

European Tobacco Harm Reduction Advocates (ETHRA) – Additional Information to the Public Consultation on Tobacco Taxation

- A key purpose of the [Tobacco Excise Directive](#)¹ is described at the 2nd recital:

The Union’s fiscal legislation on tobacco products needs to ensure the proper functioning of the internal market and, at the same time, a high level of health protection”

- The [review of the EU tobacco excise regime](#)² explicitly mentions health objectives:

The high number of smokers in the EU is still a matter of significant concern with 26% of the overall EU adult population, and 29% of young Europeans aged 15-24, smoking. The launch of the Europe's Beating Cancer Plan highlights the pivotal role of taxation in reducing tobacco consumption, in deterring young people from smoking.

- **The promise of non-combustion.** The big opportunity lies in tobacco and nicotine products that do not involve combustion. Almost all tobacco-related harms arise from inhaling products of combustion (tar and hot toxic gases from burning tobacco leaf) and without combustion there are much lower exposures to products of combustion³. There are basically four categories of non-combustible product: (1) vaping products, (2) smokeless tobacco and snus, (3) heated tobacco products, and (4) new oral nicotine products such as pouches.
- **Four public health insights essential for tax design.** We know beyond any reasonable doubt that:
 - **Non-combustibles are much safer.** Vaping and other non-combustible products are MUCH less harmful than cigarettes because there are no products of combustion^{4, 5}. We know this mainly from exposure biomarker studies (measuring toxicants in the blood, saliva, urine). The 2019 lung injury outbreak received much publicity, but it was unconnected to nicotine vaping. Vitamin E Acetate, a thickening agent used in illicit THC vaping products, was identified as the cause of these lung injuries⁶. Vitamin E acetate is oil based and so not miscible with water soluble nicotine vaping products⁷. It is also a banned substance under the TPD.
 - **Vaping products are economic substitutes for cigarettes.** Vaping products help smokers quit and probably displace smoking among young people. They are economic substitutes - that must be recognised in tax policy. We know this from randomised controlled trials⁸ (approx twice the efficacy of NRT), observational studies⁹(follow people and see what they do), and population data trends¹⁰ (smoking has tended to fall sharply as vaping has increased).
 - **Youth vaping concentrates in adolescent smokers.** Youth vaping rates are generally low in Europe. However, though it rose sharply in the United States 2017-19 most vaping was *infrequent* and frequent vaping was concentrated in adolescents who were already smoking or likely to smoke¹¹ - for them it may be beneficial.

- **No evidence for gateway effects.** There is no evidence for gateway effects from vaping to smoking - everything points to the strong associations between vaping and smoking behaviour being due to 'common liability'¹².
- **Barriers to quitting smoking.** In Q4 of last year ETHRA conducted a large-scale survey of nicotine consumers in the EU¹³, attracting over 35,000 respondents. One of the areas examined in the survey was the barriers faced by those who smoke but want to quit. The high price of low-risk alternatives to smoking was cited as a major barrier by 24.3% of those surveyed, this number increased to 44.7% for consumers in countries that have a high tax on vapour products. Taxation was also a significant barrier for dual users - those that have not fully transitioned from smoking to vaping - 28.1% said the high cost of low-risk alternatives prevented them from fully switching to vaping. In order to ensure a high level of health protection for citizens it is imperative that low-risk alternatives to smoking are affordable. Those who smoke must be incentivised to make the switch, not punished through increased taxation.
- In designing the excise system, we see four related objectives:
 - To raise revenue
 - To achieve policy aims - to contribute to reducing disease and premature death consistent with operating the internal market at a high level of health protection
 - To avoid harmful side effects - for example, the regressive effects on household budgets or development of illicit trade and nurturing criminal supply chains
 - To have an efficient system where the cost and red tape involved in tax administration is kept to a minimum
- There are trade-offs between these objectives. The Royal College of Physicians [Nicotine without smoke: tobacco harm reduction](#)¹⁴ expressed this well (emphasis added):

*if [a risk-averse and precautionary] approach also makes e-cigarettes less easily accessible, less palatable, or acceptable, **more expensive**, less consumer friendly or pharmacologically less effective, or inhibits innovation and development of new and improved products, **then it causes harm by perpetuating smoking**. Getting this balance right is difficult. (Section 12.10 page 187)*
- **Our tax proposal:** The tobacco and nicotine excise regime should be risk proportionate. The key distinction in public health terms is between smoked and smoke-free, not between tobacco and non-tobacco. To the extent possible, *combustion* is the process to tax.
 - **Combustion products - high and converged.** Combustion products should have more closely harmonised duties and common minimums to remove policy-induced incentive to switch between combustion products. The desired switch should be to low-risk non-combustion products.
 - **Non-combustion - low or zero tax to incentivise switching.** Because they are much less risky and substitute for combustion products to create a health benefit, the vaping

and other non-combustible products should attract a much lower or zero rate of excise duty. At the very least, this pro-public health option should not be *prevented* by a revised directive by permitting a zero minimum tax rate for all non-combustible products.

- **Ethical linkage between combustion and non-combustion tax.** Given the concentration of smoking in poor or disadvantaged groups, combustion taxes must be increased with great care because of the regressive effects and poor rates of smoking cessation. If taxes on an addictive and harmful product (cigarettes) are going to rise to support Europe's Beating Cancer plan, then there is an ethical imperative to provide attractive alternatives that allow the user to both reduce risk and save money.
- **Maximum smoke-free tax threshold.** As well as setting a minimum level for non-combustibles at zero and encouraging a steep fiscal gradient between smoked and smoke-free products, there should be some protection of this gradient across the EU by setting a **maximum** tax level for the four classes of non-combustibles at a level equivalent to half [or other fraction] of the lowest level set combustible products.
- **Tax administration costs.** If the tax is made approximately risk-proportionate, the annual tax burden on a user would be less than five percent of that falling on a smoker. This would be unlikely to justify the tax administration costs. Setting a higher tax would reduce the fiscal incentive to switch and cause more smoking and disease (see Royal College of Physicians¹³)
- **Tax point.** The tax system should be designed to place the administrative burden high up in the value chain to concentrate tax administration in the wholesale supply where there is a smaller number of larger economic entities. Vape shops should not be a tax point.
- **Tax base.** Given the great diversity of products available and wide range of usage patterns, we can see perverse incentives with every proposed tax base.
 - **Ad valorem:** will penalise trust-building brands, high quality design and build, and expenditure on product stewardship beyond that required by law.,
 - **By volume of e-liquid:** will favour users switching to higher strength liquids or buying non-nicotine liquids and adding nicotine concentrates. This creates the greatest distortion *within* the vaping market, given users can prefer consuming large volumes of weak liquids or low volumes of stronger liquids.
 - **By mass of nicotine:** will incentivise users cutting down to lower strength nicotine products (though they are likely to use more) and risk relapse. Will penalise the products that rely on high-strength nicotine to achieve a small size and convenience - these are important in the initial switching phase. However, it is less likely to create distortions within the vaping market given users' tendency to titrate (adjust vaping to achieve a desired nicotine exposure).
- **Note: nicotine users 'titrate' to achieve their desired nicotine exposure.** Nicotine users adjust their vaping to achieve desired exposure of nicotine through deeper or more frequent

puffs. The device and liquid do not determine this, but they can constrain it. In other words, people using weaker liquids will use higher volumes. People using stronger liquids will use lower volumes¹⁵. This is similar in some ways to alcohol. People consume much larger volumes of liquid when they drink beer, and much lower volumes when they drink spirits. A tax on liquid volume would be punitive on beer drinkers and would encourage people to switch to spirits for a given alcohol intake.

- **The black market and DIY.** It is important not to underestimate the potential for illicit activity that will undermine a tax regime, while also increasing risks. Liquids and devices are easily traded informally across borders and via the internet. Nicotine is available from Chinese internet suppliers at 99.9% strength (approximately 50 times more than is allowed on the EU market). People will obtain this and set up a rival supply chain. Users will buy common generic liquids (PG/VG) in large containers and add flavours (food aromatherapy), obtain illicit nicotine from China or intermediaries. The black market will supply products that are made for the purpose (like Puffbar in the US) with no restraint in marketing to youth. Workarounds (like shortfills) will keep the trade ahead of the authorities.
- **A possible objection - non-discrimination.** The Tobacco Excise Directive mentions an objective for non-discriminatory tax regime at recital 3

One of the objectives of the Treaty on European Union is to maintain an economic union, whose characteristics are similar to those of a domestic market, within which there is healthy competition. As regards manufactured tobacco, achievement of this aim presupposes that the application in the Member States of taxes affecting the consumption of products in this sector does not distort conditions of competition and does not impede their free movement within the Union.

- However, this non-discriminatory approach should not be approached simplistically. The EU principle of non-discrimination has been elegantly described by the Court of Justice. It has been articulated as follows

... the principle of equal treatment or non-discrimination requires that comparable situations must not be treated differently and that different situations must not be treated in the same way unless such treatment is objectively justified. [Case 304/01 Sept 2004 Spain v European Commission](#) para 31

- **Summary:** the excise tax regime should be risk-proportionate and make its most important distinction between combustion and non-combustion products. The system should incentivise switching from high-risk to low-risk products for health reasons and as an ethical response to the regressivity of tobacco taxation. It should not prevent member states implementing a public health strategy based on tobacco harm reduction by having **zero minimum thresholds** for non-combustion products. It should encourage tobacco harm reduction and non-discrimination by **setting maximum thresholds** equivalent to half [or other fractions] the lowest level of taxation on any combustible product.

Additional information

Economics of vaping

Please see the presentation by Michael Pesko, Georgia State University: [Economics of E-cigarettes: Background, Theory, and Evidence](#)

Also see Pesko's summary of his economically orientated e-cigarette evidence: [Mike Pesko's E-cigarette Policy Evaluation Research](#) - some of this makes the case that e-cigarettes function as economic substitutes for cigarettes.

[Regulators and the compliance fallacy - buying 99% nicotine e-liquid from China \(2016\)](#) - Clive Bates (2016)

Strength of liquids used

Distribution share of e-liquid nicotine strengths preferred by smokers and ex-smokers worldwide as of October 2016 ([Statista](#))

ASH fact sheet on [e-cigarette use by adults in Great Britain](#) (2020) - has some information on strength distribution.

Vaping and smoking equivalence (only very crude generalisations can be made)

Prochaska JJ, Vogel EA, Benowitz N. Nicotine delivery and cigarette equivalents from vaping a JUUL pod. *Tob Control* 2021; [[PubMed](#)] [[PDF](#)] "*JUUL Labs reports each 5% (nicotine-by-weight) cartridge contains approximately 40 mg nicotine per pod and is 'approximately equivalent to about 1 pack of cigarettes.'*" That suggests **1 cigarette = 2mg of nicotine in liquid inhalable form**. Note that this is nicotine in salt form, and it may have a stronger pharmacokinetic impact.

Farsalinos KE, Romagna G, Tsiapras D, Kyrzopoulos S, Voudris V. Characteristics, perceived side effects and benefits of electronic cigarette use: A worldwide survey of more than 19,000 consumers. *Int J Environ Res Public Health* 2014;11(4):4356–4373. [[link](#)] - this suggests (at the time) average daily nicotine consumption was about 36mg (Table 2: 12mg/ml x 3ml/day).

From [Eurobarometer 506](#) (2021) average cigarettes smoked per day in the EU is 14.2. If the smoking and vaping were equivalent consumption patterns, then 36/14.2 or **1 cigarette = 2.5mg nicotine in inhalable liquid form**.

References

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² European Commission. 2020. Revision of excise rules for tobacco. Available at: https://ec.europa.eu/taxation_customs/business/excise-duties-alcohol-tobacco-energy/excise-duties-tobacco/revision-excise-rules-tobacco_en

³ Committee on Toxicity of Chemicals in Food, C. P., and the E. (2020) 'Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment', *Committee on Toxicity of Chemicals in Food, Consumer Products, and the Environment*, (March), pp. 13–18. Available at: <http://cot.food.gov.uk/pdfs/opchap.pdf>.

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- ⁴ Royal College of Physicians. Nicotine without smoke: Tobacco harm reduction. London: RCP, 2016.
- ⁵ French National Cancer Institute. 2021. Tobacco and cancer prevention. Available at: <https://www.e-cancer.fr/Acces-thematique/Tabac-et-prevention-des-cancers>
- ⁶ Centers for Disease Control and Prevention. 25 Feb 2020. Outbreak of Lung Injury Associated with the Use of E-Cigarette, or Vaping, Products. Available at: https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html
- ⁷ Kozlovich, Shannon, Harvanko Arit M, Benowitz Neal L. March 2020. Vitamin E Acetate is not Soluble in Nicotine E-liquids. Available at: <https://www.ingentaconnect.com/contentone/trsg/trs/2021/00000007/00000002/art00004>
- ⁸ Hartmann-Boyce J, McRobbie H, Lindson N, Bullen C, Begh R, Theodoulou A, Notley C, Rigotti NA, Turner T, Butler AR, Fanshawe TR, Hajek P. Electronic cigarettes for smoking cessation. *Cochrane Database of Systematic Reviews* 2021, Issue 4. Art. No.: CD010216. DOI: 10.1002/14651858.CD010216.pub5.
- ⁹ Jackson, S. E. *et al.* (2019) 'Moderators of real-world effectiveness of smoking cessation aids: a population study', *Addiction*, 114(9), pp. 1627–1638. doi: 10.1111/add.14656.
- ¹⁰ Pasquereau, Anne & Quatremère, Guillemette & Guignard, Romain & Andler, Raphaël & Verrier, Florian & Pourchez, Jeremie & Richard, Jean-Baptiste & Nguyen-Thanh, Viêt. Usage de la cigarette électronique, tabagisme et opinions des 18-75 ANS Baromètre de Santé publique France 2017
- ¹¹ Martin Jarvis, Sarah Jackson, Robert West, Jamie Brown. (2020). Epidemic of youth nicotine addiction? What does the National Youth Tobacco Survey 2017-2019 reveal about high school e-cigarette use in the USA? *Qeios*. doi:10.32388/745076.5.
- ¹² Chan, G. C. K. *et al.* (2020) 'Gateway or common liability? A systematic review and meta-analysis of studies of adolescent e-cigarette use and future smoking initiation', *Addiction*, pp. 0–3. doi: 10.1111/add.15246.
- ¹³ European Tobacco Harm Reduction Advocates. 10 June 2021. ETHRA EU Nicotine Users Survey report. Available at: <https://ethra.co/news/80-ethra-eu-nicotine-users-survey-report>
- ¹⁴ Royal College of Physicians. *Section 12.10 page 187*. Nicotine without smoke: Tobacco harm reduction. London: RCP, 2016.
- ¹⁵ Dawkins, L. E., Kimber, C. F., Doig, M., Feyerabend, C., & Corcoran, O. (2016). Self-titration by experienced e-cigarette users: blood nicotine delivery and subjective effects. *Psychopharmacology*, 233(15-16), 2933–2941. <https://doi.org/10.1007/s00213-016-4338-2>