

# *Aviation and the EU ETS*

*What happened in 2012 during 'Stop the Clock'?*



*December 2013*



## About Sandbag

Sandbag is a UK based not-for-profit research and campaigning organisation focused on the issue of emissions trading. If emissions trading can be implemented correctly, it has the potential to help affordably deliver the deep cuts in carbon emissions the world so badly needs to prevent the worst impacts of climate change.

Through rigorous but accessible analysis we make emissions trading more transparent and understandable to a wider audience. In particular, we hope to shed light on the challenges the EU Emissions Trading System (ETS) faces in becoming a truly effective system for cutting emissions and to advocate the solutions that can help it to work better.

We are grateful to the **European Climate Foundation** for helping to fund this work.

## About this Report

The findings from this report are based on the information available on the European Union Transaction Log (EUTL), information provided by the European Commission on the number of free allowances returned as well as information from the UNFCCC CDM and JI pipelines.

We would like to acknowledge the kind advice and guidance given from a range of experts we spoke to on this topic. In particular we're grateful for the insight of Bill Hemmings and Aoife O'Leary from Transport & Environment ([www.transportenvironment.org](http://www.transportenvironment.org)).

## Save the Arctic

The inclusion of the *Arctic Sunrise* on the front cover of this report is meant as a small gesture of solidarity with Greenpeace. Sandbag has a great deal of respect for Greenpeace and the work they do. Few organisations have worked so tirelessly to defend the environment against those vested interests which look to exploit it. The ongoing criminal charges against 28 nonviolent activists and 2 journalists in Russia is an absurd and disproportionate response to a necessary protest. Drilling for oil in the Arctic should be stopped, both for the safety of the environment there, and to prevent a new source of global atmospheric pollution. The *Arctic 30* must be released, and the *Arctic Sunrise*, as depicted on this report's front cover, must be allowed to sail out to protect the Arctic once more. For more information see: [www.savethearctic.org](http://www.savethearctic.org)

**Report Authors:** Rob Elsworth, Phil MacDonald

**Supporting research:** Laurence Watson

**Illustration:** Kerry Hyndman [www.kerryhyndman.co.uk](http://www.kerryhyndman.co.uk)

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# The numbers

Last year, aviation emissions were introduced to the EU Emissions Trading Scheme (ETS) for the first time. The scheme in numbers:

Included **1169** airlines and operators

**84** million t/CO<sub>2</sub> emitted under Stop the Clock

**9** million t/CO<sub>2</sub> from Non-EU airlines

**75** million t/CO<sub>2</sub> from EU airlines

...compared to the original plan which intended  
to cap **210** million t/CO<sub>2</sub>

**89%** (1043) of airlines and operators complied

representing more than **98%**  
of intra-EU aviation emissions

...**42%** of emissions  
came from just 10 EU airlines

**87%** of the 2012 offset budget was used  
(5.6 m CERs & 5.3 m ERUs)

Ryanair charged €0.25 per passenger...  
but it cost them just €0.13 per passenger,  
resulting in a **€8 million** windfall

Some international airlines complied with  
the full, original, scope of the scheme including;  
*Korean Air, Fed Ex, Nippon Air and Lufthansa Cargo.*



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# Executive Summary

Global aviation is responsible for 2.5% of global carbon emissions, which increases to 4.9%<sup>1</sup> of total anthropogenic climate effects if all radiative forcing is included. If the sector were a country,<sup>2</sup> it would already be the 7<sup>th</sup> most polluting on the planet. Emissions from global aviation are growing at a rapid pace; the International Civil Aviation Organization (ICAO) forecasts that by 2036 emissions will increase between 155% and 300%<sup>3</sup> compared to 2006 levels.

After more than a decade of international discussions failing to find a meaningful global solution for addressing the aviation industry's contribution to global emissions, the European Union set out to create a system. From the 1<sup>st</sup> January 2012, the EU took the modest step of including the aviation sector into its carbon market, the emissions trading scheme (ETS). Emissions from all flights arriving and departing from airports in the EU were to be incorporated into the scheme, covering around a third of global aviation emissions. It was hoped that this would begin the journey towards a global mechanism to reduce the sector's previously uncontrolled pollution.

The EU's inclusion of the sector sparked the fury of airlines, manufacturers, trade groups and aviation officials from non-EU countries. It gave rise to ferocious rhetoric based around the belief that the EU had over-reached its remit in applying a charge to flights beyond its borders. In response to a backlash from the aviation sector and in the run up to the scheme's launch, the scope of the scheme was temporarily limited to include only intra-EU<sup>4</sup> flights, regardless of the carriers' origin (arrival and departure airports must both be within the EU) under a process known as "*Stop the Clock*". This change meant the scheme would cover 25% of EU emissions,<sup>5</sup> and 11% (86million tCO<sub>2</sub>) of global emissions. This allowed an additional year for the UN's aviation agency, ICAO, to make headway on a global agreement. This compromise came with a clear time limit; if ICAO couldn't make progress at its General Assembly in 2013, the original, full-coverage scheme would switch back on.

The 2012 aviation compliance data gives an overview of how the scheme has functioned to date: the majority of airlines complied with *Stop the Clock* and surrendered allowances for their intra-EU emissions. This is good news, it shows that fundamentally the EU ETS is technically working, with its limitations being political rather than structural.

In 2012, under *Stop the Clock*, the ETS had a de-facto cap of ~86 million tonnes of CO<sub>2</sub> for aviation emissions – a figure comprising of 71 million free allowances (82%), an offset budget of 13 million credits (15%) and an auction of 2.5 million allowances (3%). Reported emissions in 2012 were 84 million tCO<sub>2</sub>, meaning overall the aviation ETS has a surplus of 2 million allowances. The overall size of the 2012 auction was set at 12million allowances, however, only Germany auctioned 2.5 million allowances. The auctioning of the remaining 9.5 million allowances was postponed<sup>6</sup>.

Under *Stop the Clock* it was EU airlines who were required to submit the most allowances as the majority of their flights were intra-EU. In 2012 42% of total emissions covered by the scheme came

<sup>1</sup> Aviation and global climate change in the 21st century, <http://elib.dlr.de/59761/1/lee.pdf>

<sup>2</sup> <http://www.brookings.edu/research/opinions/2013/10/25-regulating-cardon-dioxide-emissions-meltzer>

<sup>3</sup> Executive Summary of the Impact Assessment amending Directive 2003/87/EC (2013) European Commission [http://ec.europa.eu/clima/policies/transport/aviation/docs/swd\\_2013\\_431\\_en.pdf](http://ec.europa.eu/clima/policies/transport/aviation/docs/swd_2013_431_en.pdf)

<sup>4</sup> Technically intra-European Economic Area; includes Iceland, Norway, etc.

<sup>5</sup> Commission Impact Assessment

<sup>6</sup> Auctioning of Emission Allowances in Germany Periodical Report: Early Auctions and Auctioning in Aviation 2012. [http://ec.europa.eu/clima/policies/ets/cap/auctioning/docs/ger\\_report\\_2012\\_en.pdf](http://ec.europa.eu/clima/policies/ets/cap/auctioning/docs/ger_report_2012_en.pdf)

from just 10 EU carriers. Estimating the potential costs to airlines and therefore passengers is difficult for a number of reasons. Firstly airlines receive the majority of their allowances for free and secondly it's largely unknown how much airlines charged customers to cover their costs. Ryanair is a notable exception as they publically announced an ETS charge of €0.25 per passenger per flight. By our conservative calculation<sup>7</sup> the actual ETS cost to Ryanair passengers was €0.13 in 2012, netting the airline a €8 million windfall.

Not all airlines "Stopped the Clock"; a number participated in full. They did so because it was financially advantageous to receive the generous number of free allowances. Airlines to do this include Korean Air, FedEx, World Airlines, Air Bridge Cargo, Nippon Airlines and Lufthansa Cargo.

The result is a scheme that in 2012 imposed very limited financial burdens on passengers, and controlled a small but not insignificant percentage (11%) of global aviation emissions. Now, as the deadline for changing the *Stop the Clock* proposal approaches (in April 2014), the EU is proposing to balance principle with politics, and cover only emissions within the sovereign airspace of EU Member States, as a reasonable stopgap until the details of the ICAO global scheme are announced in 2016.

Sandbag has the following recommendations:

- **The EU should, at a bare minimum, control pollution within its own airspace:**  
The EU's inclusion of aviation within the EU ETS is legally sound and has given impetus to the international aviation debate. The EU ETS is in place and functioning. The EU should not kowtow to the demands of a small number of airlines and airline officials. All industries polluting within the borders of the European Union must pay for their externalities, and that includes aviation. **The EU must maintain the principle of being able to enforce its own legislation within its borders.**
- **The full, original scope of the EU ETS should be reinstated as soon as politically possible:**  
Aviation emissions have been uncontrolled for too long, and the scope and start-date of a global scheme is still unclear, particularly in light of ICAO's past intransigence. *Stop the Clock* gave the international community the opportunity to introduce a global approach, but their success is an open question. That said, no assessment can be made without taking into account the geopolitics at play. For this reason Sandbag supports the Commission's air-space approach for the interim. This situation should be reviewed in 2016 in context of the 39<sup>th</sup> ICAO Assembly, with the full scope of the EU ETS being reinstated should the Assembly outcome be insufficient. All aviation emissions should be covered by 2020.
- **The EU should broaden its bilateral cooperation and support outside countries looking to tackle aviation emissions.**  
From the outset the EU has been clear: countries implementing equivalent measures would be exempt from the scheme. That the EU is willing to adapt its policy for those countries also taking action is proof that the EU approach is in the spirit of the ICAO discussion in seeking a global solution. The EU should facilitate this process by contributing financially to the development of other schemes via funds collected from the ETS. This would have the added benefit of requiring the **Member States to be more transparent with ETS revenues.**

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<sup>7</sup> Assuming Ryanair paid the average 2012 carbon price for allowances and credits compliance in 2012 would have cost €8,470,317. We have assumed Ryanair charged 65.8 million passengers €0.25 in 2012 leaving them with a windfall of €8. This figure does not take into account administrative burden of the scheme or currency differences.



- **Free allocation of allowances should be phased out.**

The number of free allowances issued to static installations decrease over time, yet in the aviation sector the hand-out remains steady up to 2020. Free allowances in the aviation sector should be gradually phased out. One solution would be to include the aviation sector into the main ETS, rather than it having a separate cap.

- **The level of auction allowance and the special reserve should be in proportion to the number of allowances.**

The special reserve allows for new entrants to the market, or those rapidly growing, to apply for extra free allowances. The *Stop the Clock* decision led to the adjustment of the number of auctioned allowances, but did not mention the special reserve that applies from 2013. In future the special reserve, as with the auction volumes, should be proportional to the level of emissions covered.

- **The EU must move to impose fines on airlines currently not complying with the ETS on intra-EU flights.**

As with static installations failing to comply with the EU ETS, non-compliant airlines should be fined according to the terms set out in the EU ETS Directive, and brought into future compliance. Suggestions by the UK, France and Germany to reduce the size of the scheme further will not get around this issue; these airlines operate intra-EU flights, and would still need to comply.

- **Airlines should list ETS costs in annual reports.**

Ahead of the introduction of the EU ETS there was a huge amount of speculation as to how much the scheme would cost. In 2012 the reality was much less than expected. Airlines should list ETS compliance costs in their annual reports to ensure transparency.



# Introduction

In 2012 the scope of the EU ETS expanded to include emissions from the aviation sector. This was mooted as far back as 2005<sup>8</sup> and airlines had years to prepare for the impacts. Yet as the date for inclusion came closer a number of airlines, manufactures and trade groups increased their opposition. Heaping pressure on policy makers many aviation officials dutifully followed suit and moved to block the EU's policy. China, India, Russia, Saudi Arabia and the USA have all objected to the EU ETS. In doing so they have found strange bed fellows in one another. We believe the international response to the EU ETS's inclusion of aviation has been excessive.

Consequently the EU temporarily amended its scheme in 2012, known as '*Stop the Clock*', to allow time for an international deal on tackling emissions from the aviation sector to be found. With 2012 aviation compliance data available we have taken the opportunity to look closely at what happened during the 2012 *Stop the Clock* period, and question if the impacts on the sector really merited such hyperbole. We then address the new EU compromise proposal, set to only cover EU airspace, and suggest what needs to happen next.

To fully understand the controversy, one must look back at the history of the aviation sector and the complicated network of institutions and stakeholders which vie for influence and control in ensuring the least amount of action possible is taken. The following section starts by looking at the international institution responsible for tackling the sectors emissions and how after failed attempts to galvanise the industry into action the EU went ahead and incorporated aviation emissions into its carbon market. The response from stakeholders to this inclusion is detailed as is the questions around the legality of their scheme. Finally the EU's responds by "Stopping the Clock" – a temporary change of the scope to allow for additional time to negotiate an international deal.

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<sup>8</sup> [http://eur-lex.europa.eu/LexUriServ/site/en/com/2005/com2005\\_0459en01.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/com/2005/com2005_0459en01.pdf)

# Background: From ICAO to EU ETS

The United Nations agency for aviation, the International Civil Aviation Organisation (ICAO) was ushered into existence through the ratification of the Chicago Convention of 1944. This document sought to establish the rules for international air travel to ensure it developed in a “safe and orderly manner”. The convention remains the central pillar of ICAO, an organisation which boasts a membership of 191<sup>9</sup> countries.

When ICAO was established the aviation sector did not face many of the concerns they are now presented with, such as air traffic constraints, noise controls, pollution and climate change. These are all issues that have arisen as a product of a booming aviation industry coupled with rapid globalisation and an increasingly resource constrained world. As such the original Convention did not include provisions to deal with these issues, though ironically included articles that have proven problematic when it comes to tackling contemporary issues. A prominent example can be seen in Article 24 of the Convention, which initially exempted international flights from having to pay fuel duty on the kerosene remaining in their tanks when they touched down in a new country, but has now been extended through bilateral Air Service Agreements to entirely exempt all international aviation fuel from taxation, a significant potential reduction in government revenue.<sup>10</sup> It's estimated that an intra-EU tax alone could generate €6- €7 billion a year for EU Member States.<sup>11</sup>

Tackling climate change has proven a contentious issue for the aviation sector. Unusually, along with maritime emissions, the responsibility for reducing emissions was placed with the UN agency, rather than individual countries, given the difficulties in allocating a flight's emissions between states. In the case of aviation the responsibility – for Annex I countries – to tackle the aviation sector's growing emissions was handed to the ICAO in 1997 via the UN's Kyoto Protocol.<sup>12</sup>

In the years following the Kyoto Protocol, ICAO has failed to deliver any meaningful policies, let alone leadership, to address growing emissions from the aviation sector. ICAO's most ambitious suggestion was for non-binding 'aspirational' goals and a vague hope that biofuels would eventually solve the problem, despite studies demonstrating this would be impossible without an MBM.<sup>13</sup>

A market based mechanism for the aviation sector has repeatedly been suggested by ICAO, which offers a vital first step in controlling aviation emissions, but there has been a total failure of any such schemes to materialise to date.

In 2010 ICAO pledged to “undertake work to develop a framework for market-based measures (MBMs) in international aviation...for consideration by the 38th Assembly”,<sup>14</sup> in 2007 they resolved “to expedite the development of a strategic framework to manage aviation emissions”.<sup>15</sup> As early as 2001, ICAO “endorse[d] the development of an open emissions trading system for international aviation”.<sup>16</sup> The most recent pledge by ICAO at its 38<sup>th</sup> Assembly in 2013 to develop a global MBM is not worth

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<sup>9</sup> EU Member States are individually members of ICAO, not the EU itself.

<sup>10</sup> [http://ec.europa.eu/taxation\\_customs/taxation/excise\\_duties/energy\\_products/aircraft\\_fuel/index\\_en.htm](http://ec.europa.eu/taxation_customs/taxation/excise_duties/energy_products/aircraft_fuel/index_en.htm)

<sup>11</sup> Taxing aviation fuel, House of Commons, Antony Seely 2012

<sup>12</sup> See Article 2.2 of the Kyoto Protocol

<sup>13</sup> David Lee: Bridging the emissions gap <http://www.cate.mmu.ac.uk/projects/bridging-the-aviation-co2-emissions-gap-why-emissions-trading-is-needed/>

<sup>14</sup> ICAO 37<sup>th</sup> Assembly (2010) [http://www.icao.int/publications/Documents/9958\\_en.pdf](http://www.icao.int/publications/Documents/9958_en.pdf)

<sup>15</sup> ICAO 36<sup>th</sup> Assembly (2007) [http://www.icao.int/Meetings/AMC/MA/Assembly%2036th%20Session/wp182\\_en.pdf](http://www.icao.int/Meetings/AMC/MA/Assembly%2036th%20Session/wp182_en.pdf)

<sup>16</sup> ICAO 34<sup>th</sup> Assembly (2001) [http://www.icao.int/publications/Documents/9790\\_en.pdf](http://www.icao.int/publications/Documents/9790_en.pdf)

the paper it's written on until the framework for a robust scheme is on the table. The EU must bear this in mind when deciding how to proceed; based on previous form, ICAO only takes action when pushed.

### EU Challenges ICAO into Action

The EU chose to include aviation in its ETS only after failed attempts by the ICAO to deal with the issue, despite Assembly after Assembly agreeing to work towards a global Market-Based Mechanism framework.

At their 35<sup>th</sup> Assembly in 2004 ICAO agreed on a resolution that endorsed “*voluntary trading schemes that interested contracting States and international organisations might propose*” and offered to provide guidance for states “*to incorporate emissions from international aviation into Contracting States’ emissions trading schemes*”.<sup>17</sup> The EU took this statement as the basis for developing its own scheme. However, airline officials in some countries insisted that “mutual agreement” was needed (i.e. the agreement of the country whose carriers was being regulated) but the EU, along with Norway, Switzerland and Turkey entered a reservation signalling they disagreed. Instead they favoured a system where each State has the right to incorporate foreign airlines into regional schemes if those airlines voluntarily choose to land at an airport within that State. It is important to remember this reservation as the issue of “mutual agreement” plays a recurring role in the aviation debate. The EU set about looking into options; difficulties around taxing aviation fuel led to the emissions trading scheme being identified as the most cost effective way of reducing emissions from the aviation sector. In 2005 the European Commission published a staff working document that stated emissions trading was the “most promising way forward.”<sup>18</sup>

### EU incorporates aviation into its ETS

Until the incorporation of aviation in the EU ETS in 2012, the sector had remained entirely outside pollution control schemes (for instance, it was exempted from the UK Climate Change Act and UK carbon budgets – but included in the EU’s 2020 commitment). The size of the sector meant that it was forecast to be the second largest sector after the power sector in the EU ETS when it joined in 2012.

### Airlines Respond and Lobby against the EU ETS

The inclusion of foreign carriers into the EU ETS met with strong international opposition. The USA, China, India, and Russia have all been vocal opponents of the scheme.

China and Russia, in a joint statement in 2011, began the diplomatic wrangling; “The two sides attach high importance to addressing climate change, recognizing that climate change matters to the survival and development of human beings....EU initiative violates sovereignty of other states....The two sides oppose any unilateral, mandatory actions without mutual agreement between states concerned”.<sup>19</sup> The USA and Russia went on to form a ‘coalition of the unwilling’, in which a Moscow meeting saw twenty-nine aviation officials sign a protest declaration against the EU, threatening to restrict EU carrier access to their airspace.<sup>20</sup>

The Air Transport Association of America (ATA, now *Airlines for America* or A4A) and three airlines – United, Continental, and American Airlines – took the EU to court, challenging the legality of the scheme and claiming it infringes national sovereignty and existing international treaties. In late 2012,

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<sup>17</sup> (resolution 35-5)

<sup>18</sup> [http://eur-lex.europa.eu/LexUriServ/site/en/com/2005/com2005\\_0459en01.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/com/2005/com2005_0459en01.pdf)

<sup>19</sup> Joint Statement by China and Russia (27 September 2011) [http://www.greenaironline.com/photos/China\\_-\\_Russia\\_Joint\\_Statement\\_on\\_EU\\_ETS\\_EN\\_.pd](http://www.greenaironline.com/photos/China_-_Russia_Joint_Statement_on_EU_ETS_EN_.pd)

<sup>20</sup> Russia, Nations Agree on Retaliation to EU Airline CO2 Trade (Feb 2012) Bloomberg [www.bloomberg.com/news/2012-02-22/russia-nations-agree-on-retaliation-to-eu-airline-co2-trade-1-.html](http://www.bloomberg.com/news/2012-02-22/russia-nations-agree-on-retaliation-to-eu-airline-co2-trade-1-.html)

***“They [the EU] can make laws about what happens within their sovereign territory. If we fly over their territory, they can ask us to pay for emission of carbon dioxide, whatever. But, they cannot ask us to pay if we are flying from here.”***

– Indian Civil Aviation Minister Ajit Singh

The India Times, Jun 7, 2013

[http://articles.economictimes.indiatimes.com/2013-06-07/news/39815285\\_1\\_emission-trading-scheme-emission-data-emission-norms](http://articles.economictimes.indiatimes.com/2013-06-07/news/39815285_1_emission-trading-scheme-emission-data-emission-norms)

shortly after the EU Stopped the Clock, President Obama signed the EU ETS Prohibition Act, which specifically “prohibits operators of civil aviation of the United States from participating in the EU ETS.”<sup>21</sup> The final bill signed by President Obama is a lighter version than the original tabled by Republicans in the House of Representatives, however. Instead of obliging US airlines to not comply it gives the US Transport Secretary the “discretion...to bar U.S. airlines from complying with EU law.”<sup>22</sup> This is in effect a Bill that remains on the statute books as a threat. Airlines for America (A4A), an industry group, has lobbied hard against the EU’s scheme and

described it verbosely as an “exorbitant, extraterritorial cash grab for financially troubled European countries which under the law can use the money however they see fit.”<sup>23</sup>

The Indian civil aviation Ministry has also told airlines not to comply, preventing major airlines, including Air India and Jet Airways, from claiming free allowances.<sup>24</sup> As well as concerns about sovereignty, Indian officials were opposed on the basis of the revenue that will be collected by EU Member States. India’s Civil Aviation Secretary, Syed Nasim Ahmad Zaidi, claimed “passengers and Indian carriers may end up paying a few thousand [Rupees] every year, while EU will collect billions of dollars over the coming years.”<sup>25</sup>

The Civil Aviation Administration of China (CAAC) instructed its airlines not to comply with the scheme.<sup>26</sup> In an escalation Airbus claimed the dispute led China Eastern Airlines to delay the order of new European manufactured Airbus planes whilst continuing to purchase new US made Boeing planes.<sup>27</sup> The EU ETS is unlikely to have had anything to do with this procurement process, but every angle was being pursued to increase political pressure. Already in 2011 the newswires reported China Eastern cancelling<sup>28</sup> Boeing orders, and in September this year the Bank of China confirmed an order of 25 Airbus planes.<sup>29</sup> If Chinese concerns around the EU ETS were really so great it seems unlikely that that Bank of China would complete this deal before the anxieties around the ETS had been resolved. Moreover, the purchasing of planes is a complex process and a huge number of variables play into the decision. Fears of a trade war were fuelled by Airbus themselves. Nevertheless, the threat of lost orders for Airbus led them to lobby the EU and its Member States, seemingly on behalf of the Chinese government. In a grovelling letter<sup>30</sup> from the CEO of Airbus, Fabrice Brégier, to Minister Li Jiaxiang, of the CAAC, Brégier seemingly boasted of their joint efforts to ensure Chinese airlines would not be included in the EU ETS, and mentioned his “hop[e] for [a] swift approval” for the purchase of aircraft.

Whilst China and India cite *Common but Differentiated Responsibility (CBDR)*, the EU argues that the principle applies only to states, not to businesses operating in the EU market; Chinese or Indian businesses are not given lesser regulations on their pollution in Europe, and thus neither should

<sup>21</sup> <https://www.govtrack.us/congress/bills/112/s1956#overview>

<sup>22</sup> Obama Signs "EU Emissions Trading Prohibition" (Nov 2012) The European Institute <http://www.europeaninstitute.org/November-2012/obama-signs-geu-emissions-trading-prohibitiong-measure-1129.html>

<sup>23</sup> <http://www.airlines.org/Pages/EU-ETS-Remains-Bad-News-For-U.S.-Airlines.aspx>

<sup>24</sup> Indian airlines breach EU ETS regulations (2012) Avocet [http://www.avocet.eu/risk/news\\_detail/indian\\_airlines\\_breach\\_eu\\_ets\\_regulations](http://www.avocet.eu/risk/news_detail/indian_airlines_breach_eu_ets_regulations)

<sup>25</sup> 26 countries join to protest EU’s aircraft carbon emission norms (Oct 2011) The Economic Times [http://articles.economictimes.indiatimes.com/2011-10-03/news/30238352\\_1\\_emission-trading-eu-carbon-dioxide](http://articles.economictimes.indiatimes.com/2011-10-03/news/30238352_1_emission-trading-eu-carbon-dioxide)

<sup>26</sup> <http://www.reuters.com/article/2012/02/06/us-china-eu-emissions-idUSTRE81500V20120206>

<sup>27</sup> China buys Boeing 777s, delays Airbus deal: sources (April 2012) Reuters <http://uk.reuters.com/article/2012/04/26/us-china-eastern-boeing-airbus-idUSBRE83P15K20120426>

<sup>28</sup> <http://www.forbes.com/sites/kenrapoza/2011/10/19/chinese-airline-cancels-boeing-dreamliner-order-airbus-not-spared/>

<sup>29</sup> [http://www.boc.cn/en/bocinfo/bi1/201310/t20131015\\_2541818.html](http://www.boc.cn/en/bocinfo/bi1/201310/t20131015_2541818.html)

<sup>30</sup> [http://www.sandbag.org.uk/site\\_media/uploads/airbus\\_letter.pdf](http://www.sandbag.org.uk/site_media/uploads/airbus_letter.pdf)

aircrafts. The Chicago Convention also explicitly outlaws discriminating between operators on the basis of nationality.<sup>31</sup>

### Is the EU ETS legal?

Central to a number of objections is the claim that the EU was legislating beyond its territorial remit. Professor Howse, in a comment piece in response to an article by Cambridge University Lecturer Dr Bartels, highlights three potential legal regimes that must be considered when questioning the legality of the inclusion of aviation into the EU ETS. Firstly the Chicago Convention, secondly customary international law, and thirdly GATT and GATS rules. On the first point ICAO resolutions are not legally binding and reservations are commonplace. We have also learnt that Article 1 of the Chicago Convention sets out that States have the right to regulate their airspace and those aircraft which chose to land in their territory. Furthermore the decision at the 35<sup>th</sup> Assembly paved the way for regional approaches until such time as a global mechanism was in place.

Secondly, the Court of Justice of the European Union (CJEU) found that the EU ETS did not contravene the Chicago Convention, the Kyoto Protocol or the US EU Open Skies Agreement. The Court ruled that “application of the EU ETS to aircraft operators infringes neither the principle of territoriality nor the sovereignty of third States.”<sup>32</sup> The ruling also clarified that the EU ETS was not a tax rather a market based mechanism. The EU ETS is often accused as being a tax in the media as a way to vilify it and drum up public antipathy.

Lastly Professor Howse considers international trade law, and agrees with the findings of Dr. Bartels who argues that “the coverage of non-European carriers under the ETS is compatible with WTO law, assuming that its application to those carriers is operated in an even-handed and non-protectionist fashion.”<sup>33</sup>

### Stop the Clock

Against a backdrop of increasing hostility and growing geopolitical pressure, the EU chose to “*Stop the Clock*” on the aviation ETS. This saw the ETS Directive being amended to include a derogation to exempt international flights arriving and departing from the EU during 2012. The Directive continued to apply to intra-EU flights, that is flights that take off and land within the EU, regardless of whether the carrier originated from the EU or not.

This change was supposed to “create space for the political negotiations”<sup>34</sup> and allow ICAO an additional year to come up with a plan for meaningful action on tackling the aviation sector’s contribution to climate change. Ultimately this was a face saving measure.

*Stop the Clock* meant that the geographic scope of the scheme was smaller than anticipated but it is important to remember that, in the face of international pressure, the scheme still came online. The data from 2012 gives an impression of how the scheme functioned. The following section will look in detail at what happened in 2012, specifically which airlines complied with the scheme, how they were impacted as well as a conservative estimate of the costs and windfalls of the scheme.

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<sup>31</sup> Legal Analysis (May 2012) Centre for International Sustainable Development Law  
[http://cisdl.org/public/docs/news/CISDL\\_EU\\_ETS\\_Expansion\\_Legal\\_Brief.pdf](http://cisdl.org/public/docs/news/CISDL_EU_ETS_Expansion_Legal_Brief.pdf)

<sup>32</sup> <http://curia.europa.eu/jcms/upload/docs/application/pdf/2011-12/cp110139en.pdf>

<sup>33</sup> <http://ictsd.org/downloads/2012/05/the-inclusion-of-aviation-in-the-eu-ets-wto-law-considerations.pdf>

<sup>34</sup> [http://europa.eu/rapid/press-release\\_MEMO-12-854\\_en.htm](http://europa.eu/rapid/press-release_MEMO-12-854_en.htm)

# Stop the Clock! – Aviation in the EU ETS 2012

*Stop the Clock* applied specifically to international flights arriving and departing from outside of the EU. Though, ultimately it was up to airlines whether they decided to participate in the scheme in full (i.e. the original scope) most made use of the *Stop the Clock* derogation. A small number chose not to comply at all. To *Stop the Clock* airlines were required to return their free allocation of allowances via their online registry account. Airlines had until the end of May 2013 to complete this process. In total 103 million allowances were returned by airlines. Combined with unclaimed free allowances, this amounted to over 63% of the allowances for 2012 being returned and cancelled.<sup>35</sup>

In 2012 the majority of airlines that submitted emissions data to the EU complied with the *Stop the Clock* and surrendered allowances for emissions that occurred from flights arriving and departing from the EU. Surprisingly data from the EUTL shows that a number of airlines not only complied with *Stop the Clock*, but in full with the original scope of the scheme, including commercial carriers, Air Asia X and Korean Air, and major cargo airlines including, Nippon Cargo, Fed Ex, Airbridge Cargo and Lufthansa Cargo.

## EU versus international airlines

In total 1169 airlines and aircraft operators participated in the EU ETS. We use the term 'participated' as this best reflects the various interplays taking place in the scheme in 2012. These include full compliance, *Stop the Clock* compliance, returned allowances, offset usage and non-compliance. These issues will be touched upon in more detail in the following sections. An important starting point in the aviation debate is to make the distinction between the airlines incorporated in the scheme, i.e. 'EU' and 'International' carriers. In 2012 of the 1169 participating airlines and operators, 788 (67%) were international, with the remaining 381 (33%) being EU airlines. Though there are a large number of foreign airlines and operators, the majority are small emitters, for example, the USA has the highest number of airlines participating in the scheme, 470 (40% of the total), but the majority are smaller operators, such as company or private jets.

### A note on Data and Transparency

The findings from this report are based on publically available information on the European Union Transaction Log (EUTL), information provided by the European Commission on the number of free allowance returned as well as information from the UNFCCC CDM and JI pipelines.

The quality of the publicly available data is crucial for ensuring transparency of the scheme as well as allowing meaningful analysis to be conducted. Sandbag has concerns surrounding elements of the aviation data. The initial data on returned permits had various errors in the installation name fields due to conversions with character encoding. Furthermore totals in press releases and datasets did not initially match. This seems to have been cleared up, but along with various name changes seems indicative of a rushed effort.

If EUTL figures are not correct, there should be more of an effort made to ensure users are not downloading erroneous data without sufficient warnings. If supplementary materials are made available, such as in this case, they should come with a list of changes. That would greatly aid users trying to make use of the data.

<sup>35</sup> Airlines return almost 103 million aviation allowances (October 2013) European Commission [http://ec.europa.eu/clima/news/articles/news\\_2013092601\\_en.htm](http://ec.europa.eu/clima/news/articles/news_2013092601_en.htm)



The bulk of emissions come from a small number of EU airlines. To put this in perspective 89% (75 million tCO<sub>2</sub>) of 2012 emissions came from EU carries with the remaining 11% (9 million tCO<sub>2</sub>) originating from international airlines. What's more, the emissions from the EU originated from a small number of airlines; 42% of 2012 emissions originated from just 10 EU airlines. The situation is similar for free allowances during *Stop the Clock*, where 81% (58 million) were issued to EU airlines and the remaining 19% (13 million) to international airlines. Table 1 show the breakdown of emissions and free allowances before and after *Stop the Clock* according to EU and Non-EU airlines.

| Airlines           | Number of Airlines | 2012 Allowances (EUAs)   |                     |                                       |                      | 2012 Emissions                |                |
|--------------------|--------------------|--------------------------|---------------------|---------------------------------------|----------------------|-------------------------------|----------------|
|                    |                    | Original Free Allowances | Returned Allowances | <i>Stop the Clock</i> Free Allowances | % of Free Allowances | Emissions (tCO <sub>2</sub> ) | % of Emissions |
| Non EU             | 780                | 61,208,596               | 47,923,961          | 13,284,635                            | 19%                  | 9,117,160                     | 11%            |
| EU                 | 389                | 112,608,610              | 55,070,391          | 57,538,219                            | 81%                  | 74,665,394                    | 89%            |
| <b>Grand Total</b> | 1169               | 173,817,206              | 102,994,352         | 70,822,854                            | 100%                 | 83,782,554                    | 100%           |

Table 1: EU – Non-EU breakdown of emissions and free allowances before and after *Stop the Clock*

### The Aviation Cap – Original Scope

Initially, before the *Stop the Clock* derogation, the EU ETS was set to cover 100% of EU aviation emissions, which equated to a third of global aviation emissions. This was done by setting a separate cap in the EU ETS for 2012-2020, with separate (though transferable) permits, known as European Emissions Aviation Allowances (EUAs). This cap is different to the declining annual cap provided for the other economic sectors included in the EU ETS. The 2012 aviation cap had been set at 97% of the average aviation emissions over 2004-2006, dropping to 95% for the period of 2013-2020. In 2012 the majority (85%) of allowances making up the cap were given away for free, with the remaining 15% being auctioned.<sup>36</sup>

From 2013 to 2020 this was to change slightly with 82% of allowances being awarded for free, 15% being auctioned and the remaining 3% allocated to a special reserve for fast growing and new entrant airlines. By 2020, the European Commission estimated that 183Mt of CO<sub>2</sub> would have been saved per year on flights covered by the scheme.<sup>37</sup>

### The Aviation Cap – Under *Stop the Clock*

The cap was radically altered as a result of the *Stop the Clock*, when flights to destinations outside the EU were exempt from needing to comply with the scheme in 2012. As a result 103 million free allowances (EUAs) were returned by airlines opting out. The number of allowances to be auctioned in 2012 was also ratcheted down in line with the number of free allowances; the auction pot contained 12 million allowances, but just 2.5 million allowances were auction (by Germany), whilst the remaining auctions (for 9.5 million allowances) were postponed.<sup>38</sup>

<sup>36</sup> Information on the planned cap

[http://ec.europa.eu/clima/policies/transport/aviation/allowances/index\\_en.htm](http://ec.europa.eu/clima/policies/transport/aviation/allowances/index_en.htm)

<sup>37</sup> [http://europa.eu/rapid/press-release\\_IP-06-1862\\_en.htm](http://europa.eu/rapid/press-release_IP-06-1862_en.htm)

<sup>38</sup> [http://ec.europa.eu/clima/policies/transport/aviation/docs/20130111\\_qa\\_en.pdf](http://ec.europa.eu/clima/policies/transport/aviation/docs/20130111_qa_en.pdf)

In 2012 in total, 71 million free allowances were distributed amongst 1169 airlines, add to this the offset limit of 13 million credits (from CDM and JI project) for that year and the 2.5 million allowances auctioned by Germany, this makes a de-facto cap of 86million units.<sup>39</sup> Emissions covered in 2012 totalled 84 million, which means the scheme overall has a surplus of 2 million units. Figure 4 breaks down the various elements which contribute to the number of units available, and compares that to the actual number surrendered units to meet compliance obligations in 2012. Note that the majority of allowances to be auctioned have been postponed, and are depicted in Figure 4 below for demonstrative purposes only.

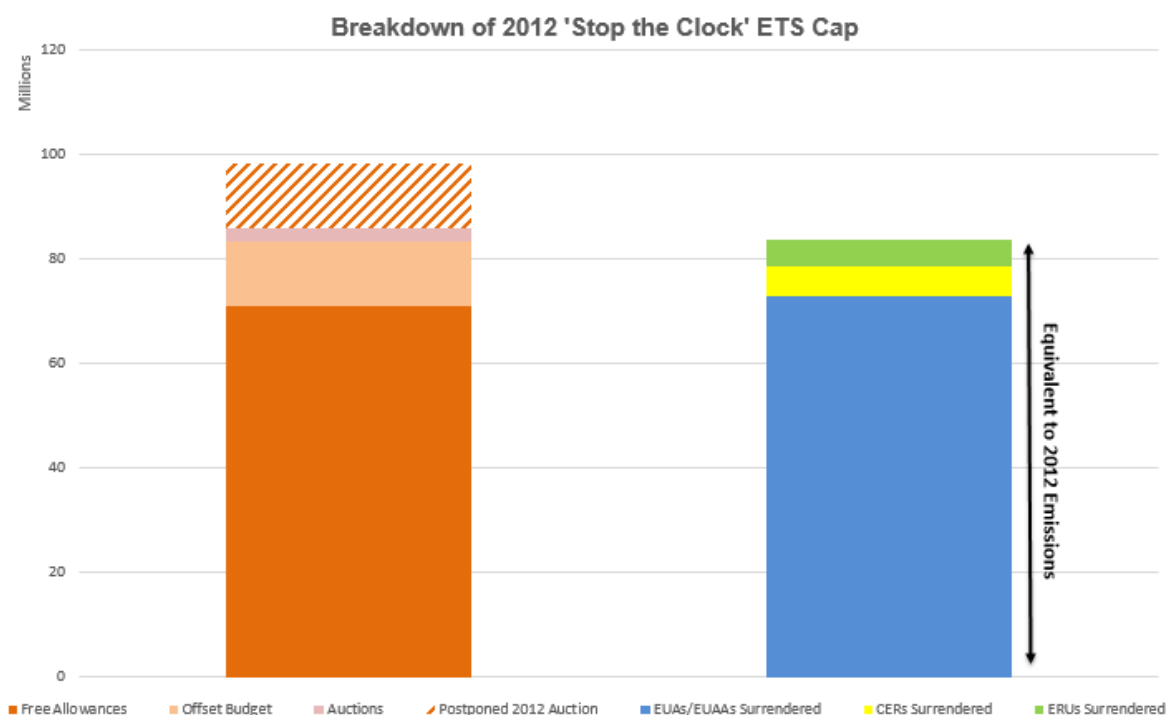


Figure 1: Overview of aviation cap and breakdown of 2012 surrendered units

Had the full 2012 auction of allowances taken place the scheme would have been over allocated by 11.5 million allowances. It is important to note that the number of allowances to be auctioned was adjusted by the *Stop the Clock* decision.<sup>40</sup> Allowances that were not auctioned in 2012 will be released into the market later in the Phase. An addition supply of allowance will come in the form of the “special reserve”. As mentioned above, from 2013 - 2020 3% of allowances were destined to be allocated to a special reserve for fast growing and new airlines. Sandbag is supportive of this reserve, however, unlike the size of the auction pot, the special reserve is not set to change depending on the number of allowances issues. As it stands the special reserve is 50 million allowances.<sup>41</sup> With the new proposal, both the level of auctions and the special reserve must be in proportion to the number of free allowances issued.

<sup>39</sup> Units = Allowances and CERs and ERUs

<sup>40</sup> Article 2 (2), <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:113:0001:0004:EN:PDF>

<sup>41</sup> Article 3, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011D0389:EN:HTML>

As with the static ETS, issuing free allowances gives rise to concern as some companies end up with a generous over allocation, and subsequently a windfall profit. Uniquely to the aviation sector under the ETS, the cap on allowances is fixed, not declining by 1.74% annually as with all other sectors. The aviation sector should be incorporated into the main body of the ETS in order that they are subject to the same emissions reduction cap as other economic sectors.

### Costs incurred, windfalls and opportunity costs

As could be expected the scheme is dominated by a small number of European airlines. In total 42%<sup>42</sup> of all 2012 emissions originated from just 10 EU airlines. The majority of airlines have incurred a cost as a result of being included into the ETS, but there have also been airlines that incurred a windfall through surplus free allowances as well as the opportunity cost of passing through the cost onto passengers.

Table 2 ranks the Top 10 airlines according to emissions in 2012, and includes the number of free allowances they received,<sup>43</sup> the size of their surplus or deficit as well as the number of international offsets they surrendered. In the final column the total compliance cost has been estimated. Estimating costs incurred by the ETS on airlines is difficult, and the numbers in Table 2 are an estimation based on an average<sup>44</sup> 2012 EUA, CER and ERU<sup>45</sup> prices. These are conservative estimates and do not take into account individual companies' compliance strategies. Strategies which are likely to have included a degree of hedging, swaps and offset usage to capitalise on arbitrage opportunities. In some instances, where the airline has included additional information in their annual report, it's possible to piece together a more comprehensive overview of their position. This is true for Ryanair who, in their 2012 annual report, include ETS compliance costs of €2.2 million for the first quarter. Unsurprisingly it is EU airlines that dominate this list as they have the most intra-EU flights. Thomson Airways is highlighted as a notable exception; their free allocation was larger than their 2012 emissions. This is because their historical average is greater than their current emissions, indicating a reduction of capacity, an increase in fuel efficiency, or a combination of both. On top of this they have also used international credits to meet their compliance obligation, freeing up free allowances in the process. We estimated that Thomson Airways ended the 2012 compliance period with a surplus of allowances worth €0.3 million.

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<sup>42</sup> The top 20 emitting airlines surrendered 49.8 m/tCO<sub>2</sub> compared to 83.7 m/tCO<sub>2</sub> in the whole scheme.

<sup>43</sup> Amended for returns

<sup>44</sup> EUA €7.3 and CER €2.5

<sup>45</sup> ERU €1.80 <http://www.icis.com/heren/articles/2012/12/13/9624259/emissions/edcm/eru-price-collapses-as-vote-postponed-issuance-hits-high.html>

| Rank              | Airline            | Free allocation | Emissions | Surplus / Deficit | Offsets   | Estimated Cost of ETS compliance |
|-------------------|--------------------|-----------------|-----------|-------------------|-----------|----------------------------------|
| 1                 | Ryanair            | 5,560,944       | 7,456,718 | -1,895,774        | 1,118,507 | € 8,470,317                      |
| 2                 | Deutsche Lufthansa | 2,303,258       | 4,932,287 | -2,629,029        | 739,843   | €15,149,614                      |
| 3                 | Easyjet            | 3,391,994       | 4,610,751 | -1,218,757        | 690,000   | €5,584,926                       |
| 4                 | Air France         | 2,420,515       | 3,769,484 | -1,348,969        | 565,422   | €6,991,504                       |
| 5                 | SAS                | 2,415,214       | 3,621,292 | -1,206,078        | 543,194   | €5,816,802                       |
| 6                 | British Airways    | 1,214,544       | 2,543,550 | -1,329,006        | 381,531   | €7,870,395                       |
| 7                 | Air Berlin         | 2,096,453       | 2,439,688 | -343,235          | 350,000   | €825,616                         |
| 8                 | Thomson Airways    | 2,364,253       | 2,279,317 | +84,936           | 166,101   | +€329,552                        |
| 9                 | Alitalia           | 1,089,274       | 1,901,994 | -812,720          | 285,299   | €4,563,421                       |
| 10                | KLM                | 1,136,069       | 1,891,413 | -755,344          | 283,712   | €3,953,595                       |
| <b>Total Cost</b> |                    |                 |           |                   |           | €59,226,189                      |

Table 2: Top 10 Emitting airlines in the EU ETS, Including estimated cost of compliance

Table 3 list the top 10 airlines that ended 2012 with a surplus of free allowances representing a windfall. This list contains an interesting cross section of airlines, each of which have a surplus of allowances for different reasons. One obvious reason for a surplus is that their initial free allocation was too generous, reflecting a historical average that is larger than the current level of emissions. Another reason is that the benchmark used for setting the free allocation was disproportionately generous to airlines travelling long haul. The favourable position these airlines found themselves in meant that some chose not to *Stop the Clock*, instead opting to participate in full with the scheme. This allowed them to retain and make use of all allocated allowances. This practice was common among cargo airlines, but also some commercial carriers, including Korean Air. The exact compliance strategies of these companies are not known, but it is obvious that their decision to comply with the scheme is influenced by this financially lucrative windfall.

| Rank         | Airline                | Free Allowances | Emissions | Surplus   | Offsets | Value of Surplus |
|--------------|------------------------|-----------------|-----------|-----------|---------|------------------|
| 1            | Cargolux               | 2,228,589       | 1,416,202 | 812,387   | 212,430 | €3,152,062       |
| 2            | Lufthansa Cargo        | 2,008,504       | 1,256,311 | 752,193   | 188,000 | €2,918,509       |
| 3            | MartinAir              | 1,548,398       | 843,973   | 704,425   | 126,596 | €2,733,169       |
| 4            | Thomas Cook            | 1,961,054       | 1,456,459 | 504,595   | 218,469 | €1,957,829       |
| 5            | World Airways          | 703,656         | 206,066   | 497,590   | 0       | €1,930,649       |
| 6            | Kenya Airways          | 322,907         | 24        | 322,883   | 0       | €12,52,786       |
| 7            | Korean Airlines        | 2,051,522       | 1,859,876 | 191,646   | 0       | €743,586         |
| 8            | DHL Air                | 330,237         | 204,227   | 126,010   | 0       | €488,919         |
| 9            | Omni Air International | 315,984         | 200,809   | 115,175   | 30,121  | €446,879         |
| 10           | JET4YOU                | 126,766         | 32,402    | 94,364    | 0       | €366,132         |
| <b>Total</b> |                        | 11,597,617      | 7,476,349 | 4,121,268 | 775,616 | €15,990,520      |

Table 3: Top airlines by 2012 emissions along with estimated EU ETS compliance costs

In Table 3 the value of the airlines surplus emission has been estimated based on the current EUAA price.<sup>46</sup> Airlines will be quick to point out that these allowances were given for free and will be needed for compliance at some stage. Nevertheless, these allowances represent a financial asset on the books of companies and are a windfall profit. There are also concerns that airlines passed on a carbon cost to consumers when they did not themselves incur the cost.

## Opportunity Costs and Cost per Passenger

<sup>46</sup> This valuation is using an EUAA price of €3.88, taken on 11<sup>th</sup> November 2013 from The ICE:

A surplus of allowances will give a small number of airlines a windfall profit. However, the passing through of opportunity costs is likely to be a bigger source of revenue for airlines. A large number of variables – including allowance or offset price, number of free allocation received, ‘bureaucratic burden’, passenger numbers etc. – means that establishing exactly how much the ETS ‘cost’ passengers is difficult.

Ahead of aviation’s entry into the ETS the European Commission put forward a cost estimation of around €1.02 – €6.25<sup>47</sup> each way for a transatlantic flight, specifying that a flight from New York to London would only be \$1-2. Many airlines<sup>48</sup> were reluctant to put a price on ETS compliance, insisting that no firm plans had been made, or stating an intention to integrate ETS costs into other charges. Airlines may also have been wary as they did not want to draw attention to potential windfall profits, keen to avoid similar media coverage static installations have had over the years the ETS has operated. Two airlines that did publically reveal how much they would add to ticket prices were Ryanair and Delta Airlines, charging €0.25 and €2.18 (\$3) respectively per passenger each way. How realistic are these figures, do they reflect the true cost incurred by airlines?

Establishing the actual cost per passenger is difficult and relies on range of information to be able to make an effective estimate. This is most easily estimated for Ryanair and Easyjet whose flights are predominantly intra-EU.

| Airline               | Passenger Numbers | Emissions | Cost of Compliance | Cost Per passenger | Customers charged   | Windfall Profit |
|-----------------------|-------------------|-----------|--------------------|--------------------|---------------------|-----------------|
| Ryanair <sup>49</sup> | 65,800,000        | 7,456,718 | €8,470,317         | €0.13              | €0.25 <sup>50</sup> | € 7,979,683     |
| Easyjet <sup>51</sup> | 48,400,000        | 4,610,751 | €5,584,926         | €0.12              | N/A                 | N/A             |

Table 4: Estimated 2012 ETS cost per passenger for Ryanair and Easyjet

We believe cost per passenger figures in Table 4 to be conservative estimates as the compliance costs are based on the average 2012 EUA and CER prices. In both cases we reduced their 2012 passenger numbers by 10 million, to factor in customers who bought their tickets ahead of the ETS entering into force. The passenger numbers also include some non EU flights (e.g. to Morocco or Jordan) but these numbers are relatively small and would not change the overall estimation.

Ryanair were one of the few airlines who put price on the ETS, of €0.25 per passenger per flight. The fee was to cover ETS costs Ryanair initially estimated to be €15 – 20 million for 2012.<sup>52</sup> Charging its passengers €0.25 would have led to a revenue of €16.5 million, which, after deducting the cost of allowances would leave a windfall of €8 million. This would equate to €0.13 per passenger. It’s likely the weak carbon price and a shrewd compliance strategy meant that costs were smaller than expected. In their 2012 annual report Ryanair have stated that any windfall would be used to pay future compliance costs.

<sup>47</sup> \$1.40 and \$8.60 [http://ec.europa.eu/commission\\_2010-2014/hedegaard/headlines/articles/2011-10-31\\_01\\_en.htm](http://ec.europa.eu/commission_2010-2014/hedegaard/headlines/articles/2011-10-31_01_en.htm)

<sup>48</sup> <http://centreforaviation.com/blogs/aviation-blog/like-dominos-airlines-globally-raise-fares-after-eu-emission-trading-scheme-starts-65856>

<sup>49</sup> 2012 passenger figures stand at 75.8 million. Ryan air has indicated that 10million passengers bought their tickets ahead of the introduction of the ETS, and thus been deducted from our calculation: [http://www.ryanair.com/doc/investor/2012/final\\_annual\\_report\\_2012\\_310712.pdf](http://www.ryanair.com/doc/investor/2012/final_annual_report_2012_310712.pdf)

<sup>50</sup> We do not take into account currency differences

<sup>51</sup> 2012 passenger figures stand at 58.4 million. We have assumed the same is true for Easyjet and deducted 10 million passengers from this figure: [http://2012annualreport.easyjet.com/downloads/PDFs/Full\\_Annual\\_Report\\_2012.pdf](http://2012annualreport.easyjet.com/downloads/PDFs/Full_Annual_Report_2012.pdf)

<sup>52</sup> <http://www.ryanair.com/en/news/ryanair-to-introduce-0-25-euro-ets-levy-to-cover-new-eu-eco-looney-tax>

Unlike Ryanair, Easyjet did not announce a per passenger cost. This means that where we're able to make a conservative estimate of how much the ETS might have cost per passenger, it's impossible to establish if they made a windfall. It's more difficult to determine the costs incurred by legacy carriers because disaggregating their passenger number to account for only those who travelled intra-EU is all but impossible for the purposes for this report. The major EU airlines have incurred a cost as a result of the ETS but we believe, as shown in the Ryanair example, these costs are likely to have been much lower than the carriers initially expected.

As this point it's also worth taking a moment to consider other airlines to publically announce they would be introducing an ETS charge, i.e. Delta Airlines. In January 2012 a Delta spokesperson confirmed that they had added a "\$3 surcharge each way on fares purchased in the United States for flights between the United States and Europe."<sup>53</sup> However, this charge was added ahead of *Stop the Clock*, which led to Delta only being required to pay for emissions from intra-EU flights, which in 2012 totalled 3,433 t/CO<sub>2</sub>. It's unclear as to whether this charge was indeed levied on all of their passenger bound to or from the EU as there is no mention of it in their 2012 Annual Report. Instead it is stated that in the face of the *Stop the Clock* they were "monitoring and evaluating the potential impact of such legislative and regulatory developments."<sup>54</sup> Our hope is that Delta did not levy this charge. As for other international airlines who complied with *Stop the Clock*, the cost was, as described by Air Canada in its annual report, "insignificant".<sup>55</sup>

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<sup>53</sup> <http://www.reuters.com/article/2012/01/03/us-delta-idUSTRE8021PR20120103>

<sup>54</sup> [http://www.delta.com/content/dam/delta-www/pdfs/about-financial/DeltaAirLines\\_10K\\_2012.pdf](http://www.delta.com/content/dam/delta-www/pdfs/about-financial/DeltaAirLines_10K_2012.pdf)

<sup>55</sup> Air Canada 2012 Annual Report

### Offsetting use during *Stop the Clock*

In 2012 airlines were permitted to use carbon credits, or “offsets”, for up to 15% of their emissions. The offsets come from clean development mechanism (CDM) and joint implementation (JI) projects located mostly outside of the EU, and are a cheaper form of compliance compared to surrendering European allowances (EUAs). Unused 2012 offset allowance can be banked and surrendered in the following phase of the scheme, from 2013 – 2020. In Phase III airlines will be entitled to offset a maximum of 1.5% of their verified emissions from 2013-2020.

The total the 2012 offset budget was set at 12.6million allowances, this figure takes into account the lower level of emissions due to *Stop the Clock*. Airlines were quick to take advantage of offsets and the cheaper form of compliance they offered; in 2012 11million offsets were surrendered representing 87% of the total 2012 offset budget.

This was made up from 5.6 million (51%) CERs and 5.3 million (49%) ERUs, surrendered by 335 and 347 airlines respectively.

The majority of offsets were surrendered by a small handful of airline. Table 5 outlines the top 10 offsets users in 2012 who between them accounted for 48% of all CERs and ERUs surrendered by airlines during *Stop the Clock*.

| Airline                        | Total Offsets surrendered | CERs             | ERUs             | % 2012 Offset budget remaining |
|--------------------------------|---------------------------|------------------|------------------|--------------------------------|
| Ryanair                        | 1,118,507                 | 1,118,507        |                  | 0.0%                           |
| Lufthansa                      | 739,843                   | 38,341           | 701502           | 0.0%                           |
| Easyjet                        | 690,000                   | 690,000          |                  | 0.2%                           |
| Air France                     | 565,422                   | 362,644          | 202,778          | 0.0%                           |
| SAS                            | 543,194                   |                  | 543,194          | 0.0%                           |
| British Airways                | 381,531                   | 381,531          |                  | 0.0%                           |
| Air Berlin                     | 350,000                   | 350,000          |                  | 4.4%                           |
| Alitalia                       | 285,299                   | 285,299          |                  | 0.0%                           |
| KLM                            | 283,712                   |                  | 283,712          | 0.0%                           |
| Norwegian                      | 254,486                   | 254,486          |                  | 0.0%                           |
| <b>Top 10 Airline Total</b>    | <b>5,211,994</b>          | <b>3,480,808</b> | <b>1,731,186</b> |                                |
| <b>% of total Offsets used</b> | <b>48%</b>                | <b>62%</b>       | <b>32%</b>       |                                |
| <b>Grand Total</b>             | <b>10,956,682</b>         | <b>5,627,861</b> | <b>5,328,821</b> |                                |

Table 5: Top 10 airlines surrendering in 2012 by volume

In 2012 airlines surrenders 5.6 million CERs. Credits came from twelve project types, with the majority of credits coming from HFC, 2.4 million (43%), and N2O, 1.5 million (26%), projects. The next most common credits type was from fuel switching projects and made up 0.3 million or 6% of all credits. These credits came from a total of twelve countries with the overwhelming majority coming from China, 4.2 million (75%), followed by South Korea, 0.4 million (8%), and India, 0.3 million (6%). See Figures 2 and 3 for a more detailed breakdown of CER type and origin. Airlines surrendered slightly fewer ERUs, with 5.3 million ERUs being used for compliance. Credits came from fourteen different project types with the most common being fugitive, 2 million (38%), industrial energy efficiency 0.72 million (14%) and energy efficiency projects, 0.7 million (13%) ERUS. The majority of ERUs originated from the Ukraine 52% and Russia 41%, with the remaining 6% (0.3million) coming from five EU Member States. See Figures 4 and 5 for a more detailed breakdown of ERU type and origin. It’s worth noting that offsets from industrial gas (HFC and N2O) projects, as well as ERUs from Ukraine and Russia are the subject of serious quality concerns. As such the European Commission have moved to ban these credits.

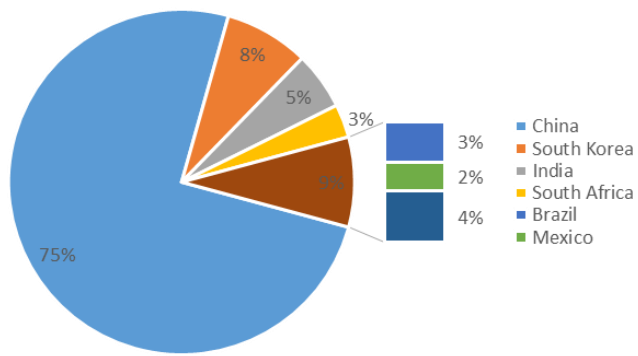


Figure 4: Origin of 2012 CERs

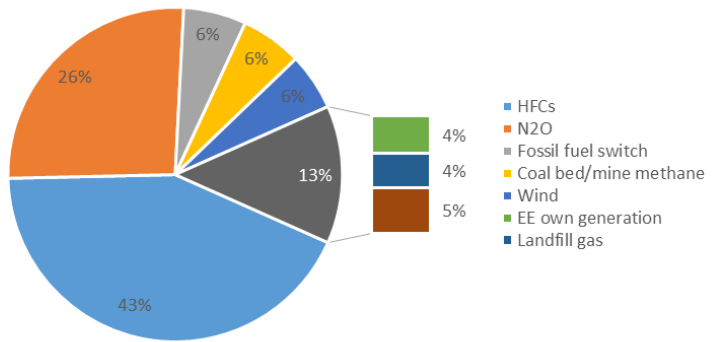


Figure 5: Type of 2012 CERs

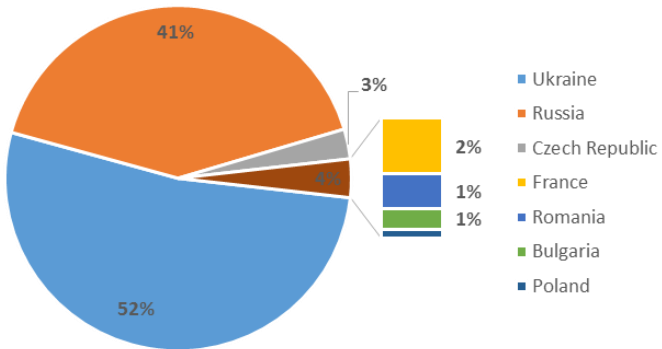


Figure 3: Origin of 2012 ERUs

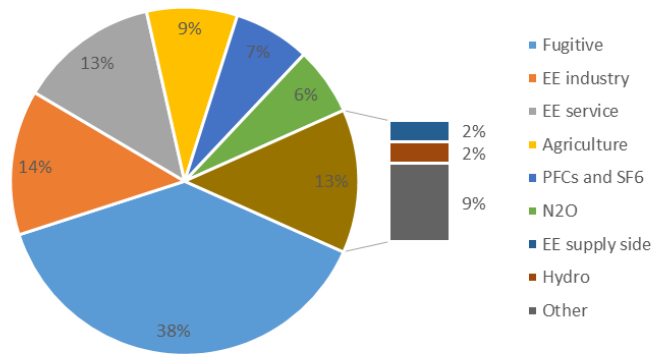


Figure 2: Type of 2012 ERUs



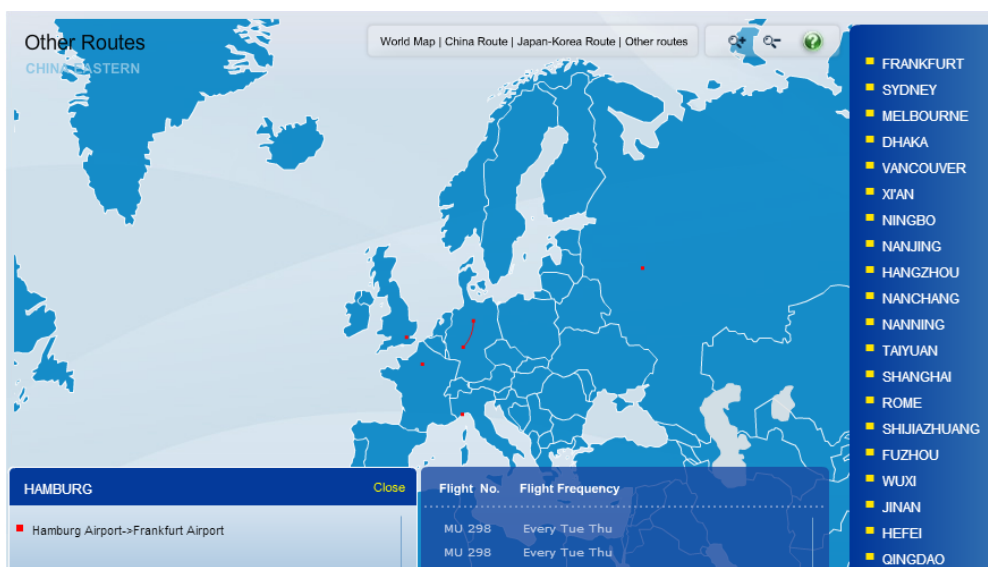
# Non Compliance

Non-compliance during *Stop the Clock* comes in the shape of airlines failing to monitor and report emissions data to the European Commission and subsequently not opening a registry account. Failure to provide data and open an account effectively makes the airlines invisible from public scrutiny as they do not appear on the EU Transaction Log (EUTL). Sandbag does not have a complete list of airlines that fall into this category, however, the European Commission has put a figure of 12 million<sup>56</sup> allowances against these airlines. Without a detail list of airlines one must deduce those that are non-compliant. A European Commission press release on the 15<sup>th</sup> May 2012 suggested eight Chinese and two Indian airlines<sup>57</sup> had not reported 2011 emissions which would imply they did not open a registry account or comply for intra-EU emissions. Conspicuous omissions from the EUTL, including Chinese airlines: China Eastern, Hainan and China Southern, and Indian airlines: Air India and Jet Air.

A second form of non-compliance is demonstrated by airlines reporting emissions data and having a registry account, thus appearing in the EUTL, but then failing to surrender allowances to account for their 2012 emissions under *Stop the Clock*. In the EUTL non-compliant airlines are indicated by a “C” status. In 2012<sup>58</sup> 126 (11%) airlines have an official “C” non-compliance status. Sadly this status is not deemed to be a reliable reflection of an airlines compliance as different Member States may have designated a airlines with a “C” by default pending an “examin[ation] by the competent authorities.”<sup>59</sup> It’s likely that there will be a host of issues at play contributing to non-compliance, ranging from technical errors to late submission of information.

What do we know from the available data? One assumption that could be made is those airlines who

failed to report any emissions in CITL did not comply with *Stop the Clock*. Of the 1169 airlines that are present in the CITL, only 103 (9%) have no reported 2012 emissions. This could mean one of two things, either they did not fly intra-EU, or they did not comply with *Stop the Clock*. It’s likely that the latter be more accurate as it’s common for airlines to fly internally within the EU. This could be to



Screen shot from China Eastern's website showing intra-EU flights

repositioning planes, or for additional pickups. Such is the case of China Eastern, which flies from Hamburg to Frankfurt every Tuesday and Thursday, presumably en route to China. How do we know this? Because the route is listed on their website. Unfortunately such transparency is rare and we do

<sup>56</sup> [http://ec.europa.eu/clima/news/articles/news\\_2013092601\\_en.htm](http://ec.europa.eu/clima/news/articles/news_2013092601_en.htm)  
<sup>57</sup> [http://europa.eu/rapid/press-release\\_IP-12-477\\_en.htm?locale=en#footnote-2](http://europa.eu/rapid/press-release_IP-12-477_en.htm?locale=en#footnote-2)  
<sup>58</sup> At time of print.  
<sup>59</sup> [http://ec.europa.eu/clima/news/articles/news\\_2013051601\\_en.htm](http://ec.europa.eu/clima/news/articles/news_2013051601_en.htm)

not have a complete list – nor do we know if one is publicly available – of all those non-EU airlines which fly intra EU.

We do know the majority of airlines did comply with *Stop the Clock* and surrendered allowances to account for their intra-EU flights. This is good news, it shows the ETS is technically feasible and that the majority of airlines are law abiding. Table 6 lists a number of international airlines that complied with the EU ETS in 2012, highlighting airlines which belong to the “coalition of the unwilling”, that is airline officials from these countries signed the Moscow Declaration. Many well known carriers are included in this list, such as China Airlines, Delta, United, S7 Airlines and Korea Air. In other cases, such as those from Saudi Arabia, it is smaller private firms that have chosen to comply. The importance of this list is that it shows the disconnect between those bellicose aviation officials who decry the EU ETS, and the reality, which is the majority of airlines are law abiding.

|                                     | Country                  | Airlines                          | Compliance Status                |
|-------------------------------------|--------------------------|-----------------------------------|----------------------------------|
| <b>"Coalition of the Unwilling"</b> | Argentina                | Aerolineas Argentina              | Complied – <i>Stop the Clock</i> |
|                                     | Brazil                   | Tam Linhas Aereas                 | Semi-Complied – under reported   |
|                                     | China <sup>60</sup>      | China Airlines                    | Complied – <i>Stop the Clock</i> |
|                                     |                          | Eva Air                           | Complied – <i>Stop the Clock</i> |
|                                     |                          | Cathay Pacific                    | Complied – <i>Stop the Clock</i> |
|                                     | Japan                    | Nippon Cargo                      | Complied in Full                 |
|                                     |                          | Japan Airlines                    | Complied – <i>Stop the Clock</i> |
|                                     |                          | All Nippon Airways                | Complied – <i>Stop the Clock</i> |
|                                     | Republic of Korea        | Korean Airlines                   | Complied in Full                 |
|                                     |                          | Asiana Airlines                   | Complied – <i>Stop the Clock</i> |
|                                     | Russia                   | AirBridge Cargo Airlines          | Complied in Full                 |
|                                     |                          | Siberia Airlines (S7 Airlines)    | Complied – <i>Stop the Clock</i> |
|                                     |                          | Joint Stock Company Ural airlines | Complied – <i>Stop the Clock</i> |
|                                     | Saudi Arabia             | Al Anwaa Est                      | Complied – <i>Stop the Clock</i> |
|                                     |                          | Bayham Limited                    | Complied – <i>Stop the Clock</i> |
|                                     | Singapore                | Singapore Airlines                | Complied – <i>Stop the Clock</i> |
|                                     | United States of America | Federal Express                   | Complied in Full                 |
|                                     |                          | Delta Air Lines, Inc.             | Complied – <i>Stop the Clock</i> |
|                                     |                          | United Parcel Service Co          | Complied – <i>Stop the Clock</i> |
|                                     |                          | US Airways, Inc.                  | Complied – <i>Stop the Clock</i> |
| World Airways                       |                          | Complied – <i>Stop the Clock</i>  |                                  |
| Atlas Air, Inc.                     |                          | Complied – <i>Stop the Clock</i>  |                                  |
| North American Air                  |                          | Complied in Full                  |                                  |
| United Airlines, Inc.               |                          | Complied – <i>Stop the Clock</i>  |                                  |
| American Airlines                   |                          | Complied – <i>Stop the Clock</i>  |                                  |
| Netjets Aviation INC                |                          | Complied – <i>Stop the Clock</i>  |                                  |
| India                               | Bharat Forge Limited     | Complied – <i>Stop the Clock</i>  |                                  |
| <b>Other</b>                        | Qatar                    | Qatar Airways                     | Complied – <i>Stop the Clock</i> |
|                                     | UAE                      | Gulf Air                          | Complied – <i>Stop the Clock</i> |
|                                     |                          | Emirates International            | Complied – <i>Stop the Clock</i> |

Table 6: Compliant airlines in the “Coalition of the unwilling”

Particularly interesting are those airlines highlighted in red as they complied with the original scope of the scheme. That is, they surrendered allowances for not only their intra-EU flights, but for all their emissions that occurred from flights arriving and departing from EU. Why would they do this? Put

<sup>60</sup> China Airways and Eva Air are registered in Taiwan. Cathay Pacific is registered in Mainland China.

simply, because free allowances offer a financial incentive to do so (as touched on in the previous section).

### Enforcement

Unlike static installations included in the EU ETS, aircraft move freely between Member States and thus must be assigned to an administrating Member State, which provides assistance, as well as monitors compliance and enforcement if necessary. The administrating Member State is usually that country in which an airline operates the most and as such those countries with large aviation hubs tend to administer the most international airlines. The majority of airlines are administered by three Member States, the UK, France and Germany who cover 381 (33%), 181 (15%) and 148 (13%) airlines and operators respectively. Followed by Italy, and Ireland administering 67 (6%) and 59 (5%) airlines and operators respectively. The total number of airlines administered by a Member States does not necessarily reflect directly the size of the emissions they police as indicated in Figure 6. Germany, for example, administers fewer airlines but has a greater share of the free allocations than France due to the high number of international and cargo flights transiting through Frankfurt International Airport.

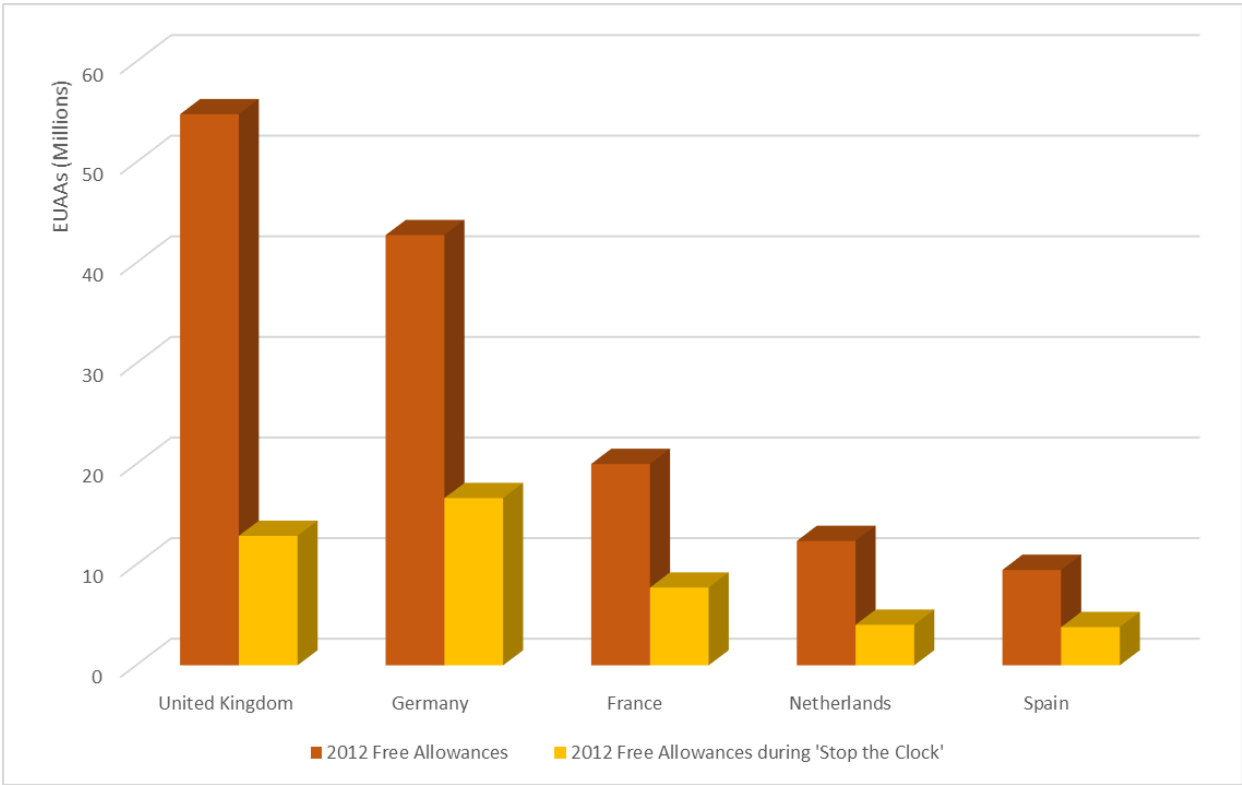


Figure 6: Top 5 Administering Member States Including Allowances Covered

It is the administrating Member State which is responsible for ensuring international airlines comply with the EU ETS. According to the ETS Directive airlines must pay €100 for every tonne of CO<sub>2</sub> they fail to surrender as well as having to make up the shortfall in allowances in the following year, just as static installations must do. This should not pose any significant problems as it is likely Member States have had to impose fines before, including to foreign owned companies. For example the largest fine issued to date by the UK Government for EU ETS non-compliance was to ExxonMobil in 2010 for under reporting 33,000 tonnes of CO<sub>2</sub> and amounted to £2.8million.<sup>61</sup> A 2013 ECJ case brought by two Swedish companies helps to clarify and reaffirm the legal basis of Member States in issuing

<sup>61</sup> [http://www.sepa.org.uk/about\\_us/news/2012/sepa\\_publishes\\_2010\\_-\\_2011\\_enf.aspx](http://www.sepa.org.uk/about_us/news/2012/sepa_publishes_2010_-_2011_enf.aspx)

penalties under the EU ETS. The court rules that the ETS Directive made it impossible for operators who have not surrendered allowances equivalent to emissions from avoiding a penalty.<sup>62</sup> Thinking more generally about the aviation industry the idea that countries do not fine airlines for infringement of domestic regulation is fanciful, for example, in 2012 the US Department of Transportation fined Air India €60,000<sup>63</sup> for failing to comply with its new consumer rules requiring them to post delay contingency plans online.

Member States should move to enforce a fine of €100 for every tonne of CO<sub>2</sub> airlines have fail to surrender during 2012 under *Stop the Clock*, as well as have to make up the shortfall as set out in the ETS Directive. We fail to see why exceptions should be made for airlines just because they dislike this particular EU legislation. Member State's failure to enforce the ETS for airlines in 2012 would simply give the impression that they are a special case and merit special treatment. This is far from the truth. Evoking the polluter pays principle on which the ETS is based, all companies should pay for their externalities.

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<sup>62</sup>[http://curia.europa.eu/juris/document/document\\_print.jsf?doclang=EN&text=&pageIndex=0&part=1&mode=req&docid=143186&occ=first&dir=&cid=114846](http://curia.europa.eu/juris/document/document_print.jsf?doclang=EN&text=&pageIndex=0&part=1&mode=req&docid=143186&occ=first&dir=&cid=114846)

<sup>63</sup> <http://timesofindia.indiatimes.com/business/india-business/US-transportation-department-slaps-fine-of-80000-on-Air-India/articleshow/12990657.cms>

## The Lufthansa Group

| Lufthansa Group Airlines | Stop the Clock Free Allowances | 2012 emissions   | Surplus / Deficit | 2012 Offsets Surrendered | % Offset Budget Remaining |
|--------------------------|--------------------------------|------------------|-------------------|--------------------------|---------------------------|
| Sun Express              | 0                              | 5,104            | -5,104            | 0                        | 100                       |
| Edelweiss Suisse         | 51,809                         | 82,811           | -31,002           | 0                        | 100                       |
| German Wings             | 410,409                        | 666,575          | -256,166          | 99,986                   | 0                         |
| Austrian Airlines        | 477,846                        | 828,384          | -350,538          | 124,236                  | 0                         |
| Brussels Airlines        | 308,516                        | 697,217          | -388,701          | 104,583                  | 0                         |
| Swiss                    | 598,672                        | 1,228,129        | -629,457          | 0                        | 100                       |
| Deutsche Lufthansa       | 2,303,258                      | 4,932,287        | -2,629,029        | 739,843                  | 0                         |
| Lufthansa Cargo          | 2,008,504                      | 1,256,311        | 752,193           | 188,000                  | 0                         |
| <b>Total</b>             | <b>6,159,014</b>               | <b>9,696,818</b> | <b>-3,537,804</b> | <b>1,256,648</b>         |                           |

**Lufthansa has been among the most vocal opponents of the EU's inclusion of aviation into its carbon market.** From as far back as 2009 Lufthansa explained that EU "unilateral efforts, in any event, lead to nowhere."<sup>1</sup> Since then they have repeatedly voiced their opposition to the scheme on grounds that it distorts competition at the expense of the EU airlines.

The table above comprises of all the airlines which make up the Lufthansa Group.<sup>1</sup> In trying to understand Lufthansa's objections we were keen to understand how they fared in 2012. The most striking thing is that Lufthansa Cargo did not, unlike its sister airlines, *Stop the Clock*. Rather they complied with the full original scope of the scheme – choosing not to return free allowances. This seems odd given the company's objection to the scheme, as well as inconsistent given the other airlines in the group did stop the clock. For example Lufthansa, the main airline of the group, returned more than 10 million allowances. The reason for this is simple; Lufthansa Cargo, like many long-haul operators, benefitted from a generous allocation of free allowances. This means that they ended 2012 with a surplus of allowances; a surplus estimated to be worth over €2.9m at current<sup>1</sup> prices. In fact, Lufthansa Cargo will be able to grow its emissions significantly under its current allocation of allowances. It's unclear exactly how the Group's carbon management strategy is devised - on an individual airline or group basis - but it's likely that Lufthansa Cargo's decision to comply in full, thus allow it to keep its full allocation of free allowances, would have allowed the company to offset losses in other areas.

The aviation sector often reiterates the fact that they are only responsible for a fraction of global greenhouse gas pollution. To put this in perspective, the emissions covered by the ETS in 2012 for Lufthansa Group were greater than the total emissions of Cyprus in 2011.<sup>1</sup> The Group's overall emissions are likely to be much greater. Airlines' emissions may well be small relative to global levels, but they are no way insignificant.

<sup>1</sup> [http://www.lufthansagroup.com/fileadmin/downloads/en/policy-brief/12\\_2009/LH-Policy-Brief-December-Emissions-trading.pdf](http://www.lufthansagroup.com/fileadmin/downloads/en/policy-brief/12_2009/LH-Policy-Brief-December-Emissions-trading.pdf)

<sup>1</sup> Airlines of Lufthansa Group: Lufthansa, SWISS, Austrian Airlines, Brussels Airlines, Germanwings, Sun Express, Edelweiss, JetBlue and Lufthansa Cargo: <http://www.lufthansagroup.com/en/company/business-segments/passenger-airline-group.html>

<sup>1</sup> This valuation is using an EUAA price of €3.88, taken on 11<sup>th</sup> November 2013 from The ICE:

<sup>1</sup> Cyprus' 2011 GHG emissions were 9.1 million t/CO<sub>2</sub>

[http://unfccc.int/files/ghg\\_data/ghg\\_data\\_unfccc/ghg\\_profiles/application/pdf/cyp\\_ghg\\_profile.pdf](http://unfccc.int/files/ghg_data/ghg_data_unfccc/ghg_profiles/application/pdf/cyp_ghg_profile.pdf)

# ICAO's Market Based Measure

The EU 'stopped the clock' in 2012 to allow ICAO time to negotiate a meaningful global deal to tackle increasing emissions from the aviation sector. The 38<sup>th</sup> ICAO Assembly was the culmination of this additional year of negotiating time, at which they came forward with a resolution for a global market-based measure, the details of which would be worked out ahead of the 39<sup>th</sup> ICAO Assembly in 2016 and to be implemented by 2020. It also dealt a parting blow to the EU ETS by again requiring "mutual consent" for States to implement new or existing MBMs – a choice of words the EU has already objected to in the past at ICAO. As well as CBDR and a 1% *de minimis* clause, some key statements from the 38<sup>th</sup> Assembly are set out in the box below:

## Key statement from the 38<sup>th</sup> Assembly resolution

*The Assembly:*

*20. Decides to develop a global MBM scheme for international aviation;*

*21. Requests the Council to:*

*a) finalize the work on the technical aspects, environmental benefits, economic impacts on international aviation and modalities of the three options for a global MBM scheme, building on the progress made by the Council, as well as taking into account the proposal of the aviation industry and other international developments, as appropriate, and without prejudice to the negotiations under the UNFCCC;*

*b) make a recommendation on a global MBM scheme that addresses key design elements, including a means to take into account special circumstances and respective capabilities as provided for in paragraphs 22 to 26 below, and the mechanisms for the implementation of the scheme from 2020 as part of a basket of measures which also include technologies, operational improvements and sustainable alternative fuels to achieve ICAO's global aspirational goals; and*

*c) report the results of the work in sub-paragraphs a) and b) above, for decision by the 39th Session of the Assembly*

The aviation industry has committed to carbon neutral growth from 2020, and a long term aim of halving emissions by 2050, but these promises lack weight. ICAO's current projections indicate that by 2036 aviation emissions will increase between 155% and 300% compared to 2006, which would make a turnaround to halving emissions incredible. The global MBM should enshrine clear emissions reductions targets in law, not just emission-free growth.

The EU submitted the following reservations to the conference, on issues in the resolution (which passed 93 votes to 39) about which they had concerns.<sup>6465</sup> These included:

<sup>64</sup> Commission proposal for European Regional Airspace Approach for the EU Emission Trading for Aviation - Frequently asked questions (2013) European Commission [http://europa.eu/rapid/press-release\\_MEMO-13-905\\_en.htm](http://europa.eu/rapid/press-release_MEMO-13-905_en.htm)

<sup>65</sup> [http://ec.europa.eu/clima/policies/transport/aviation/docs/st\\_15605\\_13\\_en.pdf](http://ec.europa.eu/clima/policies/transport/aviation/docs/st_15605_13_en.pdf)

- (i) **“engage in constructive bilateral and/or multilateral Consultations and negotiate with other States to reach agreement”**
  - EU... would like to recall that Assembly resolutions may not diminish these rights or add to the obligations of ICAO Contracting States.
- (ii) **“the ambition level of aspirational goals”**
  - Carbon neutral beyond 2020 for aviation will still see flights taking up a larger and larger slice of global emissions, as other sectoral emissions fall. The EU wants to see real cuts, beyond or equal to those of the EU ETS.
- (iii) **“the totality of the amended framework language on national and regional MBMs”**
  - ICAO in effect called for an end to aviation inclusion in the EU ETS, unless with the agreement of each country operating in the EU.
- (iv) **“the inclusion of a reference to the UNFCCC principle of Common But Differentiated responsibilities”**
  - Unfortunately if the resolution acts as a base for the coming MBM, it will allow for significant exemptions for aviation in Developing countries, despite 65% of growth occurring in emerging markets,<sup>66</sup> and despite the top socio-economic groups being the main users of aviation no matter the economic state of the country.<sup>67</sup>

The ICAO resolution does not yet indicate what the coverage will be of their hesitantly proposed global MBM. Following the EU’s compromise sovereign airspace model would leave the bulk of carbon emissions outside the scheme.

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<sup>66</sup> Annual Review (2013) International Air Transport Association <http://www.iata.org/about/Documents/iata-annual-review-2013-en.pdf>  
<sup>67</sup> <http://www.monbiot.com/2009/01/13/flying-over-the-cuckoos-nest/>

# The EU's ETS Dilemma

The 38<sup>th</sup> Assembly resolution from ICAO poses a problem for the EU. The resolution puts ICAO on track to develop some kind of market based mechanism by 2020. This is no small thing, as we have previously stated, action on this issue is slow and such a commitment should be viewed as positive. Furthermore the role on the EU in pushing the international debate should not be underestimated. If it were not for the EU ETS – and the political storm that pursued – it's unlikely that ICAO would have come this far. For this reason it's perhaps appropriate that Siim Kallas, European Commissioner for Transport called the resolution a "a landmark deal on global aviation emissions".<sup>68</sup> It was not only the EU who saw the 38<sup>th</sup> resolution a victory for themselves, but also industry groups such as the airlines association (IATA) who said the outcome was a "demonstration of how working together can deliver real results."<sup>69</sup> Yet beyond the political posturing and the high-fives questions remain. The Assembly resolution falls short of what the EU previously demanded, and the resolution sought to directly undermine the EU's ability to implement an ETS.

Now, the EU has a dilemma. It must find a way to maintain its ETS while at the same time acknowledge the progress made by ICAO. An added time pressure is present in that the EU must amend its *Stop the Clock* derogation by April 2014 otherwise international aviation will automatically be re-included, in full, into the EU ETS.

## The EU's Options

In a staff working document<sup>70</sup> the EU sets out three potential policy options as a response to the 38<sup>th</sup> Assembly ICAO resolution. These included:

- **Full scope of the EU ETS** – the scheme would return to its scope as originally designed, that is, all flights arriving and departing from the EU will be responsible for their emissions.
- **Hybrid/airspace option** – a regional scheme that would include all intra-EU flight as well as the proportion of flights from third countries which took place within EU airspace.
- **Alternative options** – including: intra-EU flights as well as departing non-EU flights; a 50/50 option where half the flights emissions are covered; an intra EEA scheme; and an upstream option where fuel suppliers are levied opposed to airlines.

## The EU's ETS compromise

After considering the available options the EU responded by proposing an airspace approach. The key features of this proposal are outlined below:

- *Stop the Clock* rules will remain in place for 2013 emissions.
- From 2014 – 2020 the EU ETS is restricted to EU airspace only and will encompass all airlines operating in this space, EU or otherwise.
- Developing countries and flights from third companies which are not developed and emit less than 1% of global aviation emissions would benefit from a full exemption
- Switzerland is exempted, including emissions from intra-EU flights that pass over the country, but Switzerland and the EU are expected to link trading schemes in 2014, removing this exemption
- Small non-commercial operators emitting below 1000tCO<sub>2</sub> would benefit from a full exemption.

<sup>68</sup> <https://twitter.com/SiimKallasEU/status/386076926571712512>

<sup>69</sup> <http://www.greenaironline.com/news.php?viewStory=1763>

<sup>70</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SWD:2013:0431:FIN:EN:PDF>



- Aircraft operators emitting less than 25000 tCO<sub>2</sub> would be eligible for a simplified procedure, i.e. waive third party verification for small emitter using the ETS Support Facility.
- There will be a review of the inclusion of aviation in the EU ETS in 2016 following the 39th ICAO General Assembly.

With regards to environmental effectiveness (as defined by the EU staff working document<sup>71</sup>) - where the full EU ETS is regarded as 100% coverage, the hybrid option is deemed to cover 39 to 47% of emissions, depending on the coverage of high seas areas adjacent to and between EU countries. This is compared to only 25% for the *Stop the Clock* option. Sandbag believe the starting point for any conversation about the future of aviation in the EU ETS needs to focus on the climate mitigation potential, and how best to deal with the increasing emissions coming from a rapidly growing sector. From this perspective it's clear that a global mechanism to address the emissions from the aviation sector would undoubtedly be the most appropriate solution. Yet as we have learnt from years of procrastination, the political reality of this remains some way away. Against this backdrop the EU's leadership is all the more impressive, and their initial design of including all flights arriving and departing from the EU is wholly consistent with the ambition needed to tackle climate change. With this in mind Sandbag recommends that the EU return to the full scope of the EU ETS as soon as possible. *Stop the Clock* served a purpose and though it begins to controls aviation pollution within EU airspace, it falls dramatically short of significantly tackling the sector's pollution, as well as falling short of what the EU is legally able to implement.

Nevertheless, no assessment can ignore the growling geopolitics at play, and with forces aligning to pull down the EU's compromise an airspace approach seems like a workable middle ground. This approach should only ever be seen as temporary stop gap and the 2016 review should act as the marker for the return of the full ETS should the ICAO not deliver on its promises of working towards a global market based mechanism. During any period of time when the cap is reduced the equivalent adjustments should be made to the size of the auction as well as the special reserve.

Another missing element of the proposal is additional transparency on how revenues raised will be spent. As it stands the EU Directive states that ETS revenues *should* be spent on climate mitigation and adaption. Sadly this language is legally weak and few Member States do earmark ETS revenue. Sandbag would support this commitment becoming more transparent, perhaps by channelling international airlines revenue into the Green Climate Fund. This would secure more buy-in from other countries, some who have accused the EU of hunting for additional revenue streams to plug national deficits.

### The way forward for the EU

Before the European Commission's proposal is agreed upon it must go through a co-decision process, which is scrutinised by Member States as well as the European Parliament. Changes to the aviation element of the EU ETS must be completed by April 2014. This will require a fast turnaround from all involved stakeholders and allows very little time for the decision to be transposed into Member State law (for example, in the UK the consultation on transposition alone must run for three weeks<sup>72</sup>).

<sup>71</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SWD:2013:0431:FIN:EN:PDF>

<sup>72</sup> Implementing the Aviation Emissions Trading System 'Stop the Clock' Decision in UK Regulations (May 2013) UK Gov <https://www.gov.uk/government/consultations/implementing-the-aviation-emissions-trading-system-stop-the-clock-decision-in-uk-regulations>

Previously, '*Stop the Clock*' was passed without dissent by the European Parliament's Environment (ENVI) committee,<sup>73</sup> and by 577-114 at plenary.<sup>74</sup> Can it expect the same easy ride this time?

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<sup>73</sup> EU ETS '*Stop the Clock*' proposal passes crucial test in the European Parliament but faces legal challenges from European airlines (February 2013) GreenAirOnline <http://www.greenaironline.com/news.php?viewStory=1650>

<sup>74</sup> Hedegaard sets out conditions on ICAO agreement as EU legislators approve EU ETS '*Stop the Clock*' measure (October 2013) GreenAirOnline <http://www.greenaironline.com/news.php?viewStory=1681>

# Conclusion

The EU took the lead and sought to break the cycle of inaction on aviation emissions. By including aviation into the ETS, airlines begin to have a tangible incentive to reduce pollution. The EU's actions should be applauded; not only have they put pressure on an intractable and much maligned international process, they have designed and deployed a market based mechanism that has proven to be technically feasible as well as cost-effective. From analysis of the 2012 data we can see that the ETS did indeed impose a cost on a number of airlines, but that cost was far from onerous, and did not begin to fairly account for the carbon externalities of the flights. The international community has been less than enthusiastic about the EU's actions and with ICAO beginning to make noises about a global scheme by 2020, the EU must decide how best to go forward.

With the clock ticking and given the slow pace of legislation, the EU must decide what to do by April 2014, as the hundredth year of commercial aviation begins, after which it will become too late to prevent the *Stop the Clock* derogation bouncing back, and re-including international aviation automatically. The Commission proposal for now is EU airspace-only, but covers all carriers within the EU. Member States and The European Parliament could now decide to accept ICAO's verdict, removing third parties from the scheme and leaving domestic airlines uncompetitive against international carriers, and wait for 2020 in the hope that a global scheme kicks in. However, the EU is already labouring under the knowledge that the global scheme will likely be much weaker environmentally than the EU ETS, and there's no guarantee that a *Jarndyce v Jarndyce* diplomatic tussle won't hold the global scheme up well past the end of this decade. The EU ETS needs to continue, with minimal compromise to the airspace proposal the EU introduced in August 2013; a step-up from *Stop the Clock*, to keep the pressure on ICAO, but a very modest one that remains inside EU borders, to avoid retaliation.

All airlines, whether they are EU or international, must take responsibility for their externalities and pay for their pollution within EU airspace. The EU has had the legal right to insist on this since the 1944 Chicago Convention on Aviation, and no country or countries should attempt to use an international platform to roll back this right. European airlines abide by the laws of other countries they land in, and international airlines must do the same in the EU. Compliance with the EU ETS is no longer a debate around climate change responsibilities; it's a simple matter of some national carriers trying to shirk their legal responsibilities.

Sandbag recommends:

- The EU should, at a bare minimum, control pollution within its airspace.
- The full, original scope of the EU ETS should be reinstated as soon as politically possible.
- The EU should broaden its bilateral cooperation and support outside countries looking to tackle aviation emissions.
- Free allocation of allowances should be phased out.
- The level of auction allowance and the special reserve should be in proportion to the scope of emissions coverage.
- The EU must move to impose fines on airlines not complying with *Stop the Clock*.

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