Boeing Expands ecoDemonstrator Flight Testing with 'Explorer' Airplanes, Announces 2023 Plan

- Accelerating technology development for sustainability with multiple airplanes

- Boeing will use first Boeing ecoDemonstrator Explorer, a 787-10 Dreamliner, to partner with four countries on operational efficiency testing

- Flagship ecoDemonstrator will test 19 new technologies in 2023

SEATTLE, April 27, 2023 /PRNewswire/ -- Boeing [NYSE: BA] is expanding its ecoDemonstrator flight-test program to further accelerate innovation for sustainability and safety. The company today announced its 2023 plan to assess 19 technologies on the Boeing 777 ecoDemonstrator, while also adding "Explorer" airplanes that will focus tests on specific technologies.

The first ecoDemonstrator Explorer, a 787-10 Dreamliner, will conduct flight tests in June fromSeattle to Tokyo, Singapore and Bangkok to demonstrate how coordinating navigation across global airspace jurisdictions can improve operational efficiency, which can reduce an airplane's fuel use and emissions by up to 10%. Utilizing today's onboard capabilities, Boeing and air navigation service providers (ANSPs) in the U.S., Japan, Singapore and Thailand will collectively sequence the airplane's routes to achieve the optimal flight path across multiple regions, factoring in conditions such as weather, air traffic and airspace closures. The airplane will fly on the highest available blend of sustainable aviation fuel (SAF) at each location.

"To support our industry's goal for net zero carbon emissions by 2050, Boeing is expanding our ecoDemonstrator program with Explorer airplanes to test even more sustainability-focused technologies," said Stan Deal, president and CEO of Boeing Commercial Airplanes. "We continue to invest in innovation that reduces fuel use, emissions and noise on our products and to partner with governments and industry to make progress on sustainability during each phase of flight."

"The industry will need continued fleet renewal, efficiency gains, renewable energy carriers such as sustainable aviation fuel and advanced technology to meet the civil aviation industry's commitment to achieve net zero carbon emission by 2050," said Boeing Chief Sustainability Officer Chris Raymond. "Our initial Explorer testing in partnership with aviation stakeholders in four countries is a great example of how we can work together to optimize operational efficiency and reduce emissions."

In 2023, Boeing also will use its current flagship ecoDemonstrator airplane, a 777-200ER (Extended Range), to test 19 technologies including:

- Sustainable wall panels in the cargo hold that are made of 40% recycled carbon fiber and 60% resin made from a bio-based feedstock
- A fiber optic fuel quantity sensor compatible with 100% SAF
- An Electronic Flight Bag application featuring Smart Airport Maps, a component of Jeppesen FliteDeck Pro, which reduces operational costs and supports safe taxi operations with the depiction of contextual airport data
- For all flight tests, the airplane will fly on the highest available blend of SAF locally

Since its initial flights in 2012, the Boeing ecoDemonstrator program has accelerated innovation by taking new technologies out of the lab and testing them in an operational environment. Including the 2023 plan, the program will have tested about 250 technologies to help decarbonize aviation, improve operational efficiency and enhance safety and the passenger experience. Approximately a third of tested technologies have progressed onto Boeing's products and services.

More information about the 2023 ecoDemonstrator and previous ecoDemonstrator airplanes is available at boeing.com/ecoDemonstrator. Boeing's sustainability commitments, partnerships and efforts are available at https://www.boeing.com/principles/sustainability.

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