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US-China Sustainable Buildings Partnership

APRIL 2010



Photo: Meghan Aminto

New commercial office buildings tower over older low-rise buildings in Shanghai, China's largest and fastest-growing commercial building market. In recent years, total new building area has increased by approximately 2 billion square meters annually across China.

CHINA'S SUSTAINABILITY CHALLENGE

China recently surpassed the United States as the world's largest emitter of greenhouse gases, and its energy requirements will continue to increase as developing cities demand more power to support growth. The number of new and existing buildings is growing not only in major cities such as Beijing, Shanghai, and Guangzhou, but also in 109 other large, fast-growing cities with populations over one million.

Buildings in China represent one of the largest, most responsive targets in addressing energy challenges and reducing associated greenhouse gases. Buildings account for more than 19 percent of China's total energy consumption, and this proportion is expected to increase to over 30 percent in the coming years. Targeting building energy use creates a significant opportunity to reduce China's energy consumption and greenhouse gas emissions.

ABOUT THE US-CHINA SUSTAINABLE BUILDINGS PARTNERSHIP

The US-China Sustainable Buildings Partnership (SBP) promotes energy efficiency in China's commercial buildings by providing policymakers and the building sector with tools and methods to take action on a large scale. The SBP's work aims to complement a growing body of minimum regulatory standards for building energy use and an evolving voluntary green building certification program in China. The SBP works with policymakers and the buildings market to increase participation in existing initiatives and demonstrates new "reach" strategies for promoting higher levels of energy performance through voluntary approaches. Voluntary, market-based approaches represent a new and as-yet-underutilized strategy for achieving large-scale reductions in energy use in Chinese buildings.

In the market, the SBP works with building owners, developers, designers, and managers to develop voluntary approaches to improve the energy performance of buildings. These approaches provide potential models for organized, national-level voluntary building energy programs. The SBP is also working directly with Chinese policymakers to provide specific tools and approaches, such as a building energy use benchmarking rating system, and to facilitate greater participation by Chinese practitioners in existing and emerging building energy programs.

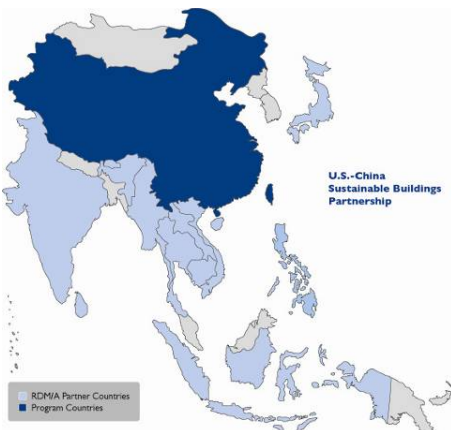




Photo: Meghan Aminto

A Shanghai building manager discusses his commercial building's automation system and energy consumption during a walk-through assessment.

APPROACH

The SBP engages both private and public stakeholders, including building developers, owners, operators, and service providers. Its work with key Chinese policy institutions promotes dialogue to strengthen linkages between policies, programs, and implementation strategies that govern building energy use. A key focus is on identifying and developing specific tools, frameworks, and strategies to assist the buildings market in participating actively in existing and new programs in order to support reductions in building energy use on a mass scale. A lack of these types of facilitating mechanisms has been a major barrier to achieving significant reductions in building energy use under existing policies and programs.

The SBP is funded through a Congressional earmark and implemented through several integrated initiatives:

- Engaging companies with large portfolios of existing buildings in a voluntary, portfolio-wide energy performance improvement process. This includes documenting energy use over time and implementing no-cost and low-cost improvement strategies.
- Collaborating with key Chinese building policy and program designers to develop a comparative building energy performance rating system. This will provide a powerful, single standard for rating the efficiency of thousands of buildings easily and cost-effectively that can help form policies directed at achieving improved energy performance on a large scale.
- Working with China's new voluntary green building certification program and other institutions to strengthen the adoption of certification in the market.
- Collaborating with major residential property developers to reduce energy use in residential buildings through improved building design and operating practices.
- Collaborating with key Chinese and international institutions to increase the demand and strengthen the market for energy management services in the commercial building sector.
- Engaging Chinese policymakers on new approaches to market transformation in the Chinese building sector, particularly voluntary approaches that encourage exemplary performance on a broad scale.

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