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The FAA is Committed to Making Aviation Cleaner, Quieter, and More Sustainable

Action Plan - At the United Nations Climate Change Conference in Nov. 2021, U.S. Transportation Sec. Pete Buttigieg released the <u>U.S. Aviation Climate Action Plan</u> that sets out to achieve net-zero greenhouse gas emissions from the U.S. aviation sector by 2050. Because transportation (ground and air) produces the most emissions, the U.S. DOT and FAA need to be a large part of the solution. This ambitious, but achievable, action plan will create a sustainable aviation system that the United States is committed to.

Here is how we are going to reach our goal.

Develop New Aircraft and Engine Technologies

Through the Sustainable Flight National Partnership, the FAA and NASA are working with industry to accelerate the development of more efficient aircraft and engine technologies with a 30-percent improvement in fuel savings compared to today's planes, while also delivering substantial noise and emissions reduction benefits. Here are details about our key programs.

- Continuous Lower Energy, Emissions and Noise (CLEEN) Program
- Accelerating to the Future: The FAA's CLEEN Research Initiative fact sheet
- The Aviation Sustainability Center ASCENT
- Sustainable Aviation: Earth Day podcast

Increase the Production of Sustainable Aviation Fuels

<u>Sustainable aviation fuels</u> produced from renewable and waste feedstock can provide the greatest impact in our effort to reduce greenhouse gas emissions. Such fuels will be critical to the aviation industry's ability to meet the <u>net-zero emissions goal</u> and they have the potential to slash emissions by up to 100 percent.

Increase Operations Efficiency

While the U.S. National Airspace System is efficient, there are opportunities for improvements in all phases of flight to reduce fuel burn. This includes improvements during taxiing, takeoff and landing operations as well as airlines flying more optimal trajectories that reduce fuel usage.

• ATC and Environmental Awareness - fact sheet

Electric Propulsion – Small start-ups and large aircraft manufacturers around the world are building new planes and retrofitting current planes that use clean and quiet electric power for propulsion. The FAA can certify these new designs using our existing regulations.

However, a large hurdle is developing safe batteries that provide more power, but not more weight. The technologies most likely will be introduced first on small aircraft and shorter routes, while implementation on larger aircraft and longer routes is further down the road. The FAA provides support for battery research and for other safety and certification topics involving electric propulsion for planes.

- Electric Propulsion Research Gets a Charge from Upgraded FAA Test Facility-article
- ASCENT Project 052 Assessment of Electrification Strategies for Aviation
- Embry-Riddle Aeronautical University FAA Powers Electric Flight Research with New Grant

Reduce Emissions and Improve Fuel Efficiency at Airports

The government provides incentives to reduce emissions from airports through funding and development of several grant programs. Among others, they include the <u>Zero Emission Vehicle</u> <u>Program</u>, which provides grants to replace or convert on-road vehicles for zero-emission vehicles. The Energy Efficiency Program provides funding to identify and implement fuel reduction measures at airports.

In addition, the FAA has begun the design and preparation for constructing an <u>initial set of 31 control towers at candidate airports</u> (pg. 664) that will replace towers at municipal and smaller airports across the United States. The <u>control towers</u>, ranging in height from 60 to 119 feet, will have an adaptable design that meets key sustainability requirements. The FAA has set aside more than <u>\$500 million</u> from the Bipartisan Infrastructure Law to support site evaluation, preparation, and early construction activities. The first groundbreaking could begin in 2024.

Here are a few more fact sheets with information about the FAA's sustainability efforts.

- 6 New Ways Your Aircraft May Be Flying Through the Sky fact sheet
- Potential Sources of Sustainable Aviation Fuels fact sheet
- FAA Harnesses the Sun to Save Energy and Lower Expenses fact sheet
- How the FAA is Championing a Greener Aviation Future <u>fact sheet</u>
- How Your Airport and Your Skies are Getting Greener <u>fact sheet</u>

Learn more about the FAA and its environmental initiatives on its sustainability page.