

Urban Designers Issue a Call to Arms

Urban design has always been at the center of this field. That was true in May 1909, when the first national conference on city planning took place, and it's still true today. The constant question in that long history, going way back to Ebenezer Howard and continuing to the present, is how to promote greener cities.

But as we begin a new century, urban designers will be asked to deal with new questions: How do we respond to the problems created by global warming? And how do we cope with the depletion of natural resources—notably oil?

Most urban designers know about compact development, mass transit, LEED standards, and green infrastructure. But, much more is needed. Recently, about 400 urban designers, scientists, and public and private decision makers from around the globe gathered for Penn's "Re-Imagining Cities: Urban Design After Peak Oil," sponsored by the Rockefeller Foundation. Here, Princeton University physics professor Robert H. Socolow, author of the "stabilization wedge theory" for addressing climate change issues, explained how urban design could contribute to greenhouse gas mitigation. He was followed by numerous other speakers who speculated about how to reach the next generation of urban design practitioners.

The attendees outlined their conclusions in *Educating Urban Designers for Post Carbon Cities*, a manifesto that sets the stage for future instruction, research, and practice. Here are some of those suggestions. The list, which focuses on technical elements, is admittedly speculative, but it makes clear that, at a minimum, the next generation of urban designers will need to know how to:

- Calculate ecological and carbon footprints at various levels—individual, building, neighborhood, city, and region—and come up with designs, urban forms, and everyday practices that minimize the footprints.
- Estimate the space and facilities needed to generate energy from alternative sources, to recycle rainwater and wastewater, to collect and reuse organic waste, and to grow food locally.
- Exchange ideas with technical experts on sustainable infrastructure systems, and integrate these technologies and urban forms.
- Make environmental economic calculations, including markets for alternative energy; the role of incentives and taxes in conservation; and other factors that affect behavior and development.
- Design circulation systems—including mass transit, shared transit, and systems for nonmotorized vehicles and pedestrians of diverse abilities. Take into account how mobility needs are changing with new information and communication technologies.
- Understand the economics and the urban densities needed to support and integrate alternative-fuel mass transit and vehicles of all sorts.
- Recognize the complexity of density (including the cultural factors involved and the implication of different densities for infrastructure costs). Learn how to estimate the densities of sketch designs and to come up with strategies for integrating higher densities into existing cities.
- Formulate design guidelines, building codes, and zoning regulations that meet sustainable objectives: ensuring public health, promoting transit access and walkability, reducing energy, limiting runoff, and encouraging the use of local materials.



Eugenie L. Birch, FAICP, is Lawrence C. Nussdorf Professor of Urban Research, University of Pennsylvania; codirector, Penn Institute for Urban Research; and coeditor, with Susan Wachter, of *Growing Green Cities* (University of Pennsylvania Press, 2008). For the complete urban design document, see the entry on Reimagining Cities at www.upenn.edu/penniur.

Right: Genie Birch and Susan Wachter, codirectors of the institute, discuss urban design and climate change with Princeton physicist Robert Socolow at the recent conference on urban design after peak oil.

Lou Huang

Eugenie L. Birch

