

Contact: John Nash

FY 2023 CAMPUS SUSTAINABILITY REPORT

Action Requested: Receive the report.

Executive Summary: To evaluate and measure campus sustainability, the universities participate in an AASHE, Association for the Advancement of Sustainability in Higher Education, program called “STARS.” STARS stands for Sustainability, Tracking, Assessment and Rating System.

In this report, the universities highlight at least one project from each of the following STARS categories:

1. Academics and Research
2. Campus Operations
3. Planning, Administration and Engagement

Iowa's public universities are committed to a sustainable future through academics and research, operations and economic development. Respect for the impact on the environment is part of decision-making at all levels. Regent institutions broadly apply campus sustainability in the general operations of each institution, in curriculum and in experiences of students and employees. Sustainability is also utilized effectively when partnering with industry leaders, joining with all levels of government and transferring technology within the institutions.

Board of Regents' Sustainability websites:

UI Office of Sustainability - <http://sustainability.uiowa.edu/>

ISU Office of Sustainability - <http://www.livegreen.iastate.edu/>

UNI Office of Sustainability - <http://www.uni.edu/sustainability>

Part 1 of 3
ACADEMICS AND RESEARCH

Clearly, a primary function of colleges and universities is to educate students. By training and educating future leaders, scholars, workers and professionals, higher education institutions are uniquely positioned to prepare students to understand and address sustainability challenges. This STARS category recognizes institutions that have formal education programs and courses, as well as sustainability learning experiences outside the formal curriculum.

University of Iowa

*CLAS students learning about their impact through sustainability requirement,
Story by Emily Delgado*

A curriculum change is equipping students to be mindful of how their actions have an impact on society. Under this new requirement, students will be able to investigate connections between humans and the natural systems.

The University of Iowa College of Liberal Arts and Sciences is emphasizing the importance of sustainability in its curriculum—and is the first college at Iowa to require sustainability as part of its general education coursework needed to graduate.

Students who entered CLAS in the 2022-2023 academic year are the first cohort to experience this change in the [CLAS Core](#), which is the college's general education course requirements. This effort has been led by the CLAS Associate Dean for Undergraduate Education, Dr. Cornelia Lang. This curriculum is designed to ensure students have the skills and knowledge they need to succeed when entering their major and exposes them to topics they haven't studied that can contribute to lifelong learning.

"These courses give students an opportunity to reflect on how their own actions will impact the ability for society to meet longer term sustainability goals," Lang said.



As part of the University Student Government's 2019 Declaration of a Climate Emergency, students asked administrators to add a requirement in sustainability so that all students would have the opportunity to learn about their impact on society and nature. This addition to the curriculum is helping students become better problem solvers and thinkers, challenging them to

ask questions and create solutions that will benefit society and the environment beyond what many view as “traditional” approaches to sustainability — like recycling, composting, or energy conservation.

Students can take courses that interest them or are connected to their major. Courses that meet this new requirement also meet other requirements for general education, so extra hours are not needed or added. Students in the college can currently choose from a variety of courses, and the college is quickly working to approve more.

“We want the courses to be designed around topics that help students explore the interconnectedness between the human experience and the environmental world over time,” Lang added.

Director of the UI Office of Sustainability and Environment, Stratis Giannakouros, says requiring sustainability courses isn’t about creating sustainability majors. It exposes students to the realities and challenges of the 21st century, which will prepare them as they live more independently and enter the workforce.

“Sustainability is a concept that lends itself to this idea of broader systems thinking,” Giannakouros explains. “That’s perfect for general education. It helps students think differently about their place in the world.”

Explore the [current sustainability course offerings](#) that are part of the CLAS general education. The UI College of Education uses the CLAS Core GE and has therefore adopted this requirement. Additional undergraduate colleges are exploring the best ways to also add sustainability to their requirements.

University of Northern Iowa

Increasing Access to Sustainability at UNI

The University of Northern Iowa's academic efforts related to sustainability are longstanding. However, most efforts prior to 2011 occurred without unifying coordination. Over the past 13 years, conscious efforts have been taken to ensure that content and pedagogy for teaching sustainability occurs in a strategic manner across the curriculum.

In order to ensure that these sustainability efforts moved in the same direction, significant work occurred to build a community of faculty with sustainability as a unifying theme. During the summer of 2011, 32 faculty members from all four colleges and 18 departments participated in 2-day workshops to revise 40 course syllabi to include sustainability-learning opportunities. Faculty participating in this workshop proposed courses for incorporation of concepts in sustainability. Selected courses were taught in academic year 2011-2012. As a follow up to this effort, this workshop series and course modification process was repeated in 2014-2015.

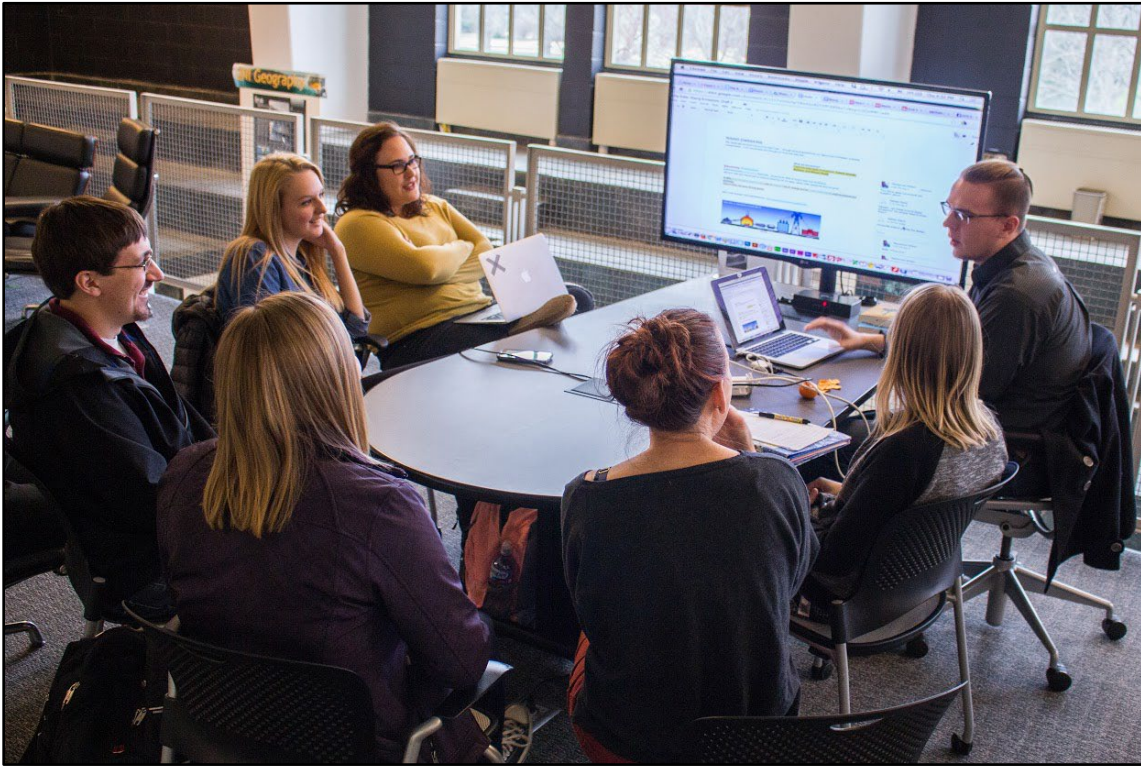


Participation in the 2015 Faculty workshop on sustainability, included faculty giving a sustainability-related presentation through the lens of their area of expertise.

Because of this foundational work, UNI successfully launched a [University Sustainability Certificate](#) program in 2014. This program has grown throughout the years, starting initially with five students in the first year, and growing to more than 50 students currently enrolled from a variety of different majors. Oversight of this program is conducted by a Curriculum Committee comprised of faculty across the colleges and a Sustainability Certificate Coordinator.

Recent changes to UNI's general education program, known as [UNIFI](#), have allowed even more students to be exposed concepts that they may not otherwise be aware of, including sustainability. These changes resulted in the creation of four new general education certificates.

While most focus on layering of education to build depth in a particular subject matter, UNIFI General Education Certificates focus on examining the subject from a variety of disciplines. This develops a broader and multidisciplinary understanding of certain topics and encourages students to learn from holistic viewpoints.



UNI communications studies work on a project integrating sustainability into their Interactive Digital Studies.

As a result, the [UNIFI Sustainability Certificate](#) was formed as a more streamlined option (three-course, nine-credit) to receive sustainability credentials. Through this effort, organizers hope to provide sustainability curricular opportunities to all interested UNI students. In contrast, the classic Sustainability Certificate is larger at five classes with a greater diversity of course themes and options and ranges from 15 to 16 credits. This work continues to lay the foundations for continued improvement in sustainability curriculum at UNI going forward.

Iowa State University

A top priority for the university is infusing innovation and entrepreneurship into the Cyclone student experience. In 2020, the [Innovate at Iowa State](#) initiative kicked off to provide students with opportunities through academic programs, research, and outreach.

As part of the initiative, the [Start Something Network](#) provides academic opportunities, including project-oriented courses, student incubators, product development assistance, internships with startups, and more across all seven colleges, augmented with university-wide resources, such as the [Student Innovation Center](#) and [Pappajohn Center for Entrepreneurship](#).



During the 2022-2023 academic year, the ISU Office of Sustainability newsletter, [Live Green! Monthly](#), featured the Start Something programs of each college. The following excerpts demonstrate how two colleges embedded sustainability into their programs.

In the College of Agricultural and Life Sciences, students engaged in a collaborative research project with the [America's Cultivation Corridor](#), focused on how agricultural innovations elevate agricultural sustainability and food system resilience in Iowa and around the world.

Cross collaborative [Option Studios](#) in the College of Design connected students to a variety of advanced project-based studios, examining global challenges of design within the lens of sustainable development and the United Nations Sustainable Development Goals.



**Part 2 of 3
CAMPUS OPERATIONS**

This STARS category encompasses everything within the daily operation of a campus. It includes quantitative data reporting in the areas of Building Operations, Climate, Dining Services, Energy, Grounds, Purchasing, Transportation, Waste and Water Usage. This overarching category notes that institutions can design, build and maintain a campus in ways that provide a safe and healthy environment for the campus community. It recognizes the outstanding efforts to maintain a more sustainable campus environment.

University of Northern Iowa
Efficiencies in Grounds Management

Facilities management at the University of Northern Iowa consistently focuses on a high quality of service and an ethic to efficiently utilize its resources. In that way, the ideas of efficiency and cost savings related to sustainability go hand in hand. One of the most longstanding and coordinated sustainability efforts within campus operations falls under the area of campus grounds management. This effort focuses on reduced intensity of management within some zones of campus.

Over the last two decades, the management practices on UNI's grounds have focused on sustainability in ways that have lowered ongoing maintenance costs and allowed groundskeepers to manage larger areas of campus at a lower intensity. These efforts have reduced the intensity of management of some parts of campus, without negatively impacting the levels of service provided.

In the early 2000's a conscious decision was made to reduce the number of acres being managed as turfgrass. As a result, significant portions of UNI's south campus grounds were converted to naturalized areas. This was done through a combination of elimination of mowing and reintroduction of plant species native to the state of Iowa.

In order to manage these naturalized areas, only infrequent fall or spring mowing is conducted in conjunction with managed burning. Mowing is conducted every one to three years, while prescribed burns have been conducted every three to five years.



Naturalized areas on UNI's south campus are maintained by a managed turf along its edges.

Additionally, over the last decade, significant reductions in herbicide applications have occurred on both the north and south edges of campus. These efforts have resulted in decreased application of herbicides in over 70% of UNI's campus grounds. This effort has been in conjunction with pilot testing a number of non-chemical treatment alternatives to promote healthy turf.



Naturalized areas of campus not only reduce maintenance costs, but also provide an area of filtration to reduce runoff from campus into Dry Run Creek.

These alternative management strategies have significant benefits in three areas directly related to sustainability. First, by reducing the management intensity of these areas, the amount of chemical contact to those using campus grounds is reduced. Second, there are positive environmental impacts that include benefits to water and air quality. These benefits occur through increased rainwater absorption by the native plants and the sequestration of carbon in their extensive root systems, plus numerous other benefits. Finally, there are notable financial implications from reduced intensity of management within campus grounds.

Management costs of naturalized areas on campus are 80-90% lower per acre than the costs of managing turfgrass.

**Iowa State University
AASHE STARS**

Iowa State University achieved a [fourth consecutive Gold certification](#) in the Association for the Advancement of Sustainability in Higher Education, Sustainability Tracking, Assessment & Rating System ([AASHE STARS](#)) during the 2022-2023 academic year.

[STARS](#) is an international system used by over 300 colleges and universities to assess and report on their sustainability programs.



Certification, renewed every three years, is at four different levels: Bronze, Silver, Gold, and Platinum. Areas evaluated encompass all facets of environmental, economic and social sustainability and include: Curriculum, Research, Campus Engagement, Public Engagement, Air & Climate, Buildings, Energy, Food & Dining, Grounds, Purchasing, Transportation, Waste, Water, Coordination & Planning, Diversity & Affordability, Investment & Finance, and Well Being & Work.

Institutions also may highlight innovative commitments to sustainability, which for Iowa State University included the following:

- Hosting [The SHOP](#) food pantry to alleviate food insecurity among students.
- Certification as a [Tree Campus USA](#).
- Supporting a [Green Initiatives Fund](#) for student campus sustainability projects.
- Creating an open dialogue with students, faculty and concerned citizens for agriculturally-based carbon removal in the research, education and extension missions of the university, through the [Consortium for Cultivating Human And Naturally reGenerative Enterprises \(C-CHANGE\)](#).
- The [“Play Ames: Imagine Your City”](#) collaborative project by the College of Design with the City of Ames to engage underrepresented groups more fully in community conversations.

- [Diverting textile waste](#) from campus textile laboratories and studios through a composting initiative involving students and faculty in the Apparel, Merchandising and Design program.
- Engaging industrial design students in a unique immersive education and research opportunity for reuse of plexiglass barriers installed on campus during the [COVID-19 pandemic](#).



University Sustainability Plan

Implementation of the [Iowa State University Strategic Plan for Sustainability in Operations continued during the 2022-23 academic year](#). Significant progress was made toward the goal of achieving a 50% reduction of university greenhouse gas emissions by 2025 when the last coal was used in the campus power plant in February 2023. The conversion of the power plant to use only natural gas will be completed within the 2023 calendar year.

University of Iowa
Bee Campus USA

The University of Iowa campus contains over 1,700 acres of diverse landscape. With President Wilson's support and in collaboration with the Office of Sustainability and the Environment, Landscape Services, Athletics, and an interdisciplinary team of faculty and students, UI has earned designation as a Bee Campus USA through the Xerces Society for Invertebrate Conservation. Xerces estimates an economic value of native pollinators at \$3 billion per year in the U.S. The UI Bee Campus Committee is facilitating planting more native pollinator-friendly flowers, reducing pesticide use, and engaging the community in pollinator conservation.



The first major goal of the Bee Campus Committee was completed in September 2022. By working with UI Purchasing and the main campus pesticide contractor, UI is now utilizing an integrated pest management plan (IPM). IPM is a science-based decision-making process to manage pest damage and minimize economic costs and risks to people, property, and the environment. In addition to implementing an IPM, UI has discontinued the use of most neonicotinoids, a pesticide well-documented as having adverse impacts on pollinator and human health. This collaborative action will create a safer environment and is a great stride toward a more sustainable campus.

In addition to reducing pesticides, the Bee Campus Committee is working to increase pollinator habitat at Iowa. Studies demonstrate that landscapes containing native plants support greater numbers of pollinators than those with non-native plants. Therefore, a native Iowa plant list has been created to be used as guidance to UI Landscape Services. The list includes details needed to make informed decisions on planting including color, size, bloom time, soil and light requirements, habit and form of plant, and best placement and application. It is hoped that the list will be referenced for all new building and landscape projects.

Education and Service Learning is a major component of the work being done as a Bee Campus. Numerous UI courses cover information about native pollinators and pollinator conservation. Native gardens are being installed on campus. An annual BioBlitz draws community members in

collecting, observing, and recording biodiversity at the Ashton Prairie living laboratory; over 150 people participated in July 2022. Workshops organized in the last year include a prairie seed harvest, a training on growing native plants from seed, and a spring wildflower hike guiding participants in finding Iowa ephemerals.

By becoming a Bee Campus USA affiliate, the University is committed to protecting everyone on campus including our native pollinator population, increasing pollinator habitat on campus, and educating our community about the benefits and need to protect pollinating species. For more information visit <https://sustainability.uiowa.edu/bee-campus-usa>.

Moving up the Rankings for Green Power: Iowa ranked No. 2 in green power usage, according to EPA's Top 30 Colleges and Universities list, Story by Wendy Moorehead

The University of Iowa moved up in the EPA's Green Power Partner rankings to No. 2 on the Top 30 Colleges and Universities list of the largest green power users. Iowa uses nearly 300 million kilowatt-hours (kWh) of green power annually, which represents 84% of its total electricity needs, up from 73% last year when it held the No. 3 spot.

Iowa also improved its ranking on the National Top 100 List, now ranked 52, up from 60. This ranking places Iowa among companies such as Johnson & Johnson, Dell Technologies, and Capital One.

Iowa's rankings on the EPA's Top Power Partner Lists recognize the university's long history of innovation and achievement in developing and using alternative fuels to generate steam for heating and cooling campus buildings.



This work has propelled Iowa toward meeting its [Zero Coal by 2025 goal](#) by exploring innovative biomass alternatives in its power plant, such as [oat hulls, miscanthus grass, and energy pellets](#). The university's commitment to green power provides energy security and creates economic value for the state by locally sourcing alternative fuels when possible. Since 2020, UI's energy delivery partner, ENGIE, has carried forward the important work of optimizing UI operations to enable the power plant boilers to utilize additional renewable fuels.

The EPA's [Green Power Partnership](#) is a voluntary program that helps increase green power use among U.S. organizations to advance the American market for green power and development of those sources to reduce air pollution and other environmental impacts associated with electricity use.

Part 3 of 3
PLANNING, ADMINISTRATION AND ENGAGEMENT

This STARS category encompasses a wide variety of planning, engagement and outreach areas. It includes quantitative and qualitative data reporting in the areas of Coordination and Planning, Diversity and Affordability, Human Resources, Investment and Public Engagement. This overarching category notes that institutions of higher learning can make significant contributions to sustainability throughout society by sharing their experiences and expertise with others. Sharing best practices and lessons learned can help other institutions, communities and individuals realize efficiencies that they otherwise may not have considered.

Iowa State University

The Iowa State University [2022-2031 Strategic Plan](#) is based on a foundation of four thematic pillars and six aspirational “to be” statements, which guide an annual process to develop and implement specific projects and initiatives.



To jump-start the process President Wintersteen announced a \$10.5 million investment for projects, including three interdisciplinary sustainability research proposals.

Stimulating Climate-smart Conservation on Iowa’s Farmland: Incorporating Collaborative Storytelling into Integrated Modeling

Led by Principal Investigator Linda Shenk, associate professor, English, and an interdisciplinary team representing Agricultural and Biosystems Engineering, Agronomy, Community and Regional Planning, Economics, Geological and Atmospheric Sciences, and Natural Resource Ecology and Management, the project addresses the disconnect between scientific climate change narratives and model projections and the experiences of stakeholders in agriculture. Through integration of a suite of existing climate-farmland-social-economic simulation models, and engaging stakeholders with these models, “storylines” can be co-created around impactful weather and the socio-economic risk-factors that influence stakeholders’ decision-making, stimulate conversations and foster trust.

Improving Understanding of Climate Justice for Vulnerable Groups Through Communication and Community Engagement

Led by Principal Investigator Yu Wang, associate professor, Political Science, and an interdisciplinary team representing Civil Engineering and Community and Regional Planning, the project focuses on finding solutions for improving local climate justice outcomes by enhancing understanding of how vulnerable groups view and respond to climate risks. Through a statewide quantitative survey and community-based qualitative methodologies – focus groups and interviews - improved knowledge, understanding, and communication of climate science and local community needs can be achieved.

Strengthening Stormwater Infrastructure in Marginalized Communities Through Social Justice Indicators

Led by Principal Investigator Chris Rehmann, associate professor, Civil, Construction and Environmental Engineering, and an interdisciplinary team representing Civil Engineering, Civil Construction and Environmental Engineering and Community and Regional Planning, the project investigates social justice stormwater indicators to improve planning and decision-making processes toward better social justice outcomes and more effective public stormwater infrastructure. Through a two-phase pilot study, outlining the impacts of stormwater events on marginalized communities, and



exploring the effects of stormwater infrastructure changes through modeling in Des Moines, Iowa, indicators can be established.

University of Iowa

The Office of Sustainability and the Environment (OSE) strategizes and manages a variety of events and programs that aim to foster mutually beneficial partnerships between our institution's students, faculty, and staff and communities across Iowa. These efforts help build strong collaborations that have transformative societal impact in Iowa communities.

One Sustainable Iowa Conference

In partnership with Iowa State University and the University of Northern Iowa, the University of Iowa supports a state-wide higher education sustainability network that enables collaborative efforts, partnerships, exchange of information, and student-led outreach and education. As part of this collaborative effort, the University of Iowa hosted the One Sustainable Iowa Student Conference in 2022 at the Tippie School of Business. Led by University of Iowa students, the

conference planning efforts provided valuable leadership experience for the participants. The OSE provided support and oversight for the student planning committee. The conference attracted 106 attendees, including students, faculty, and staff from nine Iowa colleges and universities, such as Central College, Cornell College, Drake University, Iowa State University, Kirkwood Community College, Luther College, Simpson College, University of Iowa, and University of Northern Iowa. The conference offered one day of breakout sessions, two keynote speakers, a career panel discussion, networking, and campus tours.



On Iowa! Open House

Each fall, the University of Iowa welcomes new students to campus through *On Iowa!*, a program designed to help them become acquainted with the University's community and resources before the start of the first day of classes. As part of *On Iowa!* programming, the OSE hosts an annual Open House. During this event, student organizations and university departments/offices are invited to participate by setting up informational booths and sharing resources related to sustainability-related degrees and internships, joining sustainability student organizations, volunteering with local sustainability organizations, or utilizing sustainability resources on campus.

The Open House is a collaborative effort that fosters engagement with various departments and organizations across campus. In 2022, tabling participants included seven student organizations (University Student Government, Student Gardeners, Environmental Coalition, Quench, Food Pantry at Iowa, UI BIO, and One Health) as well as three University departments (Recreation Services, Public Safety, and Parking and Transportation). The event attracted an estimated 800+ students.



Prompt for the Planet and Earth Everyday

Last fall, the OSE supported a community art project called *Prompt for the Planet*, organized by *The LENA Project*, a non-profit that aims to inspire and empower people to create positive environmental change. An OSE student intern assisted with the planning of the showcase event. The project began with community outreach and engagement, inviting people to create an open letter from the planet and culminated in an event that featured creative approaches taken by community members to speak on behalf of the planet through pictures and words. The event included a night of music, poetry, dance, and film at the Englert Theater in Iowa City, and drew a crowd of more than 400 people. The project sought to answer the question: What would happen if a whole community was invited to engage with nature through any kind of art?



The success of that event inspired the OSE to continue engaging the Iowa City art community through an art-inspired Earth Day celebration called *eARTh Everyday*. Through multiple stakeholder meetings, the OSE identified *Public Space One (PS1)* and *UI Pentacrest Museums* as the primary event partners to host the celebration. The event was held on the Pentacrest and inside Macbride Hall on April 22 and included community art workshops leading up to the event.



In addition to the primary partners, eleven University and community-based organizations participated and engaged attendees in sustainability-inspired art projects. An estimated 300 attendees braved the cold and wind to celebrate *eARTh Everyday* on the Pentacrest.

Above are just a few examples of the programming and outreach efforts organized through the OSE. The partnerships and collaborations facilitated by OSE generate meaningful, positive changes that have far-reaching societal effects for communities both in Iowa and beyond.



University of Northern Iowa
Elevating the Energy Conversation

The Iowa Waste Reduction Center (IWRC) is a nationally recognized organization at the University of Northern Iowa devoted to environmental consulting, assistance, training and education for entities with environmental impact or need. It has provided environmental services, including technical assistance and industry training, as well as research and development, for over 30 years. The IWRC is a part of the University of Northern Iowa's Business and Community Services which builds a better Iowa through hands-on technical assistance for economic and business development, entrepreneurship, environmental improvement and enhanced sustainability.

Regardless of the industry, IWRC's programs and services all maintain a core focus on helping businesses to reduce waste.



Nearly 200 representatives from business and industry have participated in the Iowa Energy Trends conference over its two-year existence.

Energy efficiency is vital to Iowa's energy management plan and it reduces the amount of energy consumed. For a business, which means a decrease in energy generated environmental impact and a significant reduction in business energy costs. Despite that, no entity in Iowa had any energy focused events that brought businesses together around this topic.

This was identified as an opportunity for IWRC to provide a benefit to businesses and industry across the state. As a result, the 2022 Iowa Energy Trends workshop was created to bring together businesses to hear from national and Iowa energy experts. This workshop benefitted Iowa businesses by providing education on current and future energy technologies and policies. This vital information allowed Iowa businesses to make informed energy management decisions for today and the future.



The 2023 Iowa Energy Trends Workshop engaged both public and private entities to increase impact for Iowans.

After a successful first year, this workshop has gained wide support from the business sector, including both Iowa investor utilities that serve multiple states in the Midwest. These utilities and other national companies that send employees to the workshop utilize the information from the workshop on a regional basis.

As a result, in early May of 2023, the IWRC in partnership with the Iowa Association for Energy Efficiency and the University of Northern Iowa presented the [2023 Energy Trends Workshop: Elevating the Energy Conversation](#). With the need for residents and businesses to reduce their use of fossil fuels sooner rather than later, this one-day workshop focused on current and future energy trends in Iowa. Attendees had the opportunity to learn from and network with energy experts, consultants, industry professionals and government agencies.