

EU Green Deal – Revision of the Energy Tax Directive Consultation - 14 October 2020

Response from Rosetta Advisory Services

Apply an intra EU fuel tax with stepped increases as post Covid traffic recovers
 Stop tankering by applying a second dissuasive tax on uplift above min fuel
 Not exempting fuel taxation with the UK enables a cross channel emissions tax
 ASA fuel tax exemptions need to be dismantled - EU concluded 20 years ago
 Starting with the EU/UK Brexit ASA as the EU Council intends.
 Which would oblige member states to remove the ETD exemption for the UK
 Remove all ETD 3rd country fuel tax exemptions in past/future ASAs
 The ETS costs just 75 cents/passenger – so tax all aviation carbon emissions
 As a floor price for the UK and EU ETS
 Propose an EU member state opt-in bilateral fuel tax convention
 And an airplane tax for freighters and excise duty on airfreight
 Promote and reform longhaul ticket taxes with guidelines to reach APD levels
 Deploy arrival taxes using an ETS “equivalent measures” approach

7.1 of the consultation poses several questions regarding aviation. This paper provides comments on taxing aviation and in an Annex a response to the recent UK consultation on a carbon emissions tax for aviation. The EU should give serious consideration to the idea in the context of a floor price for both a UK and EU aviation ETS.

Domestic Aviation

The 2003 revision permitted domestic fuel taxation for the first time. But did not make it mandatory. Only the Netherlands within the EU taxed domestic fuel until domestic flights ceased. Norway (since 1999) has had a carbon tax on domestic fuel and Switzerland taxes fuel on flights between Zurich and Geneva excepting those feeding longhaul operations.

Domestic fuel should be mandatorily taxed at a minimum rate and mandatorily inflation indexed.

Intra EU Aviation

The Commission should propose a single fuel tax level across EU member states and leave room for progressive reviews upwards and to account for carbon content. Industry, Transport ministries and their friends in Brussels will argue that the Covid collapse of traffic means environmental regulation will need to wait until recovery. But that’s not how aviation works. Once business as usual returns, competitive pressures will again make it extremely difficult to pass on new costs. It takes time, possibly years. The EU should inject external cost recovery now at a modest level and ramp up as traffic does. IATA predicts much reduced capacity, large increases in unit costs and higher airfares.

Whitehall has developed an interesting variant - proposing a UK carbon emissions tax and is considering whether to include aviation¹. The idea would be to tax all airline CO₂ emitted above carriers’ annual ETS allowance allocations starting in 2021. To implement this, the UK would need to ensure that fuel was not exempt from taxation in any future EU/UK ASA as a carbon tax on aviation emissions would be unlikely to survive a legal challenge that it was a fuel tax in disguise. Since the aviation ETS currently only represents a cost per passenger of about 75 cents, taxing all aviation

¹

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/902737/Carbon_Emissions_Tax_-_consultation.pdf

carbon emissions – not just the excess CO₂ over ETS allowance allocations - could serve as an effective floor price for both the UK and EU aviation ETS linked systems. Which option or hybrid the UK decides should be known soon. See reply to the UK consultation in the Annex.

For a cross channel EU fuel or carbon tax, the fuel tax exemptions in the ETD also need to be removed but any reform of Article 14(b) risks once again being held hostage to unanimous agreement on the whole ETD reform package. Spain and Ireland vetoed any chance of a mandatory intra EU fuel tax in the current ETD at the November 2002 Ecofin. In today's enlarged EU, there are possibly 10 small emitting member states who may have little interest in a solution which would see their already somewhat tenuous aviation links taxed.²

The obvious first route is bilateral fuel taxation as the Commission first proposed in 1997. The Commission stepped in uninvited 15 years ago to rein in unbridled state aid to airlines by regional governments/airports seeking to grow traffic. So, 23 years after proposing the idea, the Commission could draw up some guidelines on how bilateral fuel taxation can help rein in emissions. The Commission should draft an intra EU bilateral fuel tax convention enabling member states to opt-in, selecting tax levels, timing, and relevant de minimis levels pending abolition of all 3rd country carrier exemptions etc. Tankering can be abolished within the EU by applying a second tier dissuasive tax on all fuel uplifted by aircraft over and above minimum journey fuel plus an element of "captain's discretion".³

Foreign carrier, fuel tax exempt intra EU operations, representing in 2003 about 5% of traffic, prevented fuel taxation then. Exemptions in some ASAs have been removed following the 2002 ECJ ruling on designation. The Commission should now push member states to remove the remaining exemptions. The rise of LCCs and deregulation saw fares drop making most of the 5th freedom traffic uneconomic. Except for Fedex and UPS whose all-cargo operations exercising unlimited traffic and intra EU hubbing rights. These were enshrined in the 2007 Open Skies Agreement despite such quasi-domestic operations being completely unthinkable in the US context along with a US veto on taxing them. Fedex and UPS each operate over 100 flights a week – making an intra EU fuel tax de minimis unworkable. The EU could bring this to the Joint Committee or exempt all cargo flights within the EU from fuel taxation and introduce a per plane tax for all freighter operations as the Netherlands now plans. This move may be challenged in court so the Commission should assess the legal issues before proceeding. An additional move would be to apply an excise tax on all intra EU airfreight. The Americans are smart on all this and apply their own special 6.25% federal domestic excise tax (FET) on amounts paid for airfreight.⁴

Prevailing "opinion" in 2003 interpreted ICAO Assembly Resolutions on issues such as fuel taxation as binding on parties. They never were, as [Prof Eckhard Pache](#) explains. Several European states have now opted out of ICAO's fuel tax approach. Others can do so at any time by simply notifying Montreal. The 'clean cut' option in the Commission's ETS/Corsia IIA sets out how EU member states can opt out of Corsia applying within the EU. Far better a fuel tax on top of the ETS than Corsia. 'Double taxation' is no legal impediment. Many member states apply carbon taxes in addition to the ETS. Consistent with the clean cut approach, the EU should also ensure that Corsia does not apply to

² Taxing aviation Fuel in Europe; Back to the Future

https://www.transportenvironment.org/sites/te/files/publications/2020_06_Study_for_TE_Taxing_aviation_fuel_final.PDF

³ See Annex III. Taxing Aviation Fuel in Europe; Back to the Future.

⁴ <https://www.wiley.law/newsletter-3872>.

flights between the EU and the UK as these sectors pose a grave risk of competitive distortions post Brexit which Corsia could not address. Whereas taxation could.

Extra EU fuel Taxation.

International aviation fuel is already being taxed in many countries including on flights to the EU despite exemptions in ASAs and indeed ICAO policies⁵. Tax levels may be low, but these fuel tax regimes can be built on to expand carbon pricing for aviation eg in the US, Canada, Japan, India, Brazil, Australia, parts of South East Asia, and in many countries in Africa and Latin America. ASAs might need to be renegotiated, although it seems fuel taxation means many have already been breached. The offer of reciprocity could also simply be withdrawn.

The European Council does not intend to include a fuel tax exemption in the EU/UK aviation relationship post Brexit. It is fundamental that this be followed through. There are real dangers of carbon leakage post Brexit by UK carriers siphoning off traffic over UK hubs tax free both for intra EU and transatlantic traffic should member states tax fuel on intra EU traffic. The Commission's Brexit aviation negotiating text released a month after the Council's commitment, saw a fuel tax exemption reappear thus pre-empting the Green Deal taxation review and potentially undermining its credibility. Claims that this has been corrected are not yet evident publicly.⁶

Assuming the EU Council position prevails and no fuel tax exemption is included, then the subsequent EU/UK Air Services Agreement treaty will be primary legislation under EU law. Union Loyalty provisions of the TFEU will then **oblige member states to amend the ETD to remove the fuel tax exemption for 3rd countries insofar as it applies to the UK, now a 3rd country**. The Energy Tax Directive is secondary legislation under EU law⁷.

By allowing – or by not excluding - fuel taxation, the EU/UK ASA would create a treaty precedent of unparalleled aeropolitical significance not seen in international agreements since WWII.

It would oblige member states to remove the fuel tax exemption for flights to the UK in the ETD and, if the revised ETD were worded correctly, see the EU proceed at some point to agree with the UK on cross channel taxation or unilaterally tax fuel uplifted at EU airports for flights to the UK.

It would also pave the way for the Commission to propose to member states that the entire 3rd country fuel tax exemption regime in the ETD be removed as part of the Green Deal reform.

It is a duty of negotiating equity and fairness to EU citizens to do this.

Many countries tax aviation fuel uplifted for flights to the EU and have done so for a long time⁵.

The Commission, Ministries and EU airlines who pay these taxes have known this for decades.

But the ETD and ASA exemptions prevent reciprocation.

Abolishing the 3rd country fuel tax exemptions in the ETD removes the fundamental impediment to taxing fuel on all EU departing flights. ASAs would need to be renegotiated. Progressively. As a blanket obligation to tax in the ETD would be unworkable so long as EU ASAs remained unchanged.

⁵ See separate reply to this Consultation; "It's a myth that international aviation Fuel is not taxed".

⁶ COM 2020 35 para 63. <https://ec.europa.eu/info/sites/info/files/communication-annex-negotiating-directives.pdf>

See page 182 Article 13 <https://ec.europa.eu/info/sites/info/files/200318-draft-agreement-gen.pdf>

⁷ See Pache chapter 3 and Annex I in; "Taxing Aviation Fuel in Europe; Back to the Future".

https://www.transportenvironment.org/sites/te/files/publications/2020_06_Study_for_TE_Taxing_aviation_fuel_final.PDF

The ETD revision could be worded so as to allow fuel taxation case by case as historical ASAs are required to be progressively renegotiated. The EU should in the first instance initiate discussions with Canada which already taxes fuel on almost half its outbound flights, including to the EU, despite the 2009 EU/Canada ASA exempting fuel taxation. Washington, post Trump, would need to be involved because of US carrier intermediate fifth operations. Pending results of the ETD review, reciprocal fuel taxation issues in future EU ASAs with Asean, China, Brazil etc should be put on hold.

All these moves will present major challenges for the Commission given longstanding and competing responsibilities, competencies and priorities, and the silos. Future taxation, commercial and regulatory issues, the ETS, the environment, fuels and energy etc can now only be settled through effective coordination across the different directorates and the Sec Gen. EU moves, for example, to promote and subsidise the production and supply of clean aviation fuels while allowing aviation demand to recover unabated, will merely see the amount of clean fuel needed to “decarbonize” aviation that much greater, creating spiralling costs for everyone.

Ticket Taxes

The consultation interestingly asks whether “ticket taxes based on distance price should be introduced”. Interesting, because this suggests the legal service believes the EU can exercise competence on ticket taxes as a consequence of the 2002 ECJ ruling. The answer of course is “yes”. The question is “how”? A Commission proposal may not be the best route initially since, for example, last year’s decision to review once again the Article 14(b) fuel tax exemptions despite exhaustive analysis 20 years ago has dissipated momentum to tax kerosene generated by Finance Ministers at The Hague in June 2019. A ticket tax proposal would require tax unanimity yet there has been little progress on resolving this issue nor in pursuing Enhanced Cooperation or QMV.

The UK’s 1993 unilateral APD was Europe’s first ticket tax. We then saw 7 or 8 more ticket taxes introduced in EU member states. Aviation did not subsequently collapse. If taxation is ineffective in reducing demand, the obvious response is to increase tax levels. The first challenge in a post Covid recovery should be to expand ticket taxes across the EU – including for business aviation - and harmonise tax levels with reference to the UK APD, the world’s gold standard. The Commission could make a concerted effort to promote this objective – a sort of farm to fork strategy for aviation. The “elephant in the room” in all this are the extra EU outbound emissions which – pre Covid – amounted in 2018 to nearly 80 Mt CO₂ or two thirds of all extra EU 27 emissions. Multiply that by at least three to get over 240 Mt CO₂e if the recent work of 21 scientists is to be believed⁸. Corsia won’t have any effect on these emissions. In the past, the last 1% of all outbound EU flights – those to destinations beyond 8000km away - alone created 20% of all aviation CO₂. Those countries that levy ticket taxes could spur things along by implementing an additional arrivals ticket tax on all incoming passengers from EU airports and adopting an ETS-like “equivalent measures” approach; “we’ll drop the arrivals tax when you implement your own ticket tax on departures”. The US has levied a tax – currently \$18.90 – on all international passenger arrivals for many years⁹ in addition to a departure tax. It has never been successfully challenged.

Again, the Commission could draw up guidelines on implementing ticket taxes, to ensure that intra EU tax rates approximate VAT and that longhaul distance bands better match accepted carbon prices with tax rates per km flown increasing with flight distance to account for non CO₂ impacts. The

⁸

https://www.researchgate.net/publication/344208464_The_contribution_of_global_aviation_to_anthropogenic_climate_forcing_for_2000_to_2018

⁹ <https://www.airlines.org/dataset/government-imposed-taxes-on-air-transportation/#>

flawed Commission and ECJ decisions on not taxing transfer traffic are best rectified by adding in environmental charges per sector to supplement proxy VAT taxes.

Annex

Response to the UK consultation on a Carbon Emissions Tax of 21 July 2020.

Submitted by
William (Bill) Hemmings
Rosetta Advisory Services, Brussels
29 September 2020
whemmings@gmail.com

This response answers the question posed in section 3.3 of the consultation; should other sectors of the economy - in this case aviation - be covered by the tax in the years after 2021?

The UK is to be congratulated on this refreshing set of documents analyzing how a UK ETS including aviation could be implemented; linking with the EU ETS; and posing that basic question of how aviation could/should be subject to a carbon tax.

I submit this response as an independent consultant drawing on direct industry experience and extensive environmental debate at both the EU and ICAO level.

Summary

*The UK is the biggest aviation emitter in Europe so the UK has a particular responsibility to act.
Brexit means Paris Agreement backsliding of 10Mt CO₂ which a UK ETS or carbon tax could address.
Failing UK action, the EU may act unilaterally to cover its equal Brexit shortfall.
And to prevent carbon leakage; UK-based carriers siphoning off unregulated traffic via UK hubs.
A fuel tax exemption in a future UK/EU ASA is not consistent with carbon taxation.
So Whitehall's call for a fuel tax exemption in the future UK/EU aviation relationship should be dropped
Today's aviation ETS amounts to a cost of 60 pence for each passenger journey, which is a pittance.
Merely implementing a UK aviation ETS is entirely inadequate. Appropriate tax levels are suggested.
Passengers, especially corporate travellers, must pay external costs via pass through.
A carbon tax should apply to all UK aviation emissions not just those above allowance allocations.
And be additional to the APD which serves as a proxy VAT and must be retained.
Such a carbon emissions tax would serve as an effective aviation ETS allowance floor price.
Covid has rendered all assumptions about airline pricing and market behaviour obsolete.
Airlines are going up, so start carbon taxation now and increase progressively as traffic recovers.
In this way, external costs will appear from the start and airlines can pass them through.*

UK Aviation CO₂

The urgent need to rein in aviation's CO₂ and non CO₂ impacts requires no restating here. The UK has a particular responsibility to take action, being the biggest aviation emitter in Europe. 2018 UK outbound aviation CO₂ emissions were 23% of EU28 outbound CO₂ emissions. However the UK contribution to overall EU aviation climate warming in 2018 will have been far greater, as long

haul CO₂ emitted as a % of overall UK emitted CO₂ was 68.4%, whereas the equivalent EU figure was 59%. Long-haul flights have a non CO₂ warming impact far greater than short haul¹⁰.

The IMF and the World Bank have written extensively of the need to put a price on aviation emissions - to raise revenue and to cover the sector's climate and other externalities¹¹. The UK APD to an admirable extent seeks to do this especially given the lack of VAT on international flights and the failure to otherwise regulate emissions from longhaul flights. The UK APD stands out in this regard and must be retained, while carbon taxation can ensure emissions are more fully regulated.

Brexit

After Brexit, emissions coverage of the EU 27 aviation ETS will decrease by over 31% because flights to and from the UK will no longer be covered. Unless addressed, this shortfall amounts to Paris Agreement backsliding by both the UK and the EU27 – 10Mt CO₂ annually in both emissions inventories. Such backsliding is both unacceptable and contrary to Paris Agreement commitments.

The UK plans its own ETS system in 2021 to include domestic and UK-to-EU/EEA flights. UK/EU discussion is ongoing about linking the UK and EU ETS schemes so that flights UK-to-EU would be regulated by the UK, and EU-to-UK flights would remain covered under the existing EU ETS. That linking can be achieved through an EU Delegated Act as provided for in COM 2017/2392. The 2012 stop the clock derogation for flights to third countries would be suspended by this delegated act but only as regards flights between the EU and UK - the UK becomes a third country post Brexit under stop-the-clock. Regulatory continuity will require that both the UK ETS and the linking agreement be in place by 01 January 2021.

Airlines operating out of the UK were advised over the summer that, for pricing purposes, they should plan on either a UK ETS or a carbon tax obligation being in place by 01 January 2021. If a UK ETS is implemented on time but the linking agreement is delayed, then the EU Delegated Act could potentially be backdated. If, in the end, the UK fails to apply an ETS or a carbon tax to aviation, then the APD would nevertheless continue to apply to flights UK-to-EU/EEA. The APD is essentially a proxy VAT measure, so the 10Mt/CO₂ shortfall in regulated emissions amounting to Paris Agreement backsliding would still arise for both parties. The EU has several options in this situation; unilaterally extend the EU27 ETS to EU-to-UK flights or implement a tax measure – a fuel tax or ticket taxes.

The European Council does not intend to include a fuel tax exemption in its future bilateral aviation relationship with the UK¹². This will leave open the option for the EU to tax unilaterally all fuel uplifted for EU-to-UK flights should intra EU-fuel taxation be introduced - so as to address potential carbon leakage, where UK-based airlines siphon off intra EU or other traffic via fuel-tax-free UK

¹⁰ See Scheelhaase, J., 2018

https://www.researchgate.net/publication/331398720_How_to_regulate_aviation%27s_full_climate_impact_as_intended_by_the_EU_council_from_2020_onwards.

See Lee, D.S. et al. Their just released update study into non CO₂ climate impacts, concludes that “aviation emissions are currently warming the climate at approximately three times the rate of that associated with aviation CO₂ emissions alone”.

https://www.researchgate.net/publication/344208464_The_contribution_of_global_aviation_to_anthropogenic_climate_forcing_for_2000_to_2018

¹¹ Keen, M and Strand, J 2006 <https://www.imf.org/external/pubs/ft/wp/2006/wp06124.pdf>

Keen, M., Parry, I., Strand, J et al, 2013 <https://www.jstor.org/stable/24029524?seq=1K>

¹² COM 2020 35 para 63. <https://ec.europa.eu/info/sites/info/files/communication-annex-negotiating-directives.pdf>

aviation hubs. Such a unilateral fuel tax could also plug the EU's 10Mt/CO₂ Paris-backsliding shortfall in regulated emissions post Brexit if the ETS options do not eventuate.

Taxing aviation CO₂ emitted above the level of airlines' ETS allowance allocations

The Consultation document and Impact Assessment state, in effect, that UK aviation – ie all commercial airlines operating flights from UK airports subject to a UK aviation ETS - could see all CO₂ emitted above annual ETS emissions allowance allocations for auction, being subject to a carbon tax. The consultation seems to assume therefore that doing so is a legal possibility under UK law and asks if including the aviation sector in a UK carbon tax would be a good idea. It is a great idea because such a tax effectively puts a floor price on aviation allowances in the ETS. It also raises revenue which can be used for social purposes or to strengthen action to fight climate change.

The UK, however, is calling for a fuel tax exemption in any future aviation relationship with the EU. as stated in the UK negotiating text¹³. Including such an exemption would seem to be problematic if the intention was to apply the carbon tax on excess emissions arising from flights from UK to EU. Industry will almost surely challenge any attempt to impose a carbon tax on aviation as being akin to taxing aviation fuel. In 2011, Whitehall shied away from the option to introduce an all plane tax out of a concern that it might be construed as a fuel tax and contested legally. Fuel taxation was then not an option open to UK unilateralism because of the exemption in the ETD. The ETD does not apply in the UK after Brexit, but a fuel tax exemption in any future UK/EU ASA would be cited by industry as ruling out carbon taxation for airlines. The wording and legal text could be modified to apply a “carbon levy or charge” to the excess emissions rather than a “carbon tax” but it is not clear if that would constitute a substantive legal change.

The taxation of kerosene as an aviation carbon tax.

The 2020 study “Taxing Aviation Fuel in Europe; Back to the Future”¹⁴ contains an exhaustive analysis of the history of aviation fuel taxation (or not) going back 100 years, the decisions taken in Europe some 20 years ago to pursue the European and global taxation of aviation fuel, as well as in-depth analysis of European member state legal responsibilities vis a vis the EU (as opposed to hearsay re ICAO) on the issue. Experts draw conclusions on the efficacy of fuel taxation, on cost pass through (inevitable in the end) and on appropriate levels of taxation for a single tax. The European Commission in its review of the ETD next year may or may not recommend amending the Directive to enable kerosene taxation. The bilateral agreement route, in place since 2003, remains.

The UK recently included a fuel tax exemption in its new ASA with the US. Other ASAs remain unchanged, so any attempt by HMG to apply a carbon tax on flights or emissions from UK airports to destinations beyond Europe would likely face both industry and 3rd country legal obstacles. But the application by the EU of a fuel tax on flights to the UK under an EU/UK ASA that did not exempt uplifted fuel from taxation would be an historic development not seen in the post war period.

Post Brexit, whether aviation fuel uplifted at UK airports can be taxed will be determined firstly by what has been negotiated in UK ASAs as the ETD exemptions will no longer apply. The taxation of

13

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/886011/DRAFT_Air_Transport_Agreement.pdf

14

https://www.transportenvironment.org/sites/te/files/publications/2020_06_Study_for_TE_Taxing_aviation_fuel_final.PDF

uplifted fuel is, of course, not outlawed by the Chicago Convention¹⁵. So at some point HMG should formally retract the statement made on 21 May 2019 in answer to a House of Commons parliamentary question by then Treasury Minister Robert Jenrick that “members of the International Civil Aviation Organisation (ICAO), including the United Kingdom, are prevented from taxing international aviation fuel, or any proxies for fuel, under the Chicago Convention”¹⁶.

An aviation fuel tax is a flat tax payment based on the amount of fuel uplifted. It is not the same as a carbon tax on fuel which could/should be modulated according to the GHG emissions of the fuel – for example, to allow for sustainable aviation fuels. But the two are similar so it is essential that legal constraints on fuel taxation are removed if a carbon tax on aviation is to survive legal challenge.

Carbon taxation and the UK aviation ETS

As mentioned above, the consultation asks for comment on whether aviation emissions above ETS annual allowance levels should be taxed. It surely follows that if it is legal in UK law to apply a carbon tax to all aviation CO₂ emitted annually above ETS allowance levels, then it is equally legal to apply a carbon tax to *all* aviation CO₂ annually emitted. Unless UK ETS legislation says something different to its EU equivalent - which would be surprising given action already taken by HMG to apply a carbon tax to the power sector which is covered by the ETS.

CE Delft’s 2018 study on taxing aviation fuel notes that; *“There is nothing in the ETS Directive (2003/87/EC) which says it can be the only charge on the carbon emissions from entities covered by the ETS. Indeed, Recital 23 of the ETS Directive situates the ETS within the wider context of “a comprehensive and coherent package of policies and measures implemented at Member State and Community level.” And recital 26 of the ETS states that further measures at EU, Member State and international level will be needed: “notwithstanding the multifaceted potential of market-based mechanisms, the European Union strategy for climate change mitigation should be built on a balance between the Community scheme and other types of Community, domestic and international action.” These recitals clearly contemplate additional measures imposed as well as the ETS.”*¹⁷

Prior to Covid 19, aviation emissions were growing almost uncontrollably. International aviation is now virtually at a standstill. Nevertheless, assuming some sort of traffic recovery at some stage, the likelihood, seemingly shared by IATA, is that Corsia (which only covers the growth in emissions) will not require the surrender of offset credits potentially much before 2025¹⁸. Abolishing the free allocation of aviation allowances in the aviation ETS by the UK, or the EU, or both, will make some difference to ticket prices and thus demand. However it is argued below that the aviation ETS allowance price has so far had little/no impact whereas a fuel tax can send a far stronger price signal. The Impact Assessment accompanying this consultation contains forecasts about likely increases in UK ETS allowance prices. They are very modest - up to some £32/tCO₂e.

*“Additional abatement effort is required to meet the cap level, resulting in higher average annual carbon values (of around £32/tCO₂e) compared to the low end of the range. At this value, we estimate that it would be cost-effective for UK participants to deliver around 11 MtCO₂e in total from 2021 to 2024.”*¹⁹

¹⁵ See [Prof Eckhard Pache](#)

¹⁶ House of Commons Briefing Paper Number 523, 22 October 2019. Summary.

¹⁷ <https://www.cedelft.eu/en/publications/2253/taxing-aviation-fuels-in-the-eu> page 21

¹⁸ See Brian Pearce, IATA, 15 September 2020. <https://www.youtube.com/watch?v=b1ePhQXdO-s&feature=youtu.be>

¹⁹

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/889038/The_future_of_UK_carbon_pricing_impact_assessment.pdf

What is the optimal level for an aviation carbon tax?

The European Commission, on its own admission, has acknowledged publicly that *“the average level of the EU ETS revenue has been around € 0.15 per passenger for European flights... Compared to the average level of airport charges and taxes (EU average: around € 13 per passenger), the EU ETS is therefore negligible”*.²⁰ This was based on the 2016 allowance price of around €5/ton CO₂e. So 15 euro cents per passenger in 2016 is about 75 euro cents or £0.68 pence at today's allowance prices (around 25/tCO₂e) or £0.95 pence at an allowance price of £32/tCO₂e. The carbon footprint per passenger on flights within Europe is on average about 128 kg CO₂ per leg²¹ – so a £0.68 pence charge per passenger equates to a carbon price of about £5.3/t CO₂e per flight. This is a pittance.

Gabriela Mundaca and Jon Strand note, in chapter 6 of the fuel taxation study referenced above⁴ that the “globally correct” carbon tax level for 2020 ranges between US\$40-\$80 per ton CO₂ as proposed by Stern, Stiglitz et al²². They argue that an aviation carbon tax could additionally cover non-CO₂ and airport noise externalities and take account as well of the need for an MCPF (marginal cost of public funds) charge. The MCPF is an economic concept flowing from the work of Pigou which expresses the degree of fiscal inefficiency in the tax system and its capacity to raise public funds to provide public goods, from all sectors of the economy in a fair way. Doing so means the optimal aviation carbon tax would be much higher than the \$40-\$80/ton CO₂ mentioned above.

They find that at a global carbon price of \$40/ton CO₂ then the optimal fuel tax when MCPF has the reasonable value of 1.25, is 37 euro cents per litre – which is a bit higher than the minimum road fuel tax set by the EU at 33 cents/litre (and equivalent to about €145 per ton of CO₂ when other environmental impacts or correction for MCPF are not considered). At a global carbon price of \$80/ton CO₂, the optimal fuel tax is about 55 cents/litre (£217 per ton CO₂).

The proposed carbon tax, if applied to all aviation emissions reported under the UK ETS, should be set at a level that ensures that passengers start to pay a realistic amount for their emissions. Especially business travellers, as the corporate travel sector accounts for as much as 50% of major carriers' revenue. At the moment, large companies' travel carbon footprints are in effect, a major component of aviation's impact on climate change. Company travel costs are themselves normally a small cost line in company accounts – around 2% - and fully deductible before company tax is calculated. But the corporate travel dollar is the lifeblood for many airlines and travel managers work hard to get special deals for their staff, constraining carrier yields and making cost pass through for airlines extremely difficult. Corporate travellers comprise in so many, if not the vast majority, of cases, the frequent flyers who so predominate on aircraft today especially in business class where the effective carbon footprint per passenger might be three or more times that of those in economy.

And all this before account is taken of the non-CO₂ impacts of aviation on the climate. D. S. Lee et al., in their recent update paper¹ estimated that the combined CO₂ and non-CO₂ impact on the climate is 3 times the effect of CO₂ alone; that aviation CO₂ accumulated since the Wright Bros and remaining in the atmosphere represented in 2018 approximately 2.4% of all anthropogenic emissions

²⁰ see page 143 Transport Taxes and Charges in Europe.

<https://ec.europa.eu/transport/sites/transport/files/studies/transport-taxes-and-charges-in-europe-isbn-978-92-79-99561-3.pdf>

²¹ ICAO Carbon Calculator LHR/MAD. Flight distance 1242km.

²² Stern, N., Stiglitz, J. E. et al. 2017. Report of the high-level commission on carbon prices. Washington D.C.: The World Bank

of CO₂ (including land use change); while the accumulated CO₂ and the short-lived non-CO₂ emissions of aviation together contribute 3.5% of the global warming we observe today.

Allowance Allocation in the UK aviation ETS, cost pass through and the waterbed effect.

The method for allocating aviation allowances in a UK aviation ETS is described on pages 6 and 7 of the impact assessment document¹⁰. It describes how the EU avoided a recalculation of the benchmark after the stop the clock legislation in 2012 while reducing the overall allocation of aviation allowances in the intra EU aviation ETS. A re-benchmarking exercise was not done when the clock was stopped because the likely level of foreign carrier compliance with the legislation was not clear at the time. There has been a very high level of compliance with the aviation EU ETS subsequently. Therefore the allowance allocation per airline for the 2021 UK aviation ETS could be calculated from 2019 compliance data and allowances allocated to covered airlines based on their 2019 outbound UK emissions – reduced across the board by an appropriate percentage in view of the collapse of traffic in 2020. In this way 2019 would become the peak year for UK aviation emissions and 2021 allowance allocations would be lower but adjusted as appropriate to take account as necessary of the final level of emissions in 2020.

Prof Peter Forsyth in pages 25-39 of the study on taxing fuel in the EU completed before Covid struck⁵, observes that “it may not be too far off the mark to assume that airlines will be able to achieve close to full pass through of long term cost increases in the longer term. In the shorter term, full pass-through is unlikely however”. While the impact assessment notes in para 121 that Clarity Consulting for the DfT in 2018 “found that there is uncertainty regarding aircraft operators’ ability to pass through carbon costs”. These remarks were all put forward based on pre-Covid experience. The collapse in traffic during 2020 which saw activity on many/most routes almost come to a standstill has created market conditions virtually never seen before and that are likely to persist at least into early 2021. As traffic slowly recovers thereafter, past assumptions made about cost pass-through when markets and indeed congested airports were subject to full throated competitive pressures may well not apply. If the carbon tax is applied progressively now from a low starting point, a good argument can be made that full cost pass through can be progressively achieved even at so-called “slot constrained airports”. Flown capacity at these UK airports fell away dramatically during 2020.

IATA⁹ (slide 10) predicts airlines will have to “dramatically shrink” and become “much smaller” to survive, that “airfares will need to rise to cover [significantly] higher [fixed] unit costs” and that “air travel is clearly going to be more expensive and that’s before we take into account other factors like growing environmental pressures”. So start carbon pricing now ie 2021 as the consultation outlines.

Prof Forsyth also comments on the water bed effect (page 32); “in the case of an ETS covering multiple industries, an aviation fuel tax will lead to less aviation emissions, but more emissions from other industries, and no change in overall emissions”. A carbon tax on aviation emissions covered by the UK ETS could have a similar effect. Prof Forsyth notes how any waterbed effects could be addressed. The EU Market Stability Reserve is important in this respect²³. Related issues are covered in a recent publication by Fichert, Forsyth and Niemeier²⁴.

²³ See Fankhauser, S., Hepburn, C., and Park, J. (2011) http://eprints.lse.ac.uk/37573/1/Combining_multiple_climate_policy_instruments_how_not_to_do_it%28lsero%29.pdf

²⁴ Fichert, F., Forsyth, P., Niemeier, H-M., *Aviation and Climate Change; Economic Perspectives on Greenhouse Gas Reduction Policies*. 2020