the future

Facility upgrades. A 2012 control system upgrade in the Kenosha campus administration building and conference center will enable room-level heat and cooling control

and save a projected 20 to 25 percent on energy. Another 2012 project will remodel of 10,000 square feet of library and other space at the Elkhorn campus into a Learning Success Center with heating and cooling improvements and lighting controls.

Heating and cooling efficiency. An initiative has begun to evaluate building boilers and chillers, identify those that could be cost-effectively replaced with more efficient units, and set priorities for replacements.

Space utilization. Initiatives are being explored to save energy by centralizing room scheduling and synchronizing the schedule with lighting, heating and cooling controls. This will allow automated shutoff of lighting and setback of temperatures when rooms, wings or entire buildings are not in use.

Lawns and landscaping. The buildings and grounds team continues to explore options for sustainable maintenance, including environmentally friendly fertilizers and pesticides, used only when necessary.

Facility benchmarking. Staff members are exploring a process for scoring college buildings against LEED green building operation and maintenance criteria – to see how the facilities compare and where to target improvements. It is a form of self-evaluation that could help identify simple, low-cost ways to improve efficiency.

Designer education. The facilities staff will work with architects and engineers to encourage them to "think green" in simple, affordable ways and design new-building and remodeling projects with local materials, energy-saving equipment, and features that support sustainability in operations and maintenance.



Policies, Processes & Procurement

Goal: Apply sustainability in our work environment by adopting clear criteria that will be considered in purchasing and contracting decisions, reducing consumption of goods, and providing training and necessary tools and resources to staff.

Achievements to date

Gateway strives to make sustainability a permanent part of the culture by establishing policies and processes for its own staff and for companies that provide goods and services to the college.

Procurement policy. The college has centralized purchasing for all capital equipment and service agreements over \$25,000. Campus and facilities staff are encouraged to purchase energy-efficient equipment, with ENERGY STAR ratings where available.

Supplier sustainability. Requests for proposal require all product and service vendors to submit their sustainability policies and state what measures they will take, if selected, to support and augment Gateway's sustainability efforts.

Reducing consumption of goods. Departments are being asked to voluntarily remove printers from individual offices in favor of more centralized printing. Staff members are encouraged to use tap water in refillable bottles instead of buying bottled water.

Disposal of property. College policies require disposal of surplus or obsolete equipment and materials cost-effectively and sustainably. Typically, items that still have value are sold to bidders or at auction, donated to a charitable organization, sold for scrap value, or recycled.

Energy policy. Policy requires the college to promote and invest in energy conservation (electricity, natural gas and motor fuels), use alternative energy sources, conserve water, reuse and recycle, select environmentally friendly cleaning and other chemicals, maintain high indoor air quality, and foster a sustainability culture among employees and students.

Plans for the future

Develop tracking measures. The college staff has created an energy and sustainability dashboard that will be used to report to Board of Trustees on a regular basis. It includes performance figures on utility usage, recycling volumes, data on recycling of materials from remodeling and construction project, information on sustainability-related academic and training programs, and more.

Reduce consumption of goods. New computer printers will be required to have double-sided printing capability to conserve paper. The IT staff is looking toward mandating a more centralized printing solution to reduce the number of individual office printers. For students, the team is assessing a "pay for print" system to begin in 2012. The aim is to discourage unnecessary printing and save paper, toner, energy, and printer wear and tear. Industry experience shows that such solutions can cut printing volume by up to half.

Sustainable event planning. The college staff is developing guidelines for ribbon cuttings, groundbreakings and other special events that will help minimize their environmental footprint.

Measures will include:

- Publicizing recycling policies and making sure recycling containers are on site.
- Provide pitchers or water coolers where participants can fill their own water bottles.
- Serving food that is locally grown or provided by local vendors when possible.
- Providing carpooling information.
- Lodging out-of-town guests at hotels that have sustainability initiatives.



Recycling & Waste Reduction

Goal: Increase our waste diversion recycling rate by 50% by 2030

Achievements to date

Electronics recycling. The college aggressively recycles computers, monitors, printers, fluorescent lamps, and other electronic equipment. These items are collected only by certified recyclers, locally based to minimize travel. Many older computers are donated to the Association of Information Technology Professionals (AITP) student organization, which cleans their hard drives and sells them for fundraising. Some older computers are donated to local non-for-profit organizations, such as Boys & Girls Clubs.

Building materials. During building and remodeling projects, demolition and construction waste materials are recycled to the greatest extent possible. For example, during the Elkhorn campus remodeling project in 2011, solid waste service provider Waste Management recorded 80.2 percent of construction waste recycled (33.37 of 41.74 tons), topping the goal of 75 percent. Material included concrete, metals and wood.

Office recycling. All offices recycle materials such as office paper, cardboard and corrugated packaging, newsprint, aluminum cans and plastic bottles. Solid waste service provider Waste Management records the volume of recycled materials collects some 64 tons per year.

Industrial recycling. The welding, industrial maintenance and sheet metal programs consistently recycle scrap metal and wood pallets.

Recycled materials. Cups made from compostable recycled material and plastic flatware made of biodegradable cornstarch are used when food and beverages are served at events.

Plans for the future

Waste diversion. The staff will collect and track data on the makeup of college waste materials. All campuses and facilities will be encouraged to recycle usable scrap metal, wood and other materials from instructional programs. Outreach initiatives will be developed for staff and students to encourage awareness of and participation in Gateway recycling programs.

The college now contracts with Stericycle to manage medical waste. A committee of the two associate deans (Nursing/Allied Health), skills lab staff from Kenosha and Racine, and student representatives will review current purchasing practices, selection and use of disposable supplies, recycling and reuse practices, and other initiatives in support of the college's goal of reducing medical waste.

Waste reduction. The staff will be vigilant in exploring opportunities for new waste reduction programs. As one example, the Horticulture program will develop an advanced composting system to recycle all campus organic waste into compost for use on campus urban farm plots and for general grounds management.



Instruction & Training

Goal: Infuse sustainability literacy throughout the curriculum and develop programming to meet the needs of the new green workforce.

ACADEMIC INSTRUCTION AND WORKFORCE AND ECONOMIC DEVELOPMENT TRAINING

Achievements to date

Gateway has developed an extensive roster of programs to help prepare students for careers in the new and growing green economy.

Center for Sustainable Living

The Center for Sustainable Living provides an environmentally conscious place for project-based, interdisciplinary learning. Its key functions are to:

- Provide a living and learning laboratory for students and a meeting place for staff.
- Enable outreach to the community through tours, workshops, group activities, and meeting space for green-focused organizations.
- Support outreach to K-12 school districts through field trips and hands-on projects.

Located on the far west end of the Kenosha campus, the center includes a 1,884-square-foot house, several outbuildings, and a gazebo. The house interior has flooring made from cork and sustainably harvested wood. One room is dedicated to showing interior decorations and furnishings that use recycled and other sustainable materials. A small but growing sustainability library provides books and other materials on green topics.

The grounds include a natural prairie, a creek bed, a nature path, and many types of trees, providing habitat for birds and wildlife. Space is available for

creating small urban farm plots. Instructional offerings cover sustainable practices including gardening, renewable energy, home energy systems, food preservation, and smart recycling.

Green career education programs

Gateway has taken a leadership position in preparing students for careers in geothermal heating, wind power, sustainable energy systems, and fresh water resources. In two cases, that training will be shared across the nation through training of trainers and national curriculum development.

Geoexchange drilling. Students get hands-on training in geothermal systems drilling, installation and maintenance. Gateway received a \$141,000 National Science Foundation Advanced Technological Education program grant to develop the national curriculum for a degree program in geoexchange technology. Entry-level classes in geoexchange technology are offered as part of Gateway's Air Conditioning, Heating & Refrigeration Technology associate degree program.

Sustainable energy systems.

A part of Gateway's Electrical Engineering Technology program, this offering trains student in the design and maintenance of sustainable energy equipment and systems.

Wind energy. Entry-level wind energy courses are offered through the college's Air Conditioning, Heating & Refrigeration Technology program. Students can take additional courses from Lakeshore Technical College through a shared program agreement. The program includes a Torque

Technology certification created with Snap-on Incorporated to provide hands-on instruction in torque techniques, bolting applications, and tool setup and selection for the wind industry.

Fresh water resources.

Gateway launched the state's first Civil Engineering Technology – Fresh Water Engineering Technology associate degree program to train water-quality technicians to perform field work and office duties.

Other sustainability programming

Principles of Sustainability.

This course prepares students to develop sustainable literacy, analyze interconnections among the physical and biological sciences and environmental systems, summarize the effects of sustainability on health and well-being, analyze connections among social, economic and environmental systems, employ energy conservation strategies to reduce the use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal and recycling, and analyze approaches used by their communities to promote and implement sustainability.

Urban farming. An Urban Farming advanced technical certificate program equips students to intensively farm small plots and bring their crops to market profitably. It combines a farming curriculum with entrepreneurial training.

Sustainable horticulture. In October 2011, Gateway broke ground for the Pike Creek Horticulture Center on the Kenosha Campus. The project, an addition and remodeling to the

greenhouse and adjoining buildings, will add two classrooms and two labs to the college's sustainable living and urban gardening programs.

Green interiors. Interior Design students learn to incorporate sustainable products in their design and purchase decisions and how to present customers with green options.

Sustainable cooking. Culinary Arts students grow and harvest their own herbs for use in the classroom and in the Racine Campus Commons training kitchens. Café 91.1, in the atrium of the Center for Bioscience and Information Technology, serves vegetables raised in Kenosha by horticulture students. The café saves its vegetable scraps and returns them to the students for use as compost.

Green certification for faculty.

Training will be created to help develop a cast of Green-Certified Specialists or Green Team trainers at Gateway. This certification training will help further incorporate green thinking and sustainability into all programs and throughout the district. Green Specialist Certificate Series includes six workshops titled "Dumpster Dive," "Energy Management," "Green Chemistry," "H2O Conserve," "Pollution Solutions," and "Sustainability into Practice."

Plans for the future

Center for Sustainable Living.

Plans for this facility, acquired in 2010, include:

- Retrofitting to demonstrate an array of renewable energy sources, including geothermal heat pump, photovoltaic parking lot lighting, and improved heating and cooling systems.

(A solar water heating system is already in place).

- Assessing the property for its growing value for urban farming, sustainable landscaping, and test/demonstration horticulture beds.
- An energy audit to establish benchmarks and assess future needs.

Other sustainability initiatives in academic and training areas will include:

- Providing incumbent worker training on Trane chiller controls technology and the Snap-on Torque Technology program.
- Developing a survey to identify college faculty members who are in corporating sustainability concepts into their curricula; sponsoring workshops to help these faculty member implement their plans and to help others introduce sustainability components to their courses.
- Working with WEDD to develop additional training and certificate programs for business and industry in the community on green careers, as appropriate and as market demands emerge.



Community & Communication

Goal: Increase awareness of sustainability issues among campus and community members through education and outreach and empower students, staff and community members to take sustainability actions.

Achievements to date

GREEN Matters. The Workforce and Economic Development Division held this monthly series at the Center for Sustainable Living, focusing on sustainability starting at home. In 2011, experts led seminars titled:

- Putting Your Garden to Bed
- Are You Losing Heat?
- What Degree of Green Are You?

Business seminars. Gateway holds regular green business practice seminars to help local business leaders learn how to make sustainability a permanent part of their operations.

Earth Day. An annual celebrate Earth Day event helps community members become better environmental stewards. Activities include seminars, workshops and demonstrations.

Green Scholars. This program lets students learn about sustainability, get involved, and earn recognition when they graduate. They earn points for specific green activities, from using compact fluorescent or LED light bulbs, to packing waste-free lunches, to riding a bicycle or public transit, to buying an energy-efficient refrigerator. Those who collect at least 50 points graduate as Green Scholars.

Green communities. Gateway has joined the Green Racine campaign to improve the community, the college and the environment. Racine was the first community in the nation to embrace an efficient and cost-effective community-wide green cleaning campaign. Gateway is also working with the Green Kenosha community organization dedicated to environmental education, protection and sustainability.

Lecture and discussion series. The college hosted guest speakers, including the president of the

TerraCycle recycling company, and documentary films on sustainability topics, such as "King Corn."

President's messages. A "green" statement appears in each Weekly Update from college president Bryan Albrecht.

Plans for the future

As part of its sustainability initiatives, Gateway Technical College will model social responsibility, integrity and transparency to its publics. Specific communication initiatives are to include:

Sustainability teams. District and campus teams will assist in shaping the direction of sustainability at the college and on the individual campuses. They will also assist with some of the activities listed in this plan.

Web page. Develop a sustainability web page where students and community members can review college goals and view dashboards that show how initiatives such as energy savings are progressing toward goals.

Campus map. Create a map of the college that shows sustainability features at all campuses and facilities, such as locations of solar photovoltaic and hot water systems, wind generators, prairie plantings and rain gardens, the Center for Sustainable Living, and other highlights.

Educational signage. Place signage on campuses to highlight sustainability features. Indoors, provide table tent signs, such as to encourage recycling, use of tap-water bottles instead of bottled water and printing double-sided

documents (or forgoing printing). Outside, provide signage for points of interest such as renewable energy systems, hybrid-vehicle parking spaces, electric car chargers, recycling containers, and bicycle racks. Include the Sustainable Gateway logo.

Student involvement. Conduct events such as sustainability book clubs on the campuses and "dumpster dive" activities where students learn what goes into trash containers and items (such as hazardous materials and recyclables) that do not belong there.

Special events. Expand on the existing program of guest lectures and documentary films for students and community members.

Group tours. Provide tours of campuses focused on sustainability for local community organizations, followed by discussions of college sustainability initiatives.

Awards. Create a Sustainability Champion award program for instructors, staff, community and students as part of the annual February awards program. Solicit nominations and create a selection committee. Target: February 2013.

Incentives. Explore incentive programs with industry partners to encourage staff members to purchase sustainable products. Example: an incentive for replacing an older vehicle with a hybrid or other fuel-efficient vehicle.

Community partnerships. The college will expand partnerships with business and community groups around sustainability through training, service on board of directors. The college will also take part in sustainability initiatives in partnerships with other educational institutions.

Other communications. Include a sustainability section on the college intranet, in the community-wide e-mail newsletter (*Community Connections*), and in the student newspaper (*Connect*); include sustainable practices in staff in-service days.

Barriers and solutions

Sustainability is a journey. As at other learning institutions, progress depends on meeting the challenges of funding and staff time. Effective communication can help on both those fronts. Staff training can help build positive energy around sustainability and encourage faculty to invest time to incorporate it into the curriculum. That same positive energy can help encourage college leadership to assign more priority to sustainability projects and programming.

Costs and financing

Sustainability is one criterion for evaluating projects under Gateway Technical College’s three-year facilities and maintenance plan, submitted annually to the Wisconsin Technical College System. To support sustainability initiatives, Gateway staff continually seeks grants and partnerships to augment regular revenue sources. In fiscal year 2011, Gateway invested \$1 million in building energy efficiency projects.

Implementation tracking structure

The college leadership will annually review progress against the sustainability goals and will create a progress report to be published on the college website.

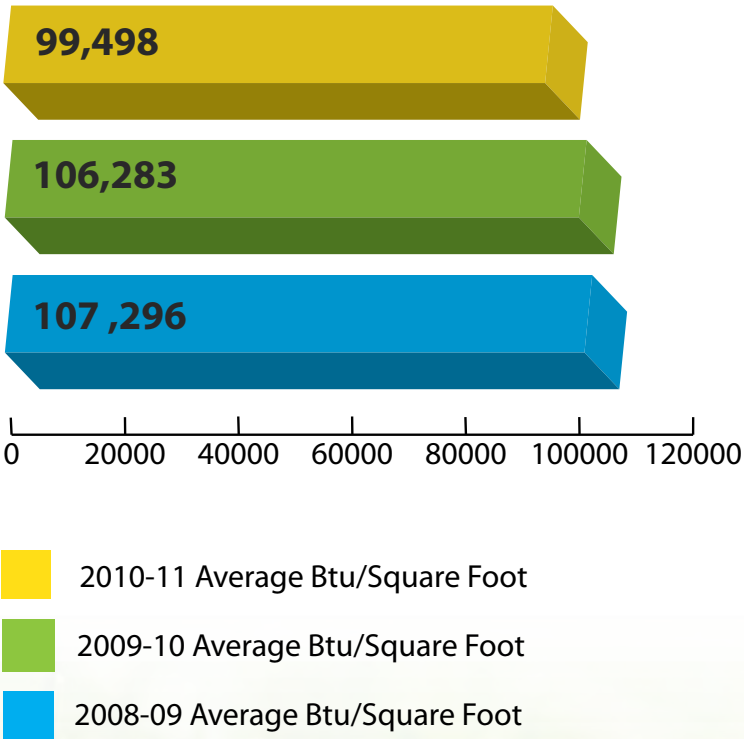
As part of tracking gains in sustainability, Gateway continues to measure building projects against LEED Silver standards. In addition, the college must complete a second Greenhouse Gas Inventory covering 2012, and every second year thereafter, as part of the American College and University Presidents’ Climate Commitment. Facilities staff members continue to monitor energy consumption and work with Waste Management track solid waste and recyclables.

The Wisconsin Technical College System Energy Consumption Report for Fiscal Year 2009-10 (latest year for which data is available) includes a comparison of all districts’ overall energy consumption per square foot of building space for the entire year. Gateway’s consumption

for 2009-10 was highest among the districts for that year, despite a modest improvement from 2008-09. Gateway’s consumption for 2010-11 was 99,498 Btu/square foot, an improvement of 6.3 percent over the previous year.

College leaders are committed to consulting with other districts and with other resources to identify best practices that can help improve efficiency significantly.

Comparison of Energy Consumption per Year Gateway Technical College



Gateway experienced a 6.38% reduction in energy consumption between 2009-2010 (106,283 BTUs/sq ft) and 2010-2011 (99,498 BTUs/sq ft).

Acknowledgement

Creation of this Gateway Technical College Sustainability Plan would not have been possible without the support and dedication of the Sustainability Plan Development Task Force. Its members are:

- Debbie Davidson, Vice President, Workforce and Economic Development
- Zina Haywood, Executive Vice President/Provost, Academic and Campus Affairs
- Jeff Robshaw, Vice President, Learning Innovation and Chief Information Officer
- Mark Zlevor, Chief Financial Officer and Vice President, Administration
- Judy Braun, Purchasing Technician
- Beverly Frazier, Associate Dean MET
- Pat Hoppe, Instructor, Electronics
- Kate Jerome, Instructor, Horticulture
- Mike O'Donnell, Dean of Campus Affairs, Burlington/Elkhorn
- Larry Paruszkiewicz, Director-Building and Technology Services
- Mike Piccolo, Director, Building Services
- John Thielen, Director, Building and Technology Services

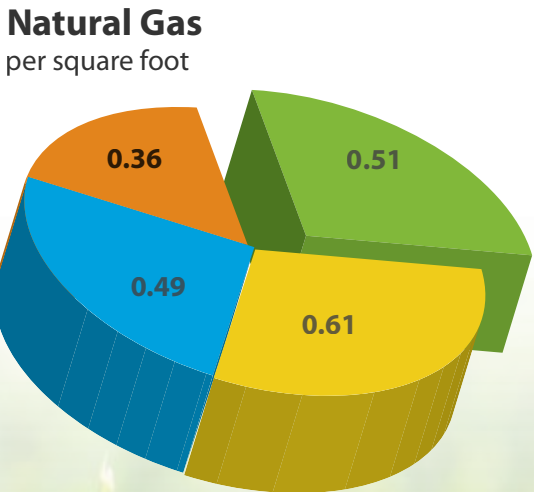
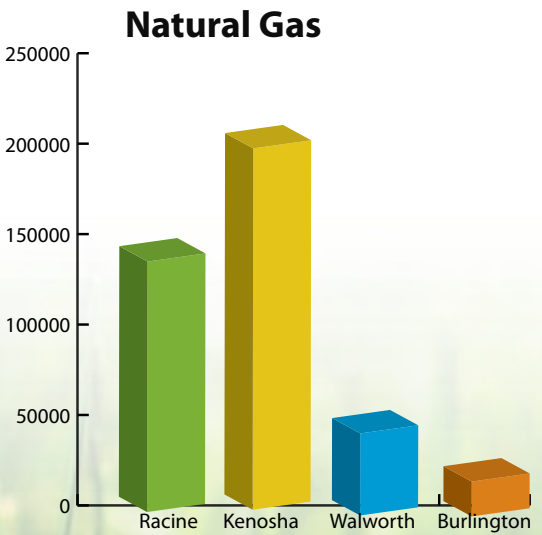
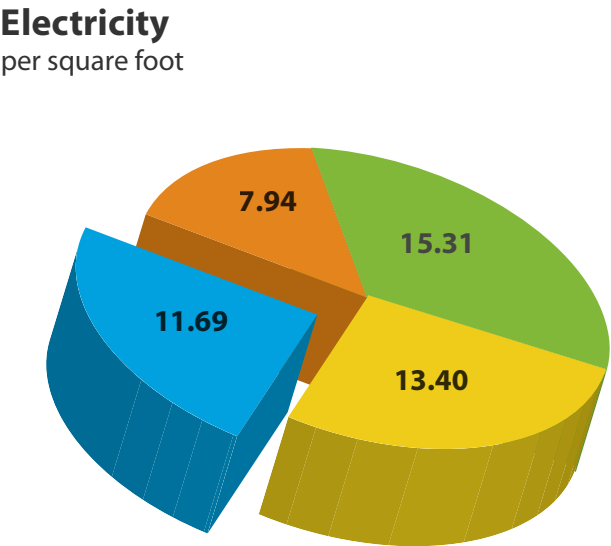
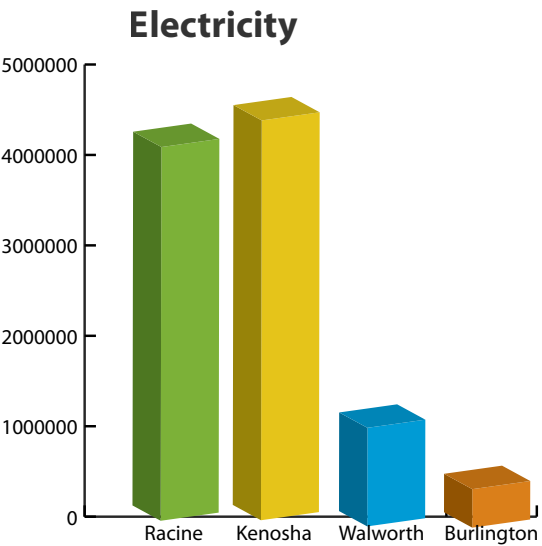
Conclusion

This sustainability plan for Gateway Technical College marks an important milestone on our journey toward a more sustainable future for our institution, our faculty and staff, our business partners, and our communities. As part of our commitment, we will keep our stakeholders informed of progress toward sustainability goals. Please look for news in local media and visit our web site at www.gtc.edu. In addition, we will issue annual progress reports on sustainability, to be published on the college website. We have also created an energy and sustainability dashboard that will be used to report to Board of Trustees on a regular basis.

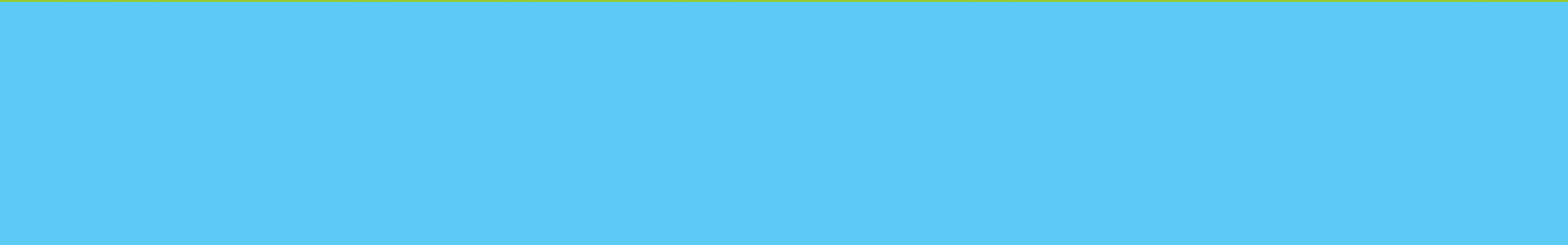
To comment on this report or to offer suggestions related to Gateway sustainability initiatives, contact:

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Gateway Technical College
Utility Usage: Fiscal year 2011



	Electricity	Electricity per square foot	Natural Gas	Natural Gas per square foot
Racine	4,301,920 kWh	15.31 kWh	144,160 therms	0.51 therms
Kenosha	4,601,971 kWh	13.40 kWh	207,974 therms	0.61 therms
Walworth	1,134,847 kWh	11.69 kWh	47,224 therms	0.49 therms
Burlington	442,960 kWh	7.94 kWh	20,070 therms	0.36 therms
Total	10,481,698 kWh	13.48 kWh	419,428 therms	0.54 therms



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