

## **Beijing Shougang LanzaTech New Energy Science & Technology Company Earns Roundtable on Sustainable Biomaterials (RSB) Certification**

*LanzaTech's joint venture with Shougang Jingtang Iron and Steel United Company and the Tang Ming Group earns first-ever RSB certification for waste-gas to biofuel process*

**WASHINGTON, D.C., USA and Beijing, China (November 5, 2013)** Beijing Shougang LanzaTech New Energy Science & Technology Co., Ltd. and the Roundtable on Sustainable Biomaterials Services Foundation, the implementing entity of the RSB, announced today that Beijing Shougang LanzaTech New Energy Science & Technology Co., Ltd. has earned RSB's sustainability certification for the joint venture's facility that converts waste steel mill gases to sustainable biofuels. The RSB is a global sustainability standard and certification system for biofuels and biomaterials production. The facility, which utilizes LanzaTech technology, is the first RSB-certified biofuel plant in China, and the first of its kind anywhere to receive this key certification for industrial carbon capture and utilization.

"The joint venture uses a process that creates a sustainable biofuel and does so by efficiently reusing greenhouse gases that would have otherwise been released into the atmosphere," said Peter Ryus, RSB Services' CEO. "This solution, which does not impact the food chain or land use, meets the RSB principles and practices and serves as an example of how continued innovation in the industry will lead to sustainable biofuels in the future. We are honored to be working with LanzaTech and their joint venture partners on greenhouse gas reduction and global sustainability improvements."

RSB certification shows the joint venture's commitment to environmental improvements through a novel biological approach that converts waste carbon emissions from steelmaking into biofuels and chemicals. Using the RSB methodology and assumptions based on commercial production, it is estimated that ethanol from the process may reduce life cycle greenhouse gas emissions by 60 percent compared to petroleum fuels.

In addition, the joint venture partners anticipate that the process will improve local air quality by materially reducing nitrogen oxide (NOx) and particulate emissions. The technology has the potential of making a significant global impact by reusing up to 150 million tonnes of CO<sub>2</sub> from the global steel industry alone.

The use of novel gas fermentation technology to convert industrial waste gases into biofuels is aligned perfectly with the RSB Principles and Criteria, which go beyond greenhouse gas emissions reductions to focus on economic and social sustainability. By using a widely available waste resource located in areas typically unsuitable for agriculture, LanzaTech's process reduces overall emissions without negatively impacting the food chain or causing land use changes. By enabling the production of fuels from available steelmaking waste, Beijing Shougang LanzaTech New Energy Science & Technology Co., Ltd. will help China balance economic growth with sustainability, as well as increase its supply of domestic biofuels.

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RSB certification provides assurance that biofuels and biomaterials deliver on their promise of sustainability. Beijing Shougang LanzaTech New Energy Science & Technology Co., Ltd. chose to work with RSB because of its rigorous sustainability standard, auditing approach, and its broad acceptance. The RSB standard provides a comprehensive approach that incorporates the standard with other operational, management and physical standards such as ISO risk management and environmental management to ensure every base is covered.

“The RSB certification is an incredibly important step for the development of our commercial production facilities which we expect to bring online in 2014,” said Dr. Jennifer Holmgren, CEO of LanzaTech. “In addition, we trust this certification will help accelerate the acceptance of biofuels made through carbon capture technologies and serve to showcase the possibilities opened up by thinking of carbon emissions as an opportunity, not just a problem.”

RSB is a preferred standard of major airlines globally, including LanzaTech’s partner Virgin Atlantic and the Sustainable Aviation Fuel Users Group, an aviation industry-led coalition that is supporting the development, certification, and commercial use of lower carbon renewable fuels, derived from sustainable sources.

Virgin Atlantic President Sir Richard Branson previously described the LanzaTech process as “one of the most exciting developments of our lifetime and a major breakthrough in the war on carbon.” Reflecting on this latest development, he says “RSB’s certification of the Beijing facility is a crucial step to ensure this revolutionary new fuel will meet the highest possible environmental standards and will result in a radical reduction in our carbon footprint.”

Virgin Atlantic Chief Executive Craig Kreeger notes: “Our partnership with LanzaTech is a key part of our *Change is in the Air* sustainability program. Beyond our significant fleet upgrades and our comprehensive fuel efficiency programme, this breakthrough opportunity to pioneer away from fossil fuels offers us the best possible chance of substantially reducing the carbon emissions associated with our flying programme. Key to that has always been ensuring that any new fuel meets the highest possible sustainability standards, and we view RSB as the gold standard scheme to help us to achieve this. We’re excited and committed to help hasten the day when we are using LanzaTech’s RSB-certified fuel to power our aircraft.”

The audit summary report is available on the RSB website, [www.rsbservices.org](http://www.rsbservices.org). The audit was conducted by SCS Global Services (SCS), [www.scsglobalservices.com](http://www.scsglobalservices.com), a leading global provider of third-party environmental and sustainability certification, auditing, testing, and standards development for nearly 30 years.

## **About LanzaTech**

LanzaTech is a leader in gas fermentation technology. It provides novel and economic routes to fuels and high value chemicals from waste gas streams. LanzaTech’s unique process provides a sustainable pathway to produce platform chemicals that serve as building blocks to products that have become indispensable in our lives such as rubber, plastics, synthetic fibers and fuels. LanzaTech’s technology solutions mitigate carbon emissions from industry without adversely impacting food or land security. With commercial facilities in China slotted for construction in 2014, LanzaTech, a company founded in New Zealand, is now a global organization. More information is available at [www.lanzatech.com](http://www.lanzatech.com).

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# News Release



## **About Shougang Group**

Shougang Group is a large enterprise group founded in 1919. While Shougang's main business is iron and steel, the Group is also engaged in mining, machinery, electronics, construction, real estate, services and international trading. Shougang has made great progress, especially since economic reforms began in China 30 years ago.

Entering the new century, the steel industry is facing unprecedented pressure and challenges, as well as unprecedented development opportunities. Shougang has created a first class iron and steel enterprise by actively promoting optimization of the industry's structure, promoting continuous innovation and pioneering new product development and production processes. Shougang has also changed its traditional product line to produce high-grade sheet metal, an historical change. In the past thirty years, Shougang steel's production capacity has increased from 1.79 million tons to 12.19 million tons and sales income has increased from 1.443 billion yuan to 132 billion yuan. The Group has paid more than 57.66 billion yuan in tax revenue and has made a significant contribution to the development of the modern Chinese iron and steel industry. More information is available at [http://www.shougang.com.cn/shougang\\_cn\\_web/](http://www.shougang.com.cn/shougang_cn_web/)

## **About Tang Ming Group**

Tang Ming Group Ltd was established in November 1999. It was successfully formed into a corporation with China Shougang Group in 2003 to establish Shougang Tangming (Auckland) Corporation Ltd. In 2011, Beijing Shougang LanzaTech New Energy Science & Technology Co., Ltd was established in Beijing.

## **About RSB Services**

The Roundtable on Sustainable Biomaterials (RSB) certification system helps farmers, feedstock processors and biomaterial producers prove their sustainability to the world. Certified entities demonstrate that their operations comply with ambitious yet practical safeguards, including the protection of natural or rare ecosystems, food security, and respect for human rights to land, water and decent work conditions, and the management of water resources. With unmatched NGO support, global market compatibility across all feedstocks, practical guidance and tools for an ongoing sustainability system, RSB Services Foundation, the implementing entity of the RSB, helps companies manage their risk and increase shareholder and consumer confidence through the certification of their businesses. More information about RSB certification can be found at [www.rsbservices.org](http://www.rsbservices.org).

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