OPPORTUNITY GREEN

Submission to the HM Treasury consultation on the reform of Air Passenger Duty for private jets

22/01/2025

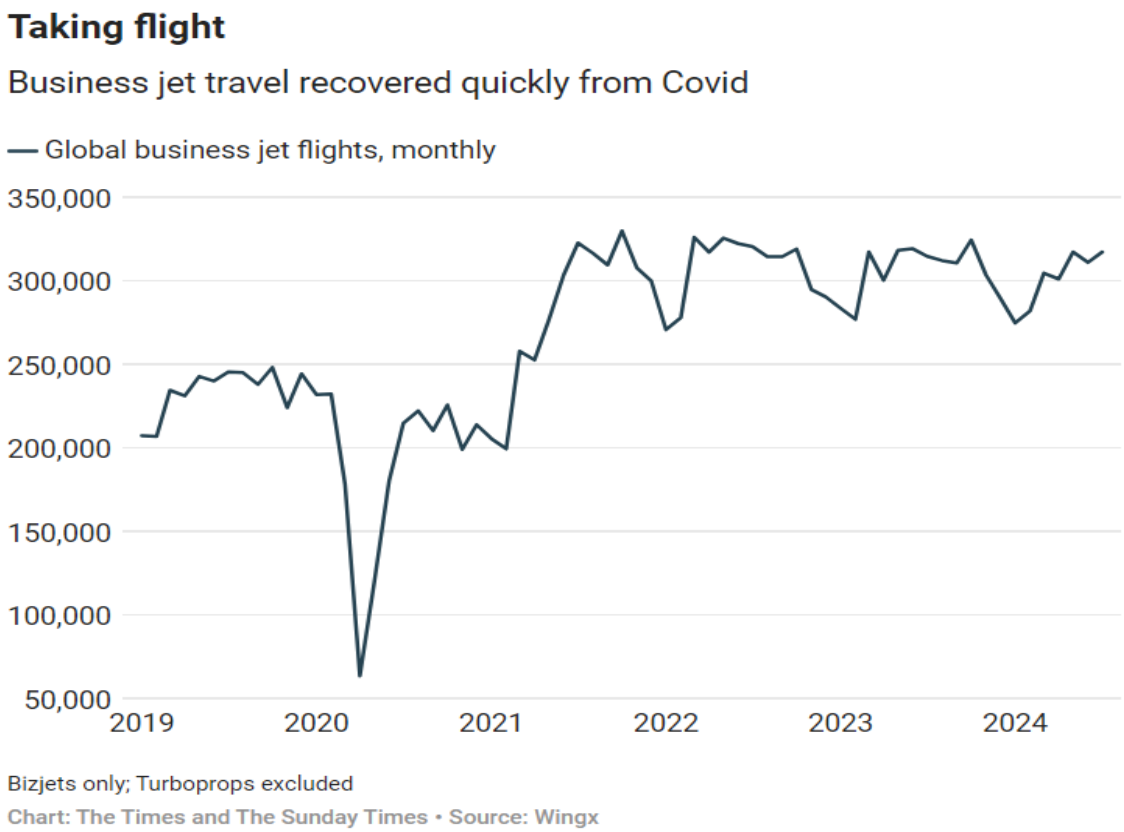
Opportunity Green is an NGO working to unlock the opportunities from tackling climate change using law, economics, and policy. We do this by amplifying diverse voices, forging ambitious collaborations and using legal innovation to motivate decision makers and achieve climate justice with particular emphasis on the aviation and shipping industries.

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?**

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

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?**

The private jet business has grown markedly faster than aviation in general in recent years, recovering more quickly from a (more reduced) dip in demand during the pandemic than the wider industry. Forecasts generally project continued, rapid growth over the rest of the decade, driven by an expected rise in the number of wealthy individuals and their preferences for private transport.



Private jet orders and deliveries continue to rise, with deliveries over the first half of 2024 up 5.3% on the same half of the preceding year.[1]

Considerations of "profitability" are problematic. Directly owning a private jet is a significant cost. The bestselling Cessna Citation, which can seat 7 passengers, costs up to £5m for a new model. Larger jets are significantly more expensive – the Gulfstream G550, which can seat 19, costs around £29m. Operating costs can also vary substantially, but the industry cites a range of £400,000 to £800,000 per year in the UK. It is not clear what business travel would be so profitable as to regularly justify such expense. It is better to think of private jet ownership as an exceptional luxury consumption.[2]

For private jet operators, looking to either hire out jets or offering some forms of fractional ownership, globally the last few years have seen a significant surge in reported revenues,[3] followed by slower growth over 2024. However, industry bodies

[1] Forster, Justin, "Private jet deliveries have increased in the first half of 2024.", *Simple Flying*, 11 September 2024. https://simpleflying.com/private-jet-deliveries-increased-first-half-2024/

[2] VistaJet, "Private jet prices", 27 May 2022. Private Jet Price | Ownership Vs Membership. Prices updated for more recent (2024) sales listings. https://www.vistajet.com/en-gb/stories/private-jet-price-ownership-vs-membership/

[3] For example, one of Europe's largest charters, Luna Aviation Group, reported record revenues over 2022, up 40% on the preceding year. Luna Aviation Group, "Lunagroup reports record breaking numbers for

report that the primary market constraint on aircraft sales globally is supply, rather than demand.

The evidence suggests that the surge in demand for private jets since the pandemic has been driven overwhelmingly by travel for leisure, with increases in privately-held wealth feeding directly into rising demand for luxury travel. That, in turn, implies that private jet demand is likely to be increasingly price inelastic, since whilst demand from business travel may be plausibly influenced by cost considerations at the margin, these are unlikely to feature in any calculation by an individual wealthy enough to afford private jet travel in the first place.

Private jets are, as a result, close to a classic "Veblen good", in which the very cost and exclusivity of the product directly increase its desirability.[4] The presence of these *status effects*, inherent to the desirability of the good for the individual consumer, is generally taken to be a social bad, since they imply that the consumption of one person involves a reduction in the status of those without access to the same good, creating a market inefficiency and case for government intervention in their production.[5] This social impact is over and above the environmental impacts of private jets. Such concerns are at least partly motivating moves to significantly increase private jet taxation in France, where a far more substantial increase in taxes due, of up to 3000 euros per passenger, has been considered.[6]

The industry itself has been sanguine about the recent price increases. The October APD increase makes up less than 2 percent of the cost of a typical private jet ticket.[7] Toby Edwards, chief executive of private jet charter company Victor, noted that "we believe that the APD increase will have very little impact."[8]

Even if the APD charged were to significantly increase, or its base to substantially broaden, there is little reason to think this picture would change given (1) the nature of private jet flight demand and (2) the small proportion of the total cost represented by the tax.

2022", n.d., https://www.lunajets.com/en/news/lunajets-lunagroup-charter-report-record-breaking-numbers-for-2022

[4] Originally in Thorstein Veblen, *Theory of the Leisure Class*, New York, 1899.

[5] There is an interesting literature relating the problem of apparently rising affluence and economic growth to the failure of reported happiness to increase in line. For a summary, see Eaton, B. C., & Eswaran, M. "Well-being and Affluence in the Presence of a Veblen Good", *The Economic Journal*, 119:539, 2009.

[6] Song, Vivian, "Michel Barnier to tax private jets as France faces budget abyss", *Telegraph*, 11 October 2024. https://www.telegraph.co.uk/world-news/2024/10/11/michel-barnier-to-tax-private-jets-reduce-french-deficit/

[7] Georgiadis, Philip, and Spero, Josh, "Higher UK air taxes will not deter private jet customers, industry bosses say", *Financial Times,* 31 October 2024. https://www.ft.com/content/ee08ab9e-7309-4e4d-9a7f-a479d36b4cf6

[8] Ibid.

For example, a mid-size charter jet from London to Paris, one-way, costs at least £3,000. The increased APD is £142, or just 4.7% of the charter price.[9] A flight from London to Singapore, in a larger jet able to make that journey, might cost around £80,000.[10] The increased APD due would be £1,141, or 1.4% of the total cost. Wealthy private jet users will not be seriously affected by such tiny proportional cost increases.

As a test case, significant cost increases coming out of the pandemic, as a surge in demand ran into ongoing supply restrictions including much higher fuel prices, failed to seriously dampen demand, with private jet use rising significantly. The last year has seen a return to something more like "normal" demand, with falling bookings, but these have been matched by generally falling prices. In other words, private jet demand does not behave like a normal good – price rises, even significant ones, do not dampen demand whilst price declines do not see more flights booked.

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

The European Business Aircraft Association provides monthly data on the European private aircraft fleet. Their latest report, published at the end of last year, shows the following distribution of aircraft by base station for the 16 most popular countries:

Country	Single engine turboprop	Twin engine turboprop	Light jet	Midsize jet	Heavy jet	Bizliners	Total
Germany	193	97	268	86	115	10	769
United Kingdom	88	100	93	66	164	18	529
France	126	104	120	51	91	3	495
Switzerland	56	15	55	10	82	7	225
Italy	18	56	59	21	56	8	218
Austria	34	14	53	25	60	3	189
Malta	2	7	12	7	132	11	171
Portugal	3	2	36	56	49	0	146

[9] Gert Svaiko, "How much does it cost to hire a private jet in the UK?", *Wise*, 25 March 2024. https://wise.com/gb/blog/private-jet-hire-cost

[10] Sample figure taken from those advertised at Private Jets UK. https://private-jets.co.uk/price.html

Spain	9	27	54	12	35	4	141
Czechia	30	11	40	13	21	1	116
Netherlands	33	27	14	8	17	1	100
Belgium	27	10	28	11	22	1	99
Poland	23	12	27	8	17	2	89
Sweden	5	25	25	8	22	0	85
Luxembourg	30	7	21	4	10	1	73
Denmark	20	4	12	7	26	0	69

Source: EBAA, *Business Tracker Europe,* November 2024. https://www.ebaa.org/resources/european-business-aviation-traffic-tracker-november-2024/

It can be readily seen that the UK is Europe's second most popular base location overall, but that it is the most popular base location for the largest category of dedicated private jets, of exactly the type currently excluded from APD.

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

The industry's evidence suggests that private jets are systematically under-occupied when in flight. 31,000 passengers paid the higher rate APD in financial year 2021-22, from 12,250 departures of planes that were liable for higher rate APD. This implies an occupancy of just 2.5 passengers per flight, on average.

This figure includes so-called "empty leg" flights, which are used to reposition aircraft but that are (as the name suggests) taken without passengers. Industry figures suggest that 41% of private jet flights in Europe are "empty leg", that is, taken without passengers on-board.[11] Looking only at those flights actually occupied suggests that a typical aircraft has on average 4.2 passengers on board for flights that are in use by passengers.

Since jet aircraft in the APD tax bands would typically have about 12-18 seats, this suggests a typical occupancy rate of 20-30%, even excluding flights intentionally left empty. This is far below the industry-standard average occupancy of 82% on commercial flights,[12] making private flights highly inefficient by comparison.

[11] Possible, *Jetting Away With It*, July 2023, p.25.

[12] Air Transport Action Group, "Facts and Figures", 2023. Facts & figures | ATAG

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

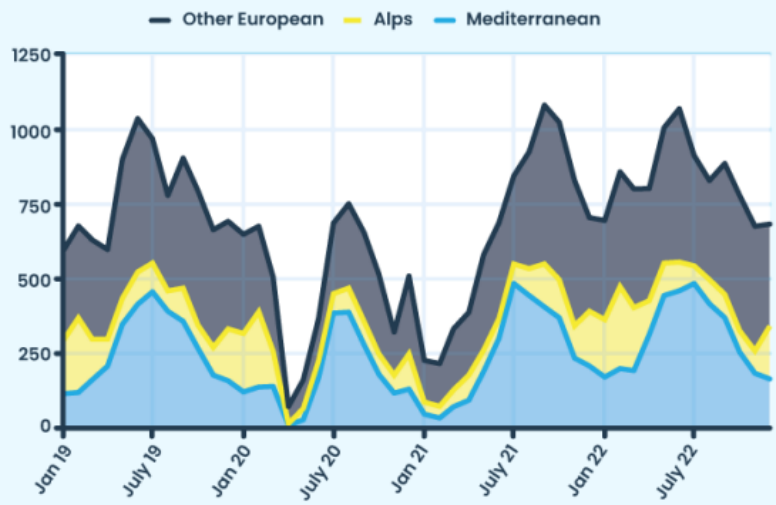
Surveys find that the majority of private jet users report that they take the flights solely for leisure purposes, with only 3% of flights taken for business use.

Purpose of travel	Proportion of total flights
Vacation/personal travel only	54%
Combined personal and business	43%
Business travel only	3%

Source*: Private Jet Card passenger survey,* 2021

These survey findings are backed up by data on flights, which find clear, seasonal surges in flights tracking popular holiday locations. The graph below shows monthly flights from Farnborough, one of the UK's top three private airfields by flight numbers, to Mediterranean and Alpine destinations. The swing to the Med can clearly be seen each summer, and the surge in skiing destinations can be seen each winter.

Figure 7. Monthly flights to European destinations from Farnborough.



Source: Possible, *Jetting Away With It,* July 2023. https://www.wearepossible.org/latest-news/jetting-away-with-it

By comparison, ONS survey figures show that one in 12 (8.2%) of all aeroplane passengers are flying to or from the UK for business purposes – a substantially higher

proportion than survey evidence would suggest for private jet passengers.[13] Despite some industry presentation, private jets are less likely to be used for business flights than commercial aircraft.

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?

As to be expected, direct ownership of private jets is extraordinarily concentrated amongst the wealthiest of the wealthiest. The average net wealth of a private jet owner, globally, is $1.6bn; their average age is 63, and 96% of them are male.[14] But even indirect ownership and rental arrangements are only available to the extremely wealthy: participants in shared jet ownership programmes have an average wealth of $1.1bn, whilst those with a subscription membership (allowing on-demand use of a jet) have an average wealth of $67m.[15] Although data on specifically UK private jet owners and users is not directly available, it is unlikely to deviate significantly from the global picture.

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

Private jets enabled those who could afford them to continue flying during covid restrictions. Analysis of UK flight data by Possible shows that private jets were 8.6% of all departures from UK airports over 2015-19, but as conventional flights were cancelled over 2020 and 2021, this rose to almost a quarter of flights. The proportion has now fallen, as commercial flying has resumed, but remains well above its pre-pandemic trend at 10% of flights from UK airports.[16]

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

Not answered here.

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

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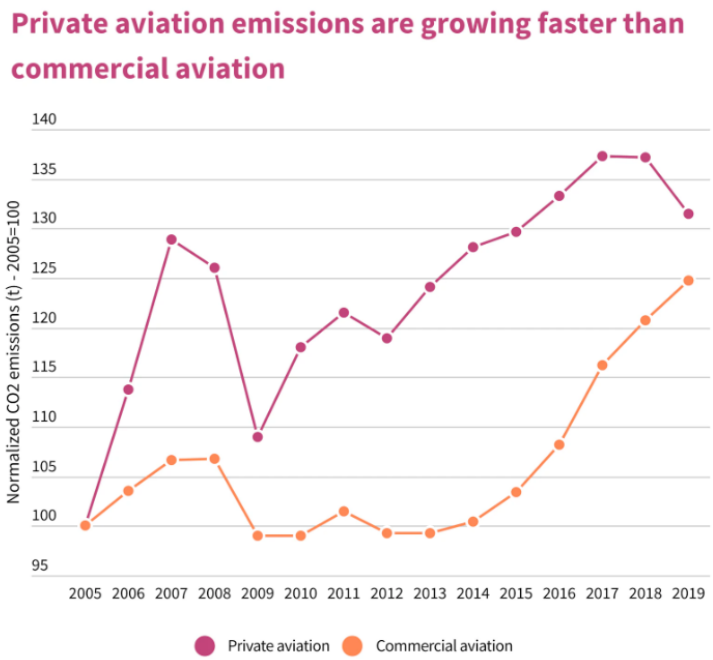
[13] ONS Travelpac figures for 2022, in Alex Chapman, *Losing Altitude: the economics of air transport in Great Britain*, London: New Economics Foundation, 2023, p.15

[14] Wealth-X, *Private Jet Ownership in the Middle East*, 2023, p.2

[15] VistaJet, *The Jet Traveller Report: who flies privately and how*, 2018.

[16] Possible, *Jetting Away With It,* July 2023.

The private jet sector, like the rest of aviation, is not decarbonising. Emissions from private jet use globally rose 46% between 2019 and 2023, compared to an 11% fall in emissions from global aviation generally as the industry recovered from the shock of covid. (2024 is expected to show a return to pre-pandemic levels of GHG emissions.) This is clearly out of line with the industry's own commitments to an "aspirational goal" of net-zero emissions by 2050.[17]



Source: Transport & Environment, *Private jets: can the super-rich supercharge zero-emission aviation?*, 2021. https://www.transportenvironment.org/articles/private-jets-can-the-super-rich-supercharge-zero-emission-aviation

It is worth nothing that the overall contribution of aviation to climate change is bigger than GHG emissions alone.[18] The production of contrails by aircraft in flight also contributes to climate change via their impact on the reflection and absorption of radiation, meaning that aviation's historic contribution to the overall change in temperature since pre-industrial averages is around 4%, rather than the 2.5% its emissions alone would suggest.[19] Private jets typically fly high enough and for long enough for their contrails to also make a contribution.[20]

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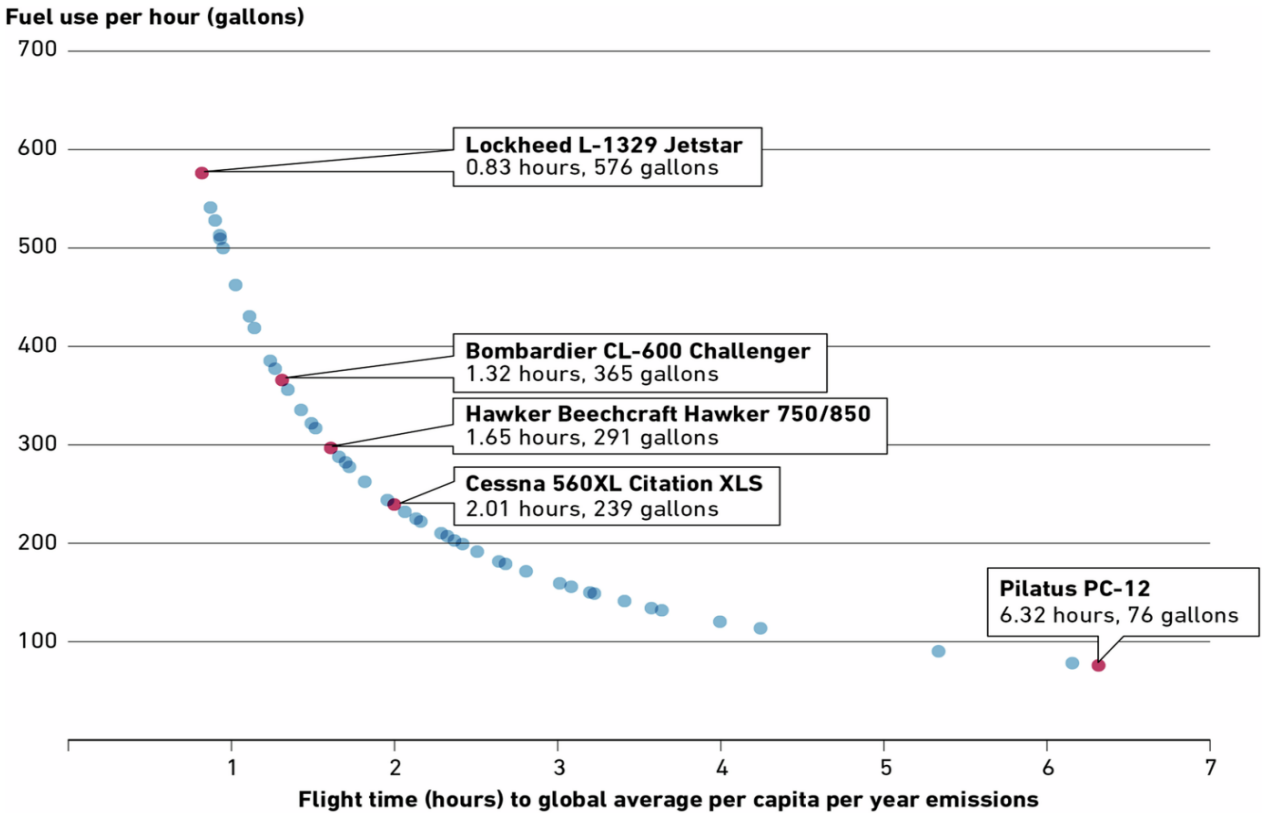
[17] ICAO, "States adopt net-zero 2050 global aspirational goal for international flight operations", press release, 7 October 2022, https://www.icao.int/Newsroom/Pages/States-adopts-netzero-2050-aspirational-goal-for-international-flight-operations.aspx

[18] Small World Consulting, 2025, *Contrails: a policymakers guide to reducing emissions*, London: Opportunity Green.

[19] Klöwer, M. et al., 'Quantifying aviation's contribution to global warming'. *Environ. Res. Lett.* 16, 104027 (2021).

[20] Gössling, S., Humpe, A. & Leitão, J.C. 'Private aviation is making a growing contribution to climate change'. *Commun Earth Environ* 5, 666 (2024). https://doi.org/10.1038/s43247-024-01775-z

The graph below shows the length of time different models of private jets need to be in the air before their greenhouse gas emissions match the global average per capita emission. The most popular models are highlighted in red; the single most popular model in Europe is the Cessna 560XL.[21] Some older models produce as much greenhouse gas in around an hour of flying as the average human being produces in a whole year, but even newer, more efficient planes still produce exceptionally high relative emissions. Comparatively minor efficiency improvements have been completely drowned out by the expansion in their use.



Source: Gössling, S., Humpe, A., & Leitão, J. C., 'Private aviation is making a growing contribution to climate change', *Communications Earth & Environment*, 666 (2024). https://doi.org/10.1038/s43247-024-01775-z

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

The APD regime will not be enough to drive the decarbonisation of the private jet sector itself due to reasons previously discussed regarding even the higher APD failing to be an effective deterrent amongst the ultra-wealthy. Therefore, HMT should work with DfT and DESNZ on policy levers to drive further decarbonisation. Particularly, the UK ETS, the

[21] Transport & Environment, *Private jets: can the super-rich supercharge zero-emission aviation?*, 2021, p.9. https://www.transportenvironment.org/uploads/files/202209_private_jets_FINAL_with_addendum_2024-05-07-140647_xczq.pdf

SAF mandate, CORSIA and a new Zero Emission Flight (ZEF) mandate should all include reference to the disproportionate climate effects of the private jet sector. Additionally, HMT should urgently introduce a tax on kerosene (for both commercial and private aviation). Introducing a £1 per litre tax rate on kerosene fuel for private jets could raise up to £200 million per year,[22] providing further revenue to help decarbonise the sector.

The UK ETS and the proposed kerosene tax would further bridge the price difference between fossil fuels and sustainable alternatives, increasing the pool of buyers of the more sustainable alternatives to those who cannot currently afford the green premium. A SAF and ZEF mandate can complement these price mechanisms by driving forward the uptake of both SAF and ZEF. In line with the polluter pays principle, these initiatives should be funded by the aviation industry. As private jets are the most polluting form of transport,[23] the sector should not be exempt from higher taxes.

Beyond the existing mandates, higher taxes on the sale and/or purchase of private jets, both new and pre-owned, could be structured to provide incentives for the purchase of low-emissions aircraft. The UK government could take the lead in lobbying for a global transfer tax on the sale and/or purchase of private jets.[24] Further private jets should have specific mandates for the use of e-fuels as they are the part of the aviation sector that can most bear the cost which can allow the e-fuel industry to move from demonstration to much wider adoption across the industry. Opportunity Green would be delighted to work with the government on designing any or all of these schemes.

Finally, regardless of the decarbonisation impacts of APD, currently private jets pay no kerosene tax or VAT and therefore do not contribute to general taxation in the same way as any other sector of the economy. Therefore, ensuring that private jets at the very least are paying for their pollution in full to at least the same level as if they paid VAT and fuel tax should be seen as a basic taxation measure to broaden the UK tax base.

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

Not answered here.

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?

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[22] Green Alliance, *Kerosene tax: how to embed the polluter pays principle in aviation*, May 2024.

[23] R. Carole et al., 'Navigating the Climate Conferences: Comparing the Carbon Footprint of Private Jet Travel and Other Modes of Transport to COP28', October 2023. https://journals.uclpress.co.uk/ucloe/plugins/isolinear/article/3036/version/1/

[24] See recommendations of Collins, C., et al., *High Flyers 2023*, Washington, D.C.: Institute for Policy Studies, 2023.

Yes, although further action is required, as above.

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?

It would be more consistent to reduce the threshold on payments to include all private jets, including the very smallest. This would remove unnecessary distortions in the market and better align the taxes paid on all private jets with the externalities caused by their use.

UK flight data shows that one in four (26%) private jet flights are made in aircraft subject to the Higher APD band. Half (52%) of flights are subject only to the Standard rate band, whilst over a fifth (22%) of flights are considered too small under the current APD regime, with an MTOW below 5.7 tonnes, and pay no APD. In other words, three-quarters of private jet flights in the UK are not presently subject to the private jet tax regime.[25]

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

The proposal captures the major distinction between a private jet in operation, and a regular commercial flight. Care will need to be taken to reduce the incentives for private jet operators to introduce mechanisms to skirt the tax: "empty leg" journeys, for example, can currently be sold as if making a conventional, commercial flight and might (in theory) be claimed as a conventional flight under a revised tax system.[26] Although relatively small and specialist it is important for the efficiency of the tax system that possible loopholes are avoided.

16. Do you have an alternative proposal as to how the government can 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?

With caveats around possible loopholes, the proposed criteria appear to capture the major, defining elements of a private jet as opposed to commercial jet flight.

However, if the aim of APD is to ensure aviation makes a "fair" contribution to the UK Exchequer, the current tax regime leaves the industry broadly undertaxed and does not come close to addressing the costs of its own activities. The major externality of flying,

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[25] Possible, *Jetting Away With It*, London, 2023, p.21

[26] See, for example, GlobeAir's current options for European empty leg flights at: https://www.globeair.com/empty-leg-flights

its contribution to climate change, is not properly taxed by the APD regime at any level, but it is the private jet sector which is most out of line.

The average private jet emits six times more carbon per passenger per mile than the average commercial flight. Yet over shorter distances and in smaller planes, subject to only the Standard APD rate, the tax paid by (for example) a premium economy passenger on a commercial flight would be identical.

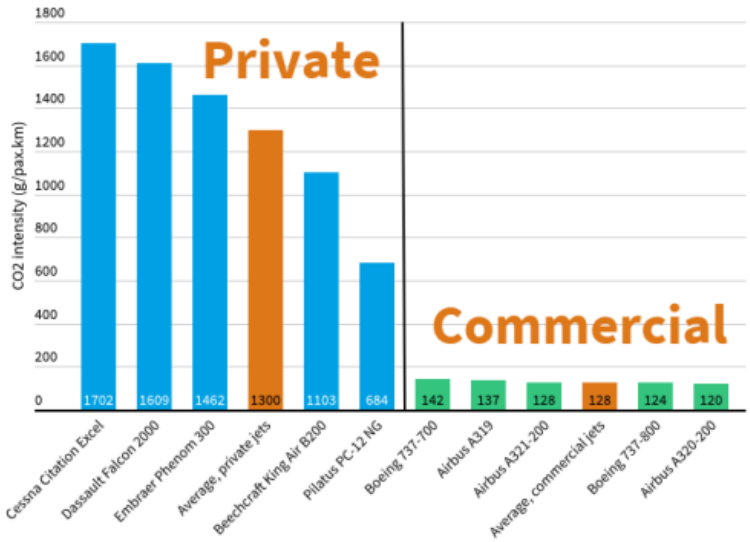

Figure 2: Private aircrafts models are much more polluting than commercial models

Source: Transport & Environment, *Private Jets: can the super-rich supercharge zero-emission aviation?*, 2023.

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

The current APD exemptions are sensible and there appears to be little reason to change the regime here. Some of the exemptions may also align well with wider decarbonisation goals, like the typically short, low-passenger journeys that are essential to Highland and Island communities but which could be supported to decarbonise more rapidly.