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**CS China Energy and Environment Update**  
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**March 2011**

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**GUEST CONTRIBUTIONS AND COLUMNS**

**Opportunities Under the 12th Five-Year Plan**

*By APCO Worldwide, Beijing Office*

**China’s Twelfth Five-Year Plan**

Reflecting the heritage of a command economy and the engineering background of many senior leaders, the Chinese policy establishment prefers a predictable and steady regulatory environment conducive to meeting its long-term development goals. China’s Five-Year Plan for National Economic and Social Development (FYP) is an important tool to achieve China’s development objectives by mapping out the country’s future progress via guidelines, policy frameworks, and targets for policy-makers at all levels of government. This March, nearly 3000 delegates at the 4th Plenary Session of the 11<sup>th</sup> National People’s Congress (NPC) are scheduled to give the 12<sup>th</sup> FYP final approval. The plan will emphasize the quality, rather than the quantity, of growth, and ensure that more Chinese citizens benefit from China’s development. To meet this objective, the 12<sup>th</sup> FYP will focus on economic restructuring, social equality, and environmental protection.

**Energy & Environment: A Sector Poised to Benefit**

Chinese planners have included in the 12<sup>th</sup> FYP several preferential policies that are designed to develop seven “Strategic Emerging Industries” (SEIs). The intention is for these industries to become the backbone of China’s economy in the decades ahead. Three of the seven SEIs are devoted to the energy and environment sectors: “Energy Efficiency and Environment,” “New Energy” and “New Energy Vehicles.” The government is reportedly prepared to spend up to RMB 100 billion on all seven industries during the 12th FYP period, with an aim to increase SEI’s contribution from approximately 5 percent of GDP today to 8 percent by 2015. For the new energy sector, China aims to develop advanced technology in the nuclear, solar, and wind sectors. For energy-efficiency and environmental conservation sectors, the focus will be on waste recycling and clean coal technologies. For new energy vehicles, China is looking for increased capabilities in electronic controls, motor batteries, and drive motors.

The 12<sup>th</sup> FYP also includes several hard energy and environment targets: a non-fossil fuels in total energy mix target of 11.4 percent, an energy efficiency target of 16 percent (down from the 11<sup>th</sup> FYP’s 20 percent goal, which was just missed by a percent), a new carbon intensity target of 17 percent (a reduction in carbon emissions per unit of GDP from 2010 levels), 8 percent targets for sul-

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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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[www.buyusa.gov/china/en](http://www.buyusa.gov/china/en)

The views and opinions of guest contributions do not necessarily represent those of the Commercial Service or U.S. Government. Inclusion does not represent or imply endorsement of the individual or organization.

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phur dioxide and COD (compared to 10 percent in the 11<sup>th</sup> FYP), and new 10 percent targets for reducing nitrogen oxides and ammonia nitrogen.

### **Implications for Foreign Energy & Environmental Companies**

While the plan to promote SEIs should yield opportunities for foreign companies due to incentives created for private investment, given China's current drive to develop its indigenous innovation capabilities, these preferential policies may be biased toward domestic firms. Foreign firms must also be aware of the government's proclivity to "re-innovate" foreign technology. Either way, increasing this sector's technological capabilities will have Chinese regulators welcoming advice and training from experienced foreign companies, offering an opportunity to help guide implementation. This assistance could range from informal consultations to more formal programs including foreign-established R&D bases in China. Foreign firms may also consider the use of partnerships with local companies to better access the significant funding opportunities available.

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## **State Visit Creates \$20 Billion in Greentech Deals**

*This segment is a summary of the China Greentech Initiative's Special Edition Continuous Market Update*

In January of this year Chinese president Hu Jintao spent four days in the U.S. for a state visit that was described as "the most important U.S.-China meeting in 30 years." Hu's state visit resulted in US\$45 billion in new business deals, of which US\$ 20 billion were greentech-related. Nine China Greentech Initiative partners signed 12 deals, valued up to US\$ 7 billion. Those greentech deals cover the topics of carbon capture and sequestration, nuclear, smart grid, electric vehicles, clean coal, and renewable energy.



*President Barack Obama and President Hu Jintao of China hold a joint press conference in the East Room of the White House, Jan. 19, 2011. (Official White House Photo by Chuck*

More details on energy deals signed during the state visit can be found in a White Press Release from January 19, 2011. [Click Here for Full Text.](#)

The full version can be found on CGTI's news page from January 25, 2011. [www.china-greentech.com/news](http://www.china-greentech.com/news)

## U.S. GOVERNMENT HIGHLIGHTS

### CS Shanghai Outreach Effort



Headed by Principle Commercial Officer (PCO) Bill Brekke, the CS Shanghai Energy Team conducted outreach to Nanjing on February 28, 2011. In the morning, PCO Brekke, CO Greg Harris and CS Scott Yao attended the signing of the agreement between USTDA and the State Grid Electric Power Research Institute (SGEPRI) for the feasibility study on the demand side management pilot

project. PCO Brekke delivered remarks for the event.

In the early afternoon, CO Harris and CS Yao paid a courtesy visit to the China Renewable Energy Industry Association Nanjing Office. The association made a brief introduction on the China wind power market, and explored the opportunities for possible mutual cooperation in the future. CS Shanghai promoted two IBP shows WindPower 2011 and RETECH 2011 to the association.

Later that day, PCO Brekke, CO Harris and CS Yao participated in the Chubb Jiangsu Branch Company opening ceremony. Senior officials from the Jiangsu Province government including Province Deputy Secretary General Wang Quan, and senior officials from Nanjing City government including Vice Mayor Zheng Zeguang attended the opening. PCO Brekke delivered remarks and participated in the ribbon cutting ceremony.

### USTDA Supports Smart Grid Development in China

The U.S. Trade and Development Agency (USTDA) continued its commitment to support the U.S.-China Energy Cooperation Program established in 2009 by awarding a \$660,000 grant to the China State Grid Electric Power Research Institute (SGEPRI) to fund a feasibility study and pilot project on the implementation of smart grid demand response management technology in China. The grant reflects the agency's strategy of focusing on projects that open China's market to U.S.-manufactured technologies as China continues to develop its energy infrastructure.

The development of a smart grid demand response system in China would increase energy efficiency and effective resource management, providing economic and environmental benefits to communities and households throughout China. The project will further generate opportunities for

U.S. manufacturers to gain a foothold in the China smart grid market, estimated to be worth \$10 billion annually.

The project will entail installation of Honeywell International and AECOM demand response management technologies in selected commercial



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“U.S. companies are leaders in smart grid technology. Exporting these clean energy solutions provides an opportunity to create green jobs here in the U.S.,” said USTDA Director Lee Zak. “This grant also supports the Administration’s goals of increasing cooperation with China in areas of clean energy technology and climate change.”

The grant was conferred during a grant signing ceremony held at the State Grid Electric Power Research Institute in Nanjing, China.

*This segment is from a March 1, 2011 news release from the U.S. Trade and Development Agency. [Click Here](#)*

## New Renewable Energy and Energy Efficiency Portal

U.S. companies can find news, events and market research for the U.S. exporter at a new portal. See:

<http://www.export.gov/reec/>



## NEWS AND ANALYSIS

### China Greentech Initiative Will Release 2011 Report



At the end of April, the China Greentech Initiative will be releasing their 2011 report. The 2011 China Greentech Report analyzes recent developments in the greentech sector in China and examines existing and emerging greentech solutions in six sectors. The report focuses on market opportunities and environmental opportunities of solutions in each sector.

The Report is the culmination of a research process led by a 30 person team that inspired significant contributions from hundreds of industry experts, in particular, through 18 in-depth working sessions. The report is targeted at CGTI's partners and strategic advisors, business executives in the Greentech sectors and all other interested parties.

Founded in 2008, The China Greentech Initiative (CGTI) has rapidly grown to become a China-

international collaboration platform of 100+ organizations, focused on identifying, developing and promoting green technology solutions in China. Partnering organizations are technology buyers and sellers, service providers, investors and policy makers. Built on two cornerstones, strategic market research and a network of 200+ industry experts, CGTI provides participating organizations with world-class market insights and partnering opportunities.

Companies interested in specific industry information should consider joining CGTI's partner program. The Partner Program is the core of China Greentech Initiative, designed as an open collaborative platform to create value for Partners and Advisors. The Program is organized around six distinct sectors: Cleaner Conventional Energy, Renewable Energy, Electric Power Infrastructure, Cleaner Transportation, Green Building, and Clean Water.

*The 2011 report can also be downloaded for free at the CGTI website at the end of April [www.china-greentech.com](http://www.china-greentech.com)*

## China's Nuclear Power Goals: Too Aggressive?

By Kristen Yee, CS Beijing Associate

Over the next decade China's nuclear power industry is expected to grow rapidly reaching a power generation capacity of 80 gigawatts (gW). However, an industry expert from the National Development and Reform Commission's (NDRC) think tank cautioned that China's targets may be "overaggressive" and harm the healthy development of the sector.



According to the National Energy Administration (NEA) China currently has 13 reactors in operation with an additional 28 units under construction. The current nuclear power generation capacity is at 10.8 gW and is expected to reach 11.74 gW by the end of the year. If China exceeds its goal of 80 gW by 2020 it may place excessive pressure on the industry. Inadequate domestic equipment manufacturing and safety risks are to blame says an expert from the Energy Research Institute (ERI).

China will maintain its current nuclear growth rate until 2013 since they need time to better understand the third-generation technology. However, experts predict that only 30 percent of equipment will be third-generation technology since China is keen to increase the localization rate of nuclear power equipment.

The shortage of uranium is another reason hindering the growth of China's nuclear industry. China can only produce 750 tons annually even

though it is estimated to have 2 million tons of natural uranium. According to the World Nuclear Association (WNA), if China is to meet its 2020 goal of 80 gW they will need approximately 20,000 tons of uranium annually. New technology to extract uranium from spent fuel needs at least a decade to be a widespread industrial application, but if successful, will provide China with one-third of their uranium requirements.

China has projected that they will pump US\$110 billion into nuclear power plants by 2020. The new infrastructure is expected to help China reach their goal of 15% total energy production from clean energy sources. Nuclear is expected to represent 5 out of the 15 % of power generated from clean sources.

Due to the seriousness of recent events involving a nuclear power plant in Fukushima, Japan it is unclear how the future nuclear industry will be affected in China. However, we believe that the impact will be temporary while the Chinese government examines the safety of the program.

In a government release from March 16, 2011, officials stated that they would suspend the approval of nuclear plants until safety standards could be revised.

The State Council is also calling for comprehensive safety checks and enhanced management at all existing plants after stating "Safety is our top priority in developing nuclear power plants".

On March 12, China's National Nuclear Safety Administration began monitoring nationwide radiation levels and posting daily results on their website.

Although safety will continue to remain an important concern for China, it is highly unlikely that China will change direction on its ambitious plans to dramatically increase nuclear power capacity. China, quite simply, needs the energy, and nuclear remains the best option for improving energy security given continued GDP growth and energy usage trends. Contact: [Kristen.Yee@trade.gov](mailto:Kristen.Yee@trade.gov)

## UPCOMING EVENTS

### 5th China New Energy International Forum

March 30-31, Beijing

Web: [www.neforum.cn/2010/en](http://www.neforum.cn/2010/en)

Contact: [lijiajia@cnecc.org.cn](mailto:lijiajia@cnecc.org.cn)

The U.S. commercial Service in Beijing supports the China New Energy International Forum, a high-level platform created by China New Energy Chamber of Commerce for networking in the new energy field. Last year's event attracted over 800 participants from 20-plus countries, including government officials, decision-makers, stock holders and experts. The theme of the 5th forum is "New Energy: the Burgeoning Industry of Strategic Importance".

### 1st Annual World Congress of Bioenergy (WCBE-2011)

April 25- 30, Dalian

Web: <http://www.bitlifesciences.com/wcbe2011/>

Contact: [kelly@bitlifesciences.com](mailto:kelly@bitlifesciences.com)

WCBE-2011 provides an ideal platform to showcase your new technologies and products in China. It is developed to maximize exposure of exhibitors, with coffee breaks and poster sessions for delegates taking place in the exhibition area.

### Electric Power 2011 May 10-12, Rosemont, IL

Web: [www.electricpowerexpo.com](http://www.electricpowerexpo.com)

Contact: [Yue.Cao@trade.gov](mailto:Yue.Cao@trade.gov)

The U.S. Commercial Service is recruiting Chinese buyers. This conference and exhibition covers maintenance and operations of coal, gas, nuclear and renewable power plants. It also offers an interactive roundtable with top executives to share ideas, experiences and management trends.

### WINDPOWER 2011 May 22-25, Anaheim, CA

Web: [www.windpowerexpo.com](http://www.windpowerexpo.com)

Contact: [Hongying.Cai@trade.gov](mailto:Hongying.Cai@trade.gov)

The U.S. Commercial Service is recruiting Chinese buyers. WINDPOWER 2011 is the world's largest wind energy development forum. Wind energy companies from all sectors are represented including wind generators, blades, towers and component manufacturers, as well as service providers including developers, operators, engineering firms, contractors, financial and legal services and training firms.

### CIEPEC 2011–Beijing June 7-10, Beijing, China

The Commercial Section of the U.S. Embassy in Beijing is pleased to invite American firms to participate in our U.S. Pavilion at the 12th China International Environmental Protection Exhibi-

tion and Conference (CIEPEC 2011) to promote American goods and services to the Chinese environmental protection market.

The exposition, with a 23-year track record, is one of the most established events of its kind in Asia, showcasing an extensive array of environmental protection products, equipment, and services. CIEPEC 2011 will be held at the China International Exhibition Center in Beijing from June 7-10, 2011.

This year, thanks to federal funds for market development, two organizations will assist in the recruitment and preparation of U.S. firms, and will offset some of the costs to U.S. exhibitors.

U.S. companies outside of Colorado can use the Green Export Enabler Program (GEEP) featured at: [www.GreenExport.org](http://www.GreenExport.org).

Colorado companies, please consult the Co-EXist program at <http://www.colorado.gov/trade>

### Offshore Wind China 2011 June 15 – 17, Shanghai

Web: [www.offshorewindchina.com](http://www.offshorewindchina.com)

Contact: [scott.yao@trade.gov](mailto:scott.yao@trade.gov)

With China's first round of offshore wind tender projects launched in April 2010, OFFSHORE WIND CHINA 2011 will move to the new venue, Shanghai New International Expo Center and newly built Shangri-La's Kerry Hotel Pu-

dong. The event will be raised to a new level, with an exhibition two times larger than last year's and a larger international conference.

### **EP Shanghai 2011**

**September 19 – 21, Shanghai**

Web: <http://www.2456.com/ep>

Contact: [scott.yao@trade.gov](mailto:scott.yao@trade.gov)

The U.S. Commercial Service in Shanghai is pleased to invite American firms to participate in the USA Pavilion at EP Shanghai 2011/Electrical Shanghai 2011 to promote American products, equipment, technologies and power generation, transmission, distribution services to China's emerging electric power market. EP Shanghai 2011/ Electrical Shanghai 2011, organized and supported by the China Electricity Council and State Grid Corp. of China, will take place at the Shanghai International Exhibition Center (INTEX). It is the only power exhibition that enjoys support from the major power corporations and grid companies in China. EP Shanghai/Electrical Shanghai 2011 is an excellent vehicle for U.S. firms interested in exporting to China.

### **RETECH 2011**

**Sept. 20-22, Washington D.C.**

Web: [www.retech2011.com](http://www.retech2011.com)

Contact: [Hongying.Cai@trade.gov](mailto:Hongying.Cai@trade.gov)

The U.S. Commercial Service is

recruiting Chinese buyers. RETECH's Business Conference is well-known for delivering educational content from more than 250 industry-leading speakers, covering all of the industry's key technologies: wind, solar, hydro, ocean, geothermal, biomass, bio-fuels, waste energy and cross-cutting sections on markets, industry, finance and policy.

### **1st Low Carbon Earth Summit (LCES-2011)**

**October 19- 26, Dalian**

Web: [www.lcesummit.com/](http://www.lcesummit.com/)

Contact: [kelly@bitlifesciences.com](mailto:kelly@bitlifesciences.com)

The global low carbon economy wave has attracted attention from almost all walks of life. Particularly after the UNFCCC Copenhagen Conference 2009 (COP-15), those involved are not just limited to the people involved in policy on economic levels, but include almost every community from politics to technology and the general public. Currently, "low carbon" has become one of the most common phrases in daily life. It will be held in Dalian, China at the World Exposition Center.

### **China International Technology Exchange and Equipment Exhibition on Coal and Mining, Oct. 28-31, Beijing**

Web: [www.chinamineexpo.com](http://www.chinamineexpo.com)

Contact: [Jianhong.Wang@trade.gov](mailto:Jianhong.Wang@trade.gov)

The Commercial Service invites companies to join the USA Pavilion at the 14th bi-annual Coal

and Mining Expo. This event is now the largest and best established coal expo in China. The show attracts domestic and international equipment companies in coal and mining, transportation, washing, and safety.

### **POWERGEN International Dec. 13-15, 2011 Las Vegas**

Web: [www.power-gen.com](http://www.power-gen.com)

Contact: [Yue.Cao@trade.gov](mailto:Yue.Cao@trade.gov)

The U.S. Commercial Service is recruiting Chinese buyers. This Conference and trade show provides comprehensive coverage of trends, technologies and issues facing the generation sector. PGI features a multi-track conference program plus curriculum of pre-conference courses and the world's largest power exhibition showcasing thousands of products, technologies and services.

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