

## Boeing announces major initiatives to develop, commercialize and fly sustainable jet biofuels in China

Fri 28 May 2010 – Boeing and PetroChina, China's largest oil and gas producer, have signed an agreement to evaluate establishing a sustainable aviation biofuels industry in the country. The US aircraft manufacturer says the strategic assessment is the first such effort in China and will study the environmental and socio-economic benefits of developing sustainable alternatives to fossil-based jet fuels. Another Chinese initiative by Boeing that is researching algae-based aviation biofuels has been expanded to include other research institutions and aviation supply chain entities. Also announced, a biofuel test flight will be conducted by Air China using sustainable biofuel derived from biomass grown and processed in China.



Air China will conduct China's first biofuel test flight (photo: Boeing)

The assessment, slated to begin in June, will look at all phases of sustainable aviation biofuel development including agronomy, energy inputs and outputs, lifecycle emissions analysis, infrastructure and government policy support. It will support a broader sustainable aviation biofuel agreement between China's National Energy Administration and the US Trade and Development Agency to promote the commercialization and use of aviation biofuels in China through the US-China Energy Cooperation Program (ECP), a public-private partnership. Other US companies participating include AECOM, Honeywell's UOP and United Technologies. Air China and PetroChina will lead the Chinese team.

In addition, Boeing Research & Technology and the Chinese Academy of Science's Qingdao Institute of Bioenergy and Bioprocess Technology (QIBEBT) have agreed to expand their collaboration to include other research institutions and aviation supply chain entities as part of their efforts on algae-based aviation biofuel development.

Boeing and QIBEBT had previously announced last October the establishment of a joint research and development laboratory focused on algal growth, harvesting and processing technologies. The Joint Laboratory for Sustainable Aviation Biofuels will be located in Qingdao and managed by Boeing Research & Technology-China and QIBEBT, which will work together to place a strong emphasis on commercial applications for developed technologies.

Air China, PetroChina, Honeywell's UOP and Boeing have also agreed to conduct China's first-ever biofuel-powered commercial aircraft flight. The sustainable biofuel, to be provided by PetroChina and processed into jet fuel by UOP, will come from biomass grown and processed in China. The purpose of the flight will be to highlight the viability of the entire supply chain, from seed to flight.

The type of biomass to be used, the flight timing and location are to be announced at a later date, although Boeing says potential plant sources being considered "are only ones that do not distort the global food-chain, compete with fresh water resources or lead to unintended land use change." *Jatropha*, which has been used a biomass source in previous biofuel test flights, is widely grown in southern China.

"Boeing is actively pursuing biofuel research around the world," said Boeing China President David Wang. "Sustainable biofuels can help reduce carbon emissions while offering the potential to lessen aviation's dependence on fossil fuels. Through these agreements China, its aviation sector and its leadership are demonstrating tremendous drive in the quest to develop a clean, sustainable aviation fuel supply."

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