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ISSUED BY AIR TRANSPORT ACTION GROUP
SEPTEMBER 2016
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BRIEF: **GLOBAL OFFSETTING SCHEME COST**

ONE OF THE KEY QUESTIONS ABOUT THE CARBON OFFSETTING AND REDUCTION SCHEME FOR INTERNATIONAL AVIATION (CORSIA) IS THE POSSIBLE COST TO AIRLINES. AIRLINES WILL NEED TO DECIDE HOW TO RECOVER THESE COSTS. DUE TO THE COMPETITIVE PRICING OF AIR TRAVEL, IT MAY NOT BE POSSIBLE FOR AN AIRLINE TO PASS THE FULL COST ON TO PASSENGERS.

COST OF GLOBAL OFFSETTING SCHEME TO WHOLE INDUSTRY

Looking at it from a macro industry-wide perspective, there are multiple forecasts involved:

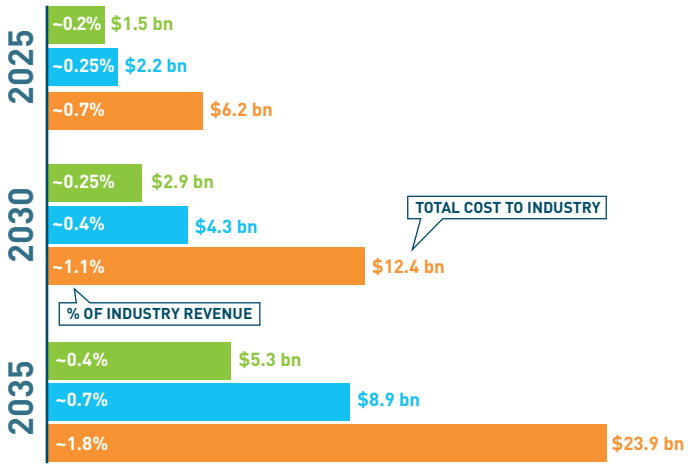
- The total amount of carbon that must be offset (depends on traffic growth).
- The individual price of carbon offsets in any particular year after 2020.
- The coverage of the scheme (depends on political decisions taken at the ICAO Assembly as to which countries are included, which are not and from when).
- The industry revenues.

To assist the negotiations, ICAO's Committee on Aviation Environment Protection (CAEP) developed a set of scenarios which looked at the potential cost of the global offsetting scheme to the industry.

Looking at a medium assumption of price and industry CO_2 growth, the CAEP forecast suggests that in 2025, the scheme may cost airlines $2.2 billion (or ~0.25% of industry revenue). By 2030, this could rise to $4.3 billion (or 0.4% of revenue at the time). To put this in context, in 2015, the world's airlines spent some $181 billion on fuel (around a third of operating costs).

Cost to offset?

ICAO projections of the cost of the global offsetting scheme to industry and percentage of industry revenues[1]



Carbon price[1] *Assumption ($/tonne)*	Current *Price, CDM*	2025 + 2030	2035
Low	~$0.45	$10	$12
Medium		$15	$20
High		$33	$40

COST OF GLOBAL OFFSETTING SCHEME ON INDIVIDUAL ROUTES

The International Air Transport Association (IATA) used ICAO projections to make a conservative estimate of how much the offsetting scheme may cost on a per-flight basis.

On one sample flight in 2030, with an A380 aircraft from Dubai to Sydney, the offsetting cost for the flight would be between $2,524 (medium estimate) to $6,585 (highest estimate). By comparison, the fuel cost for that flight today (at a relatively low cost of fuel) is around $83,248. If the cost of fuel were to rise by $10 per barrel, the fuel cost increase alone would be $13,957.

Sample flights[2] (2030, operator growing at average industry growth rate)	Offsets *Low estimate*	Offsets *High estimate*	Fuel *Cost, summer 2016 price*	Fuel **fluctuation** *(Cost of $10/barrel increase)*
Casablanca → Madrid *737-800*	$51	$131	$1,656	$278
Frankfurt → Addis Ababa *787-800*	$578	$1,497	$18,920	$3,172
Mexico → Buenos Aires *A350-900*	$910	$2,357	$29,799	$4,996
Dubai → Sydney *A380*	$2,542	$6,585	$83,248	$13,957

Sources:
1. *ICAO, 'less optimistic' CO_2 forecast: http://bit.ly/2cXiPQG*
2. *IATA Working Paper for ICAO Assembly: http://bit.ly/2csMGR4*