Kerosene taxation

How to implement it in Europe today

June 2020

Summary

Europe will fail to meet its existing climate objectives, let alone more ambitious ones, if it doesn't curb emissions from the aviation sector by pricing flying better. Despite the temporary drop in aviation emissions due to COVID, aviation has been one of the fastest growing greenhouse gas emitting sectors, while benefiting from a fuel tax holiday; a revenue shortfall of €27 billion a year. In order to reverse this growing trend of emissions and to contribute to the EU's climate efforts, the sector needs to pay for the carbon it emits, especially considering the €33 billion support it received from taxpayers during the COVID crisis.

Research commissioned by T&E[1], has shown that nothing should prevent EU countries to agree bilaterally to tax kerosene today. The analysis details the legal and economic viability of implementing kerosene taxation in Europe, through bilateral taxation agreements as a first step in view of reaching agreement on an EU-wide tax. In the EU, if **the top emitting EU regions alone** (Germany, Spain, Nordics, Benelux, France and Italy) **agreed on a series of bilateral tax agreements, it could bring up to €3.7 billion per year[2] and account for 59% of intra-EU emissions[3] .**

This briefing summarises the study's findings while detailing the main policy recommendations for European and national decision makers:

- **The EU is not bound by the Chicago Convention nor by policies of ICAO** not to tax kerosene for flights within the EU, **nor by fuel tax exemptions granted to foreign carriers** in past Air Service Agreements (ASAs) concluded by member states themselves.
- **The EU has removed intra-EU fuel tax exemptions** from most ASAs negotiated in recent times, and a **de minimis threshold** can resolve the outstanding ones by applying only to airlines operating a minimum number of flights.
- **The European Commission should assist member states in implementing bilateral taxation agreements** by providing them with the list and type of foreign carriers operating flights within their territories who need to be exempted from taxation under existing ASAs. Distortion would be avoided by making this de minimis exemption enjoyed equally by all operators in Europe.

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[1] B. Hemmings, Eckhard Pache, Peter Forsyth, Gabriela Mundaca, Jon Strand and Per Kågeson (2020), Taxing Aviation Fuel in Europe. Back to the Future?

[2] T&E (2020), Aviation Pricing Tool

[3] In 2018, emissions between Germany, Spain, Sweden, Finland, Denmark, Belgium, Netherlands, Luxembourg, France and Italy, excluding outermost regions accounted for 24 Mt. Emissions within EU27, excluding outermost regions accounted for 41 Mt.

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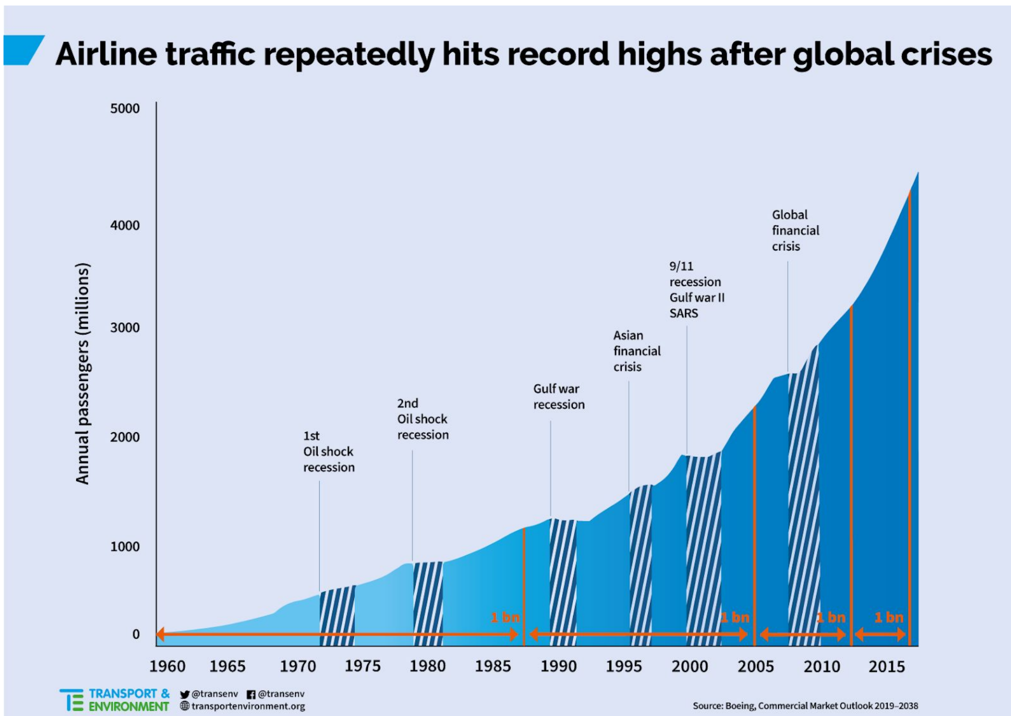
1. Why is taxing kerosene important to ensure fairer pricing of flights?

1. 1. COVID19 impact on aviation calls for better prices post-crisis

Despite COVID19 causing a temporary fall back in aviation traffic, aviation's emissions are expected to bounce back once the crisis recedes, unless the sector begins to effectively pay for its actual impact on the environment. Industry data has shown that passenger numbers have repeatedly broken records in the aftermath of global shocks such as the 2008 financial crisis.[4]



Despite the limited contribution of aviation to national budgets in normal times, governments across Europe have agreed to **at least €33 billion in bailout support for the sector with environmental conditions in only a limited number of cases.** Without obliging airlines to pay taxes and using clean fuels once the crisis passes, the emissions of the sector will continue soaring like they did right up until the start of the COVID crisis. Especially as some airlines[5] are already expecting to engage in price wars to stimulate passenger traffic, further cheapening the price of flying. Given the sector will benefit from billions of taxpayers money, governments should ensure its recovery is led by pricing policies that encourage fairer fares, which better reflect the actual cost flying has on the environment.

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[4]Boeing, Commercial Market Outlook 2018-2019.
[5] Yahoo Finance (June 2020), [Coronavirus: Wizz Air promises 'ultra low fares' as price war looms]

1.2. Aviation is unfairly undertaxed despite over polluting

Aviation has been one of the fastest growing polluting mode of transport for the last two decades, and the industry has failed to take measures to curb this growth, in part because it artificially enjoyed low costs given governments' failure to tax the sector.

Although all sectors must decarbonise, the aviation sector has so far escaped its responsibility compared to other sectors. Airlines' carbon emissions grew 1.5% overall within Europe in 2019 – in contrast to the other emissions-trading sectors (power and large industry) in the EU, which declined 8.9% overall[6]. Carbon pollution from flying within Europe has risen 27.6% since 2013[7], far outpacing any other transport mode. It seems increasingly unfair for the aviation sector to continue to grow despite pressure on other sectors to decarbonise, especially now it is receiving billions in tax payers' money because of COVID.

A report for the European Commission found that taxing aviation kerosene sold in Europe would cut aviation emissions by 11% and have no net impact on jobs or the economy as a whole while raising almost €27 billion in revenues every year[8] if applied to all inbound and outbound flights in Europe.

T&E has also conducted an analysis of the positive economic and environmental impacts taxing jet fuel would have if a coalition of European countries decides to implement a 33 cent/litre tax on kerosene. **If the biggest emitting countries in Europe agreed to tax kerosene (Germany, Spain, Nordics, Benelux, France and Italy), it could bring up to €3.7 billion per year and would cover 59% of intra-EU emissions.**[9] These figures, and others, are available at our recently launched T&E aviation pricing tool.

2. What type of kerosene taxation can be implemented?

The European Commission's plan to revise the Energy Taxation Directive provides a key opportunity to remove the existing kerosene tax exemption EU wide, but since agreement requires unanimity, there are interim ways to address this fuel exemption through the implementation of domestic fuel taxes and bilateral taxation agreements.

2. 1. Domestic jet fuel tax

Globally, domestic aviation emissions account for about 40%[10] of aviation CO2 emissions. Many countries around the world already tax fuel uplifted for domestic aviation although tax rates are generally low and levied for revenue reasons and not environmental – as an excise duty, a sales tax, or

[6] Refinitiv Carbon Research (2020), EU ETS emissions fell 8.7% in 2019, the largest decline since 2009
[7] T&E (2020), Ryanair Europe's 7th biggest carbon polluter last year as aviation emissions continued to grow
[8] T&E (2019), EU sat on data showing benefits of ending airlines' tax break – leak
[9] T&E (2020), Aviation Pricing Tool
[10] ICCT (2019), Working Paper, CO2 emissions from commercial aviation, 2018, see table 1, page 5 (includes big domestic markets like US, Brazil, Indonesia)

to cover issues such as oil tank maintenance. At least 42 countries already in the world tax kerosene used for domestic aviation, including the US, India, Japan, Australia and Canada[11].

In Europe, the top 6 domestic emitters Italy, France, Germany, Spain, the UK and Sweden account for almost 94% of domestic EU+UK fuel burn, while other European states have hardly any domestic aviation[12].

Member states have been free to tax fuel for domestic flights since 2003 and third country carriers under EU ASAs do not have cabotage rights to operate flights within domestic european markets. Unless agreed through a national ASA concluded between a member state and a third country, no exemption should be provided for foreign airlines on domestic routes. Therefore, this should be considered as one of the immediate tools to be used today to address emissions from those big domestic aviation markets and support a shift to cleaner alternatives such as rail.

2.2. Intra-EU jet fuel tax

The ETD enables member states to introduce jet fuel taxes through bilateral agreements for flights between their territories. The air service agreements concluded with third countries do not prevent the imposition of intra-EU fuel taxes as de minimis provisions can be designed to exempt those airlines benefiting from tax exemptions in existing agreements.

2.2.1. No international legal obstacles for intra-EU jet fuel tax

- **The Chicago Convention**

The Chicago Convention[13] regulates international aviation and EU member states are parties to this agreement. This convention does not prohibit kerosene taxation[14]: any EU wide or bilateral taxation scheme is in compliance with the rules of the Convention, as it only forbids the taxation of fuel on board an aircraft on arrival in the territory of a state (Art. 24 of the Chicago Convention). It doesn't ban taxing fuel which is "uplifted", i.e. supplied on the territory of an EU member state.

- **Air-Service Agreements (ASAs)**

ASAs concluded by the EU itself (as distinct from those concluded individually by member states) become part of European Law and, therefore, become binding upon the member states[15]. Hence, by implementing taxation for intra-Community flights, member states have to respect all tax exemption clauses which are part of European Law, in other words all ASAs concluded by the EU which contain such tax exemption clauses (like the EU-US Open Skies). Therefore, member states must adopt non-discriminatory measures which have to ensure that operators falling under such fuel tax exemptions in EU ASAs are excluded from taxation.

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[11] B. Hemmings, Eckhard Pache, Peter Forsyth, Gabriela Mundaca, Jon Strand and Per Kågeson (2020), Taxing Aviation Fuel in Europe. Back to the Future?, Annex IV
[12] See Annex II
[13] Convention on International Civil Aviation, Ninth edition, 2006 (Doc 7300/9)
[14] Prof. Dr. Eckhard Pache (2019), Legal analysis of fuel taxation in Europe part 1 and part 2
[15] Treaty on the functioning of the EU (TFUE), cf. Art. 216

However, according to research conducted by T&E[16], most ASAs concluded with third countries by the EU since the last European Commission's attempt to revise energy taxation rules (2011)[17], no longer include fuel taxation exemption clauses. The European Commission has successfully ensured that EU aviation agreements with third countries like Brazil, Indonesia or Korea would not impede on the future imposition of kerosene taxation for flights within Europe. Although some exemptions remain from previous agreements such as with the US or Canada, the table in annex III shows that most ASAs do not ban taxation of kerosene on intra-EU flights.

In addition, since the adoption of European Regulation No 847/2004 aimed at bringing national ASAs in line with EU law, member states gradually agreed to seek the deletion or amendment of provisions in bilateral air service agreements that exempt aviation fuel from taxation.

According to research commissioned by T&E, the EU and its member states are therefore free to decide to tax kerosene for flights within the EU subject only to any exemptions in Air Service Agreements (ASAs) concluded by the EU with third countries (such as the EU-US Open Skies Agreement). The EU is not bound by the Chicago Convention nor by policies of ICAO not to tax kerosene, nor by fuel tax exemptions granted to foreign carriers in past ASAs concluded by member states themselves.

2.2.2. Fuel tax exemptions in Air Services Agreements can be resolved

- **Renegotiating fuel tax exemption clauses**

Despite most ASAs allowing fuel taxation on intra-EU flights, a handful of foreign airlines, mainly cargo carriers, are covered by national or european fuel tax exemptions. However, in the case of American carriers, despite exempting in principle the taxation of jet fuel, the EU-US Open Skies Agreement foresees the possibility of European member states imposing a fuel tax bilaterally or the EU imposing a intra-EU fuel tax. If member states wish to impose a fuel tax bilaterally on intra-EU routes including on American carriers, it would only require a consensual decision by the Joint Committee set up under the agreement[18].

In the case of Brexit, the EU's negotiating position[19] includes the possibility of applying kerosene taxation in any future EU-UK air service agreement, which is key in order to ensure fair competition between British and European carriers post-Brexit. **If a kerosene tax were to apply intra-EU, then exempting flights coming from the UK may lead to market distortions**. It is essential for the EU to ensure regulatory alignment with the UK and for the final agreement to allow for fuel taxation, especially given the importance of the UK as an aviation market.

[16] See Annex III of this briefing

[17] European Commission (2019), Staff working document, Evaluation of the Energy Taxation Directive

[18] EU-US Open Skies Agreement (2007), Article 11(6)

[19] European Commission (2020), Recommendation for a COUNCIL DECISION authorising the opening of negotiations for a new partnership with the United Kingdom of Great Britain and Northern Ireland, Annex

- **De minimis thresholds can be applied if ASA renegotiation fails**

If requests to consensually agree with third countries to tax jet fuel is required and fail, decision makers have regulatory solutions to continue respecting those international agreements pending renegotiation. A **de minimis threshold** applying to all passenger carriers could be defined when implementing a kerosene tax. This threshold would in practice lead to the tax applying only to airlines operating above a minimum number of flights, to ensure no illegal tax incidence on foreign carriers. The de minimis quota could be the highest number of flights operated in Europe by a carrier falling under the scope of application of an ASA with a tax exemption clause.

To avoid a conflict with any future market developments, this de minimis clause should include a **mechanism for the threshold to be modified based on market conditions.** As long as only a few operators perform a small number of passenger flights it seems to be practically possible to observe market developments and modify the de minimis clause as necessary.

According to T&E analysis, the biggest foreign airlines operating intra-EU flights and covered by fuel tax exemptions are american cargo carriers, such as Federal Express (with an average of 155 flights per week) and United Parcel Service (with an average of 127 flights per week). Given the number of flights operated by these airlines, **a general exemption should apply to *cargo* carriers**, instead of setting a de minimis to 155 flights/week. A kerosene tax scheme would then include **a de minimis set at the highest level of *passenger* flights operated by a foreign carrier**, which need to be exempt from the tax. In this example, Emirates operates 38 flights/week, so the de minimis could be set at that level, instead of 155 flights/week if we didn't exempt cargo carriers. So any carrier's first 38 intra-EU flights would be exempted from the tax.

Rank in 2018*	Airline	Country of registration	2018 emissions under the ETS (t CO2)	Average flights per week
49	**FEDERAL EXPRESS CORPORATION**	United States	198.261	155
54	**United Parcel Service Co**	United States	162.020	127
89	**Emirates**	United Arab Emirates (fuel taxation allowed in EU ASA)	48.539	38
95	**ETHIOPIAN AIRLINES**	Ethiopia	40.802	32
112	**EU-ETS trading account for KOREANAIR**	Korea (fuel taxation allowed in EU ASA)	26.671	21
113	**Air Bridge Cargo**	Russia	25.952	20

114	**Qatar Airways**	Qatar	25.120	20
120	**Atlas Air, Inc.**	United States	20.275	16
121	**Latam Airlines Group, S.A.**	Chile (fuel taxation allowed in EU ASA)	19.756	15
122	**Air China Limited**	China	19004	15

(**Source**: T&E analysis of ETS data in 2018. Blue lines in the table list the foreign cargo carriers operating on intra-EU flights. **(*)** the rank is based on the airlines' ETS emissions verified in 2018, as a comparison, Ryanair was the 1st polluting airline under the ETS with 9.879.100 tonnes CO2)

2.2.3. Bilateral kerosene tax agreements

The ETD already allows two or more member states to implement a kerosene fuel tax for intra EU flights taking place between those countries, on the basis of a bilateral agreement. Member states (such as Sweden and Denmark for example) could decide, through a bilateral agreement, to tax the fuel which is sold to aircraft operating to and from their countries.

According to T&E analysis, in the EU, **the top 6 emitting EU states & regions alone** (Germany, Spain, Nordics, Benelux, France and Italy) **account for 72% of intra-EU fuel emissions**[20], while the smallest 13 emitters (including Malta, Cyprus, and Eastern countries) account for 10%[21]. Given this ratio, Europe cannot afford letting a small number of countries block crucial environmental reforms.

These figures suggest that a series of bilateral taxation agreements focusing on the top intra-EU emitters, combined as necessary by a small fuel tax de minimis, offers an immediate pathway to introducing fuel taxation in Europe. Bilateral taxation is already provided for in EU law and can be a credible option while agreement is sought to revise the 2003 ETD.

In order to legally address existing fuel tax exemptions in European ASAs, the European Commission can inform member states of the foreign carriers operating flights within their territories who need to be exempt from taxation. Member states can then determine the appropriate de minimis quota. **In addition, member states aiming to conclude bilateral fuel taxation agreements need to respect their own national ASAs concluded with third countries in circumstances where an EU Comprehensive or Horizontal ASA doesn't replace it[22]. But a vast majority of current national ASAs do not include fuel tax exemptions.** Since the adoption of European Regulation No 847/2004, aimed at bringing national ASAs (those concluded by member states) in line with EU law, the

[20] Domestic emissions excluded
[21] Annex I of this briefing
[22] See Annex III of this briefing

European Commission successfully encouraged member states to seek the deletion or amendment of provisions in bilateral air service agreements that exempt aviation fuel from taxation[23].

Once the legal de minimis issues are resolved, according to research commissioned by T&E and conducted by Dr. Pache[24], member states concluding bilateral agreements are free to choose from the following criteria:

- **Uplifted fuel**: the base of the bilateral taxation agreement should be on uplifted fuel only, so on fuel bought in those agreeing states.
- **Rate**: the ETD sets a minimum level of taxation of 33 cents/ liter of kerosene but the agreeing states can decide on a lower or higher rate.

INFO BOX: Tankering

Fuel tankering is common in aviation as fuel prices differ sometimes widely from one airport to another. It occurs when airlines, to save fuel costs, fill up their tanks at one airport to avoid buying more expensive fuel at the next airport for the return or onward journey This results in an estimated net saving of 265M€ per year for the airlines, while generating **901,000 tonnes of extra CO2 emissions in the wider European aviation market per year**[25]. Tankering practices will however always be limited by the size of the tank and the cost implications of carrying extra fuel on board. The more (extra) fuel planes carry on board, the heavier they are and in turn the more fuel they burn to fly. This means that the up front cost savings brought by tankering can actually be countered by the additional costs down the line of buying more fuel to carry the extra weight. As Eurocontrol notes, **dissuasive carbon pricing would help reduce tankering practices.** Additionally, **bilateral taxation agreements could start harmonising fuel prices and reduce price differences across Europe**. This would in turn reduce harmful tankering practices. In order to avoid potential distortions, tax rates can start low to give regulators a chance to assess the impact on potential tankering practices.

2.2.4. EU-wide fuel tax

- **Lifting unanimity rules to impose a European fuel tax on the long term**

Currently, the Energy Taxation Directive[26] (ETD) exempts fuel used for aviation from taxation. Given the European Green Deal's ambition to ensure all sectors of the economy contribute to making the EU

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[23] European Commission (2005), Decision 29/03/2005 on approving the standard clauses for inclusion in bilateral air service agreements between Member States and third countries jointly laid down by the Commission and the Member States

[24] B. Hemmings, Eckhard Pache, Peter Forsyth, Gabriela Mundaca, Jon Strand and Per Kågeson (2020), Taxing Aviation Fuel in Europe. Back to the Future?

[25] Eurocontrol (2019), Fuel Tankering: economic benefits and environmental impact: the analysis includes the European Civil Aviation Conference countries (EU, Norway, Turkey, Switzerland)

[26] Energy Taxation Directive, Art. 14 paragraph 2

climate neutral by 2050, the ETD should be revised to address the exemption rule for kerosene fuel taxation. However, unanimity rules have been a long standing obstacle to revising the ETD, with member states reliant on aviation using their veto to block a crucial revamp of kerosene taxation rules.

The urgency of climate change and the EU's environmental ambitions justify using the ordinary legislative procedure to revise the ETD instead of unanimity, through the use of passerelle clauses[27]. As unanimity is also needed to adopt these clauses, another option could be to use Article 116 TFUE. The ETD currently provides for taxation of fuel used for road and rail transport but not for aviation. This difference in pricing mechanisms creates an uneven level playing field between these transport modes, as it inflates the cost of road and rail to the benefit of aviation and maritime. These distortions in competition created by the current taxation treatments of different modes of transport could justify the use of Article 116 TFUE to revise the ETD and lift unanimity rules.

- **Remove the ETD exemption to impose de facto a fuel tax obligation**

The EU could tax kerosene across the European Common Aviation Area subject only to any exemptions in Air Service Agreements (ASAs) the EU itself has concluded with foreign governments, as mentioned above. Such a tax could be introduced by agreeing to remove the tax exemption for aviation in paragraph 14 of the ETD which would then mean that all fuel uplifted for domestic or intra-Community would have to be taxed at the EU minimum of 33 cents per litre.

National ASAs concluded by member states, which contain exemptions for fuel taxation, do not prohibit either the imposition of a kerosene tax at the EU level, because EU law on this issue supersedes existing member states' international obligations.

- **Existing policy options to address insular countries' concerns**

The EU is not obliged to implement an equal taxation level of 0.33€ per liters of kerosene for all member states. According to Dr. Pache, the EU is free to decide on a lower tax rate or even on a differentiated taxation rate between different countries as well.

As the European Commission has already mentioned in other legal acts, such as Directive 2009/28/EC [28] as well as Directive 2012/27/EU[29], some member states "due to their insular and peripheral character, rely on aviation as a mode of transport, which is essential for their citizens and their economy". Hence, a differentiation between member states could be justified within the transport sector in order to bring on board reluctant member states and agree on removing the existing fuel tax exemption as whole. Besides a differentiated taxation rate, the EU could implement differentiated transitional periods to facilitate the implementation of a kerosene tax within the bloc.

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[27]T&E (2020), [T&E's feedback on the ETD Inception Impact Assessment]
[28]Directive 2009/28/EC of the 23th of April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, recital 33.
[29]Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC

2.3. Extra-EU jet fuel tax on outbound flights

- **Exclude only international flights covered by an existing EU ASA fuel tax clause**

As mentioned above, many ASAs allow for the taxation of fuel on intra-EU flights operated by third country carriers as well as the taxation of fuel uplifted for extra-EU flights (to those third countries), but some exemptions remain.

For those ASAs where extra-EU flights are exempt from fuel taxation, an exemption in the ETD should remain for these routes until the EU has renegotiated these provisions or some other appropriate exemption scheme becomes available. However, for those EU ASAs who do not include an exemption for fuel taxation on extra-EU routes (like Brazil or Korea), the EU's kerosene tax should apply. **This would not be considered as infringing on the principle of equal treatment under EU law, given an ECJ judgement in 2016[30] acknowledged that the EU could treat different non-EU countries differently.** As EU law does not oblige the bloc in its external relations to extend equal treatment to all countries outside the bloc, the EU should be free to impose a tax on fuel uplifted for extra-EU flights when allowed by its ASA with a third country.

2.4 Overview of possible kerosene taxation options

	Domestic tax	**Intra-EU**		**Extra-EU**
		Bilateral	**EU-wide**	
Applica-tion	Only domestic flights	Only flights in between member states who are parties to a bilateral agreement	All intra-EU flights	All intra EU flights & extra-EU flights (when permitted - see below)
Treatment of foreign airlines	Not relevant as third country operators do not operate domestic routes.	For flights covered by a **national or EU ASA** which exempts fuel taxation, **a de minimis** would need to apply to exempt them	The EU is **not** bound by fuel tax exemptions in national ASAs, and **only needs to abide by EU ASAs** exempting airlines from fuel taxation on intra-EU flights.	The EU can tax uplifted fuel if an EU ASA with a third country permits it. **1) If flights fall under an ASA providing for**

[30] European Court of Justice (2016), Case C-272/15 Swiss International Air Lines AG V The Secretary of State for Energy and Climate Change, Environment Agency

		from the bilateral tax.	**1) For routes covered by an ASA allowing fuel taxation**: they could be subject to the EU wide intra EU tax. **2) For routes exempted from fuel taxation**: a) The EU would ask the Joint Committee set up by the ASA to discuss its compatibility with the ASA or try to renegotiate the clause. b) The EU could decide to apply ***a de minimis*** exempting those foreign airlines from taxation.	**fuel taxation**: an outbound tax could apply to them, as the EU is free to treat third countries differently. The EU could tax fuel on all flights to that country regardless of nationality of carrier. **2) For flights exempted by an ASA from fuel taxation**: they would have to be exempted from an outbound fuel tax.
Rate	From 33 cts/L (as this is the minimum rate applied for diesel under the current Energy Taxation Directive)			
Example	Norway, US, Japan	N/A	N/A	N/A

3. Conclusions & policy recommendations

Despite having the option to tax kerosene domestically and bilaterally since 2003, member states and the EU have been reluctant to change aviation's preferential taxation regime due to lack of political will and strong international pressure. But Europe is now striving to be at the forefront of climate action through its European Green Deal. Especially as international emissions reduction schemes designed by ICAO (Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)) are expected to deliver little to zero environmental benefits[31]. More importantly kerosene taxation is an

[31]T&E (2019), [Why ICAO and Corsia cannot deliver on climate]

essential measure to ensure that emissions from aviation do not return to their exponential growth post-COVID. So it's time to implement fuel taxation and these are T&E's recommendations on how to do it:

Member states

- **Fuel taxation should be applied to domestic flights** to promote rail alternatives, starting with the top 6 domestic emitters Italy, France, Germany, Spain, the UK and Sweden, who account for almost 94% of domestic EU+UK fuel burn.
- **Bilateral taxation agreements** should be concluded between a group of ambitious member states to pave the way to European wide fuel taxation, starting with **the top 6 emitting EU states & regions** (Germany, Spain, Nordics, Benelux, France and Italy) which would cover **59% of intra-EU aviation emissions[32].**
- **De minimis quotas can be used** to exempt the very few intra-EU flights operated by third country carriers exempted from fuel taxation under existing ASAs. Tax rates can start low to give regulators a chance to assess the impact on potential tankering practices.

Europe

- **The European Commission should assist member states in implementing bilateral taxation agreements** by providing them with the list of the foreign carriers operating flights within their territories who need to be exempted from taxation under existing EU ASAs.
- **The European Commission should engage in renegotiations of agreements which still exempt fuel taxation** and ensure future agreements allow for the taxation of intra-EU as well as extra-EU flights (i.e. EU-UK).
- **EU decision makers should agree to revise the ETD** to remove aviation's fuel tax exemption while looking into options to **address insular countries' concerns** through differentiated taxation rates.
- **The revision of the ETD should exclude only international flights covered by an existing EU ASA fuel tax clause** until these are re-negotiated. In the meantime, it should apply to extra-EU flights covered by ASAs which provide for fuel taxation.

Further information

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[32] In 2018, emissions between Germany, Spain, Sweden, Finland, Denmark, Belgium, Netherlands, Luxembourg, France and Italy, excluding outermost regions accounted for 24 Mt. Emissions within EU27, excluding outermost regions accounted for 41 Mt.

Annex I: CO2 emissions from intra-EU 27 aviation (T&E analysis)

Rank	Country	Intra EU27 CO_2 (Mt)	Cumulative Emissions
1	Germany	6.02	18%
2	Spain	4.75	32%
3	Italy	3.62	43%
4	France	3.22	52%
5	Netherlands	2.02	58%
6	Portugal	1.58	63%
7	Greece	1.54	68%
8	Sweden	1.32	71%
9	Belgium	1.29	75%
10	Denmark	1.09	79%
11	Poland	1.07	82%
12	Ireland	1.02	85%
13	Austria	0.90	87%
14	Finland	0.76	90%
15	Romania	0.72	92%
16	Czech Rep	0.46	93%
17	Hungary	0.46	95%
18	Bulgaria	0.36	96%
19	Croatia	0.30	97%
20	Malta	0.25	97%
21	Cyprus	0.24	98%
22	Luxembourg	0.17	98%
23	Latvia	0.16	99%

24	Lithuania	0.15	99%
25	Estonia	0.09	100%
26	Slovakia	0.06	100%
27	Slovenia	0.04	100%
	Total EU27	33.67	

Outermost Regions[1]	1.74
Norway[2]	1.11

Emissions are from flights departing from the 27 member states and Norway in 2018.
Domestic emissions are excluded from these calculations.

[1]The European outermost regions are the Canary Islands (Spain), French Guiana (France), Guadeloupe (France), Martinique (France), Mayotte (France), Réunion (France), Saint-Martin (France), Azores (Portugal) and Madeira (Portugal). Outermost regions: includes flights departing from the outermost regions and going to EU27, domestic excluded.

[2] Norway: includes flights departing from Norway and going to EU27, and flights departing from EU27 and going to Norway.

Annex II: CO2 emissions from domestic aviation (T&E analysis)

Rank	Country	Domestic CO_2 (Mt)	Cumulative Emissions
1	Italy	2.52	24%
2	France	1.92	43%
3	Germany	1.79	60%
4	Spain	1.51	74%
5	United Kingdom	1.43	88%
6	Sweden	0.50	93%
7	Greece	0.25	95%
8	Finland	0.14	97%
9	Poland	0.10	98%
10	Denmark	0.07	98%
11	Portugal	0.06	99%
12	Romania	0.04	99%
13	Croatia	0.03	99%
14	Austria	0.03	100%
15	Bulgaria	0.02	100%
16-28	Remaining countries	0.00	100%
	Total EU28	10.43	

Outermost Regions[1]	4.12
Norway	0.96

[1]Domestic CO_2 emissions for Outermost Regions include flights departing from the outermost regions and going to the related member state, as well as flights departing from a member state and going to a related Outermost Regions (e.g. Both Spain to Canary Islands and Canary Islands to Spain are included in Domestic Outermost Regions).

Annex III: Provisions on fuel taxation on intra-EU routes in EU air transport agreements (as of 27.05.2020)

The following table lists third countries who have signed or are negotiating an EU air transport agreement and whether agreements allow for fuel taxation on intra-EU flights. Two types of transport agreements are referred to below:

(1) **"Horizontal Agreements" (HAs)**: modify existing bilateral agreements of EU member states with the countries concerned by introducing certain clauses or provisions (mainly the EU designation clause but also fuel taxation provision). If a HA does not contain any fuel taxation provisions, then whatever was agreed bilaterally between a member state and that third country continues to apply.

(2) **"EU Comprehensive Air Transport Agreements" (CATAs)**: replace member states' bilateral agreements with the third country in question.

The information included in this table results from T&E research and analysis as well as information provided by the European Commission Directorate General for Mobility and Transport (DG MOVE).

Legend		**Sources**
(green)	Agreement allows fuel taxation on intra-EU flights	T&E analysis & DG MOVE Sources: European Commission press releases (2015); European Commission Atlas of the Sky and Country Index
(blue)	Agreement still being negotiated	
(red)	Agreement with mechanisms to potentially allow taxation on intra-EU flights	

Country	Year of conclusion or start date of negotiations	Exemption removed	Comments
Albania	-	**Yes**	HA includes fuel taxation provision
Armenia	2017	**Yes**	HA removed the exemption (Article 4)
ASEAN (Brunei, Cambodia, Indonesia, Laos, Malaysia,	2016	**Yes**	Fuel taxation provision included in CATA draft under negotiation

Myanmar, Philippines, Singapore, Thailand, Vietnam)			
Azerbaijan	2009	**Yes**	HA allows for fuel taxation on intra-EU flights and draft CATA being negotiated also includes the provision
Bangladesh	2015	**Yes**	HA allows for fuel taxation on intra-EU flights (signature expected in 2020)
Bosnia & Herzegovina	-	**Yes**	HA allows fuel taxation on intra-EU flights
Brazil	2011	**Yes**	HA allows fuel taxation on intra-EU flights
Canada	2009	**No**	"Each Party shall also exempt, **to the fullest extent possible** under national laws and regulations and on the basis of reciprocity,.."
Cape Verde	2011	**Yes**	HA allows fuel taxation on intra-EU flights
Chile	2006	**Yes**	HA allows fuel taxation on intra-EU flights and intra-CLAC flights
FYROM (fYRoMacedonia)	-	**Yes**	HA allows fuel taxation on intra-EU flights
China (Macao)	2014	**Yes**	HA allows fuel taxation on intra-EU flights
ECAA	2006	**Yes**	Annex I lists applicable provisions of Energy Taxation Directive: Article 14(1)(b) and (2) which allow to exempt fuel taxation and to limit this exemption to intra-Community and international flights
Georgia	2006	**Yes**	HA allows fuel taxation on intra-EU flights
Indonesia	2011	**Yes**	HA allows fuel taxation on intra-EU flights
Israel	2013	**Yes**	CATA allows fuel taxation on intra-EU flights
Jordan	2008	**Yes**	HA & CATA allows fuel taxation on intra-EU flights
Kyrgyzstan	2007	**Yes**	HA allows fuel taxation on intra-EU flights
Korea	2019	**Yes**	HA allows fuel taxation on intra-EU flights (signature expected in 2020)
Lebanon	2006	**Yes**	HA allows fuel taxation on intra-EU flights
Malaysia	2006	**Yes**	HA allows fuel taxation on intra-EU flights
Maldives	2006	**Yes**	HA allows fuel taxation on intra-EU flights
Moldova	2006	**Yes**	HA & CATA allows fuel taxation on intra-EU flights

Morocco	2006	**Yes**	HA & CATA allows fuel taxation on intra-EU flights
Nepal	2009	**Yes**	HA allows fuel taxation on intra-EU flights
New Zealand	2007	**Yes**	HA allows fuel taxation on intra-EU flights
Panama	2008	**Yes**	HA allows fuel taxation on intra-EU and intra-LACAC flights
Paraguay	2007	**Yes**	HA allows fuel taxation on intra-EU and intra-LACAC flights
Oman	-	**Yes**	Fuel taxation provision included in CATA draft under negotiation
Qatar	2019	**Yes**	Fuel taxation provision included in CATA draft under negotiation
Serbia & Montenegro	2006	**Yes**	HA allows fuel taxation on intra-EU flights
Switzerland	2002	**Yes**	CATA allows fuel taxation on intra-EU flights
Tunisia	2017	**Yes**	CATA allows fuel taxation on intra-EU flights
UAE	2008	**Yes**	HA allows fuel taxation on intra-EU flights
Ukraine	2006	**Yes**	HA and CATA allows fuel taxation on intra-EU flights
Uruguay	2006	**Yes**	HA allows fuel taxation on intra-EU and intra-LACAC flights
US*	2007	**No**	Joint Committee has power to decide on possible limitations to the aircraft fuel tax exemptions
West African Economic and Monetary Union	2010	**Yes**	HA allows fuel taxation on intra-EU and for intra-WAEMU flights