

21st Century Buildings: Optimizing Building Performance for a Sustainable Future Fact Sheet

Buildings use more energy than any other sector in the world and account for nearly 40 percent of global greenhouse gas emissions (GHGs), according to the Intergovernmental Panel on Climate Change. As China is leading the world in the construction of buildings, the country has an excellent opportunity to make a significant impact on GHG reduction by promoting energy efficiency in its buildings.

Under China's new urbanization plan, total building energy consumption, as well as commercial floor space, is expected to double through 2050. China currently has 50 billion square meters of buildings and is expected to add approximately 2 billion more each year. According to International Energy Agency data, if China's building sector were considered a single country, it would be the third-largest energy consumer by 2030, behind China and the United States.

The Paulson Institute and the China Center for International Economic Exchanges convened a panel of building code and energy efficiency experts, practitioners, and policy makers for a one-day urban sustainability seminar to explore developing a strategy for achieving greater building energy-efficient practices. In addition, leading CEOs from both countries discussed best practices for building greener and more efficient buildings.

Recommended steps from the discussions include:

- *Strengthen the underlying legal infrastructure:* Building code standards that reflect the latest technological innovations, are updated on a consistent and regular schedule, and vigorously enforced could potentially promote efficiencies of up to 30 percent.
- *Increase the role of market forces:* Reform of resource pricing and the energy sector will ensure more efficient supply and demand of energy.
- *Use data more effectively:* Tracking energy use allows governments, building owners, utility companies and users to regulate their behavior in a more cost-effective manner.
- *Promote incentives to change behaviors:* Incentive programs and awareness campaigns can encourage more widespread use of energy efficient appliances and Three Star building designates.
- *Raise awareness of—and access to—energy efficient building materials and methods*
- *Actively enforce building codes:* Vigorous enforcement through inspections, combined with raising awareness, will help ensure greater compliance with China's ambitious energy efficiency agenda.