FACT SHEET #1 / SEPTEMBER 2020

AVIATION'S CLIMATE ACTION FRAMEWORK

WAYPOINT 2050

The aviation sector has taken a proactive approach to reducing its impact on climate change, developing an ambitious agenda of coordinated global action.

In 2009, the air transport industry launched a series of climate change goals - one of the first industries to do so at a global level. These goals are ambitious and are backed up by actions across the whole sector: airports, airlines, air traffic management providers and the manufacturers of aircraft, engines and components. The long-term goal has recently been revised.

Proactive climate action from a key global sector through **3 global goals** underpinned by an **industry-wide strategy**

GOAL 1	1.5% AVERAGE ANNUAL FUEL EFFICIENCY IMPROVEMENT FROM 2009 TO 2020.	Currently tracking above this goal at an average of 2% per annum average improvement across the fleet. This is being achieved through the introduction of new aircraft technology as well as infrastructure and operational improvements.
GOAL 2	STABILISE NET AVIATION CO_2 EMISSIONS THROUGH CARBON-NEUTRAL GROWTH.	All parts of the industry-wide strategy will help start to bring CO_2 emissions in line with this goal, with carbon-neutral growth on international flights being served through a global market-based measure established by governments at the International Civil Aviation Organization (ICAO).
GOAL 3	NET-ZERO CARBON EMISSIONS FROM GLOBAL AVIATION BY 2050	This is in line with the Paris Agreement 1.5ºC pathway. Significant research efforts underway in new technology (including the potential for small-scale use of electric aircraft and potentially hydrogen), large-scale energy transition to sustainable aviation fuels has begun but will take time to develop. Limited market-based measures required in 2050 to deal with residual emissions

T — NEW TECHNOLOGY

- Each new generation of aircraft reduces emissions around 20%.
- Airlines have been replacing old models with new efficient aircraft – over 15,000 since 2009 at a cost of $1 trillion.
- Manufacturers of aircraft and engines spend $15 billion a year on research to produce more efficient aircraft.
- Governments and industry adopted first CO_2 Standard for aircraft in 2016.

O — IMPROVED OPERATIONS

- Aircraft already in service can have efficiency measures, such as wingtip devices, added to cut their emissions.
- Lightweight seats, food trolleys and cargo containers can help reduce fuel-burn and emissions.
- Using new satellite navigation technology can significantly cut emissions from the landing and take-off cycle.
- Airports, airlines and air traffic control work collaboratively.

I — EFFICIENT INFRASTRUCTURE

- Airports are using alternative energy for ground equipment and to illuminate and heat terminal buildings.
- Air traffic management providers routinely work with airlines to shorten routes or use flexible routing to cut CO_2.
- More systematic airspace changes need to be implemented (such as the Single European Sky) which could help reduce aviation emissions significantly.

F — SUSTAINABLE AVIATION FUEL

- Sustainable aviation fuels (SAF) could cut CO_2 by 100% in 2050.
- Over 365,000 SAF flights have taken place so far.
- Seven pathways certified for SAF production, including using waste and non-food feedstocks.
- Commitments by a number of airlines for large amounts of SAF, as new production facilities are built.
- Sustainability certification key to avoiding first generation biofuel issues.

M — MARKET-BASED MEASURE

- Once in-sector reductions have been explored, market-based measures can help bring down aviation emissions to the desired levels.
- From 1 January 2021, airlines will start offsetting the growth of international aviation CO_2 for flights between volunteering states under the ICAO Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).
- See www.enviro.aero/CORSIA