

# AVIATION 2050 GOAL AND THE PARIS AGREEMENT

*How does the aviation industry's net-zero 2050 goal compare with the Paris Agreement goals?*

Aviation adopted a set of short-, medium- and long-term climate goals in 2009, the world's first for any single global sector. The industry's medium-term goal, to achieve carbon-neutral growth and a new long-term goal, net-zero CO<sub>2</sub> emissions from global aviation by 2050, are particularly ambitious goals for this growing sector. In 2015, the world's governments negotiated the Paris Agreement, a climate change response built on voluntary pledges of emissions reductions by all states (known as nationally-determined contributions, or NDCs).

Although the Paris Agreement does not establish sector-specific goals for addressing potential temperature rise, the aviation sector's 2050 goal of net-zero carbon emissions is in line with the Paris Agreement stretch goal of keeping temperature rise to below 1.5°C above pre-industrial levels.

## Aviation's 2050 goal

- » The 2050 aviation net-zero goal is an industry-wide goal (airlines, airports, air navigation service providers and manufacturers).
  - ↳ "Net" emissions refers to the fact that, while aviation will continue to drive emissions reductions through technology, operations and infrastructure advances, additional significant CO<sub>2</sub> reductions are likely to be achieved through the use of sustainable aviation fuels and some carbon reductions through market-based measures to deal with remaining CO<sub>2</sub>.
- » Governments meeting at the International Civil Aviation Organisation (ICAO) have adopted two goals that support a trajectory towards the industry goal.
  - ↳ an efficiency goal of 2% per annum until 2050; and through the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), support for the ICAO and industry goal of capping net emissions at 2020 levels. Both ICAO goals are for international flights.
  - ↳ Generally, emissions from domestic aviation are the purview of government actions under their NDCs, whereas the difficulty in accounting for international emissions from the aviation and shipping sectors mean these are looked after by ICAO and the International Maritime Organisation, respectively.
  - ↳ The aviation industry is urging governments meeting at ICAO to adopt a long-term climate goal at its 41st Assembly in 2022 – in line with the industry net-zero goal.
- » Aviation industry goals are global – both international and domestic emissions. This is because for the industry, there is no difference in the technology, operations or energy transition that needs to be deployed at a global or national level.
- » Importantly, the industry needs to ensure political acceptability across all countries in setting goals. Aviation requires global standards that can be instituted everywhere. Developing a goal which disadvantages some countries would result in no uptake and little environmental integrity.

## The Paris Agreement goals

The Paris Agreement set a main goal and a stretch goal of:

*Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.*

Analysis has shown that there is a significant difference in how the world will meet the 2°C goal vs the 1.5°C stretch goal.

- » Current global emissions are around 52GtCO<sub>2</sub>eq<sup>1</sup>, with an expectation (based on current NDC pledges) that 2030 emissions will be between 52 and 58GtCO<sub>2</sub>eq. This does not meet the Paris Agreement 2°C goal, which would require emissions to be between 25-30 GtCO<sub>2</sub>eq in 2030 and 18-30GtCO<sub>2</sub>eq in 2050.

The current NDC pledges are due to be revised by countries in the coming years, with pressure to raise the ambition.

## Aviation 2050 goal in context of 1.5°C

While the international aviation sector was not included under the Paris Agreement, the pathways to net-zero carbon emissions from aviation by 2050 (at a global level) are likely aligned with the Paris Agreement 1.5°C pathway.

<sup>1</sup> Gigatonnes of CO<sub>2</sub> equivalent, or 52 billion tonnes. Aviation is currently around 0.9 billion tonnes. Source: World Resources Institute, International Air Transport Association.