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Collaboration supports Brazil's role in developing sustainable biofuel, helps meet aviation's environmental goals

SÃO JOSÉ DOS CAMPOS, Brazil, Jan. 14, 2014 – Boeing [NYSE: BA] and Embraer [BM&FBOVESPA: EMBR3, NYSE: ERJ] today opened a joint sustainable aviation biofuel research center in a collaborative effort to further establish the aviation biofuel industry in Brazil.

At the Boeing-Embraer Joint Research Center in the São José dos Campos Technology Park, the companies will coordinate and co-fund research with Brazilian universities and other institutions. The research will focus on technologies that address gaps in creating a sustainable aviation biofuel industry in Brazil, such as feedstock production, techno-economic analysis, economic viability studies and processing technologies.

"Boeing and Embraer, two of the world's leading aircraft manufacturers, are partnering in an unprecedented way to make more progress on sustainable aviation biofuel than one company can do alone," said Donna Hrinak, president, Boeing Brazil and Boeing Latin America. "Brazil, a pioneer in the sustainable fuels industry, will play a leading role in establishing the biofuels industry and helping meet aviation's environmental goals."

"Our purpose is to support work on developing and maturing the knowledge and technologies needed to establish a sustainable aviation biofuel industry in Brazil with global reach," said Mauro Kern, executive vice president, Engineering and Technology, Embraer. "Brazil has shown its potential and is already a benchmark for the clean-energy industry, having created very successful ethanol and biodiesel industries."

Boeing's biofuel collaboration with Embraer is led by Boeing Research & Technology-Brazil (BR&T-Brazil), one of Boeing's six international advanced research centers. BR&T-Brazil works with Brazil's research-and-development community to grow Brazil's capabilities and meet the country's goals for economic and technology development while supporting the creation of innovative and affordable technologies for Boeing's business units. In addition to its collaboration in Brazil, Boeing has active biofuel-development projects in the United States, Middle East, Africa, Europe, China, Japan, Southeast Asia and Australia.

The Boeing-Embraer Joint Research Center is the latest in a series of collaborative efforts by Boeing, Embraer and Brazilian partners on sustainable aviation biofuel. Between 2012 and 2013, Boeing, Embraer, the Fundação de Amparo à Pesquisa do São Paulo (FAPESP) and the State University of Campinas (UNICAMP) held a series of workshops in Brazil and, in 2014, published a detailed roadmap—called Flightpath to Aviation Biofuels in Brazil—that identified gaps in establishing this industry. These gaps will be addressed in part through the Boeing-Embraer Joint Research Center. In 2014, both companies signed a collaboration agreement to jointly conduct and co-fund research and share intellectual property developed through the center.

Embraer also has collaborated with several initiatives to produce an aviation biofuel that is economically viable and fulfills stringent aviation requirements. In 2011, Embraer and engine-manufacturer GE completed test flights under a broad range of conditions on an E-170 using hydro-processed esters and fatty acids (HEFA). The following year, an E-195 from Azul airline flew during the Rio+20 fueled with biokerosene produced from sugar cane developed by Amyris.

Studies have shown that sustainably produced aviation biofuel emits 50 to 80 percent lower carbon emissions through its life cycle than fossil jet fuel. Globally, more than 1,600 passenger flights using sustainable aviation biofuel have been conducted since it was first approved for use in 2011.

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