

# Deal emerges to curb greenhouse-gas emissions from aviation

Airlines would be required to offset most of their greenhouse-gas emissions after 2020 under the latest plan.

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Roger Barber/Alamy

The International Civil Aviation Organization is mulling new rules to fight climate change.

Governments will begin final negotiations this week on a plan to curb carbon emissions from international aircraft flights beginning in 2020.

The proposal, which will be debated at a meeting of the United Nations' International Civil Aviation Organization (ICAO) in Montreal, Canada, would direct most airlines to invest in carbon "offsets" that reduce emissions in other carbon-producing industries. At least 58 countries, which account for more than 80% of international aviation emissions, have said they would participate in a voluntary phase that would begin in 2021 and last six years; the requirements would become mandatory in 2027.

"This is a solid first step, but it's not a done deal," says Annie Petsonk, international counsel for the Environmental Defense Fund, an advocacy group based in New York City.

Aviation accounts for 2% of global carbon emissions, with more than half of that contributed by international flights. Initial estimates suggest that the proposed agreement would cover as much as 70% of the projected growth in emissions from 2021 to 2035, depending on how many countries ultimately join the voluntary phase. This would result in roughly 2 billion tonnes of carbon dioxide offsets over 15 years, which would be valued at roughly US\$10 billion at today's carbon prices, according to the International Council on Clean Transportation (ICCT), a research-based advocacy organization based in Washington DC. In total, the offsets would be equivalent to roughly five years of carbon emissions from the United Kingdom.

## A global first

Although disputes over details could arise during the talks, which run from 27 September to 7 October, most observers say the general outline of the draft agreement is unlikely to change substantially.

The proposal almost certainly falls short of the ICAO's stated goal of carbon-neutral growth in international aviation beyond 2020. The agency adopted that target when it launched deliberations three years ago, but questions of fairness led to exemptions for many developing countries, where the aviation industry is just beginning to take off. Whereas environmentalists are pushing to make the

agreement more stringent, industry officials say full coverage is too much to ask.

“Rather than complaining that this isn’t 100% perfect from anybody’s point of view, I think we should be marvelling at what is going to be achieved,” says Nancy Young, vice-president for environmental affairs at Airlines For America, a trade group based in Washington DC. Young notes that this would be the first global agreement to curb emissions from a specific industry.

The agreement would build on [a CO<sub>2</sub> emissions standard for new aircraft](#) that the ICAO advanced in February. That standard could cut fuel consumption at cruising speed by an estimated 4% compared with 2015 levels, and is due to come into full effect in 2028. But environmentalists blasted the standard as wholly inadequate. An analysis by the ICCT suggested that market forces could [drive substantially more gains in fuel efficiency](#) than are required by the CO<sub>2</sub> standard.

ICAO estimates that more-efficient aircraft and operations could offset nearly half of the growth in international-aviation emissions, which could rise by 300–400% over the next 25 years. Advanced biofuels, which are just beginning to be deployed, could also contribute an as-yet-unknown share of emissions reductions. The offset mechanism under discussion this week was initially conceived as a way of closing the remaining gap and ensuring carbon-neutral growth. But emissions will continue to rise unless more countries participate, says Daniel Rutherford, the ICCT’s chief representative in the ICAO process.

Fortunately, some countries that could be excluded under the mandatory phase are opting in anyway, Rutherford says. “It’s good news, but we still have a ways to go.”

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