

Protecting the global environment by working with China to harness efficiency as a viable energy resource

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A Note from the Alliance President



So much to report since our last newsletter!

The Alliance celebrated its 5th Anniversary in February by holding a retreat with its Leadership Council and other key leaders to reflect on past accomplishments and develop a strategic plan for the future. I would like to express my sincere appreciation to all those who attended as well as those who have helped to shape the Alliance into the organization it has become.

In a very exciting development, the Alliance plans to expand its work to include building energy efficiency. We hope to replicate our record of success in industrial demand side management (DSM) in building efficiency. The building sector has the greatest potential of any sector for reducing GHG emissions, accounting for 25% of total energy usage in China. We will be supporting the efforts of NRDC in this area and working closely with their building efficiency experts (see the profiles of Jin Ruidong and Kevin Mo in this newsletter). Both experts have extensive experience with energy efficiency policy and implementation and have a very impressive resume of accomplishments.

As always, the Alliance, together with other partnering organizations, continues to expand upon its current provincial and national DSM projects. In accordance with the collaboration framework, the Alliance is providing support for Hebei's EPP project. In addition to technical support, the Alliance is

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Energy Efficiency Directory of Organizations & Projects



The Alliance recently developed a directory of organizations working with China to promote improvements in energy efficiency (chinausealliance.org/directory). It will contain information on organizations (including non-profits organizations, government agencies, and private companies) that are cooperating with partners in China working to improve building and industrial energy efficiency.

The purpose of the directory is to raise awareness of on-going work and provide a tool to promote collaboration among organizations.

We are asking each organization to provide contact information, a description of their mission and relevant information on their efficiency project(s). Users will be able to search and sort through the directory based on many factors including project name or location, time frame, relevant materials, partners, and target audience.

Currently, the focus is on US and China-based organizations but, in the future, it may be expanded to include organizations located in other countries that are working in China.

The directory is free to use, and the Alliance highly encourages organizations to participate and provide feedback for improving the directory to better meet their needs.

Alliance to Expand the Scope of its Work to Include Building Energy Efficiency

The Alliance plans to expand the scope of its work to include building energy efficiency in both residential and commercial buildings.

The Alliance will be exploring how it can support efforts to improve building energy efficiency. The Alliance will be working closely with colleagues at NRDC in order to facilitate participation of our network of private and public sector experts and to create opportunities for further exchange of information and experience.

Two NRDC staff members working in China on building energy efficiency issues, Jin Ruidong and Kevin Mo, are profiled in this newsletter. These two experts are working with the local government to increase building energy efficiency in five key ways:

- Building codes enforcement in new buildings.
- Existing building retrofits.
- Commercial buildings operation energy efficiency requirements.
- Incentives policy development.
- Application of renewable energy in buildings.

"The decision to address building energy efficiency will provide new and exciting opportunities for both the Alliance and its Partners," states Fran Schulberg, Director of Operations. "We hope to replicate our record of success in industrial DSM in building efficiency."

Addressing building energy efficiency is essential if China is to meet its energy usage goals. Buildings are one of China's largest energy "consumers", accounting for 25% or more of total energy usage. In fact, residential and commercial buildings use more energy than the country's iron, steel and cement industries combined.

More and more Chinese citizens are moving from rural to urban areas, thereby increasing demand for energy. Electricity usage by a city resident is more than three times that of a rural resident. Furthermore, every year,

Recent Alliance Developments

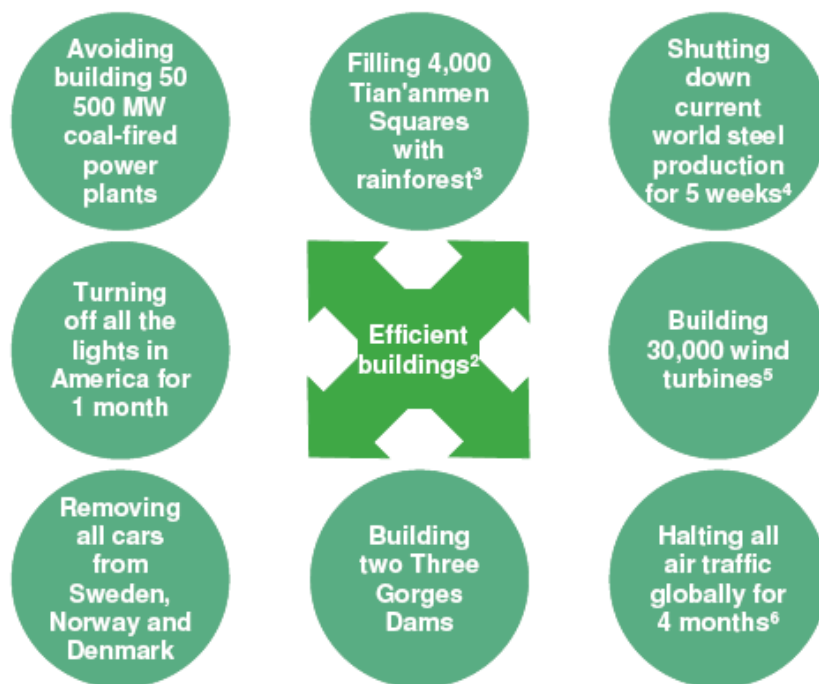
DSM Work in Sichuan Province

In November 2009, the Alliance / NRDC DSM team met with Sichuan officials to explore the possibility of expanding DSM work to Sichuan Province.

Sichuan is unique in terms of its energy mix and consumption. Hydropower accounts for 63% of the province's total generation capacity of over 35GW and coal-fired generation makes up the remaining 37%. Due to hydropower's relatively low electricity rates, Sichuan is popular for manufacturing business and heavy industry. Sichuan has been selected for experimenting with environmental power dispatch, progressive pricing, peak/off peak pricing, and other electricity pricing reforms.

China adds two billion m2 of new buildings, accounting for half of the world's new buildings (Professor Lin Borong, Tsinghua University).

The building sector has the greatest potential of any sector for reducing GHG emissions. Reducing energy use by 50% in 5% of existing buildings and 60% of new buildings in China by 2015 is the equivalent to any one of the following every year:



Source: Hill Briefing to the Senate, Kevin Mo, Ph.D.

The Alliance will continue to expand its work in industrial DSM and search for areas of potential collaboration between its building energy efficiency and industrial DSM activities.

For more information on building efficiency in China, see the report "From Grey to Green: How Energy Efficient Buildings Can Help Make China's Rapid Urbanization Sustainable" from Boston Consulting Group and NRDC. (http://china.nrdc.org/files/china_nrdc_org/From_Gray_to_Green_EN_Final%202009%20Oct.pdf)

Sichuan currently does not have funding to support DSM/EPP. Nor does the Province have an entity to guide and administer DSM programs. The Provincial EIC (Economic & Information Commission) is interested in the idea of creating a DSM center either under the Provincial EIC or as a separate entity, which could be part of the Provincial Energy Conservation Center or a particular association. The Province is also interested in developing different funding mechanisms including the utilization of an urban construction fee and/or differential pricing.

Since the initial meeting, the Alliance/NRDC team have continued to work with Sichuan in meeting its training needs.

Alliance Leaders in the Field

The China-US Energy Efficiency Alliance "team" - technical experts, members of the Board and Leadership Council, Partners, employees, volunteers and others - enables our organization to be an agent for positive change related to energy efficiency in China. Each newsletter features Alliance team members who are making significant contributions both to our organization and to improving energy efficiency and global warming more generally. This time we are highlighting building efficiency experts that are currently working in China.



Jin Ruidong, China's Green Building Project Director for the NRDC China Program, joined the NRDC team in 1999 to promote building energy efficiency and sustainable development. The Alliance asked Mr. Ruidong about his work. Here are his answers

What type of assistance do you provide to Chinese officials?

I help the central government craft national energy codes for commercial and residential buildings and develop a green building standard. I also assist local governments in cities such as Beijing, Shanghai, Shenzhen, and Chongqing to develop local green building standards and retrofitting programs for government and commercial buildings.

I also assist with the development of a building and labeling

system, residential energy rating system, and policies for code enforcement. And, I lead code implementation training for Chinese design and construction building professionals.

What is your greatest accomplishment in regards to building efficiency in China?

My greatest accomplishment is helping China achieve energy reductions through the retrofitting of existing buildings, demonstration projects, stricter building energy codes and equipment standards, and by creating energy rating and labeling systems.

I also provided technical assistance on several green building projects in China, including the Agenda 21 building in Beijing, the first building to earn LEED (Leadership in Energy and Environmental Design) Certification and greening the Beijing Olympic Village. Agenda21 proved to the Chinese market that green building can be built on a normal budget. Technologies adopted here can be used in any other project.

What are the practical impacts of the programs you are working on (especially in regards to GHG reduction)?

Energy consumption from the daily operation of buildings, such as lighting, accounts for about one quarter of China's total energy consumption. As China's rapid development continues, China's buildings will become an increasingly significant source of greenhouse gas emissions.

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Kevin Mo, China's International Sustainable Buildings Project Director for the NRDC China Program, has over 16 years of experience conducting research in China and the US. The Alliance asked Mr. Mo about his work. Here are his answers

What type of assistance do you provide to Chinese officials?

I advise government agencies, developers, researchers, and building experts on building energy efficiency policy. On a day-to-day basis, I conduct meetings, attend conferences, give several presentations, write extract sheets, provide comments on standards and policy, and I serve as an expert reviewer for projects.

What is the biggest obstacle in working to improve building efficiency in China?

There isn't one major obstacle. There are several barriers:

- Code enforcement. Although a building energy code is mandated, code compliance is not 100%. Some buildings and

builders don't follow standards, and agencies do not have a staff to enforce these codes.

- Financing. A successful policy needs two sides: enforcement and encouragement. Chinese policy needs incentives to stimulate the market, and this kind of policy is not ready yet. That's why we're here--to help them to build up better policy standards.

- The Market. Builders don't care enough to implement green building. We need a better way to explain the long-term benefits of energy efficient buildings, to demonstrate the marginal benefit of energy efficient buildings.

The building volume is huge. China represents 30% of the construction in the world. China's rapid urbanization and growing market makes overall management difficult. A huge market is difficult to handle.

Overall, it is a very challenging but very exciting place.

What are the practical impacts of the programs you are working on (especially in regards to GHG reduction)?

I am working on several things right now. I am advising China's

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Page 3

Ruidong continued...

I help China reduce their GHG emissions through promoting building energy efficiency. The building codes and standards I am helping to develop will be implemented nationwide for all new buildings. The demonstration projects are used to compare regular buildings with the green building to show the level of energy reduction that can be achieved on a normal budget.

Do you have any thoughts about how the Alliance can support your work (for example, taking into consideration that the Alliance could try to get US companies involved)?

The Alliance could help by introducing US companies that have technologies China could use to improve building efficiency. As China continues to build more efficient buildings, there is a growing market for US technologies. China is producing half of the world's new buildings every year—this presents a huge business opportunity.

Jin Ruidong is the Green Building Project Director for the NRDC China Program. Professor, Senior Engineer.

Jin Ruidong graduated with a Master of Science degree from Chongqing University in 1987. He joined the China Building Science and Development Center to work on building standard and technology development.

He has been working for NRDC since 1999 to promote building energy efficiency and sustainable development. He led the development of the Chinese housing performance assessment system and assisted with the development of building energy efficiency standards for residential and commercial buildings. He also helped China with the development of green building standards.

Jin also worked in partnership with the U.S. Department of Energy and China's Ministry of Science and Technology to build China's first green building demonstration, which was awarded the first LEED gold certification in China.

He is currently working closely with China Ministry of Construction and Ministry of Science and Technology to promote sustainable cities planning and green building promotion. Also, he is working with the Beijing Administration in their energy and green retrofitting program for governmental and commercial buildings.

Mo continued...

Academy of Social Sciences on a low carbon development policy. Also, I participate as a think tank member of the United Nations Environment Programme (UNEP). The focus is sustainable building. I work with members of the UNEP to help draft the first carbon matrix for the building sector. The main purpose is to come up with a good methodology to quantify GHG emissions from the building sector globally.

I am also advising several Chinese research institutes on developing low-carbon standards for different subsectors of the building industry.

And, I assisted the Chinese Real Estate Chamber of Commerce with developing the first low-carbon building standards, from start to finish.

Do you have any thoughts about how the Alliance can support your work?

Certainly, the NRDC works primarily with government agencies to provide policy analysis and advising. I interact with the Chinese private sector, but I don't really do a lot in that field. Working here, I am often approached by private sector players that really need advising on how they can turn their business into a low carbon or green business. The Alliance could engage green businesses in the US to help the Chinese businesses to improve, and be more involved in spending and resource efficiency.

Dr. Kevin Mo is an International Sustainable Buildings Project Director with the Natural Resources Defense Council. He has conducted building research in both the U.S. and China for 16 years. His focus includes building solutions to climate change, building energy efficiency, international building policy analysis and green

buildings. He is currently working on sustainable building, eco-cities and low-carbon cities in the NRDC Beijing office. Prior to NRDC, Dr. Mo worked for the U.S. National Association of Home Builders Research Center (NAHB Research Center) in Maryland for six years on building energy efficiency and renewable energy, and managed the EnergyValue Housing Award for U.S. Department of Energy's Building America Program. He won the EEBA (U.S. Energy and Environmental Building Association) Legacy Award.

Dr. Mo received his Ph.D. in Building Performance & Diagnostics from Carnegie Mellon University, Pittsburgh, USA, and Master of Engineering in Building Science from Tsinghua University, Beijing, China. He also holds a bachelor's degree in architecture from Zhejiang University, Hangzhou, China.

He is a committee member of China Green Building Council and a member of American Society of Heating, Refrigerating, Air-conditioning Engineers (ASHRAE), member of Institute of Electrician and Electronics Engineers (IEEE), and associate member of American Institute of Architects (AIA).

Alliance Expands Board of Directors

The China-US Energy Efficiency Alliance recently elected Terry Fry and Bill Kissinger to its Board of Directors, adding to the non-profit's management strength as it celebrates its fifth anniversary.

"Fry has extensive experience with China energy projects as well as the leadership skills and enthusiasm necessary to bring the Alliance to new levels," said Board Chair Bryant Tong. "Bill's experience with environmental and energy issues in California and elsewhere, as well as his network and passion for the issue will help us to attract new Partners and better serve our current Partners."



Fry is Senior Vice President at Nexant. He brings over 25 years of experience with China energy projects and issues. In his work at Nexant he has focused on energy industry restructuring policies and regulations that encourage energy efficiency—with particular emphasis on DSM, environmentally friendly technologies, and private sector services. Terry has been working with the Alliance for a number of years, leading the effort to develop the DSM Manual as well as providing technical support and participating in training activities.

"It has been a privilege to work with the Alliance and its many counterparts and supporters over the past few years," said Fry. "The organization's accomplishments have resulted in several recent requests to expand the Alliance's activities in ways that are creating exciting new opportunities to help China's leadership organizations chart a more energy-efficient future. I am delighted to join the Board and help the Alliance meet these challenges."

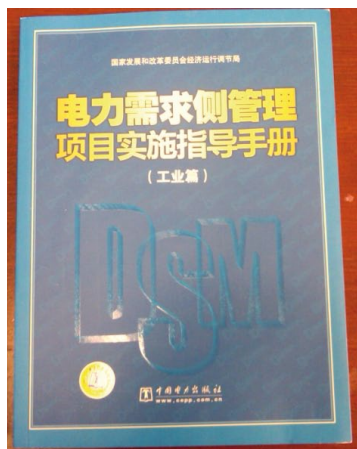


Kissinger is a partner at the Bingham McCutchen law firm, specializing in environment and energy matters. He works closely with California's investor-owned utilities as well as government agencies on behalf of gas-fired and renewable generation developers, helping to resolve the often competing regulatory objectives of the various state and federal energy and environmental regulatory agencies. Prior to Bingham he spent two years working as senior deputy legal affairs secretary to Governor Gray Davis and serving as the point person for the Governor on his Energy Task Force during the 2000-2001 California Energy Crisis as well as the primary legal contact for the Office of the Governor with Cal EPA, Cal Health and Human Services Agency, and the Resources Agency. Before that, Bill spent four years working in senior positions in the federal government, including serving as senior adviser for international economic policy at the White House National Economic Council.

"There is much that the US and China can share with one another on energy related issues and I very much look forward to being a part of that dialogue," Kissinger said.

The Board also accepted the resignation of Board member Peter Carson with gratitude for his invaluable service in helping to build the Alliance. Carson has been a member of the Board since the Alliance was established. "I continue to be fully supportive of the Alliance, its mission, and its future, but have to step aside due to time constraints," said Carson. "I will continue to provide pro bono legal services."

Note continued...



also assisting Hebei explore potential financial and investment opportunities in commercial markets. Together with RAP and USAID, the Alliance will support several DSM / EPP training programs in 2010. (Please see "Developments" on page 6)

I am happy to announce that the Chinese version of the DSM Manual (pictured to the left) has now been officially approved and published.

Copies are now publically available for distribution in China.

To enhance collaboration between organizations, the Alliance recently developed an on-line Directory of Energy Efficiency Organizations and Projects. I highly encourage all organizations

working on energy efficiency issues in China to contribute to the Directory by logging onto chinausealliance.org/directory (See article on page 1). We would also appreciate any feedback on how we can improve it to better suit your needs.

Last but not least, I am proud to announce that Mona Yew, profiled in our last newsletter, will be working with our DSM Team in China for a year. Her expertise and experience with DSM are invaluable. We are grateful to PG&E Corporation for providing this opportunity.

Please contact me or my colleagues (Fran Schulberg, Director of Operations and Tracy Rosecrans, Program Assistant) if you have any questions or would like to join the Alliance.

With best wishes,

Developments continued...

DSM Training

The Alliance is coordinating with the NRDC, the Energy Foundation (EF), and the Regulatory Assistance Project (RAP) to organize a series of DSM/EPP training programs in China during 2010. The participants will include central and provincial government officials as well as representatives of energy conservation centers, energy and power research institutions, universities, and energy management companies.

The agenda for the training sessions are being finalized, taking into account a DSM/EPP training needs assessment and implementation plan. The first session, on national demand side management and energy audits for planning and constructing an efficiency power plant, is taking place June 1 - 3. International and domestic energy efficiency experts will address a number of topics including energy efficiency portfolio approaches to constructing an EPP, program examples, program planning, design and selection criteria, portfolio economic and financial analysis, management practices, energy auditing, and portfolio screening tools.

Technical Assistance to Hebei Province

In accordance with the MOU signed with Hebei DSM Center, the Alliance/ NRDC DSM Team has been assisting with targeted energy audits and potential studies, as well as the development of an EPP

implementation framework, including EM&V. See Fall 2009 Newsletter for a description of the MOU.

In February this year, the Alliance / NRDC team participated in a review meeting for Hebei's EPP Model. During the meeting, the Hebei DSM Instruction Center presented its proposed EPP implementation framework, including its potential, preliminary research work, participating enterprises, financing mechanism, exit strategy, capacity building, and additional steps. Experts from various institutions, including NRDC, provided valuable feedback for Hebei on EPP projects.

Also, in March, the Alliance / NRDC team conducted several project evaluation audits for factories and companies in different fields such as iron and steel, coking, and hospitals. Together with the Hebei DSM Center, the super ESCO company Fakai, NRDC, RAP and ECO-Asia determined specific implementation activities related to investment grade audits, auditors, other technical trainings and financial options.

In addition to providing technical support, there are ongoing efforts to help Hebei explore possible financial and investment opportunities in commercial markets.

About the Alliance

The China-US Energy Efficiency Alliance is a non-profit organization dedicated to combating global climate change by promoting energy efficiency as the cleanest and least expensive energy resource in China. The Alliance works with experts, officials, and other key stakeholders in China and the United States to pool financial and technical resources to help China design and implement large-scale energy efficiency incentive programs known as demand side management (DSM) programs. We are able to achieve substantial and concrete results by working directly with key Chinese officials at national and provincial levels, who have invited the Alliance to provide regulatory and technical advice and training related to the design and implementation of DSM programs.

In addition to our direct assistance, the Alliance is also building a network of stakeholders interested in promoting energy efficiency in China. We engage key US and Chinese experts through our Leadership Council and Technical Advisory Group, and work in cooperation with other leading governmental and non-governmental organizations to help achieve our mission. The Alliance also hosts conferences and other events to engage a diverse group of leaders, believing that it is only through a comprehensive, multi-disciplinary approach to efficiency that China and the US can collectively work towards providing environmentally-sound options for energy use into the future.

Our Partners

The Alliance would like to extend our appreciation to our Partners for their technical, financial and in-kind support.

