

An Overview of Aviation & the European Union Emissions Trading System

Aviation now accounts for roughly as much global warming pollution as the entire annual emissions of the State of Texas. Left unregulated, emissions from the sector are on pace to quadruple from 2005 levels by 2050.¹

Emissions from global aviation have been rising for nearly two decades while the imperative to avoid dangerous climate change becomes ever stronger. To address a portion of aviation's growing GHG emissions, and in the absence of policy from international forums, on January 1, 2012 the European Union will begin holding *aircraft operators* accountable for CO₂ emissions by establishing a special EU Emissions Trading System for aviation.

The EU Emissions Trading System for aviation is a regional regulatory program enacted in 2009 with built-in provisions that enable and encourage non-EU countries to link into the EU carbon market. This linkage can spur job creation and economic development, generate a reliable source of finance in countries outside the EU, achieve additional GHG emissions reductions, and help advance global efforts to combat carbon pollution.

How will the EU Aviation program limit GHG emissions?

A cap on emissions from flights using EU airports will create a powerful incentive for aircraft operators to find the cheapest possible ways to reduce emissions. The declining cap establishes a limit on total emissions, thus guaranteeing that they go down over time.

New regulations for reporting CO₂ emissions from aviation under the EU ETS went into effect January 1, 2010. All "aircraft operators" (airlines, including passenger airlines, freight airlines, and business and corporate jets) are required to report their CO₂ emissions, based on fuel consumption, for each flight that lands in or takes off from the EU. The emissions limit--*the cap*--will take effect January 1, 2012. Emissions from the entire duration of any non-military flight departing from or arriving at an EU airport will be covered under the new regulations.

Emissions limits will be phased in to give airlines time to plan: for 2012, the cap is set at 97% of the average annual aviation emissions from 2004-2006; for the years 2013-2020, the cap will be 95% of the 2004-2006 average. These caps are projected to result in emissions reductions on the order of 183 million tons of CO₂ per year by 2020.² That's roughly equivalent to taking 30 million cars off the road each year.

The EU will assign "emissions allowances," with each allowance representing a ton of CO₂ emissions, so the total number of allowances is equal to the cap. At the end of each year, each airline must turn in to the government enough allowances to cover its actual emissions. So, every ton of pollution that is not emitted is worth real dollars in the form of unused allowances that can be sold in the carbon market.

How are EU aviation ETS emissions allowances allocated?

Eighty-two percent of EU aviation allowances (EUAs) will be distributed to the airlines free of charge. The EU will offer 15% of the allowances for sale. To receive free emissions allowances,

¹ International Civil Aviation Organization. *ICAO Environmental Report: Aviation's Contribution to Climate Change*. 2010.

² Commission of the European Communities. *Summary of the Impact Assessment: Inclusion of Aviation in the EU Greenhouse Gas Emissions Trading Scheme (EU ETS)*. 2006.

an aircraft operator must report the weight of passengers and cargo and the distance traveled during the year 2010. This ton-kilometer (distance times payload) data is used to calculate how many allowances each airline will receive for free. The program encourages aircraft operators to operate more efficiently, because those who do will get a greater share of the free allowances. To date, virtually all airlines flying in and out of EU airports have applied for free allowances.

The EU will set aside 3% of aviation emissions allowances for new airlines, airlines with new and additional flights to Europe, and airlines whose average annual growth in ton-kilometers to/from EU airports increases by more than 18%.

How do aircraft operators participate in the carbon market?

The program affords broad flexibility to airlines in determining how to meet their compliance obligations, and encourages airlines to compete to find better, cheaper ways of cutting pollution. To comply with the EU ETS, an airline can reduce emissions, buy allowances at auction, buy allowances from another airline that reduces its emissions below the level of the allowances it holds, use allowances saved from earlier years of the program, or (within quality and quantity limitations) use emission reduction credits from the global carbon market.

How much will it cost?

Analysis by the European Commission has shown a small increase in the price of airline tickets of between about \$7 and about \$57 (€5 and €40) by 2020, depending on the length of the flight. This range is roughly comparable to fees that the U.S. government imposes on flights arriving in and departing from the United States (\$42.30 per round trip ticket).

While some in the industry argue that compliance costs will be steeper, evidence from the EU ETS and from the U.S. sulfur dioxide program (which provided a design model for the EU ETS) indicates that a competitive environmental market is a powerful tool for grinding compliance costs down to a fraction of what industry estimates in advance of regulation.

Furthermore, airlines, concerned about fuel price rises, are looking for ways to improve efficiency and cut fuel consumption. Better efficiency means less fuel burn, less pollution, and more surplus allowances that can be saved or sold in the carbon market. For airlines that pursue efficiency aggressively, compliance could become a revenue source.

United/Continental and American airlines want to exempt themselves from the EU's program. Could they?

Flights into the EU can be exempted from the ETS if the country of origin implements a measure with an environmental effect that is "at least equivalent" to that of the EU's. This serves the dual purpose of avoiding redundant regulation and ensuring a level playing field for all aircraft operators.

In other words, if the United States established its own program to reduce global warming pollution from aviation, flights from the U.S. to the EU could be exempt from the EU program. If the U.S. program included a government auction of emissions allowances, the U.S. government could generate revenue from the program. The U.S.—or any other nation that wants exemption—could adopt any of a range of measures to reduce emissions from aviation activities (e.g., a cap on aviation pollution, or an airport departure fee whose revenue is used to finance pollution reductions in the aviation sector or in other sectors).