



**Energy Institute**  
UNIVERSITY OF WISCONSIN-MADISON

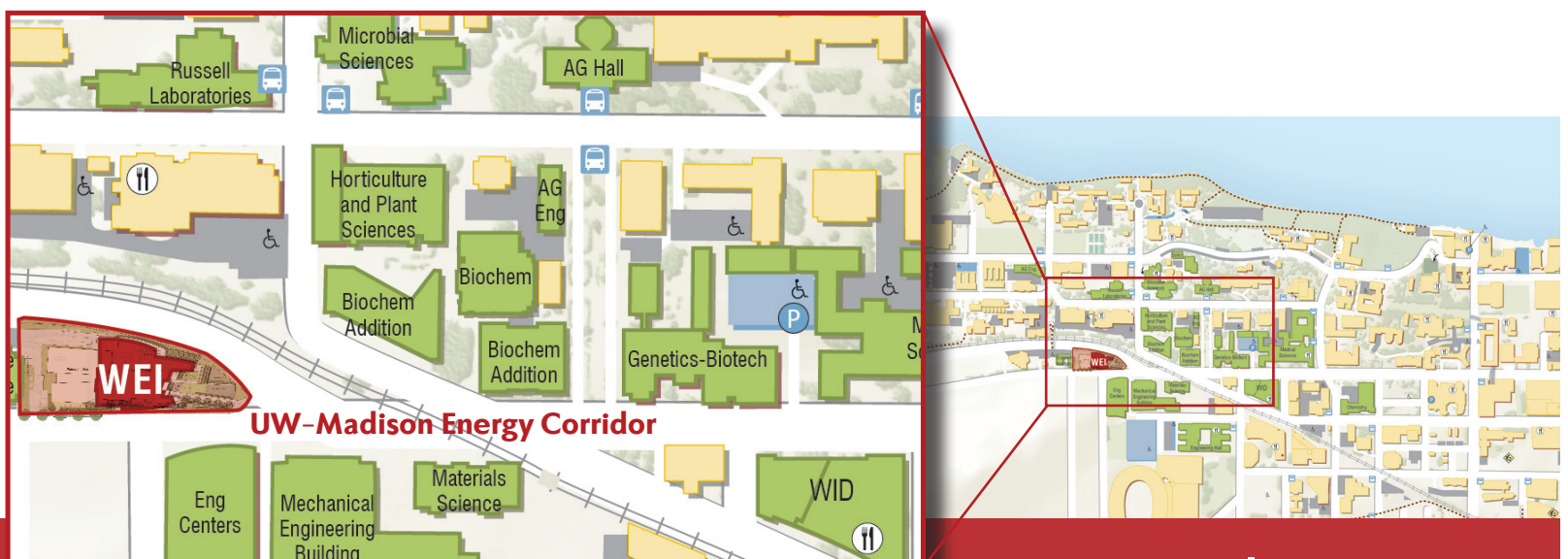
**WISCONSIN ENERGY INSTITUTE**  
CONNECT | COLLABORATE | DISCOVER | IMPROVE



## THE CHALLENGE

For nearly 165 years, UW-Madison and industry partners have demonstrated their abilities to help solve some of the most pressing challenges facing society. Today, drawing upon the expertise that led to those discoveries, the state of Wisconsin is uniquely poised to meet the energy challenge ahead. UW-Madison is a leader in interdisciplinary energy research, training future scientists and engineers, and entrepreneurial activities with world-renowned expertise in a diverse range of technologies.

Currently, our energy experts and programs are spread across multiple schools and colleges, throughout more than 20 campus buildings. Continuing and expanding on these projects and programs is critical to answering energy and sustainability questions of global scale. Energy is a crosscutting, ever-increasing societal concern. Solving tomorrow's energy challenges will require experts from every academic domain and research discipline.



## Our Solution

UW-Madison and the state of Wisconsin have invested in the Wisconsin Energy Institute (WEI) facility to serve as a center of excellence for clean energy research to support our leadership in energy systems research and education. This state-of-the-art facility will bring together coordinated energy activities and house cutting-edge research in advanced fuels, renewable energy

and energy storage systems. The WEI building brings together scientists from the College of Agricultural and Life Sciences, the College of Engineering and other campus groups to examine and create integrated clean energy systems that diversify the energy sector and increase energy efficiency. WEI connects world-class teams of multidisciplinary scientists and engineers to work in collaboration

with industry leaders across traditional research boundaries to make game-changing energy discoveries a reality. The new building will provide essential translational space for interaction with peer researchers, private industry representatives and other partners. From biofuels to renewable energy breakthroughs, WEI will transform our society and economy through clean energy research and innovation.

*The Wisconsin Energy Institute solidifies an energy research corridor that will spur collaboration, innovation and technology transfer across campus, Wisconsin and beyond.*



*High bay lab provides increased space for large-scale testing*

## Designed for the Science Inside

A testament to the energy research within its walls, WEI is pursuing LEED® Gold certification. The flexible design of WEI's 100,000 square feet includes "plug and play" wet and dry laboratories that easily adapt to changes in research teams or disciplines.

The building features a high-bay lab for microgrid research. The first of its kind on the UW-Madison campus, the lab will allow space to develop models that can be scaled up to test application and usage.

A dedicated biomass grinding suite allows researchers to bring the field to the lab. Researchers in this space will work with biomass materials from Arlington, West Madison and other agricultural research stations without having to leave the building.

The first phase of the building will house chemistry, engineering, and biological research labs as well as education and outreach space, and translational labs to build partnerships with collaborating institutions and industries.

Each research floor features open sightlines and "highways" to encourage interaction between researchers and staff, increasing organic opportunities for collaboration and scientific inquiry. Enhanced visual connectivity from labs to offices maximizes the potential for interaction amongst multidisciplinary researchers and staff. The building's two video conferencing rooms allow for face-to-face communication, while maintaining a commitment to sustainability by reducing travel.

## SUSTAINABLE FEATURES

- » Approximately 95% of construction waste was recycled
- » The building is projected to use 48.8% less energy than code minimum
- » More than 35% of the building's electricity will be provided from green power
- » The project uses chilled beam technology for cooling, which doesn't require air movement and increases energy efficiency
- » Building design and orientation was optimized for daylight, reducing electricity demand
- » A photovoltaic (PV) array on the roof is planned to offset electrical consumption
- » An onsite bio-swale will absorb rainwater runoff, and native landscape plantings will reduce the need for watering
- » Low-flow plumbing fixtures improve water efficiency by 35% over typical fixtures
- » Reclaimed and recycled wood, glass, steel and carpet will be used throughout the building



*Open sightlines encourage interaction and collaboration*



# OUR FUTURE

Maintaining a commitment to efficiency, the Wisconsin Energy Institute was designed so that a Phase II of the building could be added seamlessly in the future.

Phase II would provide more space to foster:

- *Greater public engagement:*  
Symposium space for public events
- *Increased industry connections:*  
Planned access to incubator space
- *Further opportunities for education and training:*  
Teaching laboratories and classroom space

PHASE II

**For More Information about the Wisconsin Energy Institute, Contact:**

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## The Design/Construction Team

**Potter Lawson** Established in 1913, Potter Lawson is the oldest Madison-based architectural firm. Dedicated to providing quality architectural and interior design services, we have a reputation for excellence that has given us the opportunity to work on many of Madison's landmarks. We use sustainable design principles on all our projects as a matter of sound business practice. We promote the use of renewable and reusable materials, and efficient use of resources, wherever and whenever possible. Our approach means our projects use fewer resources and are fundamentally more cost effective to operate, while improving the life of occupants.

**Eric Lawson, President/CEO - 15 Ellis Potter Court - Madison, WI 53711 - [www.potterlawson.com](http://www.potterlawson.com)**

**HOK** HOK is a global provider of planning, design and delivery solutions for the built environment. Since the firm's founding in 1955, HOK has developed into one of the world's largest, most diverse and respected design practices. We employ more than 1,700 professionals linked across a global network of 25 offices on three continents. Industry surveys consistently rank HOK among the leading firms in numerous building types, specialties and regions, and we have earned many awards and honors for our projects, people and practice.

**Patrick Gleason - 211 N. Broadway, Suite 700 - St. Louis, MO 63102 - [www.hok.com](http://www.hok.com)**

**Mortenson Construction** With more than 50 University of Wisconsin-Madison alumni on staff throughout Mortenson, our team members are committed to Madison. Mortenson has been an industry leader in integrating Building Information Modeling technology into our everyday processes. This technology has allowed our customers and projects to realize cost and time savings, which results in a higher quality end product. Our goal in the Madison area is to carry forward the Mortenson tradition, building exceptional facilities for the advancement of the Madison community and greater society, and using innovative and integrated systems to deliver the best experience and product to our customers and team members.

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Learn more about the Wisconsin Energy Institute:  
[www.energy.wisc.edu](http://www.energy.wisc.edu)



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