



Institute for Sustainability,
Energy, and Environment (iSEE)
Strategy Task Force

THE NEXT **150**

Ximing Cai on behalf of Evan H. DeLucia

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iSEE Management

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Areas where Illinois has the greatest opportunity to positively impact state, national and global environmental sustainability through research, education and engagement

- ❖ **Interdisciplinary, transformative research on sustainability, energy and environment (SEE)** to solve grand challenges such as feeding, sheltering, and providing energy for a growing world population while protecting resources and the environment.
- ❖ **Sustainability Education** to train the next generation of leaders equipped to find actionable solutions to address sustainability challenges and to achieve a sustainable, resilient society.
- ❖ **Campus as Living Laboratory** to bring students, faculty, and staff together to use campus and the surrounding community as a “testbed” to new solutions to real-world challenges, such as implementing the objectives of Illinois Climate Action Plan (iCAP)

Opportunities and challenges in SEE-related research and education in the next 5-10 years

- ❖ Finding **solutions** for the ever-growing demand for food, water, and energy while ensuring a safe, productive, and sustainable environment for all global citizens.
- ❖ Fostering actionable, **interdisciplinary research** to address **grand challenges** in Climate Solutions, Energy Transitions, Resilient Infrastructure, Water and Land Stewardship, and Secure and Sustainable Agriculture; strengthening our **internal capacity** and leveraging scholarly strengths, and providing national and international **leadership**
- ❖ Identifying and filling key **expertise gaps** in our faculty with scholars who could synergize new, cross-campus R&E initiatives in SEE
- ❖ Providing **transformative learning experiences and problem solution skills**, especially bridging knowledge and skill gaps between disciplines
- ❖ Enhancing **interdisciplinary undergraduate/graduate traineeship** programs on SEE
- ❖ Promoting personal **responsibility and behavior change**, e.g., increasing awareness via classes, programs, and events on carbon emissions, water, energy, food waste etc.
- ❖ Making Illinois a **model of sustainability** for the world — with a top priority of having a carbon-neutral campus by 2050 or sooner
- ❖ Improving **campus sustainability** ranking: moving from a three-time Gold Level honoree in the Sustainability Tracking, Assessment & Rating System (STARS) to Platinum
- ❖ Procuring substantial **new funds** from public or private foundations for R&E on SEE and campus sustainability development

Specific actions would be most effective in realizing our potential in SEE education, research and engagement

- ❖ Launch and support **scholar communities** in each of iSEE's research themes: Water Scholars, Energy Scholars, and Global Change Scholars (coming soon): e.g., CABBI; another potential DOE center with Energy Scholars; potential STC on food-energy-water systems, etc.
- ❖ Implement a **seed grant program** in which campus projects and sites would be used by Illinois faculty as "**living laboratories**" to help leverage large grants from major external agencies and provide support for campus sustainability
- ❖ Host annual **iSEE Congress** to foster exchange with leading scholars, industry professionals, and community leaders for dialogue on the world's current and future SEE challenges
- ❖ Organize annual "**Critical Conversation**" forum with diverse stakeholders to develop a road map for addressing SEE challenges
- ❖ Advance major actions to realize the objectives of **iCAP**, e.g., net-zero space growth, Solar Farm 1&2, biomass boiler, green labs coordination, Certified Green Office Program (CGOP), food waste reduction initiatives, recycling, bike sharing, pollinator support, etc.
- ❖ Raise more **external funding** from grants and/or endowments for cross-disciplinary research on SEE challenges, for capstone projects, and for campus sustainability projects

Ways we better leverage our research strengths to enhance the university's educational mission in SEE-related fields

- ❖ SEE Fellows Program, sustainability minor for undergraduates: growth of enrollment
- ❖ A graduate traineeship program on SEE via NSF NRT (under preparation)
- ❖ Cross-disciplinary courses and learning communities for interdisciplinary approach to problem-solving in SEE minor program, including the capstone
- ❖ Certificate in Environmental Writing (CEW) courses, gaining an understanding of the problems and potential solutions — and conveying that to the public
- ❖ Public events such as the Earth Week, Sustainability Week, the Water Day, the Heartland Environmental and Resource Economics Conference etc. to provide SEE related education to college students, K-12 and the public
- ❖ External grants for SEE projects including educational components, thus leveraging the research knowledge with Illinois' teaching mission

Ways to best engage our local community through SEE related events

- ❖ SEE high-impact annual fall Congress and Earth-Week lecture series on big-picture world challenges
- ❖ Student engagement with local economic development and community sustainability (Urbana, Champaign), e.g., projects on Urbana wind turbines, Urbana-Champaign Solar, and Urbana-Champaign Energy Star Challenge, Food waste reduction with local restaurants and shops
- ❖ Support to Champaign Country Sustainability Network (CCNet)
- ❖ Community Climate Resilience Action Plan led by a joint campus-community task force
- ❖ Campus sustainability events with broad participation, e.g., Bike -to-Work Month in May, Boneyard Creek Community Day, zero-waste athletic events, Illini Lights Out
- ❖ Continuous participation in regional sustainability practitioners meetings