

May 28, 2010

Dear Board Member,

Following this month's briefing on recent activities and accomplishments in sustainability, I am pleased to introduce the nation's first Ph.D. in sustainability, Dr. Jin Jo, who has focused his work on renewable energy strategies for cities.

Highlights of ASU's sustainability activities

- Two ASU climate change experts contributed to just-released National Research Council reports commissioned by Congress to develop a national climate change strategy. B.L. Turner II, professor in the School of Sustainability and in the School of Geographical Sciences and Urban Planning, served on the panel for the report "Advancing the Science of Climate Change," while Jim Buizer, science policy adviser to President Crow, served on the panel for "Adapting to the Impacts of Climate Change." [Read more.](#)
- The Global Institute of Sustainability is partnering with Sapienza University of Rome, University of Tokyo, and United Nations University to host the International Conference on Sustainability Science 2010 in Rome, June 23-25. At the conference, invited experts and scholars will discuss the crucial elements of sustainability science, share transdisciplinary research practices, and engage collaboratively with representatives from civil society, industry, and policymaking institutions. [Read more.](#)
- The Princeton Review, one of the top U.S. providers of college admissions assistance and information, named ASU to its 2010 honor roll of the 15 "greenest" universities for the third straight year and again gave ASU the highest possible score. Criteria for the green rating cover data in three broad areas: sustainable quality of life on campus, student preparation for addressing environmental challenges, and institutional commitment to environmental issues. [Read more.](#)
- A postdoctoral fellow funded by a European science foundation has joined ASU to research how farmers in two widely separated countries manage scarce water resources in the face of climate changes and economic growth. Dr. Perez Ibarra was attracted to the Center for the Study of Institutional Diversity, founded by Nobel Prize winner Elinor Ostrom, because of its work in water resource management and institutional analysis. [Read more.](#)
- Three ASU research centers have pooled resources to create the Consortium for Biosocial Complex Systems, a multidisciplinary strategy to focus on sustainable solutions for interrelated challenges in social, environmental, and health policy. The new consortium brings together more than 70 faculty from diverse fields who will work collaboratively with colleagues around the world. [Read more.](#)
- The School of Sustainability celebrated its second spring convocation by honoring 66 graduates for the class of 2010. The graduates included 15 master's students, 50 undergraduates, and the nation's first Ph.D. in sustainability, Dr. Jin Jo, who will soon join the faculty of Illinois State University. [Read more.](#)

You can reach me at rob.melnick@asu.edu or 480-965-5233 with any questions or comments about this briefing. The interview with Dr. Jo follows on page two.

Best regards,



Rob Melnick
Executive Dean

cc: Jim Buizer

Q&A with Dr. Jin Jo

optimizing renewable energy for sustainable cities

Dr. Jo graduated from the School of Sustainability in May 2010 as the nation's first Ph.D. in sustainability. His doctoral studies, chaired by School of Sustainability Assistant Professor Jay Golden, focused on the use of sustainable building strategies and renewable energy to reduce negative impacts of urbanization. This fall he will join the faculty of Illinois State University.

What inspired your interest in sustainability as an academic and research focus?

While pursuing a master's in urban planning at Columbia University, I had the chance to study with Jeffrey Sachs and other faculty in the fields of environmental planning and sustainable development. Outside the classroom, I worked with local community groups such as Sustainable South Bronx. Both experiences stimulated my interest in creating mitigation strategies to reduce energy and material intensity, water consumption, and environmental impacts in cities. Faculty in the School of Sustainability furthered that interest by providing opportunities to work alongside local utility companies and city governments to develop and implement my ideas.

What are the most important sustainability-related projects you've been involved with at ASU?

In one project, I partnered with Arizona Public Service to model the electricity savings and environmental benefits from a cool roof system, using data I collected on the utility's solar-reflective roof. For a project with the city of Chandler, I helped assess the feasibility of a photovoltaic system for the new city hall building by modeling several different available options and assessing the costs and energy production of each. On a follow-up project, I analyzed over 900 primarily commercial buildings in Chandler to assess the impacts of urban-scale photovoltaic installations. Finally, I developed a model that individually optimizes for each building the costs and benefits of cool roofs and renewable energy systems over entire life cycles.

How will your career work affect sustainability in the "real world"?

As a new faculty member in Illinois State University's Renewable Energy Program and coordinator for the Center for Renewable Energy, I will enjoy unique opportunities to work with governments and industries to assess the impacts of urban-scale renewable energy applications. Results from this work will inform the decisions of utility companies and policymakers at many levels.

What is the world sustainability challenge that concerns you the most?

I believe the biggest sustainability challenge is to understand complex urban systems, particularly at the regional level. Major cities currently produce a significant impact on global and regional climate change due to their rapid population growth and physical expansion, but little is known about the regional effects of mitigation strategies. It is critical that we give city planners the knowledge and tools they need for assessing how different strategies can help them address energy consumption, water use, and environmental impacts.



Dr. Jo (left) working in the NCE Sustainable Materials and Renewable Technologies lab.



Dr. Jo measuring sunlight reflectivity of a Phoenix-area rooftop.



Visual comparison of a cool roof treatment (left) with a standard commercial rooftop (right).