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CS China Energy and Environment Update

is an electronic publication produced by the U.S. Commercial Service in China. The *Update* provides U.S. companies with information and analysis on China's energy and environmental technology market, project alerts, highlights from the U.S. Mission in China and U.S. Department of Commerce, U.S. Government activities in the cleantech sector, and a listing of upcoming events and activities.

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U.S. GOVERNMENT HIGHLIGHTS

Department of Commerce



U.S. Commerce Secretary John Bryson delivered remarks welcoming Chinese Vice President Xi Jinping and his Business Delegation at the U.S. China Business Council/National Committee on U.S. China Relations luncheon on February 15 in Washington, D.C. Bryson discussed the ways that the U.S. and China can work together to increase economic growth by expanding trade, respecting intellectual property and encouraging innovation. This luncheon was part of Vice President Xi's week-long visit to the U.S., the second of the planned reciprocal visits between the vice presidents announced by President Obama and Chinese President Hu Jintao during the latter's state visit to Washington last year.

SCO William Zarit and CS Beijing Energy Team Visit ENN

Invited by ENN Chairman Wang Yusuo, SCO William Zarit and CS Beijing energy team visited ENN on Feb 22, 2012. ENN is one of China's leading private clean energy companies. Their business covers energy distribution, smart grid, energy chemicals and solar energy.



SCO Zarit had a meeting with ENN Chairman Wang Yusuo; visited their thin film solar module plant and ENN coal-based low carbon energy lab.

Beginning in 2009, ENN has cooperated with U.S. company Duke Energy on a variety of clean energy projects in the United States. They also have a joint project with Applied Materials to manufacture solar panels for power generation.

In 2012 ENN signed a Cooperation Agreement with the state of Nevada to invest \$5 billion USD to develop a solar farm in Nevada which will create thousands of U.S. jobs.

Department of State



The State Department is now accepting applications for new EcoPartnerships!

The EcoPartnerships program brings together Chinese and U.S. entities from the public, private, and civic sectors to create mutual economic and environmental benefits. EcoPartnerships are established to advance energy security, economic growth, and environmental sustainability, and address climate change, by encouraging voluntary, cooperative partnerships at the sub-national level. Visit our "[Becoming an EcoPartner](#)" webpage to learn how to submit an application. The deadline for applications is March 8, 2012.

Expansion of U.S.-China EcoPartnerships Program

On the occasion of the visit of Chinese Vice President Xi Jinping, the United States and China have expanded the U.S.-China EcoPartnerships program with the admission of two more EcoPartnerships this week, bringing the total number of EcoPartnerships to 15. The EcoPartnerships program is aimed at developing new models of mutually beneficial voluntary arrangements between a range of state, local, and private sector organizations, to promote energy security, economic growth, and environmental sustainability in both countries. The United States and China signed the *Framework for EcoPartnerships Under the U.S.-China Ten Year Framework for Cooperation on Energy and Environment* ("EcoPartnerships Framework") in Beijing in December 2008. The two new partnerships are:

- *Cities of Columbus, Ohio, and Hefei, Anhui province:* These sister cities will form an EcoPartnership together with flagship universities in those cities. This EcoPartnership plans to use the resources from Ohio State University's Center for Automotive Research and Hefei University of Technology to develop and apply electric vehicle technologies and address other energy and environmental issues facing both cities, such as lake and wetland conservation, waste and sewage treatment, energy conservation in buildings, and urban planning. The two cities plan to work with private sector funding sources, local manufacturing, and academic centers in order to strengthen ties, mitigate negative impacts on the environment, and create green jobs.

- *The Nature Conservancy's Great River Partnership and the Chinese Ministry of Agriculture's Yangtze River Fishery Administration:* This EcoPartnership will work to advance river basin management and conservation of large river systems and will try to develop new capacity for sustainable agriculture in both countries.

This EcoPartnership will use each partner's unique strengths to develop new systems to monitor and manage large river systems such as the Mississippi and Yangtze Rivers.

For more information on EcoPartnerships, visit: <http://www.ecopartnerships.gov>

For information on how to become an EcoPartner, visit:

<http://www.ecopartnerships.gov/partner>

Department of Energy



Nuclear Energy, Safety, and Non-Proliferation

Radiation Detection Training Center Meetings with China Customs and NucTech

DOE China has attended regular meetings with China Customs and NucTech Corporation on the Radiation Detection Training Center (RDTC) at the Qinhuangdao Customs Academy. Construction of the RDTC, a deliverable for the upcoming March Nuclear Security Summit in Seoul, Korea, is now complete. In advance of a potential ribbon cutting ceremony tentatively scheduled for March 24, DOE's Pacific Northwest National Laboratory (PNNL) and NucTech, the local service contractor, will sign a contract to provide radiation detection equipment (monitors, handhelds, and mobile detection systems), radioactive test sources for training and equipment calibration, and area radiation monitoring equipment, which is needed in order to obtain the license to procure the radioactive sources. PNNL will also train RDTC instructors in China over a two week period; however, the date and venue have yet to be decided. The RDTC is jointly funded by the U.S. and China.

Meeting with the National Energy Administration (NEA) on Traveling Wave Reactor (TWR) and bi-lateral between Ambassador Locke and NEA Administrator Liu

DOE China met with NEA on a number of open topics and set up a bilateral meeting between NEA Administrator Liu and Ambassador Locke that was held February 10. The implementing arrangement for the traveling wave reactor agreement has made its way up to Administrator Liu, but has not yet been approved. Ambassador Locke expressed and reiterated support from the USG for the traveling wave reactor for its unique nonproliferation and energy security aspects.

DOE China meets with Westinghouse

On February 7 DOE China met with Westinghouse executives who provided an update on AP1000 progress in China, and highlighted that the first reactor is scheduled to go online in 2013. Westinghouse also seeks support from DOE and the USG through advocacy for the adoption of Generation III technology, and specifically AP1000's, for the next wave of nuclear reactors in China. The State Nuclear Power

Technology Corporation (SNPTC) will be a major player in the decision on whether and how to expand the use of AP1000 technology in China. DOE also reviewed options for developing a nuclear energy private – public partnership program modeled after DOE's successful renewable, fossil and energy efficiency private – public forums. On February 9, DOE organized a meeting for Ambassador Locke to meet with Jack Allen, Westinghouse President of Asia.

Center of Excellence (COE) Meetings

From February 8-10 meetings were held on development and progress of the COE. Mr. DENG Ge was introduced as the new lead for COE operations and management. DENG is also head of the State Nuclear Security Technical Center (SNSTC), a new organization approved in December 2011 by the State Council. The COE will fall under responsibility of the SNSTC. A new timeline was presented for the COE, with approval of the final design in March 2013 and operations commencing September 2015. Potential Chinese investment in the COE is \$500 million rmb.

Fossil Energy, Energy Efficiency, Renewable Energy

Feedback on the U.S.-China Clean Energy for Sustainable Cities Program Beijing visit



DOE received highly positive feedback on the program, which recently brought together a delegation consisting of representatives from eight American cities, including the Mayors of Birmingham and Ft. Worth, the Commissioner of Columbus and Franklin County, Ohio, and senior officials from San Francisco, Denver, Honolulu, Richmond and Charlotte. While in China the delegation met with senior government and city officials, as well as U.S. and Chinese companies, to promote U.S. businesses and advance the widespread adoption of advanced energy technologies in cities throughout China and the United States, with the aim of strengthening ties between U.S. and Chinese cities to support the development and deployment of clean energy.

Energy efficiency private – public agreement and smart grid pilot project advance national clean energy goals

DOE China, along with FCS, USTDA, State Grid, the U.S. – China Clean Energy Forum,

and the Energy Cooperation Program, participated in a signing ceremony in January with the Vice Mayor of Tianjin and Honeywell for China's First Smart Grid Demand Response Management Project. This pilot project not only offers a great business opportunity for Honeywell, but is also expected to enable the broader application of this technology across China, ultimately reducing the number of energy plants needed by reducing peak load requirements 10-20% in participating urban areas.

Fossil energy meetings with industry and research institutes

DOE China joined ECON and FCS in a meeting with Peabody Energy, to discuss major projects they have underway with Chinese partners, including very large clean coal-mining operations in Xinjiang, and a new proposal for a major clean-coal with CO2 sequestration project in the U.S. DOE also met with the U.S. Gas Technology Institute and the Clean Air Task Force to help plan a major conference in October on unconventional gas. DOE met with Zach Friedman of the Center for Climate Strategies (CCS) of Johns Hopkins University as well, to discuss their efforts to localize in China tools that CCS uses in the U.S. to calculate the economic benefits (in added GDP and in jobs) as well as the economic costs of adopting climate change mitigation strategies.

Clean Energy Research Center (CERC) and IPR cooperation update

MOST has agreed to the first week of March for the CERC IP Workshop in Hainan, in order to highlight the island's clean energy projects, such as the use of electric vehicles and large solar power generation. A Letter of Intent is being developed to include the IP workshop in Hainan, IP training (potentially cosponsored by an IP law firm and/or U.S. University), and a joint IP Task Force for clean energy between CERC and MOST. Approximately 80 invitations will be sent out for the IP workshop. The workshop is a collaborative effort for CERC with direct funding support from China's Ministry of Science and Technology (MOST) and the U.S. Department of Energy. It brings together the top IPR legal teams and industry representatives from both sides to build on the success of IPR implementation under the CERC and to explore areas for mutual collaboration beyond CERC.

Meeting with Energy Cooperation Program (ECP)

DOE China met with the Energy Cooperation Program (along with FCS) to streamline ideas that DOE can work on with the National Energy Administration (NEA) to accelerate commercial deals between our companies, in both countries, on clean energy. Some of the results of this conversation were reflected in the bilateral meeting between Ambassador Locke and NEA Administrator Liu Tienan on February 10.

Advancing US – China Shale Gas Cooperation

DOE and the National Energy Administration agreed to establish a government to government shale gas regulatory workshop during last fall's US – China Oil and Gas Industry Forum. During the week of Feb. 9th final planning for the workshop was underway, that will share best practices and lessons learned in shale gas fracturing techniques, permitting and regulation of land, water and air quality, and permitting and monitoring of the shale gas projects. The intent is to enable China to develop a sound shale gas investment and regulatory environment that encourages shale gas development in China while promoting US commercial participation.

DOE China meets with Energy Cooperation Program's (ECP) Smart Grid Working Group

On Feb 15, DOE China joined FCS and USTDA in meeting with ECP's Smart Grid Working Group. They are one of the largest working groups (WG) and the fastest-developing within ECP. Discussion focused on ECP's March annual meeting, shale gas cooperation, and NEA interest in the May Shale Gas Symposium. The DOE – NDRC Energy Efficiency Forum was also raised and received a positive response from the ECP WG.



ECP Smart Grid Working Group Co-chair Honeywell Partners with Tianjin Economic-Technological Development Area to Launch China's First Demand Response Project

Honeywell, co-chair of ECP's Smart Grid Working Group, signed an agreement in January with the Tianjin Economic-Technological Development Area (TEDA) to implement China's first Smart Grid Demand Response project. This agreement also represents the launch of the Demand Response System Pilot, which aims to develop a nationwide set of smart grid industry standards and regulations in China — an initiative jointly sponsored by the U.S. and Chinese governments.

With funding support from U.S. Trade and Development Agency, the Smart Grid Demand Response project will help temporarily reduce energy use in commercial, industrial

and government buildings, thereby cutting energy costs and emissions and improving electrical grid stability. Under the Honeywell-TEDA agreement, Honeywell will conduct a demonstration project using its automated demand response (Auto DR) technology at select facilities within the TEDA. Smart Grid Working group member AECOM will provide economic analysis on how the demonstration project will help TEDA improve its investment and operational profile as well as contribute to energy efficiency and environmental protection.

The Smart Grid Demand Response project is a key initiative of ECP's Smart Grid Working Group, which is also co-chaired by IBM and Cisco. The objective of the working group is to pilot and commercialize smart grid initiatives in China with their Chinese stakeholders.

For more info, please Email: ecp@amchamchina.org

Or visit: www.uschinaecp.org

PROFILE OF THE MONTH:



The global quest for improved energy efficiency and lower carbon emissions is spurring new industries and market opportunities. One example is the sustainable aviation bio-fuels (SAB) industry in China, whose prospects are large given the rapid and planned growth of the country's commercial airline sector. For such an industry to achieve success requires the participation of multiple stakeholders across sectors and on a platform where all can be appropriately engaged. Equally important, there must be a champion to drive the effort forward – a role that The Boeing Company took on as co-chair with Corning and Cummins of the Clean Transportation Working Group (CTWG).

Reducing Air Emissions by Creating a New Industry

For Boeing, the American corporation synonymous with aviation – the development of the SAB industry in China makes sound business sense. Not only is Boeing a leading supplier of airplanes in China, it is also a pioneer in environmental sustainability. As part of its corporate strategy, Boeing seeks to manufac-

Boeing

ture each new generation of airplanes so they are increasingly more fuel efficient than the airplanes they replace. Thus, the company's push to develop the SAB industry is fundamental to achieving its business and environmental goals.



Working Through Peers in the CTWG to Build the Framework

To have a role in the launching of a SAB industry in China, Boeing began a series of partnerships and initiatives with the Chinese government and related entities. To build the necessary cross-sector industrial frame-

work, Boeing then sought to foster collaboration among its commercial peers throughout the SAB value chain, and also to garner support from both the US and Chinese governments.

Through the CTWG, and with the support of the US DOE and DOC, Boeing established a formal dialogue with China's National Energy Administration (NEA) about the country's national strategy for sustainable aviation biofuel development.

Critical Turning Point

In early 2010, Boeing met with China's national alternative fuels working group, including representatives from NEA and a total of 13 Chinese ministries. This critical engagement and the continued work of the CTWG resulted in the following significant milestones that have supported the adoption of SAB in China:

- Establishment of a NEA-ECP sub-working group on sustainable aviation biofuels, with Petro-China designated as the lead Chinese entity for SAB.
- Inclusion of the Civil Administration Aviation in China (CAAC) as the 14th ministry-level entity in the nation's alternative fuels working group.
- The May 2010 signing of three memoranda of understanding with Chinese partners focusing on:

1. A joint research study between Petro-China and Boeing to evaluate the development of the Chinese SAB industry.
2. A joint research center with the Chinese academy of Science's Qingdao Institute of Bio-Energy and Bio-Process Technology. NEA has requested that the research cooperation include more companies and be focused on the development of an SAB industrial value chain.
3. A Series of demonstrative biofuel flights that will utilize viable feedstock supply grown in China. Boeing, Pratt & Whitney, Honeywell UOP and Air-China's participation was secured through the assistance of NEA and CAAC.

"It was not just us knocking on the door. The door was opened because there was a mechanism for US-China cooperation, a cooperation realized through the ECP platform," Al Bryant, Boeing's Vice President of Research and Technology.

To learn more: www.boeing.com and <http://www.uschinaecp.org/boeing/>

UPCOMING EVENTS

IE Expo 2012 (IFAT China + EPTEE + CWS)– March 7-9, 2012: CS Shanghai will support this comprehensive environmental show.
For more info contact: Scott.Yao@trade.gov

Macau International Environment Cooperation Forum & Exhibition, MIECF– March 29-31, 2012:
For more info contact: Ming.yang@trade.gov

The 12th China International Petroleum & Petro-Chemical Technology & Equipment Exhibition (CIPPE)–March 19-21, 2012: CS will be hosting a USA pavilion at what is advertised as "the largest petroleum exhibition in the world"
Please contact: Jianhong.Wang@trade.gov

The 12th China International Nuclear Industry Exhibition–April 3-6, 2012: CS Beijing will support this show.
For more info contact: Yue.Cao@trade.gov

CHINA REFRIGERATION 2012 –April 11-13, 2012: CS Beijing will support the show.
Please contact: Shujuan.Cao@trade.gov

Buyer Delegation to Waste Expo in Las Vegas–May 1-3, 2012: CS Shanghai will bring a Chinese buyer delegation to visit this solid waste show.
Please contact: Scott.Yao@trade.gov

AWEA Wind Power–June 3-6, 2012: CS Beijing will support the show in the U.S.
For more info contact: Hongying.cai@trade.gov

The 5th edition of Aquatech China 2012 in Shanghai–June 6-8, 2012: CS Shanghai will support this show and set up a U.S. Pavilion.
For more info contact: Scott.Yao@trade.gov

EP China 2012 (The 14th International Exhibition on Electric Power Equipment and Technology)–September 26-28, 2012: CS Beijing will support the show.
For more info contact: Yue.Cao@trade.gov

China Wind Power (CWP 2012)–October 16-18, 2012: CS Beijing will support the show.
Please contact: Hongying.Cai@trade.gov

Eco Expo– October 27-30, 2012: CS Hong Kong will support the show.
For more info contact: Yi.Wang@trade.gov

The 11th China International Exhibition on Housing Industry–November 21-23, 2012
For more info contact: Shujuan.Cao@trade.gov

China International Architectural Expo– November 20-22, 2012
For more info contact: Shujuan.Cao@trade.gov

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