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## U.S. GOVERNMENT HIGHLIGHTS

### LanzaTech Launches Demo Plant



*British Prime Minister Tony Blair, President of Baosteel Group, Mr He Wenbo and the President of the Chinese Academy of Sciences, Dr Bai Chunli, Shanghai Deputy Mayor Ai*

On March 27, 2011 CS Commercial Officer Bryan Larson participated in a ceremony to launch the construction of a demo plant that will use LanzaTech's gas fermentation technology for the production of fuel ethanol from steel mill off gases. LanzaTech, Baosteel Group Corporation, and the Chinese Academy of Sciences (CAS) partnered to together to launch this project. Also in attendance

was consultant to LanzaTech and former British Prime Minister Tony Blair, Chairman Vinod Khosla, and CEO Dr. Jennifer Holmgren, joined by Mr. He Wenbo, President of Baosteel Group and Dr. Bai Chunli, President of the Chinese Academy of Sciences.

In February the clean technology company and the world's third largest steel producer signed a joint venture agreement that will see the construction of a 100,000 gallon a year demo plant, with the intention of quickly scaling the model again for the first commercial plant in China. As an important part of the ceremony, the partners have also announced the intention to form a dedicated CAS, Baosteel, LanzaTech Research and Development Center to ensure the continued growth and evolution of this novel technology.

A new joint venture company, Shanghai Baosteel LanzaTech New Energy Company Ltd (上海宝钢朗泽新能源有限公司), has been set up to be responsible for delivering the successful demonstration unit and then a number of commercial production facilities.

Mr. He Wenbo says LanzaTech has developed a world leading technology to convert off gases into ethanol, and CAS will facilitate the commercialization of such technology."

He also stated that "What we start today will have huge potential in the Chinese market as it will positively impact the steel mill's recycling operations, and China's new energy development".

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

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## **NEWS AND ANALYSIS**

### **Heavy Metals Control Program Announced**

*By Ivy Yang, CS Beijing Associate*

The Hunan Provincial Development and Reform Commission announced that the State Council has formally approved the "Heavy Metal Pollution in the Xiangjiang River Basin Management Implementation Plan." This is the first heavy metal pollution control program that the State Council has approved and will be used as a pilot program for future references.

The preparation of the heavy metal pollution control plan began in July 2009. The new plan seeks to reduce discharge of lead, mercury, chromium, cadmium, and arsenic by 15% from China's 2007 level of 900 tons. Minster Zhou of the Ministry of Environmental Protection estimates that RMB 75 billion (US\$ 11.41 billion) will be spent over the next five years to address heavy metal pollution. The new plan will cover the geographical area of eight cities, including: Changsha, Zhuzhou, Xiangtan, Hengyang, Chenzhou, Loudi, Yueyang, and Yongzhou.

The Hunan Provincial Party Committee Secretary Ren Zhoujiang expressed to Chinese and foreign media that Hunan province is confident in its efforts to further improve the status of the heavy metal pollution controls during the 12<sup>th</sup> Five-Year Plan period. He wants to one day turn Xiangjiang River into the Oriental version of the Rhine River.

*This segment is a summary of a statement released on March 22, 2011, from the Ministry of Environmental Protection. Read the full Chinese text ([here](#)).*

### **CGTI Launches China Greentech Report 2011**

The China Greentech Initiative (CGTI) launched *The China Greentech Report 2011* at the Annual Summit of Green Companies, organized by China Entrepreneur Club, in Qingdao, China on April 21, 2011. The 2011 Report is a companion document to *The China Greentech Report 2009*, which CGTI launched at the World Economic Forum in Dalian in September 2009. With over 50,000 copies in use, the 2009 Report is commonly referred to as the 'primer' by which to understand China's greentech markets.



*Ribbon cutting at the launch of the 2011 report.*

*The China Greentech Report 2011* cites five specific trends that are driving China's emergence as a global greentech leader. It includes market updates of six greentech sectors, and summaries of 19 prioritized greentech market opportunities.

If you would like to download the Initiative's reports and other deliverables, please [register here](#) now for free.

## Future of China's Nuclear Industry

By Kristen Yee, CS Beijing Associate



According to the Xinhua News agency, China guarantees the safety of its nuclear power facilities and will not abandon plans to expand. However, following the Japan crisis, the country will continue to evaluate safety of all reactors.

China currently has 14 reactors in operation, 28 under construction,

and 28 planned. Construction of a new plant will commence next month in Shandong province. The new plant will contain fourth-generation technology, which is thought to be less susceptible to meltdowns and avoid situations similar to the Fu-

kushima, Japan incidents.

Fears that similar nuclear disasters would take place in China have risen. However, Cui Shaozhang, Deputy General Manager at Huaneng Nuclear Power Development Company ensures there are huge technologies differences between the two countries. Japan started its nuclear power program in 1971 and uses older technology and China's program is more modern and began in 1994.

On April 21, He Yongjian of NEA's Planning Department, stated that all reactors under constructions will be operational by 2015 for a total of 40 GW of installed capacity.

*This segment is a summary of news reports and analysis. It does not represent the views of CS Beijing or the U.S. Government.*

## Tax Breaks For Energy Service Industry

By Kristen Yee, CS Beijing Associate

On February 17, 2011 the Ministry of Finance and the State Administration of Taxation issued a joint statement regarding tax breaks for energy service companies. Qualified energy service companies (ESCOs) and their customers will be eligible for tax exemptions or reductions in a variety of categories.

ESCOs will be exempt from business tax, which is generally 5% of their sales from qualified energy performance contracting (EPC) projects. When goods, such as energy saving equipment or facilities, are transferred to energy users they will also be exempt from 3-17% of value added tax (VAT). In order to qualify for these savings ESCOs must have "savings-sharing" contracts with the energy user. ESCOs will also be exempt from income tax derived from EPC projects for a limited time and given a reduced rate thereafter. ESCOs and energy users will also be privy to prefer-

ential tax treatment for assets used for certain EPC projects.

In 1998, there were only three officially recognized ESCOs. By 2009, the number ESCOs grew to 502, with over 4,000 contracted projects valued at RMB 28 billion. These tax breaks demonstrate how committed the Chinese government is to saving energy. Making tax breaks for EPC projects a tool to promote energy savings will hugely benefit ESCOs and energy users.



## Local Government Accountability

*By Kristen Yee, CS Beijing Associate*

China wants to hold local governments more accountable for environmental protection as the country seeks to reduce pollution. Zhang Lijun, Vice Minister for Environmental Protection, said that reaching China's energy consumption targets depends mainly on efforts at the provincial level. "Grasping the balance between economic growth and environmental protection is the responsibility of all levels of government, especially local governments," Zhang also stated.

In 2010 China surpassed Japan to become the world's second largest economy. It also surpassed the U.S. to be the world's largest energy consumer and emitter of greenhouse gasses. The government has set targets to reduce its "energy intensity"—energy use per unit of GDP by 17% during the 12<sup>th</sup> Five-Year Plan period. It was announced in late

February that China fell short of its 20% energy intensity reduction goal during the 2006-2010 period by just 0.9%.

China plans to reach their goal by reducing emissions. Specifically, China is targeting sulfur dioxide, nitrogen oxide, and ammonia nitrogen. They also have plans to reduce the demand for chemical oxygen. This is the first time that China has introduced nitrogen oxide and ammonia nitrogen into the planning process. They will be issuing nitrogen oxide reductions for the cement and power-generation industries. Power plants with denitrification units will also begin to receive preferential electricity rates.

*This segment is a summary of a Bloomberg ([Article](#)) released on March 12, 2011. It does not represent the views of CS Beijing or the U.S. Government.*

## New Water Efficiency Goals Released

*By Kristen Yee, CS Beijing Associate*

On March 28, 2011 the Chinese government issued new water efficiency goals. The government has pledged to reduce its "water intensity"—consumption per unit of GDP, by 30% in the next five years. Beijing has ambitious plans to reduce water use by 7% in 2011 alone. The total target is 5% higher than originally planned when the National People's Congress released the 12<sup>th</sup> Five-Year Plan.

Some analysts believe that China is unlikely to meet the new target, but it is a good sign that water efficiency goals are included in the planning process. It is also believed that if the price of water were to increase it would deter factories and farmers from wasting precious water, helping to alleviate the water shortage.

China faces enormous water shortages. China holds over 20% of the world's population but has less than 7% of the world's freshwater resources, resulting in water resources per capita one quarter of the world average. In 2009, nearly 270 million

Chinese lacked safe drinking water. China's demand for water is estimated to grow to 654 billion cubic meters in 2030, a 47% increase over 1980. According to the *China Greentech Report 2009*, in 2010, 400 out of 655 cities suffered from water scarcity. Cities such as Beijing and Tianjin faced the most intensive shortages.



*This segment is a summary of a Forbes opinion ([piece](#)) released on April 3, 2011 and an Associate Press ([article](#)) released by the China Post on March 29, 2011. It does not represent the views of CS Beijing or the U.S. Government.*

## UPCOMING EVENTS

### **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)

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 Exhibition 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 Pudong. 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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