

THE PENN STATE SUSTAINABILITY STRATEGIC PLAN

VISION

Penn State's vision is to embed sustainability as a fundamental value at the University through the development of sustainability literacy, solutions, and leadership.

MISSION

This comprehensive integration of sustainability into the University's research, teaching, outreach, and operations will prepare students, faculty, and staff to be sustainability leaders.

DEFINITION

Sustainability is the simultaneous pursuit of human health and happiness, environmental quality, and economic well-being for current and future generations.

ANSWERING THE CALL

Since its founding, Penn State has repeatedly answered the call to address societal challenges by recognizing turning points in history and seizing the opportunity to run at the vanguard of innovation in teaching, research, and service. Students learned how to ensure food security by increasing yields in the 19th century. University leadership ensured access to higher education through a System of Commonwealth Campuses in the 20th century. Over the past century and a half, Penn State has grown to twenty-four campuses throughout the Commonwealth, and we have become one of the most comprehensive institutions in the country, offering nearly every field of study in higher education. The entire Penn State community is ensuring the generation and dissemination of knowledge, skills, and values in the 21st century.

Today, we face the global challenge of sustainability, and Penn State is again answering the call as its faculty, staff, students, and communities race to solve some of the toughest problems in history, from feeding a growing population to protecting a threatened environment to ensuring energy security. Our commitment to sustainability arises from three interconnected scientific and ethical principles:

Principle 1: The recognition of the fundamental ethical right of all humans, both now and in the future, to basic needs such as healthy food, clean water, dependable healthcare, a living wage, and affordable education

Principle 2: A scientific appreciation of the interconnections between human prosperity and ecological health

Principle 3: The necessity of providing the economic means for addressing human needs and supporting human flourishing, while ensuring the long-term health of ecosystems

To remain vibrant and true to our purpose, the University must again transform how it pursues its mission. Penn State must provide an atmosphere that encourages critical thinking and develops our capacity to account for the ethical, environmental, and economic outcomes of our decisions—an immersive education in sustainability.

EMBRACING THE OPPORTUNITY

When people think about sustainability, many think first of increased operational efficiency and waste diversion, and there is ample evidence for those benefits. For example, Penn State has reduced its electrical usage by about 7 percent since 2005 (while its footprint has grown significantly), avoiding \$5 million annually in utility costs. Twenty-two thousand gallons of used-cooking oil are refined yearly into fuel for campus vehicles and pieces of equipment. More than 3,000 tons of food and landscaping waste are converted into 1,200 tons of compost. Penn State has a highly developed waste management program and is now recycling 65 percent of its waste, avoiding half a million dollars annually in landfill tipping fees. These early successes and savings in operational efficiency are just the beginning of what is possible.

However, a commitment to sustainability that is integrated into teaching, research, and service, in addition to operations, will yield benefits that far exceed those listed above. In particular, evidence suggests that sustainability has emerged as an important and growing priority among the University's key stakeholders, including students, faculty, and staff, research agencies, private donors, alumni, and policymakers. We expect these benefits to include an increase in students who apply for admission and faculty and staff who apply to work here. That will allow us to select more of the best and brightest among these applicants. The *Princeton Review* published a survey showing that if students could compare colleges on how committed they were to environmental issues, 67 percent said that it would contribute very strongly or strongly to their decision to apply to or attend that college. *Princeton Review's* Green Guide now allows students to make these comparisons.

We also expect to attract a greater share of the federal, state and local grants that are targeted to research on sustainability. For example, the National Science Foundation set aside \$766 million in its 2011 budget (16 percent higher than 2010) for "cross-agency sustainability research" aimed at increasing sustainability research on renewable energy and complex environmental processes. The NSF has partnered with the Department of Energy to provide \$19 million in the form of graduate fellowships and undergraduate scholarships to encourage careers in clean energy. We further expect an increase in gifts and endowments. We have barely begun to tap the interest of our alumni and other potential donors to create a legacy of social, economic, and environmental well-being for future generations. Penn State's commitment to sustainability will inspire its stakeholders to rise to the challenge and establishing legacies such as new centers, endowed chairs, and student scholarships.

Our commitment to sustainability also will raise interest among private and public organizations in our graduates and in our research. Korn/Ferry conducted a survey with 1,500 executives across functions, industries, and geographical areas. Nearly half said that their companies were hiring new staff to support environmental initiatives, reassigning existing staff for that purpose, or doing both. A Walmart senior executive reported that his college recruitment teams are increasingly screening for candidates with a record of community involvement and sustainability competencies. We expect our graduates to be ready to meet this demand. Finally, although limited evidence is available to show that university research on sustainability will influence public and private sector policy and practice as well as personal behavior, we are confident that recruiting the best and brightest researchers to Penn State will increase the amount of research that is conducted here, which in turn will enhance our reputation and impact on society.

The strategic rationale for sustainability at Penn State, here and now, is clear and compelling. Penn State's reputation for ethical leadership and academic excellence will soar by doing what is right in the present for the benefit of the future.

OUR APPROACH—THE LIVING LAB

We are committed to the creation of a learning environment that dissolves the boundaries of classrooms and campuses and creates immersive sustainability experiences. An education in sustainability goes far beyond mastering the material in a textbook. It requires hands-on opportunities for the entire University community and an active engagement in the reinvention of our physical environment as well as many policies and processes. Of paramount importance for ensuring the success of the ***Sustainability Strategic Plan*** will be to involve all campuses, research centers, and 30 million square feet of Penn State facilities in developing a living laboratory to pioneer sustainability education, implement sustainable practices, and lead the innovation of technologies and practices. Sustainability will be infused into all facets of life at Penn State, supported and driven by a collective and collaborative effort.

Further, this Penn State education will transcend the boundaries of traditional learning by connecting our students, faculty, and staff to broader communities and landscapes at every scale as a resource for learning. Our entrepreneurial partnerships with business, agricultural, educational, government, and community partners will underscore the University's commitment to creating a learning environment that extends far beyond the borders of our campuses to fulfill our land-grant mission in the context of 21st century challenges.

Our collaboration with partner organizations will result in an efficient and effective iteration of innovation, advancement, and implementation. Each party will alternately act as inventor, adopter, advocate, and advisor, allowing us to mobilize together to address sustainability challenges. Cooperatively building a vibrant living laboratory for sustainability across the Commonwealth will foster generations of students and community members who appreciate the importance of sustainable practices in all aspects of their lives, who become our societal leaders and environmental stewards, who value their connection to their physical surroundings, and who embrace their role as responsible citizens.

Building this living laboratory will provide a more holistic intellectual environment for the entire Penn State community. It will help the University achieve its historical mission of preparing the next generation of leaders with a core education in traditional arts and sciences, and it will achieve its new mission of ensuring that those leaders possess the critical thinking essential for understanding and solving the challenges of tomorrow.

OUR FUTURE—RE-IMAGINED

When longtime Penn State Professor of American Literature Fred Lewis Pattee sat down to write the lyrics of the Penn State Alma Mater in 1901, he was looking forward, anticipating but perhaps not even able to imagine what the institution would become—"For the future that we wait...."

We stand at the gate of the sustainability challenge. We have the opportunity, the responsibility, and the great honor of molding a sustainable future. This is not a future we can afford to wait for but one we must actively forge by educating our students and ourselves about balancing human welfare with natural systems, reinventing our policies and practices, and mobilizing commitment

across diverse stakeholders to address the complex challenges associated with sustaining life on the planet.

For our students—for the glory—for the future.

OUR STRATEGY—THE SUSTAINABILITY STRATEGIC PLAN

This Sustainability Strategic Plan was developed by a University Sustainability Council appointed by Provost Rodney Erickson during the period April-December 2011. The Council's charge was to "integrate sustainability in a way that adds value to our institution, communities, the Commonwealth of Pennsylvania, and beyond." The plan is the result of a collaborative process, featuring input sessions with faculty, staff, administrators, and community leaders held at nearly every campus and involving more than 500 people. The Council also worked in subcommittees for deeper analysis and further input solicitation. The subcommittees were: benchmarking, sustainability metrics, the business case, and communications. The Council reviewed its draft Sustainability Strategic Plan with President Erickson and Interim Provost Pangborn in January 2012 and developed a proposed implementation strategy by July 2012. The Sustainability Strategic Plan and implementation strategy, which recommended the creation of a cross-cutting Sustainability Institute, were shared with the Board of Trustees in September 2012. The Provost and vice presidents of Finance and Business, Research, and Outreach agreed to resource the start-up of the Sustainability Institute in Fall 2012. The Sustainability Institute opened its doors January 1, 2013.

The Council's work, as presented in the Penn State Sustainability Strategic Plan (SSP), features three sustainability goals that are applicable for all of us, whether staff, student, faculty, community, alumni, partner, or friend:

- Literacy—Having the understanding to recognize the need for change, act upon it, and recognize and reward the actions of others
- Solutions—Putting knowledge to work in our practices and approaches
- Leadership—Inspiring others and enlisting their aid in the common pursuit of innovation in policy, practice, and knowledge

These goals were selected as an irreducible set of steps to fulfill our vision to embed sustainability as a fundamental value. When taken together and acted upon in a full and collaborative partnership by all, they set us on a course to answer the new call of a land-grant institution, embrace the opportunity to provide leadership to all of higher education, and fulfill the promise of delivering a new generation of global citizens that can shape the future that we envision and desire. Ultimately, as these goals come to fruition, the University will function as a sustainability living laboratory, embodying responsible and restorative use of resources and promoting these values in our teaching, research, and community partnerships.

In June 2013, interim Provost Pangborn formally launched a new strategic planning cycle for the University. In his instructions to unit leaders, Provost Pangborn asked each unit to include a sustainability component in their five-year strategic plans. The Sustainability Strategic Plan is intended as a framework for units to consider how to address sustainability literacy, solutions, and leadership in their respective plans. The Sustainability Institute will serve as a resource to units, by offering facilitation, tools, resources, and infrastructure.

Each goal is presented with a roadmap of strategies and actions gleaned and refined from the input of the planning process. The strategies and their accompanying actions do not collectively represent a checklist that every unit must complete. Instead, they represent a collection of individual steps that are impactful, readily implementable, and measurable, and can be addressed in the context of a unit's own goals and mission. Each unit may formulate its unique contribution to sustainability literacy, solutions, and leadership, choosing to implement those strategies and actions that align with their goals and mission. When these individual actions by units are combined across the institution, the construction of the living laboratory will accelerate and become the vehicle towards our vision of a sustainable Penn State, a place where responsible and restorative use of resources is the norm, and we promote these values in our teaching, research, and community partnerships.

GOAL 1—LEARN SUSTAINABILITY LITERACY

All members of the Penn State community will realize, advocate, and contribute to sustainability literacy.

A sustainability-literate person should:

- Understand the need for change to a sustainable way of doing things, individually and collectively
- Have sufficient knowledge and skills to decide and act
- Recognize and reward other people's decisions and actions

Strategy

1.1 Incorporate sustainability learning opportunities into daily life across the University, including the built environment and service and program delivery.

Actions

Highlight visible demonstrations of sustainability as we create facilities and grounds that teach (e.g., LEED-certified buildings, green roofs, etc.).

Develop and promote co-curricular programs that address sustainability in student life.

Provide opportunities for self-assessment of sustainable behaviors (e.g., Know-Your-Numbers, building dashboards).

Provide sustainability training for existing and incoming administrators, governing board members, faculty, and staff at all campus locations.

Integrate sustainability practices and learning opportunities into all University-associated events including those held on University property, alumni and development functions, and appropriate external events (e.g., Festival of the Arts, farmers' markets, student recruitment fairs, etc.).

Strategy

1.2 Develop and promote academic programs that address sustainability, including both online and residential offerings.

Actions

Develop sustainability-focused and sustainability-related academic courses across colleges and campuses and nurture connections between faculty members teaching these courses.

Regularly convene sustainability leaders (including potential employers) to provide input into the sustainability competencies that Penn State should be cultivating in all students (residential and on-line).

Provide access to faculty development opportunities and resources that support the integration of sustainability into both existing and new courses.

Incorporate opportunities to facilitate experiential learning through projects that involve students in the application of sustainability theory to real-world problems.

Strategy

1.3

Create sustainability-focused programs and learning opportunities for external constituents, including alumni, corporate partners, and the general public.

Actions

Utilize existing place-based opportunities for local public education (e.g., Sustainability Experiential Center, Shaver's Creek, Penn State Pittsburgh Center, Westmoreland County Extension Office, and the Rockview/Spring Creek Property).

Develop formal programs (degrees, certificates, short courses, conferences, and workshops) that prepare the workforce with leading-edge sustainability knowledge and competencies.

For the general public, develop informal education programs about sustainability that are media-based (public radio, television, and Web) as well as offered in person (such as through Penn State Extension).

GOAL 2—LIVE SUSTAINABILITY IN PRACTICE

Penn State will put knowledge to work as it actively engages the science, practice, and art of sustainability.

As a leading international research university with a land-grant mission, Penn State has a responsibility to incorporate sustainability as a primary tenet of its own decision-making and to implement available solutions that support the long-term success and prosperity of students, staff, faculty, alumni, and the communities in which we are embedded. Penn State is committed to supporting the internal and external partnerships that are necessary for the implementation and communication of sustainability solutions on scales from local to global.

Strategy

2.1

Identify obstacles to widespread adoption of sustainability best practices into daily life across the University.

Actions

Create and/or expand faculty exchange and scholar-in-residence programs to minimize duplication of effort and to synergize collaboration of faculty across campuses and colleges.

Develop networking opportunities for administrators and staff across campuses and colleges to exchange information and facilitate collaboration and collective action associated with sustainability solution implementation.

Strategy

2.2

Create strategies and programs for the implementation of sustainability solutions beyond the Penn State community.

Actions

Identify and develop strategic partnerships in the Commonwealth and across the U.S. to facilitate the advancement of sustainability solutions.

Strengthen the process of translating sustainability-related research discoveries into practical application to facilitate proof-of-concept development and pilot testing in real-world contexts that will accelerate new-solution adoption.

Support the advancement of partnerships and relationships that seek to cultivate sustainability in communities abroad as a path to large-scale testing and validation of sustainability solutions.

Strategy

2.3

Create strategies and programs for the implementation of sustainability solutions within the Penn State community.

Actions

Infuse campus master planning and facilities operations with sustainable best practices.

Develop employee engagement programs to empower staff and faculty to implement sustainability solutions in their own contexts.

Strategy

2.4

Develop an effective infrastructure for communicating sustainability solutions to inspire the widespread adoption of sustainability practices.

Actions

Develop and enhance electronic mechanisms, such as websites, newsletters, and social media, for communicating sustainability solutions between Penn State and its stakeholders.

Establish and support in-person events that provide opportunities for sharing information about sustainability solutions.

Utilize broadcast media to communicate sustainability solutions to citizens where they live and work.

GOAL 3—LEAD SUSTAINABILITY INSPIRATION

Penn State will lead higher education in transformational innovations in policy, practice, and knowledge that address critical, complex, and systems-level sustainability challenges.

Leadership is the ability to inspire individuals, institutions, and society at-large to examine how their values and behaviors affect the quality of life on the planet, for current and future generations, and enlist their aid and support in the constant pursuit of a sustainable world. Leadership is demonstrated through the recognition of the frontiers of sustainability challenges, the effective directing of resources to these frontiers, the ability to create and practice truly transformational innovations, and their communication to others for widespread adoption.

Strategy

3.1 Achieve full integration of sustainability into the Pennsylvania State University as evidenced by the setting of long-term measurable goals, establishment of mature measurement systems, and alignment of all systems and operations.

Actions

Pursue transparency on institutional decision-making as a means of educating the University community and the public about how sustainability is implemented.

Make sustainability leadership a recognized Penn State principle and formally incorporate it into the University's mission statement.

Integrate sustainability into the strategic plans of all Penn State units.

Establish quantifiable targets for the reduction of non-sustainable practices and the increase of sustainable practices.

Strategy

3.2 Develop means to readily recognize new frontiers in sustainability challenges and respond to them.

Actions

Create structures and processes for the identification of sustainability challenges, communicate activity related to these challenges internally and externally, and develop a process for advancing solutions.

Utilize centers of strength to develop a portfolio of sustainability research and identify priority areas so that the creation of knowledge proceeds in an effective manner.

Develop measures of progress in the construction of a living laboratory and monitor and report these measures widely as we pursue our own learning.

**Strategy
3.3**

Recognize and reward the innovations of students, staff, faculty, administrators, and alumni in the generation of sustainability solutions.

Actions

Establish Sustainability Innovations Awards for staff, faculty, students, and alumni.

Integrate ways to reward sustainability leadership into the University's review process for faculty, staff, and administration.

Engage with external partners to establish recognition mechanisms that align with broader incentive programs and competition events aimed at generating sustainability innovations.

**Strategy
3.4**

Develop resources for innovation.

Actions

Identify external potential sources of funds for sustainability innovations and develop a plan to pursue sponsors whose sustainability innovation goals are aligned with the University's sustainability goals.

Identify projects through a Reinvention Fund that can be implemented within and across Penn State campuses and Commonwealth communities to encourage the development of sustainability innovations and the adoption of sustainable solutions.

Leverage human capital in the University and its associated communities where goals can be aligned to focus on the identification of complex sustainability challenges and the innovations needed to address them.

**Strategy
3.5**

Contribute substantively to national and international sustainability conversations and solutions through membership, leadership, and service in sustainability-related organizations and forums.

Actions

Lead the creation and formation of new sustainability-focused associations, forums, collaborations or groups where gaps exist at the state, national, or international level

Actively seek opportunities to feature Penn State sustainability innovations in research, teaching, operations, and outreach in state, national, and international journals, publications, conferences, and meetings through presentations, poster sessions, etc.

Host conferences and other events at Penn State campuses to showcase and share sustainability innovations as well as create forums for dialogue, collaboration, and creative problem-solving.