

Existing Programs and Best Practices for Building Energy Labeling/Rating Programs in the United States and China

Overview of a presentation given at Peking University,
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Workshop Purpose

Engage in discussion about the American and Chinese experience with energy labeling and rating programs, focusing on:

- China's labeling requirements for public and multi-family projects.
- Asset rating tools and programs in the U.S., such as Earth Advantage's Energy Performance Score.
- Operational rating tools and programs in the U.S., such as ENERGY STAR® Portfolio Manager and Superior Energy Performance.

Participants

Key participants from China included:

- Representatives of the Ministry of Housing and Urban-Rural Development (MOHURD).
- Faculty and students from the School of Environment and Energy at the Shenzhen Graduate School of Peking University.
- Local developers.

Key participants from the U.S. were from:

- NASEO, ASERTTI, Massachusetts Dept. of Energy Resources, Hewlett Packard, NRDC, Earth Advantage Institute, WSU Energy Program

Chinese Regulation

MOHURD is responsible for implementing a national building energy rating and labeling regulation that:

- Covers new government office buildings and large non-residential buildings.
- Combines both asset ratings and operational ratings.
- Has multiple climate zones.
- Is a five star (level) system, starting at 50 percent improvement over 1980 baseline building for energy use in heating, cooling and sometimes lighting.

Asset and Operational Ratings

With the rating system developed by MOHURD:

- All ratings require compliance with Basic Items (energy use per square meter as modeled or simulated), Required Items and Optional Items.
- Asset rating is based on a theoretical building – rating expires after 12 months.
- Operational rating label is effective for five years and is based on measured energy use.

Summary Impressions

Chinese authorities are:

- Serious about this effort and have worked hard to make it meaningful and robust.
- Using software tools that probably need further testing.
- Aware of not having much apparent building science infrastructure to support or extend the effort.
- Interested in the choices we are making and the systems that we have.

Possible Opportunities

With MOHURD and its implementation agencies:

- Providing technical support and training in modeling and energy use measurement.
- Evaluating the impacts of the effort.
- Sharing building science and construction best practices.

With Peking University:

- Sharing ideas for further development of the graduate program and related activities.
- Faculty/staff/student exchanges.

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