

# DRIVING WORLDWIDE INNOVATION IN ENERGY, POWER AND CONTROL IN WISCONSIN®





# WHY ENERGY, POWER AND CONTROL COMPANIES CHOOSE WISCONSIN

Companies looking to start, relocate or expand their operations in Wisconsin benefit from the state's central location, reliable infrastructure, talented workforce and business-friendly policies—all of which create competitive advantages that help businesses capitalize upon regional, national and global market opportunities.

Wisconsin's long history of innovation continues to fuel new solutions to challenges facing people, companies, nations and our very planet, with some of the most respected companies in the world drawing upon Wisconsin's plentiful natural resources, its renowned research capabilities and the can-do spirit of its citizens to grow and succeed.

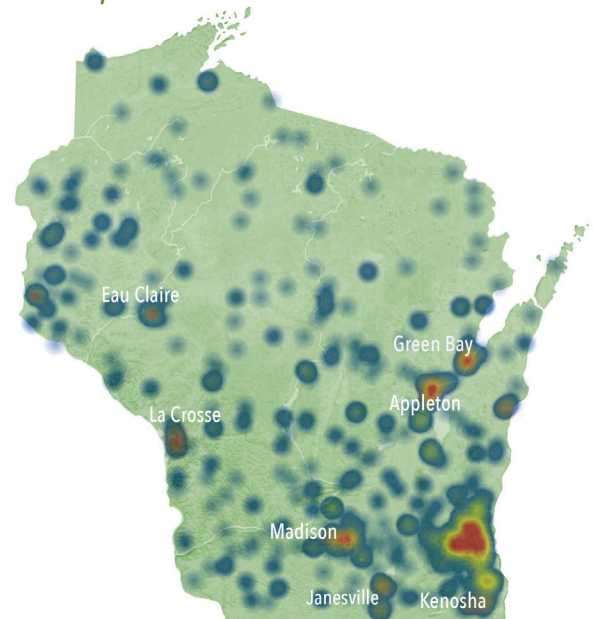
From fossil fuels to biofuels, wind and solar technologies, Wisconsin is generating new ideas, new advanced applications and new energy efficiency technologies to power the world. Wisconsin is a global center for energy, power and control—uniquely leveraging market-leading industrial capabilities, advanced academic research and specialized institutions. Electrical machinery and control manufacturing is one of Wisconsin's fastest-growing and most competitive industrial sectors, and companies in this sector are committed to addressing the world's energy challenges by continuously adapting to new market demand and opportunities.

**900+**  **COMPANIES**

**IN WISCONSIN'S ENERGY, POWER AND CONTROL SECTOR**

Source: Infogroup, 2018

## CONCENTRATION OF WISCONSIN'S ENERGY, POWER AND CONTROL COMPANIES



Source: Infogroup, 2018



More than 900 companies<sup>1</sup> in Wisconsin's growing energy, power and control sector employ over 100,000 people<sup>2</sup> and generate \$38 billion in annual sales.<sup>3</sup> Electrical machinery is Wisconsin's second-highest export category, totaling \$2.6 billion in 2018.<sup>4</sup>

<sup>1</sup> Infogroup, 2018

<sup>2</sup> EMSI 2018.4 Class of Worker, QCEW Employees 2017

<sup>3</sup> Midwest Energy Research Consortium

<sup>4</sup> U.S. Census Bureau data as reported by WISERTrade 2018

With the brightest minds and latest technologies available, Wisconsin companies are leading the way all along the spectrum of energy, power and control, with a broad and deep array of companies representing all the areas the sector encompasses:

**ENERGY** — grid modernization, conservation, fossil fuels, nuclear, renewables and storage

**POWER** — power controls and sensors, transmission, distribution, monitoring, efficiency and quality

**CONTROLS** — automation and systems intelligence for industrial and building applications, energy management, SMART grid/distributed energy, wind and solar control

Although utilities make up a significant portion of Wisconsin's energy industry representation, the state's capabilities are broad and widely dispersed, and reflect special strength in the areas of:

- generation and transmission;
- storage and distribution;
- conversion, control and automation; and
- efficiency and conservation.

Notable companies in energy, power and control include:

- ABB Inc.** (New Berlin and Wauwatosa)
- Briggs & Stratton** (Wauwatosa)
- Cooper Power Systems** (Waukesha)
- Danfoss** (Milwaukee)
- DRS Power & Control Technologies, Inc.** (Milwaukee)
- Eaton** (Menomonee Falls)
- EnSync Energy Systems** (Menomonee Falls)
- Fairbanks Morse** (Beloit)
- Generac Power Systems** (multiple locations)
- Ingeteam** (Milwaukee)
- Johnson Controls** (Milwaukee)
- Kohler Company** (Kohler)
- Orion Energy Systems** (Manitowoc)
- Plexus Corp.** (Neenah)
- Regal Beloit Corp.** (Beloit)
- Rexnord Industries** (Milwaukee)
- Rockwell Automation** (Milwaukee)
- S&C Electric Co.** (Franklin)
- Trane** (La Crosse)

**TALENT**

Wisconsin is well known for its industrious, Midwestern work ethic, and its educational system is universally admired. Wisconsin's high school graduation rate is consistently ranked among the top in the nation, and the University of Wisconsin System is regularly cited as a leader in terms of size and quality.

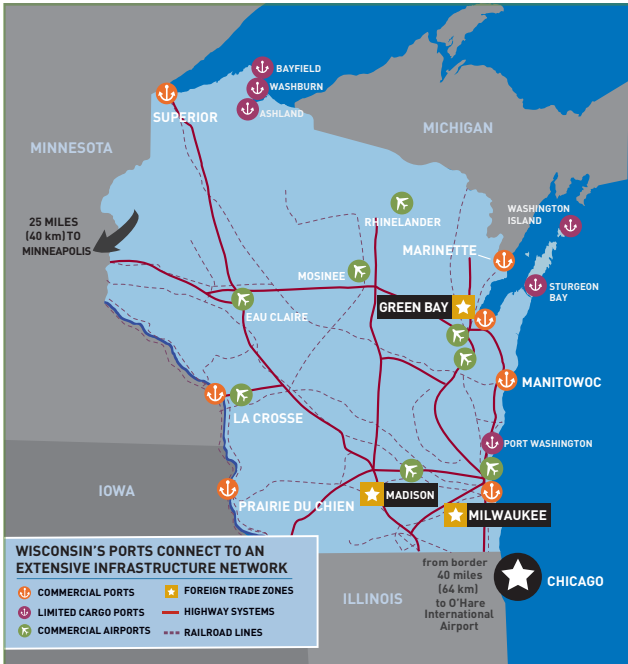
Wisconsin's public and private colleges support the resources, companies and policy makers throughout the state that are working to develop new, innovative products to fulfill market needs. And as the first state in the nation to develop a technical college system, Wisconsin has more than 100 years' experience training its workforce to fulfill ever-changing industry demands.

With a markedly high concentration of engineers in the state's southeast region, Wisconsin possesses the quality and quantity of necessary talent to compete on a global scale. Wisconsin's stellar academic institutions offer certificates and associate, bachelor's, master's and doctoral degrees in a variety of fields ranging from solar energy technology to engineering mechanics. In 2017, the mechanical engineering and electrical engineering programs across the state stood out as some of the most successful, with 832 and 630 educational completions, respectively.<sup>5</sup> This highly educated workforce is the foundation for a thriving energy sector in Wisconsin.

**INFRASTRUCTURE**

Wisconsin's central location and robust infrastructure give companies operating in the state one-day access to major markets throughout the U.S. and beyond. Wisconsin's roads, railways and ports provide seamless, convenient access to the world's busiest multimodal transportation hub, located just 55 miles south of the state's border.

<sup>5</sup> Educational completions were derived by adding CIP codes 14.19 and 15.08 to obtain 832 completions in mechanical engineering. CIP codes 14.10 and 15.03 were used to derive the 630 completions for electrical engineering. National Center for Education Statistics, IPEDS Database 2017



**INFRASTRUCTURE IN WISCONSIN**

09

**HIGHWAY SYSTEMS**  
State commerce and industry relies on nine major highways covering more than 11,700 miles (18,829 km) to move our goods to market. Our interstate system connects us to major industrial cities across the U.S.

13

**RAILROAD LINES**  
Rail traffic throughout the state continues to grow and move more than \$160 billion in freight each year, creating a seamless link in the nationwide intermodal system. Amtrak travels between Chicago and Milwaukee multiple times daily.

08

**COMMERCIAL AIRPORTS**  
Eight commercial airport locations serving major industrial and metropolitan areas statewide. These airports are served by all major carriers, linking to every point in the nation within one business day. In addition, these larger airports are within driving distance:  
**CHICAGO:** O'Hare is American's second largest hub, with 1,068 domestic flights daily to 153 U.S. cities and more than 123 direct flights daily to 55 international destinations.  
**MINNEAPOLIS:** 163 nonstop flights including 136 domestic and 27 international markets

13

**COMMERCIAL PORTS**  
Uniquely situated on the nation's greatest waterways, Wisconsin ships approximately 30 million tons of product from commercial cargo ports and 6 limited cargo ports located along Lake Michigan, Lake Superior and the Mississippi River.

03

**FOREIGN TRADE ZONES**  
Companies located in one of our three Foreign Trade Zones (FTZs) can import merchandise (by truck, rail, air or boat) without going through formal customs entry procedures or paying import duties. These companies have the option to pay tariffs after their product inventory is sold, improving cash flow and saving money. Other benefits include, but are not limited to: global market competitiveness, minimized bureaucratic regulations, and improved supply chain efficiencies.

# RENEWABLE ENERGY ASSETS AND CAPABILITIES

## Biofuels

**36** farm digesters

Source: EPA Agstar database

**62** water treatment facility biogas systems

Source: Water Environment Federation

**42** landfill gas systems

Source: renewwisconsin.org

**#7**

In 2017, Wisconsin ranked seventh in the nation in ethanol production capacity, with facilities able to produce 580 million gallons annually.

Source: U.S. Energy Information Administration

## Wind

**461** wind turbines

**26** wind technology manufacturing facilities

**746** MW installed power capacity

Source: renewwisconsin.org

**173,000**

Equivalent of 173,000 homes powered by wind

## Solar

**205** Solar companies in Wisconsin

**3,000+** Industry jobs

**103** MW installed solar power

Source: renewwisconsin.org

**17,000**

Equivalent of 17,000 homes powered by solar

## Hydropower

**105** hydropower facilities

Source: renewwisconsin.org

**241,000**

Equivalent of 241,000 homes powered by hydropower

## Alternative fuels

**950+**

locations including biodiesel, natural gas, ethanol, propane and electric

Source: U.S. Department of Energy Clean Cities Coalition Network

## WISCONSIN RANKS

**#2**

nationally in employment concentration for electrical, electronic and electromechanical assemblers except coil winders, tapers and finishers.

Source: Bureau of Labor Statistics, Occupational Employment Statistics, May 2018



**100K+** EMPLOYED  
**BY WISCONSIN**  
ENERGY, POWER AND CONTROL COMPANIES

Source: QCEW Employees – EMSI 2018.4 Class of Worker

## JOBS RELATED TO ENERGY, POWER AND CONTROL IN WISCONSIN

| OCCUPATION TITLE   | JOB    | LOCATION QUOTIENT |
|--|--------|-------------------|
| First-line supervisors of production and operating workers   | 24,840 | 2.03              |
| Electrical, electronic and electromechanical assemblers, except coil winders, tapers and finishers | 12,370 | 2.28              |
| Mechanical engineers   | 11,270 | 1.89              |
| Industrial engineers   | 9,290  | 1.69              |
| Industrial production managers   | 6,580  | 1.84              |
| Electrical engineers   | 3,920  | 1.07              |
| Electrical and electronics engineering technicians   | 1,780  | 0.71              |
| Mechanical engineering technicians   | 2,100  | 2.57              |
| Industrial engineering technicians   | 980    | 0.75              |

Bureau of Labor Statistics, Occupational Employment Statistics, May 2018



# WISCONSIN'S SUSTAINABLE ECOSYSTEM

Public-private partnerships in Wisconsin draw together research and education institutions, industry participants and government agencies, creating collaborative models that enhance sustainability leadership.



## WISCONSIN MANUFACTURING EXTENSION PARTNERSHIP

The Wisconsin business community is supported by three unique award-winning, proven programs promoting sustainability and best practices in energy/electrical and resource efficiency. These programs are administered by the **WISCONSIN MANUFACTURING EXTENSION PARTNERSHIP** to support Wisconsin's leadership in resource efficiency, innovation, clean technology, alternative energy, sustainability and responsible business management.

## The PROFITABLE SUSTAINABILITY INITIATIVE

has a return on investment of almost 50:1, with a track record of helping more than 200 manufacturers. Energy

and resource management, Lean, environmental and logistics best practices dramatically reduce energy, resource intensity and improve profitability. These companies have reduced costs by hundreds of millions of dollars and annual energy use by more than 85 million kilowatt hours.



The **WISCONSIN SUSTAINABLE BUSINESS COUNCIL** supports businesses

through education, information exchange, networking, resources and tools to help move companies in a more sustainable direction.



The **GREEN MASTERS PROGRAM** is an assessment and recognition program for Wisconsin companies interested in improving and being recognized for their sustainability

initiatives. The program provides companies with a benchmark to compare their sustainability performance to other companies in their sector. The Green Master logo is a credential that validates a company's sustainability program.



Wisconsin Energy Institute, Madison

The City of Milwaukee's **ENVIRONMENTAL COLLABORATION OFFICE (ECO)** promotes cost-effective environmental sustainability practices in order to improve resource efficiency not only for the city, but also for businesses. Since 2006, ECO has attracted more than \$20 million in grant funding to support a multitude of projects and initiatives to improve energy efficiency.



With funding support from the U.S. Department of Energy, Milwaukee has expanded its **BETTER BUILDINGS CHALLENGE** to include development and implementation of a comprehensive energy efficiency program. The expanded program bundles a streamlined customer experience involving energy benchmarking, energy assessments and determination of next steps with operations and maintenance support, workforce development, technology integration, marketing and awards.

Piloted by the City of Milwaukee using a nationally recognized implementation model, the



**PROPERTY ASSESSED CLEAN ENERGY (PACE)** financing program is now available statewide to help commercial building owners finance energy-saving improvements through a voluntary municipal special charge.

# GLOBAL LEADERSHIP

**\$4.3B**

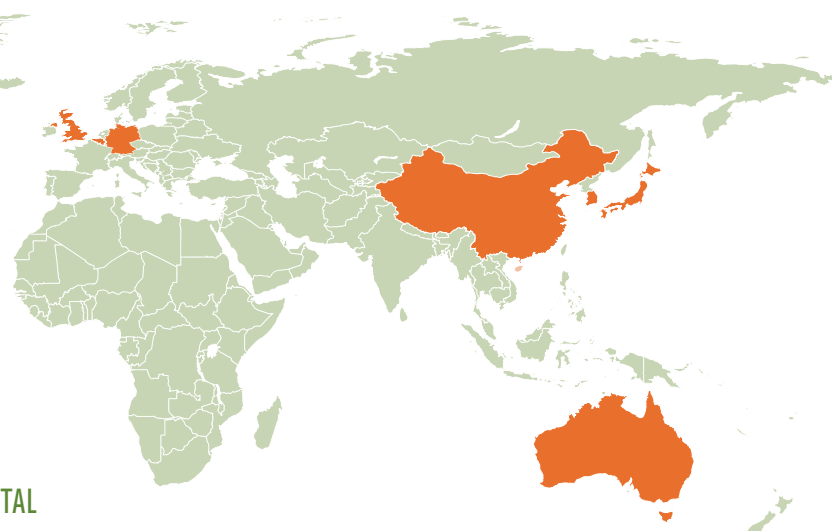
2018 TOTAL ENERGY, POWER  
AND CONTROL EXPORTS  
TO ALL COUNTRIES

|                            | TOTAL<br>EXPORTS |
|----------------------------|------------------|
| 1 Canada .....             | <b>\$1.25 B</b>  |
| 2 Mexico .....             | <b>\$851 M</b>   |
| 3 China .....              | <b>\$284 M</b>   |
| 4 Belgium.....             | <b>\$169 M</b>   |
| 5 Australia .....          | <b>\$121 M</b>   |
| 6 Korea, Republic Of ..... | <b>\$99 M</b>    |
| 7 Japan .....              | <b>\$97 M</b>    |
| 8 United Kingdom .....     | <b>\$95 M</b>    |
| 9 Germany .....            | <b>\$94 M</b>    |
| 10 Brazil .....            | <b>\$78 M</b>    |

Source: U.S. Census Bureau data as reported by wisertrade.org



The **MID-WEST ENERGY RESEARCH CONSORTIUM (M-WERC)** brings together public and private stakeholders to solve the energy power control sector's toughest research problems, provide market insights and foster talent development. Since its founding in 2009, M-WERC has grown to more than 90 members, and its creative and dynamic research model calls upon engineers and scientists at Wisconsin's top universities to identify and tackle the critical challenges member companies must overcome to compete in the future. M-WERC's new technology innovation research program is focused on advanced manufacturing and materials systems, extreme power conversion and systems intelligence. This powerful partnership between industry and academic institutions serves as a catalyst to help make Wisconsin a national leader in science- and technology-driven innovation.



Wisconsin's exports of energy, power and control products grew by 6.6% in 2018, and the state ranks 15th among the 50 states. Total U.S. growth in that supercategory was just 2.9%.

Growth rates for Wisconsin exports to both Canada and Mexico, the top two destinations, were significantly higher than the national average—15.6 and 12.1%, respectively.



Source: Public Plans Data; Bloomberg 2018

## ENERGY INNOVATION CENTER

To capitalize on Wisconsin's manufacturing strength in energy, power and control, a collaborative space for entrepreneurs, researchers, scientists, engineers and business leaders was established in the former Eaton Research Center located in Milwaukee's 30th Street Corridor. **THE ENERGY INNOVATION CENTER (EIC)** leverages unique research capabilities with physical proximity to promote interaction and provide a home for startup companies, shared labs and a large-scale product piloting space. M-WERC operates the center and hosts its annual accelerator program, WERCBench Labs, on site. The EIC will also fulfill a critical role in furthering talent development goals through dedicated programming to support industry needs. Key stakeholders include M-WERC, Milwaukee Area Technical College and industry partners.



# CUTTING-EDGE ACADEMIC PROGRAMS AND INDUSTRY-ACADEMIC COLLABORATIONS

Wisconsin's long history of collaboration between business and academia has yielded innovations that have advanced industry, not only nationally but globally.



**WISCONSIN**  
UNIVERSITY OF WISCONSIN-MADISON

As one of the nation's top-10 universities in terms of research spending,<sup>6</sup> the **UNIVERSITY OF WISCONSIN-MADISON** attracts and delivers an extraordinary amount of top-tier talent, research, innovation and product development. Wisconsin's land grant university has more than 40,000 students and has an annual economic impact of \$24 billion—representing 7.7% of the state's total economic activity.<sup>7</sup>

<sup>6</sup> Source: National Science Foundation on Nov. 20 released its 2017 Higher Education Research and Development (HERD) Survey

<sup>7</sup> Source: NorthStar Analytics, 2018



**Wisconsin Energy Institute**  
UNIVERSITY OF WISCONSIN-MADISON

The **WISCONSIN ENERGY INSTITUTE** (WEI) is the home of catalytic energy research, training and technology at the UW-Madison, with more than 160 faculty scientists working across disciplines to solve large-scale energy challenges. The institute is committed to developing a smarter, cleaner energy portfolio to advance economic growth for the state and the nation and to creating real-world innovations that offer new competitive advantages and products for a wide range of industries. Distinct categories of research include:

- **Electricity systems:** WEI experts are configuring renewable systems to support a smarter energy grid.
- **Fuels and transportation:** A focus on converting non-food crops into next-generation and drop-in fuels and developing a robust pipeline from biomass production to biofuels and biochemicals
- **Engine Research Center:** Focusing on combustion performance and pollutant emissions
- **Energy Storage Laboratory:** Built in partnership with Johnson Controls to test, evaluate and optimize battery systems' performance while supporting education, outreach and research advancements in battery storage

Two principles guide all the work WEI does: preparing UW-Madison students for future leadership in the energy, power and control sector and engaging with industry in high-impact research collaborations.

The **GRAINGER INSTITUTE FOR ENGINEERING** collaborates across disciplines and industries to solve critical technological challenges. Focus areas include energy and sustainability, advanced manufacturing, infrastructure resiliency, machine learning, and sensors and systems.



The **GREAT LAKES BIOENERGY RESEARCH CENTER** (GLBRC) is one of four bioenergy research centers of excellence

established by the U.S. Department of Energy. The GLBRC is a collaboration led by UW-Madison in partnership with Michigan State University and others to research and develop efficient, sustainable biofuels and bioproducts made from dedicated energy crops grown on marginal land. Technologies include converting non-food or lignocellulosic biomass to advanced biofuels and bio-based products. To date, results include:

- 400+ scientists, students and staff
- 5 spin-out companies, including GlucanBio
- 195 patent apps and 169 invention disclosures
- 100+ options/licenses negotiated
- Over 1,200 publications reporting knowledge to form the basis of lignocellulosic biomass as a source of renewable fuels and products
- \$290 million in total research support through 2018

UW-Madison is one of the founding institutions of the **POWER SYSTEMS ENGINEERING RESEARCH CENTER** (PSERC), a hotbed of electrical transmission and distribution research.

UW-Madison is home to the **WISCONSIN ELECTRIC MACHINES AND POWER ELECTRONICS CONSORTIUM**, an internationally renowned power electronics research group. With more than 80 corporate sponsors, the consortium's team of professors, graduate students and international scholars works together to research and develop the newest technologies and techniques in electric machines, power electronics, actuators, sensors, drives, motion control and drive applications.



Located at the epicenter of Wisconsin's energy, power and control cluster, the **UNIVERSITY OF WISCONSIN-MILWAUKEE** provides cutting-edge research and partnerships with industry and government, while also providing a talent pipeline for companies addressing the world's energy challenges. One of the nation's top research universities, UW-Milwaukee is the only institution in southeast Wisconsin ranked R1 by the Carnegie Classification of Institutions of Higher Education. Energy and sustainability are key areas of focus for the university, with many initiatives and partnerships in these areas.

The **CONNECTED SYSTEMS INSTITUTE (CSI)** is a cutting-edge, campus-wide entity at UW-Milwaukee that partners with industry to conduct research, educate students and offer programs that develop talent, expertise and solutions in IoT technologies and applications. CSI member companies benefit from advanced research in industrial IoT, talent development and connections with small, midsize and large companies in need of IoT support. CSI's goal is to reduce the cost and risk for member companies to adopt new digital technologies and transition to a connected system.



In the **ENERGY ADVANCEMENT CENTER**, Johnson Controls partners with UW-Milwaukee to focus on cutting-edge research for new technologies in energy storage and auto battery technology.

The Energy Advancement Center has the largest academic institution "dry lab" in North America and hosts a state-of-the-art automated lithium ion (Li-ion) pilot production line.

The **CENTER FOR SUSTAINABLE ELECTRICAL ENERGY SYSTEMS** includes power electronics and electric drives labs that focus on all aspects of electrical energy generation and conversion. A key interest is developing methods to make electric power systems more sustainable, cost-effective and secure.

The **CYBER-PHYSICAL ENERGY SYSTEMS LAB** aims to build valid models capable of reflecting the true interactions between the cyber and physical portions of integrated systems, as applied to the smart grid, microgrid, energy-efficient buildings, water and natural gas distribution networks; intelligent and sustainable transportation; health care systems and smart manufacturing.

With a goal of accelerating the adoption and insertion of power electronics into the grid, making power systems more sustainable, cost-effective and secure, UW-Milwaukee is one of three university partners in the **GRID-CONNECTED ADVANCED POWER ELECTRONIC SYSTEMS (GRAPES) INDUSTRY/UNIVERSITY COOPERATIVE RESEARCH CENTER** funded by the National Science Foundation. GRAPES includes 17 member companies that work closely with UW-Milwaukee researchers on electrical energy systems.



In a **U.S. DEPARTMENT OF DEFENSE**-sponsored research collaboration, four UW-Milwaukee College of Engineering & Applied Science researchers are partnering with Eaton Corporation on a multi-million-dollar project for the U.S. Air Force to develop a smart and connected energy/water microgrid.



The **U.S. DEPARTMENT OF ENERGY (DOE)** has provided over \$1 million in funding to

UW-Milwaukee for research on next-generation Li batteries, including Li-air and Li-sulfur chemistries. UW-Milwaukee is also home to Wisconsin's only DOE Industrial Assessment Center, which provides assistance to small and midsize manufacturers and utilities to increase productivity and competitiveness by reducing energy and water consumption, enhancing cybersecurity and adopting smart manufacturing technologies. To date, more than 600 companies and water treatment plants have used the center's services, with average recommended savings of \$150,000.



UW-Stevens Point's **WISCONSIN INSTITUTE FOR SUSTAINABLE TECHNOLOGY** provides research, education and services to improve Wisconsin's long-term environment and economy through collaboration among educators, students and researchers.



UNIVERSITY OF WISCONSIN  
PLATTEVILLE

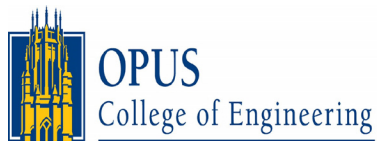
UW-Platteville's **SUSTAINABLE AND RENEWABLE ENERGY SYSTEMS PROGRAM**, a university-wide interdisciplinary program, enhances student knowledge of all energy sources and their impacts on the environment and society.



Ranked in the top five nationally for computer and electrical engineering, the **MILWAUKEE SCHOOL OF ENGINEERING** (MSOE) has always engaged leaders of business and industry. MSOE's **APPLIED TECHNOLOGY CENTER** (ATC) uses faculty, staff and student expertise to solve technological problems confronting industry today. Annually, the center undertakes hundreds of industry-sponsored research projects that are primarily focused on providing real solutions to some of industry's biggest challenges. This work is completed through several centers of excellence within the ATC, including the Fluid Power Institute, the Photonics and Applied Optics Center, the Center for Biomolecular Modeling and the Rapid Prototyping Center.

Source: U.S. News and World Report, 2019

MSOE's **THERMAL SYSTEMS ENERGY LABORATORY** features a commercial-sized HVAC system custom-designed and instrumented by Johnson Controls to provide an effective learning environment for students. Sensors record temperature, pressure, flow rate and power consumption at critical locations. Real-time video display provides information on system operations. Johnson Controls also uses the laboratory for classes and seminars within its Johnson Controls Institute.



MARQUETTE UNIVERSITY

Within the  
**MARQUETTE  
UNIVERSITY OPUS  
COLLEGE OF  
ENGINEERING,**

research in energy, water, manufacturing, robotics, sensors and system analytics engages both faculty and students. Key strengths include electrical machines and drives, power electronics, power systems, renewable energy and modeling in uncertain conditions. Marquette also partners with UW-Milwaukee in a National Science Foundation Industry-University Cooperative Research Center focused on engineering at the energy-water nexus.

Between 2012 and 2017, the UW System experienced higher growth rates than the national average for degree completions in science, technology, engineering and mathematics (STEM) fields, both for bachelor's degrees and overall. During this timeframe, the UW System also experienced a higher growth rate than the national average specifically for bachelor's degrees completions in engineering. The UW System saw very strong growth during this time period for degree completions in computer and information sciences and support services, with 89% and 91% growth rates in bachelor's degree completions and all types of degrees, respectively. Both of these rates far exceed the national average for this timeframe.<sup>8</sup>

<sup>8</sup> National IPEDS database published by the U.S. Department of Education's NCES



Based in Mukwonago, Wisconsin, Gearbox Express rebuilds gearboxes for wind turbines.

**\$38**   
**BILLION ANNUAL  
SALES**

Source: Midwest Energy Research Consortium



Broadwind Energy makes towers for wind turbines at its facility in Manitowoc, Wisconsin. Access to a deepwater port allows for transportation by water.

# WISCONSIN

## JOHNSON CONTROLS

Milwaukee



Johnson Controls is a global diversified technology and industrial leader serving customers in more than 150 countries. Since inventing the first electric room thermostat in 1885, Johnson Controls has been committed to delivering innovative products that help the world run smoothly, smartly, simply and safely.

A Fortune 500 company with 120,000 employees in more than 1,500 locations across six continents, Johnson Controls specializes in building efficiency, with products, services and solutions to increase energy efficiency and lower operating costs for buildings worldwide; batteries and energy storage, including advanced batteries for hybrid and electric vehicles, as well as stationary energy storage; automotive seats that deliver superior quality and performance; and distributed energy storage that can be integrated into the energy control system of a utility, regional transmission organization or facility.

Johnson Controls' operational headquarters are in Milwaukee, Wisconsin, and global headquarters in Cork, Ireland.

## ABB

New Berlin and Wauwatosa



ABB is a pioneering technology leader with a comprehensive offering for digital industries. With a history of innovation spanning more than 130 years, ABB is today a leader in digital industries, with four customer-focused, globally leading businesses—electrification, industrial automation, motion, and robotics and discrete automation—supported by its common ABB Ability™ digital platform. ABB operates in more than 100 countries, with about 147,000 employees.

ABB's motion business employs more than 4,000 engineers, researchers and manufacturing personnel in the U.S., including 340 at the drives U.S headquarters in Wauwatosa and 250 at the drives plant in New Berlin. Since 1981, ABB's Wisconsin factory has manufactured and assembled low- and medium-voltage drives for industry that can be found in applications within amusement parks, corporate offices, sports venues, breweries, bakeries and even the Statue of Liberty.

As the world's leading manufacturer of drives, ABB offers products, systems and service solutions that not only enhance its customers' businesses, but also lessen environmental impacts through improved energy efficiency and increased industrial productivity.



# ENERGY POWER<sup>AND</sup> CONTROL COMPANIES

## BRIGGS & STRATTON

Milwaukee and Menomonee Falls

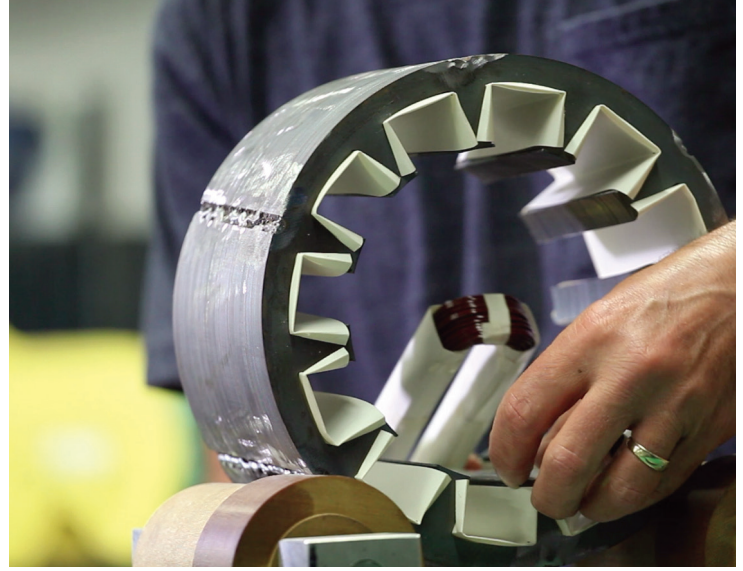


Briggs & Stratton Corporation [NYSE:BGG], headquartered in Milwaukee, Wisconsin, is focused on providing power to get work done and make people's lives better. Briggs & Stratton is the world's largest producer of gasoline engines for outdoor power equipment, and is a leading designer, manufacturer and marketer of power generation, pressure washers, lawn and garden, turf care and job site products through its Briggs & Stratton®, Simplicity®, Snapper®, Ferris®, Vanguard™, Allmand®, Billy Goat®, Murray®, Branco® and Victa brands. Briggs & Stratton products are designed, manufactured, marketed and serviced in over 100 countries on six continents. These products are sold through consumer home centers, mass merchants, warehouse clubs, and independent and rental dealers.

For over 110 years, Briggs & Stratton has seen innovation play a key role in both manufacturing processes and new product development. The company is focused on "user-driven problem solving" and prides itself on understanding its customers' needs. This understanding allows for effective deployment of enabling technologies such as IoT (internet of things and connected products), EFI (electronic fuel injection) and electrification (applying alternative power to get work done). This focus on innovation is driving the company's growth (15%+) in commercial markets.

## REGAL BELOIT

Beloit



Regal Beloit Corporation [NYSE: RBC] is a leading manufacturer of electric motors and controls, power generation products and power transmission products serving customers throughout the world. The company creates a better tomorrow by developing and responsibly producing energy-efficient products and systems. The company comprises three operating segments: commercial and industrial systems, climate solutions and power transmission solutions.

Regal's product brands meet customer requirements in demanding applications used around the globe in heating, ventilation, air conditioning, commercial refrigeration, food processing, pharmaceutical, material handling, medical, construction, manufacturing, power generation, agriculture and mining. The company's first sustainability report, published in January 2019, displays what it is doing to minimize its footprint, and shares the innovative spirit that is maximizing its handprint.

Regal is headquartered in Beloit, Wisconsin, and has manufacturing, sales and service facilities worldwide. With over 23,000 employees, Regal is one of the largest electric motor manufacturers in the world.

The Wisconsin Economic Development Corporation (WEDC) leads economic development efforts for the state by advancing and maximizing opportunities in Wisconsin for businesses, communities and people to thrive in a globally competitive environment. WEDC provides resources, operational support and financial assistance to companies, partners and communities in Wisconsin. WEDC achieves its mission through initiatives driven by five strategic pillars: business development; community and economic opportunity; strategic economic competitiveness; state brand management and promotion; and operational and fiscal excellence. Working with more than 600 regional and local partners, WEDC develops and delivers solutions representative of a highly responsive and coordinated economic development network.

Visit **InWisconsin.com** to learn more.



**WISCONSIN ECONOMIC DEVELOPMENT CORPORATION**

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May 2019