



# **HIGHLY CHARGED**

WISCONSIN'S WORLD-LEADING ENERGY, POWER, & CONTROLS SECTOR



**HIGHLY CHARGED** WISCONSIN'S WORLD-LEADING ENERGY, POWER, & CONTROLS SECTOR

# INDUSTRY STRONG. TECHNOLOGY SMART. FUTURE READY.

# 1,000+

Wisconsin energy, power, and controls companies Data Axle, 2023

# 115,000+

Wisconsin energy, power, and controls jobs

Lightcast Q4 2022 Dataset



# **BUILT FOR INNOVATION**

Wisconsin is generating new ideas, advanced applications, and energy efficiency technologies to power the world. We are a global center for energy, power, and controls—uniquely leveraging marketleading 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.

**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



## WISCONSIN'S LEADERS IN ENERGY, POWER, & CONTROLS



















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# **GET CONNECTED**



In Wisconsin, we are defined by our collaborative approach. Companies collaborate with academic partners and one another—as well as public-sector and nonprofit partners—to advance innovation and develop the next generation of talent. By locating in Wisconsin, your company will benefit from:

The **Great Lakes Bioenergy Research Center**, one of four bioenergy research centers of excellence established by the U.S. Department of Energy to research and develop efficient, sustainable biofuels and bioproducts made from dedicated energy products grown on marginal land.

The **Power Systems Engineering Research Center**, a hotbed of electrical transmission and distribution research (with UW-Madison as a founding member)

The Wisconsin Electric Machines and Power

**Consortium** at UW-Madison, where with more than 70 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

The **Energy Advancement Center**, A collaboration between Johnson Controls and UW-Milwaukee that focuses on cutting-edge research for new technologies in energy storage and auto battery technology

The **Center for Sustainable Electrical Energy Systems,** which is developing methods to make electric power systems more sustainable, cost-effective, and secure

The **Cyber-physical Energy Systems Lab**, which 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 sustain able transportation; health care systems and smart manufacturing The National Science Foundation-funded Grid-connected Advanced Power Electronic Systems (GRAPES) Industry/University Cooperative Research Center, whose goal is to accelerate the adoption and insertion of power electronics into the grid, making power systems more sustainable, costeffective, and secure

**Argonne National Laboratory**, a U.S. Department of Energy multidisciplinary science and engineering research center located within easy driving access (just over an hour from Wisconsin's border)



445 wind turbines with 735MW of installed power capacity and the equivalent of 172,000 homes powered by wind energy<sup>1</sup>



130MW of installed solar power and the equivalent of 21,000 homes powered by solar energy<sup>1</sup>



105 hydropower facilities together power the equivalent of 241,000 homes<sup>1</sup>



Leader in biofuels, with 34 farm digesters, 42 landfill gas systems and 60 water treatment facility biogas systems<sup>1</sup>



Ranked ninth in the nation in ethanol production capacity in 2021<sup>2</sup>

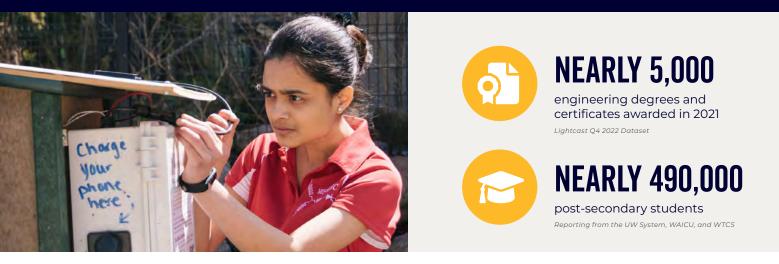
Wisconsin provides the ideal business environment and all the necessary elements you need to grow your business: talent, technology, supply chain, location, and infrastructure.

Sources: (1) renewwisconsin.org; (2) U.S. Energy Information Administration



### **HIGHLY CHARGED** WISCONSIN'S WORLD-LEADING ENERGY, POWER, & CONTROLS SECTOR

## THE WORKFORCE YOU NEED AWAITS YOU IN WISCONSIN



Wisconsin is well known for its industrious, Midwestern work ethic, and its educational system is universally admired. With a high school graduation rate consistently ranked among the top in the nation, Wisconsin offers a steady pipeline of talent to keep our state at the forefront of innovation and economic growth.

The **University of Wisconsin System** is regularly cited as a leader in terms of quality and reach, with established leadership in research and talent development. 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.

#### **ADVANCING KNOWLEDGE**

In Wisconsin, our universities lead in research and technology commercialization, supporting partnerships, companies, and policymakers to develop new, innovative products that fill market needs. For example:

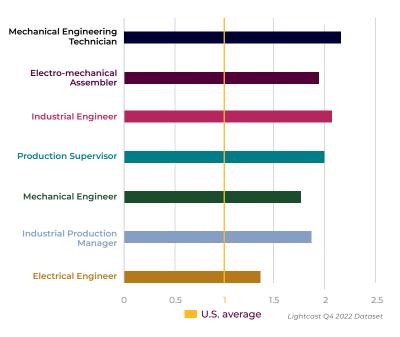
> UW-Madison and UW-Milwaukee are both Tier 1 research universities.<sup>3</sup>

> UW-Madison ranks in the top 3% of US universities for engineering research expenditures and near the top of global rankings.<sup>4</sup>

> UW-Milwaukee College of Engineering and Applied Science is rated among the top 4% of research universities in the U.S.<sup>3</sup>

> Ranked in the top five nationally for computer engineering and top 10 for electrical engineering, the Milwaukee School of Engineering has always engaged leaders of business and industry.<sup>5</sup>

#### **EMPLOYMENT CONCENTRATION**



The **Wisconsin Energy Institute** at UW-Madison is the home of catalytic research, training and technology, with nearly 170 faculty members working across disciplines to solve large-scale energy challenges.

Our 16 technical colleges and 35 universities, with a combined total of 100 campus locations around the state, prepare students to make strong contributions to Wisconsin's economy—and the leaders who hire them.

Sources: (3) Carnegie Classification of Institutions of Higher Education; (4) U.S. National Center for Education Statistics; (5) U.S. News & World Report





#### HIGHLY CHARGED WISCONSIN'S WORLD-LEADING ENERGY, POWER, & CONTROLS SECTOR

### INDUSTRY STRONG. TECHNOLOGY SMART. FUTURE READY.



We are focused on creating and scaling clean and sustainable energy technologies to power the future.

### **AN IDEAL LOCATION**

In Wisconsin, we offer unparalleled advantages that are especially suited to the energy, power, and controls sector.

#### Workforce

We deliver the highest concentration of experienced manufacturing workers in the U.S.,<sup>6</sup> often three to four times higher in critical industry sectors than competing states.

#### **Central location**

From the center of the U.S., we offer quick access to markets throughout North America. Chicago and its O'Hare Airport are less than an hour from our border. And our well-developed logistics sector moves your goods to market efficiently via rail, road, air or water.

#### Academic excellence

We push the boundaries of theoretical and applied science—and prepare talent for the future. At more than \$1.3 billion annually,<sup>7</sup> our flagship University of Wisconsin-Madison ranks #8 in the U.S. for research spending;<sup>7</sup> the University of Wisconsin System awards more than 41,000 degrees annually.<sup>8</sup>

#### Low risk of natural disaster

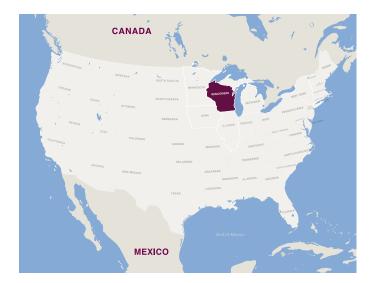
We offer remarkably low risk for every imaginable type of disaster, from earthquakes and wildfires to climate threats like heat waves, tornadoes, and hurricanes.

#### **Fiscal responsibility**

From our fully funded state pension system—one of only two in the U.S.—to our extraordinary credit rating, we offer a politically stable, low-tax, low-regulation, business-welcoming environment.<sup>9</sup>

#### **Natural resources**

More than two-thirds of Wisconsin's borders are water,<sup>10</sup> and 21% of the entire world's fresh water is located along the state's borders.<sup>11</sup> In addition, Wisconsin has 1.2 quadrillion gallons of groundwater;<sup>12</sup> this plentiful supply means Wisconsin businesses have no trouble getting access to the water they need for their operations.



Sources: (6) Business Facilities magazine, July/August 2022; (7) U.S. NCES Higher Education Research and Development Survey; (8) Lightcast Q4 2022 Dataset; (9) Pew Charitable Trusts, (10) Wisconsin State Cartographer's Office and U.S. Census Bureau; (11) Wisconsin Water Facts, Wisconsin Water Library, UW-Madison; (12) Wisconsin Department of Natural Resources







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