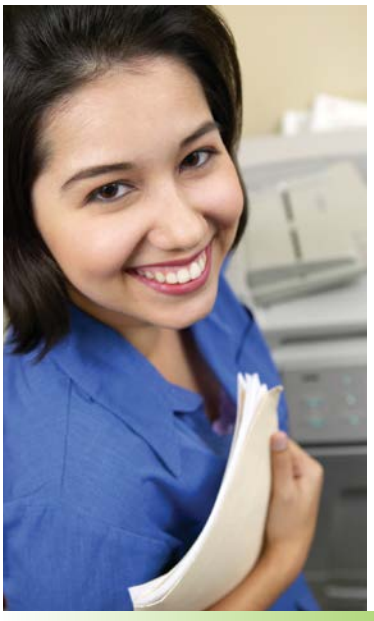
SUSTAINABLE GATEWAY

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

A SUSTAINABILITY REPORT FOR GATEWAY TECHNICAL COLLEGE



2016

A message from
Bryan D. Albrecht,
President and CEO

To all Gateway Technical College stakeholders:

It is an honor to serve as President of Gateway Technical College. The Gateway community continues to inspire in many ways. Our students achieve academic and career success, our business partnerships are models for the nation, and our faculty and staff strive for the highest service, built on the core values of honesty, integrity and responsibility.

Those same core values shape our commitment to sustainability. We constantly strive to create a culture around saving energy, reducing our carbon footprint, recycling more, wasting less, and generally doing our part toward building a greener, cleaner world. This report is one example of our ongoing effort to model environmental sustainability. Through carbon measurement, energy management and facility improvements, Gateway is advancing aggressively toward our established goals for reducing our environmental impacts on the communities we serve.

This year we renewed our participation in the American College and University Presidents' Climate Commitment, signed onto the Global Environmental Pledge, and joined countries worldwide in boosting awareness of global warming through Global Warming Summit held in Paris. From our recycling initiative to the Green Scholars program, our faculty, staff and students are leading the way in sustainable practices.

Our world will continue to challenge us to maintain adequate supplies of fresh water, clean air and locally sourced food. With your support, Gateway will continue to design education programs that prepare and inspire students for careers that help build a more sustainable future – programs like freshwater resources, geoexchange technology, sustainable energy systems, wind and solar technology, and urban farming.

This 2016 Sustainable Gateway report updates our initial plan, presented in 2012. It outlines what we have accomplished thus far and our goals looking ahead. I welcome you to review this report, offer your comments, and suggest other steps Gateway can take toward making our campuses and communities greener.

Sincerely,

Bryan D. Albrecht
President and CEO

SUSTAINABILITY REPORT FOR GATEWAY TECHNICAL COLLEGE

Energy and Transportation 5

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

Latest achievements: Continued deployment of wind and solar energy; installed geothermal energy at the Center for Sustainable Living; deployed remote technical assistance video kiosks for students in all buildings; retrofitted energy-efficient air conditioning units in information technology network closets and server rooms; and expanded opportunities for video-conferencing and distance learning to help reduce travel.

Plans: Complete one or two solar, wind or other renewable energy projects per year; electronically monitor electricity consumption in real time; continue improvements to cut electricity usage from computers; expand distance learning, virtual meetings, and other travel-saving conveniences.

Buildings and Grounds 7

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Policies, Processes and Procurement 9

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.

Latest achievements: Took initiatives to reduce use of computer printing supplies; developed guidelines to minimize the environmental footprint of special events; made sustainability discussion a part of new-employee onboarding; continued to encourage purchase of equipment with ENERGY STAR ratings.

Plans: Use an energy and sustainability dashboard to regularly report to college leadership on performance with utility usage, recycling, sustainability-related academic and training programs, and more; develop a Green Office program to encourage creation of sustainable work spaces.

Recycling and Waste Reduction 11

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

Latest achievements: Recycled 90 percent of used electronic equipment; diverted more than 80 percent of construction refuse from landfills; launched a new college-wide recycling education initiative; continued installing drinking fountains with water bottle fillers; expanded green printing initiatives.

Plans: Collect and track data on college waste materials; encourage recycling of scrap materials from instructional programs; develop outreach to staff and students to encourage participation in college recycling initiatives; developing a process to monitor material recycled and sent to landfills.

Academic Instruction and Business and Workforce Solutions 13

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

Latest achievements: Assessed the Center for Sustainable Living for its value for urban farming and sustainable horticulture and completed an energy audit of the facility; added a course in Sustainable Materials and Finishes to the Interior Design certificate curriculum; continued leadership in preparing students for careers in sustainable energy systems and fresh water resources.

Plans: Develop a cast of Green-Certified Specialists or Green Team trainers to help incorporate green thinking and sustainability into all programs; establish an Energy Knowledge Center at the Center for Sustainable Living; work with Business and Workforce Solutions to develop additional training and certificate programs for business and industry on green careers.

Community and Communication 15

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.

Latest achievements: Sponsored Celebrate Earth Day events on the Kenosha and Elkhorn campuses; launched an annual EcoFest Racine event; continued the Green Scholars program; joined the Racine Sustainable Business Network; continued environmental-themed summer camps offered with the Boys and Girls Clubs of Kenosha; hosted a weekly farmer's market on the Kenosha campus; created a 1/4-mile Nature Discovery Trail at the Center for Sustainable Living; added a sustainability web page; created maps of campus sustainability features.

Plans: Create district and campus sustainability teams to help shape the direction of sustainability; place educational signage on the campuses to highlight sustainability features; create a Sustainability Champion award program for instructors, staff and community members; expand partnerships with business and community groups around sustainability.

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 and the Second Nature Climate Leadership Commitment.
- Achieve carbon neutrality – emitting net zero greenhouse gases – by 2030.

Executive Summary

This 2016 Sustainability Report presents the latest Gateway Technical College initiatives toward creating a more sustainable future for our institution, our communities, and the people and businesses we serve. It also notes the progress made since our first Sustainability Report issued in 2012.

The report includes a statement of our responsibilities under the American College and University Presidents' Climate Commitment. As a signatory to that commitment, the college recognizes the scientific consensus behind global climate change 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.

Accordingly, as part of this report, we present the results of our latest Greenhouse Gas Inventory, covering 2014. In that year, Gateway produced 30,009 metric tons of carbon dioxide equivalent (CO_2e), about 69 percent from travel-related sources and 31 percent from energy use in campus facilities. The balance of the report describes our sustainability goals, achievements to date, and plans for the future in six key areas: Energy and Transportation; Buildings and Grounds; Policies, Processes and Procurement; Recycling and Waste Reduction; Academic Instruction and Business and Workforce Solutions; Community and Communication.

WHO WE ARE

Gateway Technical College collaborates with communities in Kenosha, Racine, and Walworth counties, offering instructional programs that reach some 21,000 students annually on our campuses and through distance learning. About 5,400 full-time-equivalent students are registered in 79 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

THE BASIS OF OUR COMMITMENT

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 Report 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. We encourage our students, faculty, staff, sponsors, business partners and community members to join us in moving forward.

The 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."

Background

In 2009, Gateway Technical College President Bryan D. Albrecht signed the American College and University Presidents' Climate Commitment (ACUPCC), and in 2015 he signed the Second Nature Climate Leadership Commitment, of which Gateway is a charter signatory. These actions acknowledged that global climate change is a defining challenge of the 21st Century that higher education has an obligation to take a leadership role in addressing.

The ACUPCC and Second Nature recognize the responsibility that institutions of higher education have as role models for their communities and in educating the people who will develop the social, economic and technological solutions to reverse global warming and help create a thriving, civil and sustainable society. Gateway seeks to enable students to benefit from the economic opportunities that will arise out of solutions they develop.

Leading climate action will benefit Gateway in numerous ways, such as by:
- Reducing long-term energy costs
- Attracting excellent students and faculty
- Attracting new sources of funding
- Increasing support from alumni and local communities

To do its part, Gateway has committed to creating a plan to achieve carbon neutrality (emitting no net greenhouse gases) by 2030. To achieve this goal, a greenhouse gas inventory is an important component. In creating the inventory, data was collected to cover the entire fiscal year 2014. Information was gathered from sources, including:
- We Energies utility bills for electricity and natural gas usage
- A survey of student, faculty and staff commuting habits
- Purchasing card bills 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.

Greenhouse Gas Inventory Summary

Gateway Technical College has completed its fourth Greenhouse Gas (GHG) Inventory, covering fiscal year 2014. Previous inventories were completed in fiscal 2009, 2010 and 2011. The inventories quantify the impact of Gateway's operations on greenhouse gas emissions and serve as baselines and guides for future reduction strategies as the college moves toward its goal of achieving carbon neutrality.

A GHG inventory provides a critical benchmark against which Gateway tracks progress toward reducing its environmental footprint. It also offers insights that help Gateway policymakers formulate informed strategic plans to this end. The inventory provides a broad overview of Gateway's greenhouse emissions and breaks down emissions into four categories:
- Transportation
- Non-vehicular energy use
- Landscaping
- Solid waste

The inventory of GHG emissions shows that Gateway emitted a total of approximately 30,009 metric tons (MT) of CO2e in fiscal 2014, including Scope 1, Scope 2 and Scope 3 emissions (Table 1). Of these emissions, 69 percent were from transportation-related sources, while 31 percent came from building energy-related sources. Student commuting, at 62 percent, composed the largest share of total GHG emissions, followed by purchased electricity at 22 percent and natural gas combustion at 8 percent.

Table 1. Gateway Technical College GHG Emissions By Source

Source	Emissions (Metric tons CO2e)	Percent of Total
Student commuting	18,437.1	62%
Purchased electricity	6,557.4	22%
Purchased natural gas	2,378.0	8%
Employee commuting	1,492.1	5%
Losses from electrical grid	405.3	1%
Employee air travel	236.2	<1%
Study abroad travel	215.2	<1%
Vehicle fleet	95.5	<1%
Employee mileage	207.0	<1%
Solid waste	-14.5	<1%
TOTAL EMISSIONS	30,009.3	100%

The total of 30,009 MT CO2e for fiscal 2014 represents a 5.7 percent decrease in total GHG emissions from all scopes from fiscal 2011, when 31,826 MT CO2e was released. This decrease coincided with a 15 percent decline in full-time equivalent (FTE) enrollment, from 6,382 FTE in fiscal 2011 to 5,419 FTE in fiscal 2014 (Table 2).

Table 2. Total GHG Emissions Per Year (2009, 2010, 2011, 2014)

Year	Emissions Scopes 1, 2, 3 (MT CO2e)	Percent Change	Emissions Scopes 1, 2 (MT CO2e)	Percent Change
2009	34,900	–	10,544	–
2010	32,000	-8%	9,606	-9%
2011	31,826	- <1%	9,634	+ <1%
2014	30,009	-6%	9,031	-6%

Since 2009, Gateway has achieved a gradual reduction of 15 percent of total emissions (Scopes 1, 2 and 3), and 14 percent in combined Scope 1 and 2 emissions – those over which the college has the most control. The decline between the latest inventory in 2014 and the previous inventory in 2011 amounted to just under 6 percent.

For fiscal 2014, each FTE was responsible for 5.5 MT CO2e of emissions in Scopes 1, 2 and 3 in the context of Gateway operations. Limiting the count to Scopes 1 and 2, each FTE was responsible for 1.7 MT CO2e of emissions (Table 3).

Table 3. GHG Emissions per FTE (2009, 2010, 2011, 2014)

Year	FTE	Emissions/FTE Scopes 1, 2, 3 (MT CO2e)	Emissions/FTE Scopes 1, 2, (MT CO2e)
2009	5,188	6.7	2.0
2010	5,985	5.3	1.6
2011	6,382	5.0	1.5
2014	5,419	5.5	1.7

A comparison of combined Scope 1 and 2 emissions per FTE reveals that Gateway and its Wisconsin Technical College System peers are achieving similar performance after normalizing for size. Gateway marginally leads its peers at 1.7 MT CO2e per FTE, followed closely by Milwaukee Area Technical College and Western Technical College, both at 1.8, and Lakeshore Technical College at 1.9.

Gateway has achieved a generally downward trend in GHG emission despite maintaining a similar operational footprint over the entire period. The slight uptick in GHG emissions per FTE for 2014 is logical given the 15 percent drop in FTE between 2011 and 2014, without a similar drop in the size of Gateway facilities.

Gateway's GHG emissions from transportation declined overall due to a reduction in student commuting from a smaller student body, but saw an uptick in all other subsectors. Study-abroad air travel accounted for the largest percentage increase (150 percent) over the previous report.

Recent data from the U.S. EPA reveals that the RFC West eGRID Subregion in which Gateway resides is rapidly reducing combustion of coal in favor of natural gas, a less carbon-intensive fossil fuel, to generate electricity. Renewable energy, especially wind, is also increasing. In addition, although Gateway has seen slight increases in natural gas used for its operations, it has reduced its purchases of electricity by 9 percent since 2010, avoiding GHG emissions of about 742 MT CO2e for 2014.

During fiscal 2014, the solar arrays at Gateway's Horizon Center, Kenosha Campus and Racine Campus supplied 14,208 kWh of electricity, about 0.15 percent of Gateway's annual total. During that year, Gateway disposed of about 439 metric tons (483 short tons) of solid waste. That represents a net avoidance of 17 metric tons of CO2e emissions because methane is captured and used to generate electricity at landfills serving Gateway.

The primary reason for the 14 percent reduction in Scope 1 and 2 emissions from 2009 to 2014 is the reduction in electricity usage. Great potential exists for further electricity reductions, and this will be compounded by improvements in an electrical grid that is becoming more efficient. Expansion of renewable energy will enable additional reductions. There are also significant opportunities for reducing usage of natural gas. Emissions reduction from commuting and travel offer less potential for reduction.

Energy and Transportation

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

Latest Achievements

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

- Kenosha Horizon Center: Solar photovoltaic system (3 kW) and rooftop wind generator (1 kW)
- Kenosha Center for Sustainable Living: solar photovoltaic system (3 kW); solar water heating system (133 therms per year); 1.2 kW wind generator
- Elkhorn: Solar water heating system at the North Building (222 therms per year)
- Burlington: Solar water heating system (222 therms per year)
- Racine: Three wind generators on the main campus rated at a combined 3.6 kW; solar photovoltaic system at the Technical Building (2.88 kW)
- Solar PV panel (3 kW) with sun tracking at the SC Johnson Integrated Manufacturing and Engineering Technology (iMET) center in Sturtevant.

Total annual savings from the solar and wind systems are estimated at $2,500.

Geothermal energy. At the Center for Sustainable Living on the Kenosha campus, an oil-fired hot-water boiler and an old air conditioning system have been replaced with geothermal heating and cooling. The new system is a 5-ton GeoExchange electric groundwater source heat pump from Modine Manufacturing. The system draws energy from five 200-foot-deep wells. Its energy efficiency rating (EER) of 15 is 35 to 40 percent better than for typical residential systems. The system serves as both an energy saver and as a demonstration project for geothermal energy.

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 online, helping to reduce travel. Thirteen classrooms and 11 meeting spaces across the district are hard-wired with video-conferencing equipment. In addition, 23 mobile video conferencing units are used district-wide to support classes and meetings. Our partnership with the Wisconsin Association of Distance Education Networks' VANguard program has seven dedicated rooms and uses 12 mobile units to support instruction. Some 997 courses sections were available via distance learning in 2015-16, versus 261 five years ago. In addition:

- Internal meetings via webcam are enabled using GooglePlus (Google Hangouts) to reduce travel and increase telecommuting options.
- Virtual desktop interfaces allow staff members to access their work computers from home, helping to reduce commuting.
- LifeSize Cloud enables desktop and laptop computers with software installed to function as virtual endpoints for video-conferencing instruction or meetings.
- Backboard Collaborate, a web-based video teaching and learning tool integrated with the college-wide learning management system, essentially allows anyone with a classroom or laptop with internet access to take

part in live meetings or classes. This means that essentially all classrooms are accessible through distance learning from a technology standpoint.

Remote technical assistance. Each campus building now has a video kiosk where students can use high-definition video and telephone to speak with technicians instead of having to travel to central campuses to meet in person.

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, the Health and Emergency Responder Occupations (HERO) Center and the Elkhorn campus have credit-card-operated electric vehicle charging stations. The Horticulture Department in Kenosha uses a small electric vehicle to move plants and supplies around the campus.

Occupancy sensors. Almost all rooms have occupancy sensors; lights turn off when the room is unoccupied. In more and more of these rooms, the occupancy sensor is tied to the building controls so that heating or cooling dials down when the room is empty.

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. A bike trail connection is also available at the iMET Center in Sturtevant.

Computing systems. The Facilities Department has been replacing air conditioning units in information technology network closets and server rooms to make them more efficient. In the main server rooms at the iMET Center and at the Kenosha Campus, custom units constantly monitor the cooling load and adjust the cooling capacity to match for optimum efficiency. When conditions permit (cool weather and low humidity), the mechanical cooling compressors shut off and outside air is brought in to cool the server rooms (free cooling). Similar systems will be added to other server rooms where they make sense. The college continually seeks opportunities to employ the best technologies for energy efficiency.
The department has moved aggressively to reduce power consumption from computers:

- More than 80 physical servers have been virtualized so that three high-performance blade servers now provide the same computing power. This eliminated one computer room, reduced cooling requirements, freed space for other purposes and saved energy.
- 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

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.

Energy management. A college initiative will electronically monitor electricity consumption in real time and will use the data to automatically correct electrical loads.

Computing systems. More improvements are being planned to cut electricity consumption from computers. The information technology staff is exploring further energy-saving innovations.

Travel reduction. Technology has potential to create still more opportunities for distance learning, virtual meetings, and other travel-saving conveniences. This includes adding videoconferencing when remodeling or expanding meeting rooms. Laptops purchased now have webcams.

Bicycle transportation. The college is working with the Kenosha Bicycle Ambassadors and Kenosha County toward becoming a Bicycle-Friendly Community/University.

Other measures that will be explored to reduce travel include creating alternative class and work schedules, creating a website 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.

Latest achievements

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 has been applied to all renovation and expansion projects. Recent major projects that contribute to meeting the LEED silver standard include:

- Boiler replacements on the Kenosha, Racine and Elkhorn campuses, improving efficiencies from 60 percent to more than 90 percent.
- Chiller replacements in Elkhorn and Racine, yielding 30 percent efficiency improvements.
- Air handler upgrades in Racine, Kenosha and Elkhorn with premium-efficiency, load-matching motors and enhanced automated controls.

Energy audits. Gateway partners with Wisconsin Focus on Energy for energy audits and consulting. For example, a recent audit of the iMET Center found that 41 percent of electricity usage in the facility came from outdated lighting systems. Lighting was replaced with LED fixtures and controls, leading to energy and maintenance savings.

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

- Elkhorn Student Life/Office renovation (2014) includes a high-efficiency boiler and chiller plant with energy recovery to replace inefficient rooftop units. It also included high-efficiency lighting, low-flow and no-flow plumbing fixtures, and xeriscaping.
- The Elkhorn Veterinary Science Building renovation (2015) includes an energy-saving variable refrigerant flow (VRF) heating and cooling system, high-efficiency lighting, and xeriscaping.
- The Elkhorn Manufacturing Building renovation and expansion (2015) includes energy recovery, high-efficiency lighting and xeriscaping.
- The Kenosha Student Life, Student Services/ Learning Success upgrade (2014-2015) includes updates to the heating/cooling systems and lighting, along with xeriscaping.
- Major roof replacements in Racine, Kenosha and Elkhorn include enhanced thermal insulation and cool roof designs that reflect sunlight to minimize summer heat gain.

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. Gateway has installed highly efficient LED lighting in all remodels and retrofits, achieving 50 percent savings in electricity and helping to lower cooling costs. New lighting installations also include enhanced controls and daylighting.

Water efficiency. During building expansions and remodels and wherever feasible, the college installs water-saving fixtures, including low-flow faucets, low-flow or waterless urinals, and dual-flush toilets. 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.

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. The college also employs cost-saving green practices in cleaning and paper usage in partnerships with local companies JohnsonDiversey and Kranz Inc. Proper product selection and best practices for use of cleaning products help safeguard the health and safety of building occupants and minimize impacts on the environment.

Space utilization. Initiatives are being taken to save energy by centralizing room scheduling and synchronizing schedules with lighting, heating and cooling controls. This enables automated shutoff of lighting and setback of temperatures when rooms, wings or entire buildings are empty. Software will soon enable optimal class scheduling. For example, if only a few classes are to be held on a given day, the software can schedule them all for the same building, saving on energy for lighting, heating and cooling.

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.
- A portion of the Racine Campus Technical Building has a 4.100-square-foot green roof planted with low-maintenance, drought-tolerant sedum perennials.
- 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 greenhouse.

Brookhouse Arboretum. This arboretum, developed in 2015-16 next to the Pike Creek Horticulture Center in Kenosha, now includes 54 trees. Plants and trees are selected by professional horticulturists who choose according to native character, strength of characteristics and novelty.

Bee awareness. Through a donation from Kenosha community members Kathy and Joseph Madrigrano Jr., a bee education center has been created at the Center for Sustainable Living. The purpose is to raise awareness about the dramatic loss of bees – essential pollinators of crops – through colony collapse disorder. Features include a mural, bee-friendly gardens, and programs discussing colony collapse disorder. The site is open to community workshops and activities and for school field trips.

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

Plans for the future

Upgrades will continue to be integrated into facilities projects. For energy efficiency, the emphasis is beginning to switch to operational initiatives. The college continues to improve plans to utilize the new technology that has been installed.

Native plantings. Where feasible, the college will establish and maintain more areas of native vegetation and habitat.

Tree recognition. Within the next two years and where appropriate, the college will seek to acquire Tree Campus USA status from the Arbor Day Foundation, most likely beginning with the Racine campus. The college will also seek national accreditation for the Brookhouse Arboretum under the national Morton Register of Arboreta program.

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.

Designer education. The college 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 to consider in purchasing and contracting decisions, reducing consumption of goods, and providing staff with necessary training and tools.

Latest achievements

Gateway strives to make sustainability a permanent part of its 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 members are encouraged to purchase energy-efficient equipment with ENERGY STAR ratings where available.

Reducing use of printing supplies. Departments are being asked to voluntarily remove printers from individual offices in favor of more centralized printing. There are now 269 printers on the Gateway campuses. New computer printers are required to have double-sided printing capability. For students, a pay-for-print system discourages unnecessary printing and saves paper, toner, energy, and printer wear and tear.

Reducing disposable water bottles. Staff members, through the installation of drinking fountains with bottle fillers are encouraged to use tap water in refillable bottles instead of buying water in plastic bottles.

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 charities, 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.

Sustainable event planning. The college has developed guidelines for ribbon cuttings, groundbreakings and other special events that help minimize their environmental footprint. Measures include:

- Publicizing recycling policies and making sure recycling containers are on site
- Providing 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

Employee onboarding. As part of their Gateway journey, new employees are briefed on the college's sustainability mission.

Plans for the future

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

Office sustainability. A team is developing a Green Office program to help in the developing more sustainable work spaces.


GATEWAY
TECHNICAL COLLEGE

Recycling & Waste Reduction

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

Latest achievements

Electronics recycling. The college aggressively recycles computers, monitors, printers, fluorescent lamps, and other electronic equipment. Some 90 percent of these items are collected and taken to certified recyclers, locally based to minimize travel.

Building materials. During building and remodeling projects, demolition and construction waste materials are recycled to the greatest extent possible. As a standard practice, the college diverts more than 80 percent of construction refuse, including concrete, metals and wood.

Recycling education. A new recycling initiative launched in the fall 2016 semester grew out of a quality improvement project that evaluated the effectiveness of current recycling programs. A study found that of materials discarded, just 17.5 percent of the tonnage was recycled. A survey showed a need for communication and marketing to improve awareness of recycling. Elements of the new initiative include:

- Wider distribution of recycling bins, including outdoor bins for each campus
- Bin labels telling what materials can be recycled
- Proper training of custodial staff on recycling
- Updates to the recycling page on the college website

Bottled water reduction. Eleven water fountains (nearly half) on the campuses now have water bottle fillers, and more are planned in the near future, to help limit the prevalence of plastic water bottles.

Green printing. A college-wide green printing initiative has reduced amount of printer paper purchased by 53 percent, amounting to savings of 3,675,000 sheets of paper.

The total volume of printing decreased by 5.97 percent from 2014-15 to 2015-16. Spending for employee printing decreased by 8.21 percent; spending on paper for employee and student printing decreased by 12.04 percent.

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.

Waste monitoring. The staff is developing a format and process for keeping accurate data on the amounts and types of material recycled and sent to landfill each year, as a basis for measuring and improving management of waste and recyclables.

Recycling education. Future components of the college's education initiative include:

- Educational posters and digital sign messages in common areas and Student Services
- Recycling video featuring campus mascot Rudy the Red Hawk
- Community engagement by way of events throughout the district

Instruction & Training

Latest achievements

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 sustainability library provides books and other materials on green topics. The grounds include a natural prairie, a creek bed, 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

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

gardening, renewable energy, home energy systems, food preservation, and smart recycling. Projects completed at the center to date include:

- Retrofitting to demonstrate an array of renewable energy sources, including geothermal heat pump technology, solar water heating, photovoltaic parking lot lighting, and improved heating and cooling systems.
- Assessment of the property for its value for urban farming, sustainable landscaping, and test/demonstration horticulture beds.
- An energy audit to establish benchmarks for energy savings and assess future needs.

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.

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

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.

Interior design. The college's two-year Interior Design associate degree program allows students to procure a certificate in Sustainable Design. The certificate includes a course in Sustainable Materials and Finishes and a practicum at the Center for Sustainable Living where students create a design for a space in the center and put the design in place.

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
- 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 cooking. Culinary Arts students grow and harvest their own herbs for use in the classroom and in the Racine Campus Commons training kitchens.

Plans for the future

Green certification for faculty.
Training will be created to help develop to 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. The Green Specialist Certificate Series includes six workshops titled Dumpster Dive, Energy Management, Green Chemistry, H2O Conserve, Pollution Solutions, and Sustainability into Practice.

Center for Sustainable Living.
An energy knowledge center will be developed to address geothermal heating and cooling, insulation, energy-efficient windows, and efficient lighting.

Other sustainability initiatives in academic and training areas will include:

- Developing a survey to identify college faculty members who are incorporating sustainability concepts into their curricula; sponsoring workshops to help those instructor implement their plans and to help others introduce sustainability components to their courses.
- Working with Business and Workforce Solutions (formerly 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

Latest achievements

Green observances. The college sponsors annual community celebrations designed to share information and engage residents in activities that help them live in more environmentally friendly ways.

- Celebrate Earth Day. Held on the Saturday closest to Earth Day in April, these events on the Kenosha and Elkhorn campuses celebrate the environment with displays, workshops, hands-on activities for people of all ages, and other environment-related activities. Hundreds of community members attend the events, sponsored by Snap-on Incorporated. The Elkhorn events are also supported by the Elkhorn Parks and Recreation Department and the Elkhorn Chamber of Commerce.
- EcoFest Racine. Held for the first time in March 2016 on the Racine campus, this event is organized with Greening Greater Racine. It features cooking demonstrations, 20-minute informational presentations, children's activities, and informational displays from more than 50 product and service vendors, educational institutions, nature centers and parks, and community organizations. Admission is free, and healthy refreshments are available.

Green Scholars. This program encourages students to 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 using public transit, to buying an energy-efficient refrigerator. Those who collect at least 50 points graduate as Green Scholars.



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.

Green communities. Gateway has joined the Racine Sustainable Business Network to support improvements in the community, the college and the environment.

Summer camps. Gateway's summer camp program, offered with the Boys and Girls Clubs of Kenosha County in partnership with Snap-on Incorporated, includes two week-long sessions with environmental themes. A solar energy week includes hands-on activities that include cooking in solar ovens and building and racing solar-powered cars. A sustainability week covers horticulture, native birds, renewable energy, recycling, and exploration of the Center for Sustainable Living.

Farmer's Market. The Kenosha campus hosts a weekly farmer's market in summer and fall, featuring produce grown on campus through the Horticulture Program. Local farmers offer products such as honey and eggs.

Nature trail. A 1/4-mile Nature Discovery Trail on the Center for Sustainable Living property, funded by the Kloss Foundation and supported by Kathy and Joseph Madrigrano Jr., includes five stations with activities involving solar energy, recycling and composting, birds, trees and insects. The trail is available for field trips.

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

Campus map. Maps have been developed showing the sustainability features at all campuses, including solar photovoltaic and hot water systems, wind generators, prairie plantings, rain gardens, the Center for Sustainable Living, and other highlights.

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.

Educational signage. Signage will be placed on campuses to highlight sustainability features. Indoors, table tent signs will be provided to encourage behaviors such as recycling, use of tap-water bottles instead of bottled water, and printing double-sided documents (or forgoing printing). Outside, signage will indicate points of interest such as renewable energy systems, hybrid-vehicle parking spaces, electric car chargers, recycling containers, and bicycle racks. Signs will include the Sustainable Gateway logo.

Student involvement. Events will include 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 no belong there.

Special events. The existing program of guest lectures and documentary films for students and community members will be expanded.

Group tours. Sustainability-focused campus tours will be conducted for community organizations, followed by discussions of college sustainability initiatives.

Awards. A Sustainability Champion award program will be created for instructors, staff, community and students as part of the annual February employee recognition program.

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

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 2015, the most recent year for which complete information is available, Gateway invested $3.2 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 now completes an annual Greenhouse Gas Inventory. Facilities staff members continue to monitor energy consumption and work with Waste Management to track solid waste and recyclables. College leaders are committed to consulting with other districts in the Wisconsin Technical College System and with other resources to identify best practices that can help improve efficiency.

Acknowledgements

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

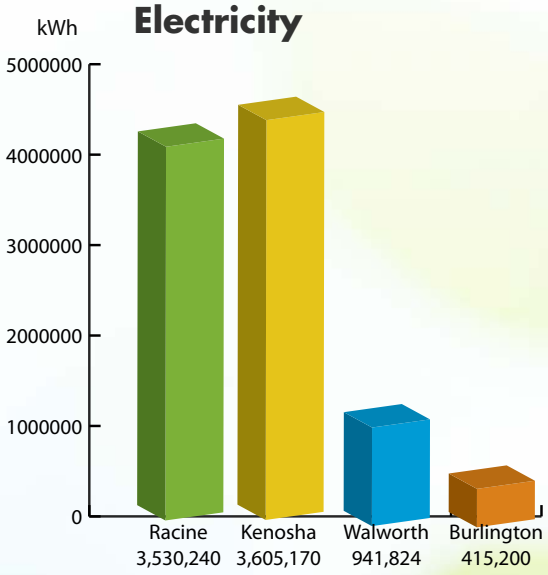
- Judy Braun, Manager, Purchasing
- Debbie Davidson, Vice President, Business and Workforce Solutions
- Zina Haywood, Executive Vice President/Provost, Academic and Campus Affairs
- Larry Hobbs, Instructor, HVAC
- Kate Jerome, Instructor, Horticulture
- Kallie Johnson, Program Manager, Center for Sustainable Living
- Dan Madsen, Director, Information Technology
- Mike O'Donnell, Dean of Campus Affairs, Burlington/Elkhorn
- Larry Paruszkiewicz, Director, Building Services
- Jeff Robshaw, Vice President, Learning Innovation and Chief Information Officer
- Stephanie Sklba, Vice President, Community and Government Relations
- John Thielen, Director, Building Services
- Bill Whyte, Senior Vice President, Operations

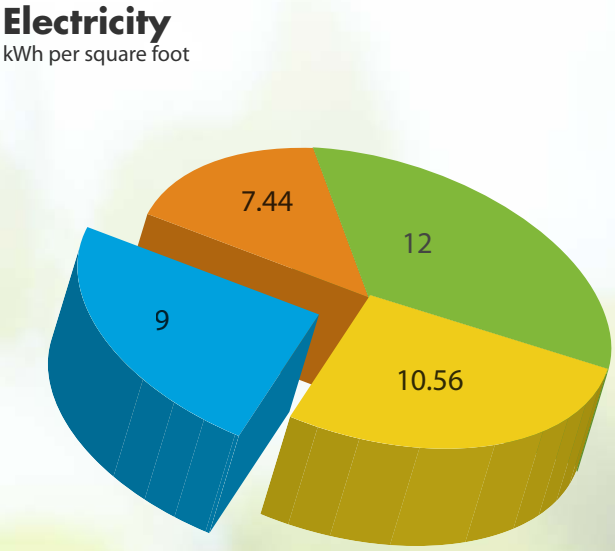
Conclusion

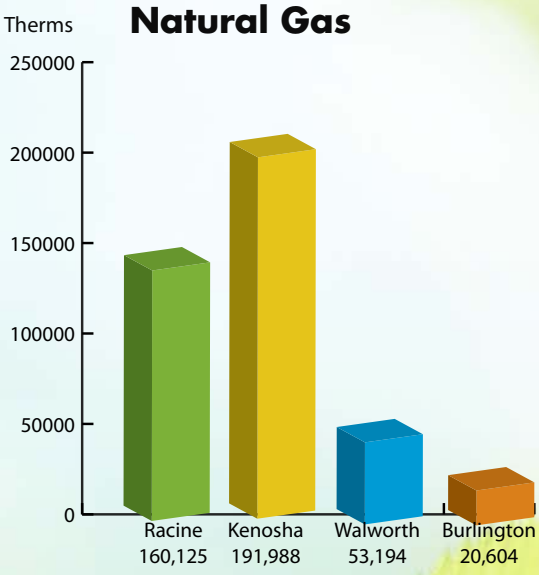
This Sustainability Report for Gateway Technical College marks an important milestone on our journey toward a more sustainable future for our college, our faculty and staff, our business partners, and our communities. Please look for news in local media and visit our web site at www.gtc.edu. In addition, we will issue periodic progress reports on sustainability, to be published on the college website. To comment on this report or to offer suggestions related to Gateway sustainability initiatives, contact:

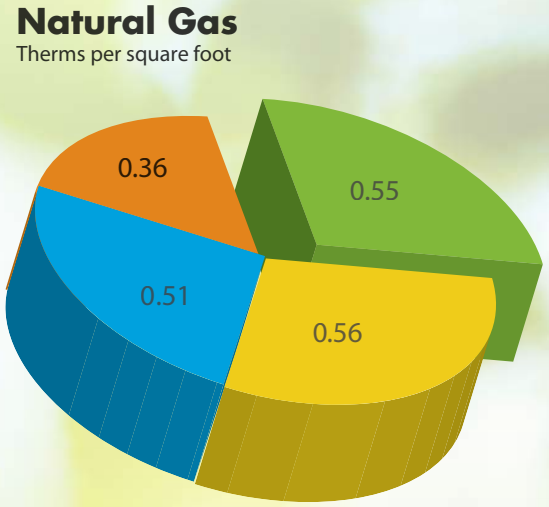
Stephanie Sklba
Vice President, Community and Government Relations
Gateway Technical College
262-564-2662
sklbas@gtc.edu

Gateway Technical College
Utility Usage: Fiscal year 2015

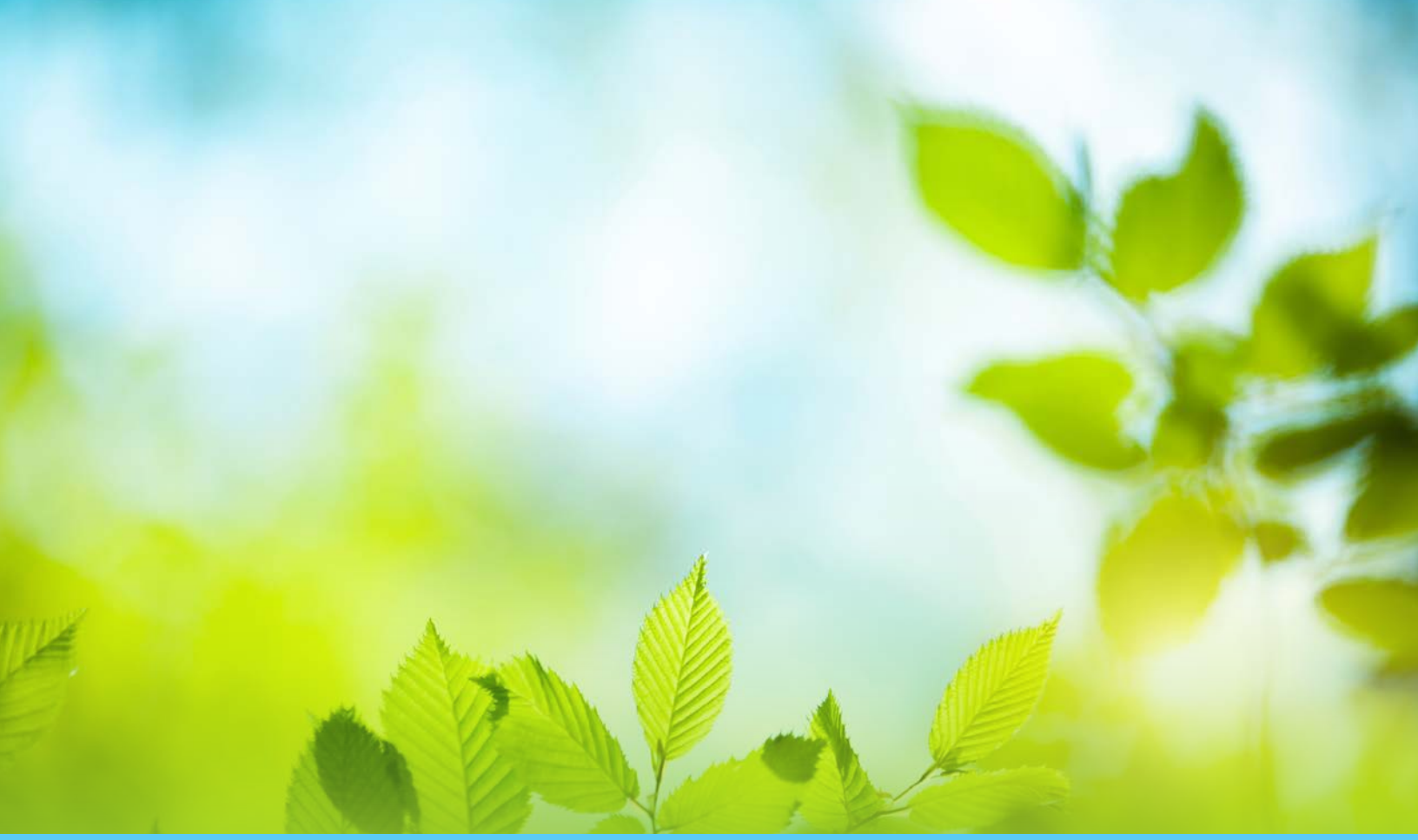








	Electricity	Electricity per square foot	Natural Gas	Natural Gas per square foot
Racine	3,530,240 kWh	12.14 kWh	160,125 therms	0.55 therms
Kenosha	3,605,170 kWh	10.57 kWh	191,988 therms	0.56 therms
Walworth	941,824 kWh	8.92 kWh	53,914 therms	0.51 therms
Burlington	415,200 kWh	7.45 kWh	20,604 therms	0.37 therms
Total	8,492,434 kWh		426,631 therms	



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