

## SCIENCE

# Over 190 Countries Adopt Plan to Offset Air Travel Emissions

By HENRY FOUNTAIN OCT. 6, 2016

Governments from more than 190 countries on Thursday adopted a measure that for the first time will reduce the climate impact of international jet travel.

The accord adds an exclamation point to a week in which enough countries signed onto the broader Paris climate deal to ensure that it will enter into force later this year.

The aviation plan, the product of years of negotiations, was approved by acclamation at a meeting of the International Civil Aviation Organization, or I.C.A.O., in Montreal.

The measure could force air carriers to take major steps to improve fuel economy in their routes and fleets, very likely accelerating the purchase of newer, more efficient planes.

Carriers may pass the cost of the program on to consumers in higher airfares, though most experts think any increases would be relatively small.

Leaders hailed the accord, which will take effect in 2021, as a major step in reducing the environmental impact of international aviation, which is currently responsible for about 2 percent of worldwide emissions of greenhouse gases.

Secretary of State John Kerry called the measure “unprecedented” and said it built on the Paris agreement and other international efforts to reduce emissions.

“This measure addresses a growing source of global emissions, demonstrates the international community’s strong and growing support for climate action in all areas and helps avoid a patchwork of potentially costly and overlapping regional and national measures,” Mr. Kerry said in a statement.

Along with international shipping, international aviation was not covered by the Paris accord reached in December. On Tuesday, with the ratification of that pact by the European Union, it reached a threshold — acceptance by countries responsible for more than 55 percent of the world’s emissions — that causes it to go into effect. It is expected to enter into force before the next large United Nations climate meeting, in Morocco early next month.

The aviation measure will be voluntary for the first six years, and even countries that commit to it voluntarily will be allowed to opt out on relatively short notice.

Under the program, airlines will buy credits to offset emissions from individual flights. The credits will come from alternative energy installations, forest conservation programs and other projects that prevent some amount of greenhouse gas emissions.

But critics point to several possible problems.

Some environmental groups said the plan did not go far enough, forecasting that it would fall short of the goal originally set by the aviation organization to offset all of the growth in emissions from air travel after 2020.

At least 65 nations, including the United States, China and the European Union countries, have signaled that they will participate during the voluntary phase of the measure.

The measure exempts many smaller countries that do not have large international air carriers, and because of rules on competition, that could mean that some popular routes from participating countries could be exempt as well.

Several countries that are significant sources of international air travel, including Russia and India, on Thursday expressed formal reservations about the agreement, indicating they would not participate, at least for now.

Critics and supporters of the measure alike noted that much work remains to be done before the agreement is put into effect. Mechanisms must be developed to monitor and report current emissions, and criteria established to select conservation programs and other projects that will count toward offset credits.

The aviation industry has supported the idea of mitigating the climate impact of its jet engines. Manufacturers have taken steps to improve the efficiency of current engines, and some carriers have begun replacing some of their conventional jet fuel with cleaner-burning biofuels.

Some airlines have also encouraged environmentally conscious passengers to buy offsets voluntarily for their flights. Under the new measure, the airlines would buy the offsets, and they could pass the cost on to all passengers. But one estimate by the aviation organization forecasts that by 2025 the annual cost to airlines would be less than 1 percent of revenue.

On Thursday, industry representatives welcomed adoption of the measure.

Michael Gill, executive director of the Air Transport Action Group, a coalition of manufacturers, carriers and other companies, said he was heartened by how many countries, including small developing countries with a lot at stake as climate change takes hold, had agreed to participate voluntarily.

“Despite some reservations over the scheme being voluntary in its initial years, the support of all these states — large, small, developed and developing — shows the commitment of the international community, working through I.C.A.O., to deliver a robust measure,” Mr. Gill said in a statement.

But an analysis by the International Council on Clean Transportation, a research group, shows that the agreement as approved will offset only about three-quarters of the growth in emissions from international aviation above 2020 levels. That means the proposal falls short of the goal originally set by the International Civil Aviation Organization of “carbon-neutral” growth after 2020.