



AEF response to reform of Air Passenger Duty for private jets consultation

January 2025

Introduction

Aviation Environment Federation (AEF) campaigns on aviation for people and the environment. Our focus is on aviation policy, relating primarily to climate change, noise and air pollution, and we participate in several Government engagement groups including having a seat on the Jet Zero Taskforce. Internationally, we are a lead member and representative of the NGO grouping ICSA (the International Coalition for Sustainable Aviation), which has observer status to the UN's International Civil Aviation Organisation (ICAO).

Context

The UK has an exceptionally large private jet market that is booming and largely leisure focused. Within this sector, the majority of private jet flights have not been paying the higher rate of APD, with a significant portion paying no APD at all. We appreciate that the proposals outlined in this consultation to include all private jets above the current 5.7 tonne MTOW threshold for APD will go some way to addressing this. We believe that all private jet passengers should be paying APD including those below the threshold. Ensuring that the definition of a private jet is precise and not open to interpretation is a key aspect of achieving the goals of this proposal.

Our analysis indicates that private jet passengers are undertaxed and not making a fair contribution (this applies to the current and the proposed systems). This undertaxation becomes apparent when looking at private jet APD as a percentage of ticket prices, the proportion of total flights that are private versus the revenue that they bring in, and the disproportionate pollution and emissions attributable to a private flight.

Although APD is not specifically tied to decarbonisation, we believe there are additional measures and alterations to this proposal that could better align private jet taxation with environmental objectives and the government's wider aims for aviation taxation. Evidence of decarbonisation from within the private jet sector is limited, so there is scope for government policy to be the key driver of this in the future, with a central role for taxation.

Make-up of the private jet industry

1. What evidence can you provide about the profitability of different parts of the private jet sector, at the upper and lower ends of the market?

We do not have direct access to the industry so lack information to answer this fully. However there is clear evidence showing the sector is booming globally. For example, [research](#) from the Institute for Policy Studies shows that the number of private jets has risen from 9,895 in 2000 to 23,133 in 2022, 133% increase in 22 years. More recently, from 2019 to 2023, growth trends were [observed](#) for jet numbers (6.45% per year), distances traveled (11.31% per year) and emissions (9.93% per year). Our response to question 2 also supports our assessment that the sector is broadly very profitable. Various news articles also point to the sector being increasingly successful, for example, see articles in [Forbes](#) or [The Times](#).

2. How would different segments of the market respond to the government's proposals to extend the scope of the higher rate?

We suggest that there would be little change to the market. Current tax rates are very low relative to total total prices - [Possible](#) has reported that on a flight to Paris, the proportion of ticket costs paid in tax for a private jet is below 2% versus 23% for a business class ticket and up to 43% for an economy ticket. We would also suggest that as the wealth of a typical private jet user is very high, that private jet demand is likely to be highly inelastic (According to Wealth-X's report 'Spotlight on Private Jet Owners', the median net worth of a full and fractional private jet owner is \$190m and \$140m respectively). This is supported by the industry comments in a recent article in the [Financial Times](#) following the announcement of new APD rates in the Autumn Statement. The article supports Possible's findings, saying, 'private jet executives said that even at these higher levels, the duty would make up less than 2 per cent of the average cost of a flight, and was likely to be easily absorbed by wealthy customers'. Whilst this is referring to a different APD alteration to those being proposed in this consultation, it points to an industry that can afford additional taxation.

3. What impact would the extension of the scope of the higher rate to cover all private jets over 5.7 tonnes and increases to APD have on customer demand for private jets?

As outlined in our response to question 2, we would expect there to be little impact on customer demand. There could be some shift to commercial flights as typically private jet routes have a viable commercial alternative. For example, a 2018 [study](#) found that there is no viable commercial alternative to a private jet flight in the US in only 1.6% of cases. We would expect this to be similar in the UK, as according to [CE Delft](#), in 2022 the three most flown private jet routes from the UK all had well established commercial alternatives (London-Paris, London-Nice, London-Geneva). While we recognise that APD is not an environmental tax, any resulting changes in behaviour, however small, are likely to have a positive environmental benefit.

4. Can you provide any evidence about the size of the private jet aircraft population and its distribution between lighter and heavier jets?

The UK has a disproportionately large private jet aircraft population, ranking 6th for the most registered private jets in the [world](#) (522), and accounting for around 1 in 10 flights in the [UK](#). The UK also had the highest number of private jet flights in Europe in [2022](#) (90,256), with London airports in 6 of the top 10 European private jet routes. 3 UK airports (Farnborough, Luton and Biggin Hill) were in the top 10 for European airports by number of private jet flights in 2022).

Possible's [data](#) shows that the private jet aircraft population is largely made up of jets outside the current higher rate criteria (≥ 20 tonnes, < 19 passengers), with the distribution as

follows: 26% of private jet flights are made by aircraft in the current higher rate APD band. 52% of private jet flights are in the reduced/standard rate band and 22% are below the 5.7t MTOW threshold and therefore pay no APD at all.

[Analysis](#) of the CE Delft data shows that for the 50 most used private jet types in Europe in 2022, 12 were ≥ 20 tonnes (22% of these flights), 24 were between 5.7 and 20 tonnes (49% of flights) and 14 were below 5.7 tonnes (29% flights). We would assume that the UK jet population follows a similar distribution to Europe as a whole, partly because the UK has the highest number of flights in this dataset. The above data suggest that private aircraft distribution in the UK favours light and medium jets over heavy jets. It is worth noting that because of the way that CE Delft collected data, the above numbers are likely to be conservative.

5. What evidence can you share about the average number of passengers per private jet?

Evidence from [Possible](#) shows the average occupancy to be between 2.5 and 2.8 passengers per private jet and we would refer HMT to their submission for details on these estimates. In a [report](#) commissioned by the European Business Aviation Association, the average occupancy is estimated at 4.7 passengers per jet, a figure often cited by the sector. This number does not include the ~41% of private jet flights that are empty leg flights with an occupancy of 0. Taking these into account would drop the 4.7 to 2.8 passengers per jet. This coincides with information from our community member groups around Farnborough who report that the airport management has previously informed the consultative committee that the average occupancy is around 2 passengers per movement.

Both the empty leg flights and the generally low occupancy rates present major inefficiencies in the aviation system and we refer back to this in our tax suggestions in response to Question 12. We acknowledge that some aspects of this issue, e.g. improving occupancy monitoring/reporting, may fall outside of the purpose of this consultation and HMT's remit.

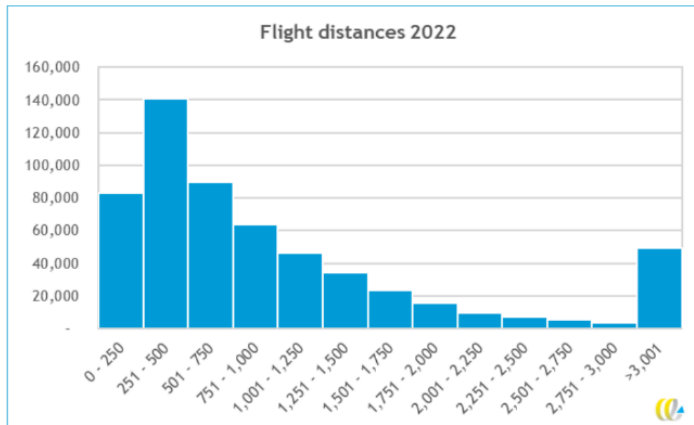
6. In contrast to flying on commercial airliners, what are the primary reasons for using private jets and range of journey lengths?

There is clear evidence to suggest that the primary reason for using private jets is increasingly focused on short distance leisure trips. According to a [report](#) by T3, focused on private jet flights to European holiday destinations, 'arrivals of private jets at most airports are concentrated during the summer vacation period', with 42.6% of flights occurring between June 1st and September 20th in 2023. The same report also demonstrated that the seasonality of private jet arrivals mirrors the patterns of standard tourism. This pattern is echoed in reports from [Possible](#) (p18) and [Transport and Environment](#), with private jet departures reported to be 50% higher in July than January. T3 also reported that 6 of the top 10 most important routes (measured by total distance covered by all flights on the route in 2023) are from UK airports. A 2024 [study](#) reported similar findings: 'seasonal and weekly arrival peaks in popular holiday destinations show many flights are made for leisure purposes.' Cultural, sporting and political events, such as the 2022 World Cup, the World Economic Forum and the Super Bowl, also contributed to peaks in private jet usage. We would suggest that it is likely that private jets have followed a similar trend to commercial air travel in terms of the business passenger market being in decline. Business travel has been falling as a percentage of total aviation activity since 2006 when measured by passenger numbers, proportion of passengers and proportion of spend ([NEF, 2023](#)). Given the

predominance of private jet trips for leisure travellers. We support using the term ‘private jets’ rather than ‘business jets’.

Short journey lengths are the most common as shown by the figure below from CE Delft’s report:

Figure 3 - Histogram containing the distances of all flights in 2022



The analysis from [Gossling et al.](#) found that 18.9% of flights were <200km with 4.7% of flights below 50km (although these are likely to include positioning flights). Specifically for the UK, Farnborough to London (all London airports included) was the 9th most popular private jet route in Europe in 2022.

[T3](#) suggests that larger jets are more likely to be used for business purposes: ‘Private jet services highlight on their websites that bigger aircraft with more than 20 seats are mainly used by business travel groups’.

7. As set out, data suggest that those using private jets are more likely to be male. We do not consider that there will be a significant impact on those with other protected characteristics from the government’s proposal on private jet taxation. Do you agree?

We agree that there would not be a significant impact on those with other protected characteristics. Any proposals to increase taxation on private jets would likely have a positive impact on equality, as the users of private jets are typically significantly more wealthy than those that experience the negative impacts of the private jet sector.

Changes to the private jet industry

8. What impact did the Covid-19 pandemic have on the private jet industry?

The pandemic reportedly contributed to the industry growing and reaching new customers. Private aviation was less impacted than the wider commercial industry, with private jets rising to nearly 1 in for 4 flights in the UK ([Possible](#), 2023). There are numerous articles (e.g. in [Business Traveller](#) and the [BBC](#)) reporting on positive effects of the pandemic on the sector, with some of this data covered in our answer to Question 1. These effects are covered in academic literature, with a US-focused [paper](#) titled, ‘Jet-setting during COVID-19: Environmental implications of the pandemic induced private aviation boom’ published in 2022.

9. What are the current drivers of change in the UK private jet industry?

N/A

Private jet decarbonisation

10. What evidence can you share about how the private jet sector has decarbonised to date?

As outlined in our previous responses, the private jet industry continues to grow quickly and emissions are rising accordingly. This follows the pattern of the wider commercial industry, whereby any emissions savings from efficiency improvements are outweighed by rises in demand. We have found no evidence of attempted decarbonisation beyond questionable voluntary offset commitments and some interest in SAF. SAF volumes are currently limited and a majority of private jet owners are not planning on using it in the near future ([Gossling et al. 2024](#)). Given low production volumes, any commitment by the private jet market to use SAF is likely to divert supply away from the decarbonisation of commercial air travel. See our answer to Question 12 for further details on SAF. We also refer HMT to Possible's submission and [research](#) on this question for further detail on SAF and the general lack of progress in decarbonising the sector.

11. What role could tax changes play in supporting decarbonisation of the private jet sector?

We see tax changes as potentially impacting the following areas: changing behaviour by reducing or shifting demand and demand growth, discouraging empty seats and empty flights and reducing the tailpipe emissions of private jet flights.

Due to the high emissions per passenger kilometre, empty leg flights and low occupancy rates, the higher rate of APD is not properly aligned with the Government's wider environmental objectives, including commitments to net zero by 2050 and the 'polluter pays' principle. Under the proposed system, one person on a large, 15 seat jet would pay less tax than two passengers on a small, less polluting jet to make the same journey, and no APD is paid on an empty leg flight despite obvious wastefulness. These issues form part of a wider question of whether private jets are undertaxed or making a fair contribution to government revenues.

In addition to APD not always addressing pollution and emissions, private jets are arguably undertaxed with regards to APD as a proportion of ticket prices (see question 2) and when looking at total APD revenues compared to the size of the industry. In 2022/23, APD receipts from the higher rate totalled ~£8,824,000 (May 2024 APD Tables) whereas domestic reduced and standard rate receipts in 2023/24 were around 10 times higher, totalling ~£89,108,500. According to CE Delft's figures, UK private jet emissions in 2022 were around 0.5Mt CO₂—roughly half that produced by all commercial domestic flights in the UK. APD revenues for private jets being ~1/10th of those for domestic flights looks disproportionately small in this context. This is also taking into account that for the 2023/24 tax year, APD on domestic flights was halved by the creation of the new domestic band, in previous years private jet revenue would have been even lower in comparison. The addition of smaller jets to the higher rate by altering the MTOW classification will increase the APD receipts from private jet flights, however revenues will likely remain disproportionately low.

Looking at APD revenues compared to the proportion of flights taking off reveals a similar lack of fair contribution. Private jets make up roughly one in ten flights departing from UK airports, however receipts from private jets only accounted for 0.28% of total APD revenues. These flights benefit from the use of UK airspace and air traffic control and produce

significantly more environmental damage per passenger than commercial flights. The sector's contribution to public finances appears to be unbalanced.

There are a number of other reasons why tax changes are appropriate for decarbonising private jets. [Research](#) from More In Common has shown that taking action on private jet emissions is highly popular in the UK. As a separated part of the aviation industry, the private jet sector could also present an optimal industry to trial alternative or additional tax regimes. Due to the profile of private jet owners, there may also be possibilities and a willingness to pursue investment in zero emission flight technology if the tax system is set up in a manner that supports this, for example by discounting or exempting APD for early adopters of zero emission aircraft .

The information provided in response to previous questions is important context for understanding why the UK has more responsibility to set higher standards than other countries on private jet taxation. The current tax system is, in part, contributing to conditions that have led to the UK being a regional and global hotspot for private jet travel. It is reasonable to expect this large and lucrative sector to contribute properly to public finances in ways that may not be appropriate in other countries. Our position as a country that heavily promotes outbound tourism also separates us from other major private jet using countries: a lack of fair taxation is incentivising people to travel abroad for leisure.

There is interest in taxing the private jet sector in other countries with large sectors. In the US, domestic private jet usage is taxed under the federal kerosene tax at \$0.219 per gallon, with [suggestions](#) last March that this would be increased just for private jets to \$1.06 per gallon. A similar approach in the UK, at least domestically, would help to tie private jet taxation to wider environmental goals. France is also [reportedly](#) looking to implement a private jet tax possibly as high as €3,000 for long-haul flights.

12. What could be the drivers of future decarbonisation of the private jet sector?

At the outset it is worth highlighting that some private jet trends do not support decarbonisation efforts. For example, US manufacturers like Boom are developing a new generation of supersonic jets, primarily for the private jet market. Research by [ICCT](#) shows that the carbon intensity of supersonic private jets will use a significant proportion of aviation net zero carbon budget.

Based on our response to Question 10, we see the drivers for decarbonisation for the current fleet as external rather than coming from within the industry. Taxation alongside other complementary government policy is likely to be the most effective way of bringing about private jet decarbonisation. We recognise that some of these measures outlined below fall outside of HMT's direct remit but the interaction between these and the tax system is important.

Reduce growth in demand

The simplest way to reduce the emissions from the private jet sector is to manage demand/demand growth, with taxation as the key driver (we acknowledge this may not be a government objective). To do this and to better tie the higher rate of APD with emissions, we would suggest raising the higher rate to a more proportionate level to begin addressing the issues of undertaxation discussed in Question 11. Additional policy measures could include

provision of information around the environmental impacts of private jet flights at the point of booking. Other forms of regulation would include bans on flights between certain destinations within a given range or journey time.

Address low occupancy and empty leg flights

Improving the low occupancy rates and frequent empty leg flights of private jets is important to achieving decarbonisation goals. Taxation could again be the most effective driver to address this issue. To ensure that tax is better linked to the actual emissions of a flight, an additional tax measure, such as a kerosene tax, could be implemented. This would ensure that the estimated 41% of private jet flights that are empty, and currently untaxed in APD terms, are making a fairer contribution to tax revenue. We understand that HMT has reservations about implementing a kerosene tax (or similar schemes)—if APD remains the only tax on private jet flights, we would suggest that the 41% of flights that are empty are properly accounted for in the design of APD rates. Essentially, the other 59% of flights should be taxed at a higher rate to compensate for the lack of revenue from empty leg flights.

There may be other drivers that could limit the number of empty leg flights, for example, a set APD charge for any empty seats or additional non-tax related policy. An APD rate for empty seats could be applied to all flights, private and commercial, as the issue of empty, or near-empty, leg flights is still common across the aviation industry, as evidenced in the [flight data](#) collected by the CAA.

Reduce tailpipe emissions

Zero emissions flight (ZEF) is likely to be a key contributor to reducing private jet tailpipe emissions in the future. More needs to be done to accelerate progress in pursuing this technology, and we agree with the following comment in the consultation document ‘Existing low carbon aviation technologies such as battery power have been trialled on smaller aircraft and may, therefore, be better suited to private jets at present than to commercial aviation’. The increased distribution of private jet flights across shorter routes aligns well with ZEF technology which is likely to be limited in range initially. Taxation could be used to encourage ZEF, for example by providing APD discounts to ZEF flights or by exempting ZEF flights from an additional kerosene tax. Further government policy that would support ZEF uptake could include a mandate for ZEF planes or a ban on kerosene private jets by a certain date.

We also see a potential opportunity for using the private jet sector to support wider action on aviation’s non-CO2 emissions. Whilst some uncertainty remains, non-CO2 emissions are estimated to be at least equivalent to the CO2 effects of aviation in terms of their contribution to net warming, with a large amount of this effect resulting from contrails. The private jet sector could be a useful place to address this as, according to this 2024 [study](#) from Imperial, private jets create similar contrail emissions to much larger commercial aircraft. The most popular locations for private jet flights (US, EU, UK) are also closely correlated with the main routes that cause contrail warming. We suggest that the private jet sector is used for contrail avoidance trials.

The key decarbonisation driver from within the sector will be SAF (despite slow current uptake) as ZEF is not close to widespread commercial use and SAF can be used as a drop in fuel for currently in service jets. We have concerns over the use of SAF in general but

particularly with its use in the private jet sector. Supply of SAF is likely to be limited, and highly variable in terms of life cycle emissions reductions. Private jet customers have a higher ability to pay than commercial flyers and so operators may be able to pay more for 'better' SAF. In this scenario, the use of limited 'good' SAF on private jets seems wasteful when that fuel could be more useful in fueling a commercial jet. Conversely if private jet operators buy SAF with low environmental integrity, this will have negative environmental impacts. This problem could be exacerbated in future with the pending return of supersonic flight in the private sector. These flights consume significantly higher amounts of fuel than current private jets and would add more constraints to restricted SAF supplies.

Defining the scope of the higher rate

13. Do you agree with the proposal that APD higher rate should be reformed to apply to all private jet passengers above the current 5.7 tonne MTOW threshold?

Yes, the current system clearly needs updating as most private jet flights are not paying the higher rate of APD. For example, in Europe, only 12 of the 50 most used private jets in 2022 would pay the higher rate under the current system. According to the May 2024 APD bulletin, in 2022, 42,000 passengers paid the higher rate—assuming the average occupancy was 2.5 passengers per flight this means around 73,000 private jet flights were outside the higher rate band.

Whilst we agree that the higher rate should apply to all private jets above the 5.7 tonne MTOW threshold, we outline some additional concerns with the current threshold in response to Question 14.

14. Do you have any views on whether the current 5.7 MTOW threshold remains appropriate for private jets, and if not, what alternative threshold would you suggest, and why?

We believe that a threshold lower than 5,700kg is needed to ensure that the scope of the higher rate covers all private jets as outlined in the consultation. Evidence strongly suggests that the proportion of private jet flights that currently fall under the 5.7 tonne MTOW threshold is significant, with Possible estimating passengers on ~1 in 5 private jet flights are below the threshold and pay no APD. Of the 50 most commonly used private jets in Europe in 2022, 14 jets comprising 29% of flights (performed by these 50 jet types) were lighter than the 5.7 tonnes MTOW threshold ([CE Delft](#), 2023). 2 of the 3 most popular private jet aircraft globally (Pilatus PC-12 and Piper PA-46-500TP) have an MTOW below 5.7 tonnes ([Gossling et al.](#) Supplementary material, 2024). The table showing the 5 private jet models with the most movements in the UK in 2022 that was presented in the webinar for this consultation revealed that 2 of these 5 jet types (Beech 200 and Pilatus PC12) are below the 5.7 tonne MTOW threshold.

As the definition of private jets for the purposes of APD is being reviewed, this is a good opportunity to ensure that the MTOW threshold is set at a level that includes all jets. Private jets represent a luxury form of travel and should all be taxed accordingly. The CAA uses 2.7 tonnes as a threshold in their definition ([Annual airport data 2023](#), Foreword), and this would be more appropriate but would still leave some lighter jets untaxed. We do not think the risk of bringing non-private jet flights into the higher rate is significant due to the exemptions in place.

15. What are the benefits and risks of the proposal to define private jets as having no formal agreement of carriage and no schedule?

We urge caution over ensuring that any new definition is not open to manipulation or misinterpretation. There are risks that jet operators could attempt to find ways around being included in the higher rate, for example by publishing schedules at short notice or issuing formal agreements of carriage. Private jet users have in the past taken steps to try to hide their jet emissions (Oxfam, 2024). The final definition should be carefully designed to include all private jet flights.

16. Do you have an alternative proposal as to how the government could achieve its stated aims on private jet taxation? Can you conceive of alternative ways of defining private jets in law in a way which aligns with the government's stated aims?

No additional comments.

17. Which APD exemptions should continue to apply to private jets under a reformed higher rate and why?

The APD exemptions are largely reasonable, however if there are private jet users that come under 'Passengers on short pleasure flights, that last 60 minutes or less and begin and end at the same place', we would support applying APD to this category. We would be interested in seeing any data on the number of each exemption taken by private jet flyers to determine whether any adjustments are needed.

The impact of extending the Higher Rate to all private jets

18. If, as proposed, the APD higher rate were applied to passengers in all private jets, what would the impact be on:

• The private jet industry in the UK

As outlined the private jet sector in the UK is substantial and undergoing a period of significant growth. We see it as unlikely that these changes are large enough to make a significant difference to the industry. We have been unable to find evidence of displacement of private jet users to other countries and see this risk as low due to the small proportion of total costs that APD represents.

• The administrative burden facing private jet operators

There should be no major administrative issues as APD is not a new tax.

• Private jet occupancy rates

The current and proposed systems do not incentivise cutting down on empty flights or increasing occupancy so we would expect no change unless a proposal is made to address empty seats in parallel.

• Emissions

As with our answer to the effects on the industry, we believe the proposed rates are likely to make a marginal or small difference to emissions, especially in the context of industry growth pushing emissions up. Therefore, we suggest additional proposals designed specifically to tackle rising aviation emissions, for example, a kerosene tax on key routes.

• UK and international connectivity

The UK is one of the best connected countries globally. If consumers are priced out by this change then in almost all private flight cases there is a commercial alternative. Private jets are mostly used for short leisure flights and leisure customers have an exceptional range of choice on the commercial market. From a decarbonisation point of view, higher APD rates

would ideally help to shift passengers onto rail alternatives. Many of the most popular private jet routes have a suitable train alternative that could be easily substituted ([CE Delft](#), 2023).

19. What data on private departures (e.g. numbers of passengers, aircraft size/weight, destination, proportion of departures for which the jet is hired vis-à-vis owner-operated) are kept and by whom (e.g. operators, brokers)?

Data sources we are aware of include CE Delft's database (using data from CIRIUM) and the OpenSky network. The CAA data on airports has some information on movements, but uses a different definition of private jets.