TAXATION OF ELECTRONIC NICOTINE AND NON-NICOTINE DELIVERY SYSTEMS

DISCUSSION PAPER

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STAY SAFE
VACCINATE TO SAVE SOUTH AFRICA

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Executive Summary

The health consequences of tobacco consumption are well known and tobacco products have been regulated through tax and non-tax measures over the years. To date, government's regulatory interventions have reduced smoking prevalence in South Africa. However, to counter the reduction in tobacco consumption, new generation products (NGPs) have been introduced in the market either as substitutes or to complement current tobacco products consumption. These NGPs include electronic nicotine delivery systems (ENDS) and electronic non-nicotine delivery systems (ENNDS). These products are battery-powered devices that do not burn or use tobacco leaves, but instead vaporise e-liquid solutions to create an aerosol which the user then inhales. Innovations surrounding these products and their use is ongoing.

The market for ENDS/ENNDS is still in its infancy in South Africa, but it is projected to grow. It is estimated that the market generated about R2.54 billion in revenue from vaping products in 2018 and experienced an average annual growth of 21.2 per cent over the 2013-2018 period. Even though these products are marketed as less harmful compared to cigarettes or traditional tobacco products, they are not without risk. Some NGPs are modified risk products, though the modification does not necessarily mean no health harm. The long-term health effects of e-cigarette use are unknown at this stage, primarily because e-cigarettes have not been in the market for long. However, preliminary studies indicate that the use of ENDS/ENNDS may be associated with a number of detrimental health effects, and the World Health Organisation (WHO) has advised governments to take a precautionary approach in regulating these products. South Africa is a signatory to the WHO Framework Convention on Tobacco Control (FCTC) and one of the objectives of the FCTC is to curb the demand and supply of these harmful products through taxation.

Governments around the world have started a process of regulating the consumption and use of ENDS/ENNDS through tax and non-tax measures. The most commonly used regulatory approaches include complete sale bans, age-of-purchase requirements, and advertising or promotion bans. The National Department of Health (NDoH) has already started a process of amending the current tobacco control legislation for the regulation of these products. From a tax perspective, a number of countries have already started implementing taxes on ENDS/ENNDS in the form of a specific excise duty and/or an ad valorem duty. The specific excise tax regimes implemented include the taxation of non-nicotine solution and an additional rate for nicotine content of the solution. For example, Latvia implemented an excise tax in July 2016 which is calculated on two bases – the volume of liquid measured in millilitres and the weight of nicotine measured in milligrams. It is levied at a rate of EUR0.01 per ml (i.e. R0.19 per ml) for the volume of the liquid and at EUR0.005 per mg (R0.095 per mg) for the nicotine weight.

Other countries tax both the solution and the device. Kenya introduced an excise duty on ENDS/ENNDS levied on two bases, the device and the cartridge used. The excise was initially charged at a rate of 3,000 Kenyan Shilling per unit (R507.58 per unit) for the device and at a rate of 2,000 Kenyan Shilling per unit (R338.39 per unit) for the cartridge. In 2019, the rates were increased to 3,156.00 Kenyan Shilling per unit (R534.16 per unit) for the device and 2,104.00 Kenyan Shilling per unit (R356.11 per unit) for the cartridge. Indonesia introduced an excise tax on the e-liquid used in electronic cigarettes in July 2018 which is applied at 57 per

cent of the retail selling price of the product. Many States in the United States have also implemented ad valorem excise tax regimes for e-cigarettes.

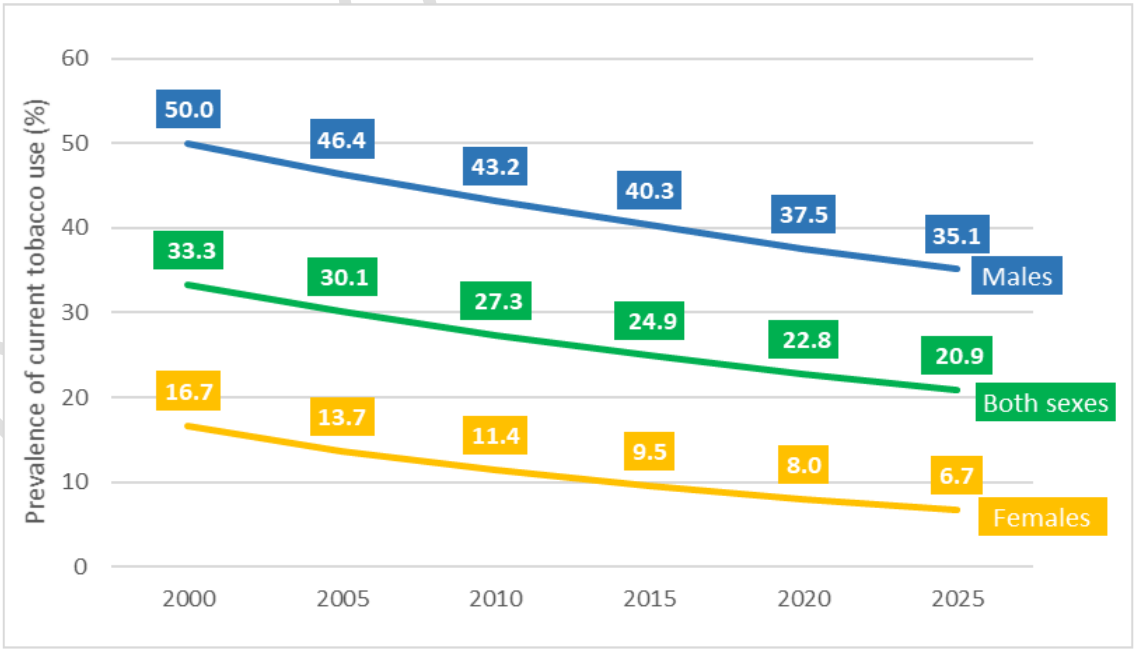
For South Africa, a specific excise tax on both the non-nicotine and nicotine solution would be more appropriate. It is proposed that a 40 per cent incidence guideline be used which translates to a total excise duty ranging from as low as R33,30 to R346,00 with an average of R165,29. With this approach, the excise rate may be set at an average of R2,91 per millilitre apportioned on nicotine and non-nicotine elements of the solution based on a ratio of 70:30, respectively. This will imply a rate of R2,03 per milligram of nicotine and 87 cents per millilitre for the liquid. The reason for the higher ratio for nicotine is to ensure that products with high nicotine concentration levy a relative higher rate compared to lower nicotine products, whilst non-nicotine products also levy an excise duty. The Customs and Excise Act 91 of 1964 provides for the levying of customs and excise duties, and will be used for e-cigarette excise regime to be administered by the South African Revenue Service (SARS).

1. Background

1.1. The negative health consequences related to tobacco consumption and use are well known and documented. Tobacco use is the leading preventable cause of death in high income countries, and increasingly in low and middle-income countries. According to the WHO, the tobacco epidemic is one of the biggest public health threats the world has ever faced, killing more than 8 million people a year around the world. More than 7 million of those deaths are the result of direct tobacco use while around 1.2 million are the result of non-smokers being exposed to second-hand smoke. Around 80 per cent of the 1.1 billion smokers worldwide live in low- and middle-income countries, where the burden of tobacco-related illness and death is heaviest. There are more than 7 000 chemicals in tobacco smoke, of which at least 250 are known to be harmful and at least 69 are known to cause cancer.[1]

1.2. Governments around the world have implemented various measures to reduce consumption and use of tobacco products and address the related health harms. These measures include implementing excise tax regimes, restricting access or sale to minors, restricting and banning of advertising, restricting promotion and sponsorship, and introducing smoke-free areas in public spaces, amongst others. All of these measures are implemented to reduce the demand and supply of tobacco products. According to the WHO (2019)[2] over the last two decades, overall global tobacco use has fallen and is expected to continue declining due to governments efforts to reduce tobacco consumption. In South Africa, research[3] shows that the prevelance of tobacco use has also declined over the years. The graph below shows the global trends in tobacco use prevalence over the past 20 years and projections to 2025.

Graph 1: Global trends in prevelance of tobacco use



Source: WHO (2019). Global report on trends in prevalence of tobacco use 2000-2025, third edition

1.3. In recent years however, alternative products or NGPs have been introduced in the market, either as substitutes or to complement current tobacco products consumption,

given the changing dynamics in the market and changing consumer preferences. These NGPs include heated tobacco products (HTPs), ENDS, ENNDS and hybrids of HTPs and ENDS. In most cases, these products are marketed as harm reduction or reduced-risk products compared to traditional tobacco products.

1.4. Globally, there is growth in the marketing and use of NGPs and in some instances high consumption of NGPs is experienced amongst young people. According to the WHO (2019)[4], "*these products play an important role in expanding the market of nicotine users, with a high associated risk for addiction, particularly among children and adolescents*". In South Africa, the marketing and distribution of NGPs especially ENDS/ENNDS, is still at its infancy and unregulated. However, there are signs that the consumption and use of NGPs is growing and that the industry will continue growing this new market. This has prompted government, specifically the NDoH, to start a process of amending the current tobacco control legislation (i.e. Tobacco Products Control Act 83 of 1993) to include the regulation of these new products.

1.5. Policymakers around the world are looking at regulating and taxing these products due to concerns about their health effects and the work already done on tobacco regulation. The Minister of Finance announced in both the 2019 and 2020 February Budgets that government intends to start taxing these new products and that National Treasury, SARS, and NDoH will consult on the appropriate mechanisms, structure and timing of the tax. In the 2021 February Budget, the Minister announced that National Treasury will publish a discussion paper on a proposal to tax electronic nicotine and non-nicotine delivery systems. Also, an excise duty will be introduced later this year, following public consultations. To that end, this draft discussion paper outlines the proposal on the tax treatment of ENDS/ENNDS.

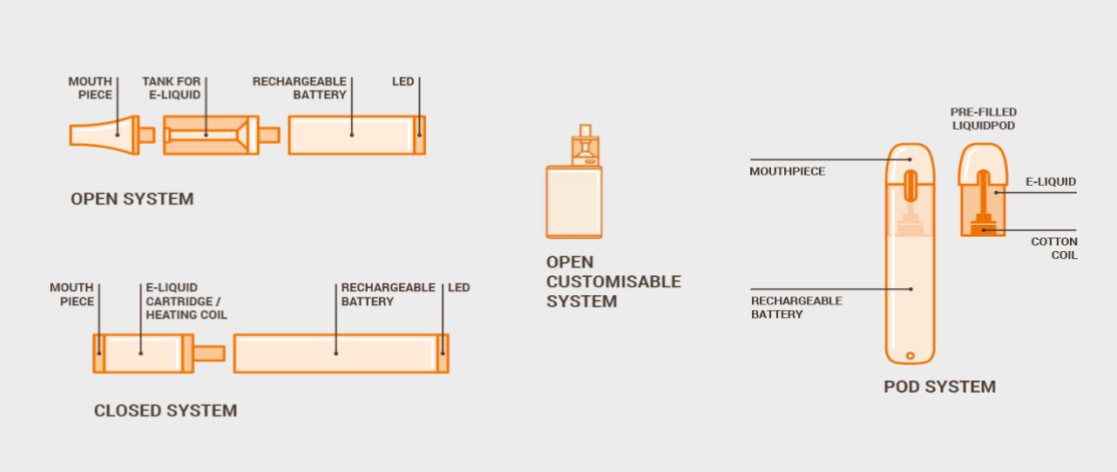
2. Electronic Nicotine/Non-Nicotine Delivery Systems

2.1 ENDS/ENNDS, also known as electronic-cigarettes (e-cigarettes), are battery-powered devices that do not burn or use tobacco leaves but instead vaporise e-liquid solutions to create an aerosol (i.e. airborne droplets) which the user then inhales (WHO, 2016). The liquid may contain nicotine/non-nicotine, cannabis (i.e. Tetrahydrocannabinol (THC) or Cannabidiol (CBD)), and other chemicals that may be toxic to people's health (ibid). It frequently contains flavouring chemicals and carrier solvents, such as propylene glycol and glycerol, for inhalation by the user. E-cigarettes simulate the act of smoking but is referred to as vaping due to vapours that are inhaled and exhaled by user, while the inhalation of smoke from any combustible tobacco product is normally referred to as smoking.[5]

2.2 The e-cigarette is typically made of a mouthpiece, a cartridge (which holds the e-liquid), a heating element/atomizer (heats the e-liquid to produce a vapour), and a microprocessor (an optional mechanism for operations), a battery and a Light Emitting Diode (LED) to imitate a burning cigarette (Brown and Cheng, 2014:5)[6]. They come in "…*a wide variety of shapes and sizes; mini (often called cig-a-like), mid-size, vape pens, vape pod systems, e-hookahs, e-cigars, advanced personal vaporizers or mods; even*

ones shaped to look like pens and usb drives".[7] The diagram below shows examples of different ENDS systems available in the market.

Diagram 1: Examples of e-cigarettes



Source: http://www.imperialbrandsscience.com/en/our-science/next-generation-products.html accessed on 10 Oct 2019

2.3 The evolution of electronic cigarettes is generally characterised through identification of generations of development[8,9].

2.3.1 "The first-generation e-cigarettes look like traditional cigarettes and so are called 'cig-a-like'" and come with some variation in sizes. These are disposable e-cigarettes (i.e. no cartridge, tank or pod)".

2.3.2 "The second-generation devices are larger overall and look less like traditional cigarettes". They are usually pen-shaped devices which include prefilled or refillable cartridges.

2.3.3 "Third-generation devices include mechanical mods and variable voltage devices, and some parts may be replaceable, hence mods (i.e. modifiable)".

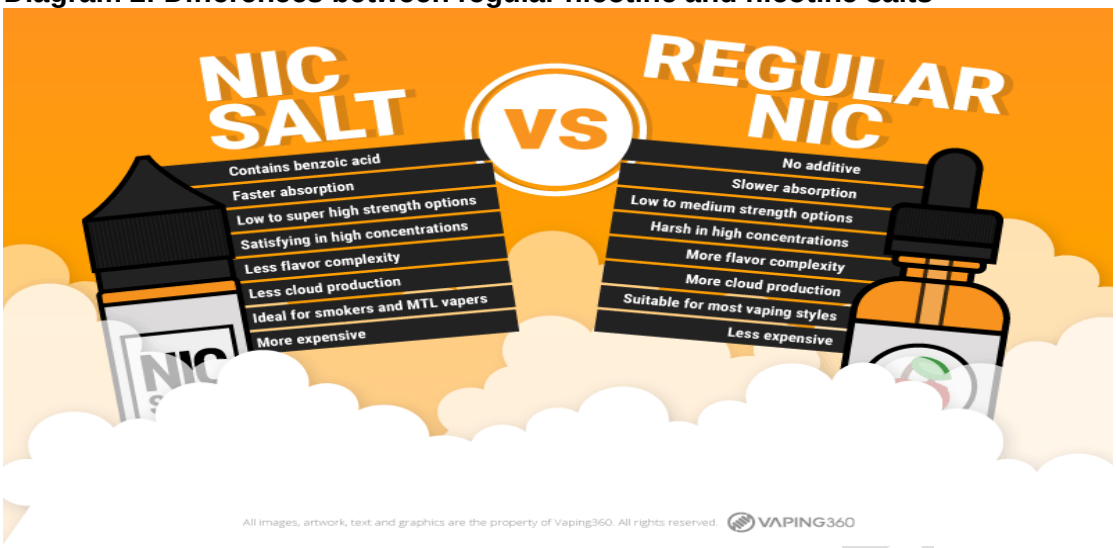
2.3.4 "The fourth-generation includes sub ohm tanks and temperature control devices".

2.3.5 "The latest generation of e-cigarettes are pod mods, that use protonated nicotine, rather than free-base nicotine (referred to as non-protonated nicotine) found in earlier generations which provide higher levels of nicotine through the production of aerosolized protonated nicotine (referred to as nicotine salts)".

2.4 According to Talih et al., (2020:2)[10], "…the use of nicotine salts is growing and many e-cigarette manufacturers offer nicotine salt-containing e-cigarettes and refillable solutions". New research is investigating the effects of protonated vs. free-base nicotine on nicotine yield, this is important as it is associated with the use of pod mods.[11]

2.5 The diagram below shows the difference between the salt and regular nicotine. From the diagram, it is apparent that nicotine salt is a type of processed nicotine which contains benzoic acid, with faster absorption properties and high strength options than the freebase nicotine.[12] It is reported that benzoic acid is an important ingredient in neutralizing the nicotine (base) molecules to create a more stable compound that decreases the harshness of nicotine on the throat (due to high alkalinity) for smoother consumption and enhanced user experience.[13]

Diagram 2: Differences between regular nicotine and nicotine salts



Source: https://vaping360.com/learn/nicotine-strengths-percentages/ *accessed on 21 Oct 2020*

2.6 E-liquids not only vary by their nicotine concentration but can also be distinguished by their flavors. These flavours may include desserts, candy, fruity flavours (banana, peach, lime, strawberry), tobacco and many others. Flavors are often cited as the main reason the youth try these products.[14] Countries such as Finland and Hungary have introduced flavour bans in response to these concerns. There are also emerging reports indicating that the youth in dominant vaping markets such as the United States of America (USA), are commonly consuming pre-filled pods/cartridges[15,16].

3. Market for New Growth Products

3.1 A 2018 study commisioned by Vapour Products Association of South Africa (VPASA) highlighted that major vaping product markets by revenue are the US, the UK and other developed European markets – Germany, Italy, and France[17]. In 2017, US electronic vaping product (EVP) revenues were over 4 billion (USD), which accounted for over 40 per cent of EVP revenues globally[18]. EVP revenues in the US market have been outperforming other markets, recording approximately 76 per cent annual growth between 2008 and 2017 whilst when it comes to penetration, the UK and Germany had the highest growth between 2013 and 2017. In South Africa, EVP revenues were estimated at R1.16 billion in 2017. The category growth is forecasted to remain robust as the market continues to develop.

3.2 According to other market research, the number of vapers globally has been increasing rapidly from approximately 7 million in 2011 to 41 million in 2018, and it is estimated that the number of adults who vape will reach approximately 55 million by 2021[19]. It is also estimated that adult vapers in South Africa grew from approximately 73 000 in 2013 to over 139 000 in 2018 (this indicates a prevelance of approximately 0.4 percent). It is anticipated that adult vapers in South Africa will reach approximately 224 000 by 2023.[20]

3.3 South Africa is in the earliest stage of development when compared to vaping markets such as the US, UK and Italy. South Africa recorded an average annual growth of 21.2

per cent in revenue over the 2013 to 2018 period to R2.54 billion and is projected to increase by an average annual growth of 13.9 per cent to 2023.[21] Revenues generated from closed system e-vapour products were estimated to be lower than revenues from open vaping systems in 2018. Furthermore, it is expected that sales from closed system e-vapour products will decline while revenues from open vaping systems will continue on the upward trend. The sales of e-vapour products are largely driven by sales of e-liquids.

3.4 Open systems afford consumers the flexiblity to customise their vaping product and experience whereas closed systems by design, limit the flexibility (e.g. cartridges may be pre-filled with flavoured e-liquid). Closed systems are highly portable and easy to use and are primarily aimed at consumers who are new to vaping whereas open systems allow users to mix e-liquid flavors/nicotine levels, fine-tune wattage levels, airflow and other factors. It is reported that a key strategy for the industry will remain brand differentiation through flavour innovation, launching of nicotine-free variants and products that can be used with multiple different open vaping systems.[22]

3.5 It is also estimated that in 2018 approximately 70.2 per cent of electronic vaping products were sold through specialist stores, 23.2 per cent were sold through online retail channels and the rest were mostly sold through the grocery retailers, especially supermarkets[23]. According to VPASA study, the vaping wholesale and retail sector generated over 4,000 jobs in 2017 and expected to generate an additional 10,000 jobs between 2017 and 2027.

3.6 Research on the price responsiveness of vapour products is quite scant, however, we can anticipate an improvement with the increasing availability of market data on NGPs. WHO (2016; 5)[24] argue that ENDS/ENNDS sales and prices have a strong negative relationship, indicating that the demand for ENDS/ENNDS is price sensitive. Furthermore, WHO also argues that: “ENDS/ENNDS and cigarettes are substitutes – higher cigarette prices are associated with increased ENDS/ENNDS sales”[25]. A review of more recent literature[26,27,28,29,30,31] largely supports WHO’s assertion.

4. Health Considerations

4.1. The introduction of NGPs in the global market has raised concerns regarding their potential to undermine global tobacco control efforts, effects on long-term health and public health in general, their role in smoking cessation, their safety profile and impact on youth initiation of smoking and tobacco use (RACP, 2018)[32]. Similarly, the WHO (2019:46-47)[33] plausibly notes that ENDS/ENNDS are promoted as reduced risk alternatives to conventional cigarettes and as smoking cessation aids but these products are not without risks, instead, their long term impact on health and mortality is presently unknown. Further, WHO has not endorsed e-cigarettes as cessation aids, they point to inconclusive independent scientific evidence as the reason[34]. Emerging randomised controlled trials, longitudinal studies and reviews[35,36,37,38,39,40] on the efficacy of e-cigarettes as smoking cessation aids largely support these assertions.

4.2. According to the American Heart Association, *"*e-cigarettes biggest threat to public health may be that its increasing popularity may re-normalize smoking, which has declined for years"[41]. Thus reversing the gains that have been realised from tobacco control efforts. WHO (2014;7) refers to this as the renormalization effect and explains this concept as the possibility that the simulation of smoking a conventional cigarette along with other properties that make ENDS or ENNDS attractive to smokers may perpetuate the smoking epidemic.

4.3. A review conducted by WHO (2014;3)[42] highlighted that though independent scientific literature on ENDS/ENNDS is scant, there is evidence that suggests that nicotine is not only addictive but has also been associated with cardiovascular disease, learning and anxiety disorders, tumours and neurodegeneration.

4.4. Similarly, a review by the World Bank Group's Global Tobacco Control Programme Team[43] highlighted that;

4.4.1 E-cigarettes are "a source of fine/ultrafine particles, harmful metals, carcinogenic tobacco-specific nitrosamines, volatile organic compounds, carcinogenic carbonyls (some in high but most in low/trace concentrations), which can render cytotoxicity and changed gene expression" [44],

4.4.2 E-cigarettes are also "…a source of formaldehyde, which is regarded as a group 1 carcinogen by the International Agency for Research on Cancer, and is a known degradation product of propylene glycol – which occurs when propylene glycol and glycerol are heated in the presence of oxygen to temperatures reached by commercially available e-cigarettes" [45]. It is also argued that "…an e-cigarette user vaping at a rate of 3 ml per day would inhale 14.4±3.3 mg of formaldehyde per day while tobacco cigarettes produce 3 mg per pack of 20 cigarettes"[46],

4.4.3 E-liquids used in e-cigarettes "may contain flavorants that contain a chemical called diacetyl, which when inhaled, can cause bronchiolitis obliterans that is also referred to as popcorn lung"[47],

4.4.4 "E-cigarette use was associated with increased odds of having had a myocardial infarction"[48]".

4.4.5 E-liquids may contain a lethal dose of nicotine that can adversely affect non-users if they are to come into direct contact with it. Further, e-liquids that are available in a variety of candy or fruit flavors may increase the risk for children to be exposed[49].

4.5. According to WHO (2014;5), ENDS/ENNDS aerosol not only exposes the smokers but also non-smokers to nicotine and other potential toxicants. WHO refers to this as secondhand aerosol (SHA). A 2016 WHO-commissioned review[50] and other developing empirical studies[51,52,53] have found that these toxicants include "*particulate matter, 1,2-propanediol, some volatile organic compounds, some heavy metals (such as nickel and chromium), and nicotine*". While WHO (2016;3-4)[54] highlighted that exposure to toxicants from secondhand aerosol (with the exception of heavy metals) is generally in lower concentrations than those found in secondhand smoking from combustable tobacco, the amount of risk reduction, is presently unknown.

4.6. According to the Centers for Disease Control and Prevention (CDC) in the USA, e-cigarette use has been associated with vaping associated pulmonary injury (VAPI or EVALI)[55]. EVALI was initially described in 2019 by the CDC as "an acute or subacute respiratory illness that can be severe and life-threatening, however, the exact pathogenesis of EVALI is unknown as various presentations of EVALI suggest acute lung injury, possibly reflecting a spectrum of disease processes, rather than a single process"[56]. The CDC recorded approximately 2,807 hospitalized EVALI cases in February 2020 that had been reported across the USA, 68 deaths were confirmed[57]. According to the CDC, vitamin E acetate, an additive found in some tetrahydrocannabinol (THC) containing e-cigarettes, is the primary cause of EVALI. There are some developing empirical studies that also affirm the CDC's findings[58,59]. King et al. (2020; 689)[60] argues that the legalization of marijuana use in a number of States in the USA seems to have coincided with the availability of a wide variety of products containing THC.

4.7. Assertions indicating that NGPs pose significantly fewer risks than traditional cigarettes such as the Public Health England (PHE) report which indicated that e-cigarettes are 95 per cent safer than conventional cigarettes[61], are misleading. PHE's claim is particularly concerning because it appears that the research that informed this claim was based on an analysis of opinions and not hard scientific data. Furthermore, conflict of interest issues among some of the contributors to the research have also been flagged[62]. With time, we should be in a better position to ascertain the claims made on the efficacy of NGP products in reducing harm associated with smoking. What is known currently is that stopping smoking completely, is the most effective way to reduce harm (RACP, 2018:4). In the interim, a cautionary approach is necessary.

5. Regulatory Framework

5.1. The Tobacco Products Control Act No. 83 of 1993 (referred to herein as the Act) is the primary tobacco control law in South Africa. In 1999, the Act was amended to include bans on tobacco advertising and sponsorship (excluding display at point of sale), a partial ban of smoking in indoor public places (wherein 25% of the floor area of a venue can be enclosed and designated for smoking) and the prohibition of tobacco sales to minors. The Act has seen some amendments over the years, the most recent amendments are contained in Tobacco Products Control Amendment Act 63 of 2008, these amendments however did not cover e-cigarettes.

5.2. Jurisdictions such an the European Union have placed a restriction on the concentration levels of nicotine in electronic cigarettes. In the EU Directive 2014/40/EU, nicotine-containing liquid that is placed on the market cannot exceed a nicotine concentration of 20 mg/ml. The Directive also limits the volume of e-liquid refill containers 10 ml or less. The EU's view is that restricting the nicotine concentration allows for delivery of nicotine that is comparable to the permitted dose of nicotine derived from a standard cigarette. Further, only electronic cigarettes that deliver nicotine doses at consistent levels are allowed for health protection, safety and quality purposes, including to avoid the risk of accidental consumption of high doses. Israel is also regulating nicotine concentrations

in e-liquids since 2018, the nicotine concentration levels currently have a limit of no more than 20 mg/ml.

5.3. In South Africa, nicotine is registered as a drug or medicine in terms of Medicines and Related Substances Act, 1965 (Act 101 of 1965), which provides for the registration of medicines and related substances intended for human and for animal use. According to the Medicines and Related Substances Act, nicotine, when intended for use as an aid to smoking cessation or as a substitute for a tobacco product (as defined in the Act, as amended), is a Schedule 3 substance[63], except when registered and presented as;

5.3.1. "*Nicotine gum or lozenges used for human medicinal use as an aid to smoking cessation (Schedule 0 or Schedule 2)",*

5.3.2. *Nicotine transdermal patches for continuous application to the skin used for human medicinal use as an aid to smoking cessation (Schedule 1 or Schedule 2)*,

5.3.3. "*Metered sprays containing 1mg per dose or less (Schedule 2)",*

5.3.4. "*Oral solid dosage forms containing 2mg or less (Schedule 2)"*

5.3.5. "*Inhalers containing not more than 10 mg per cartridge (Schedule 2)*".

5.4. However, as argued in Omarjee (2015;7)[64], e-cigarettes containing no nicotine and making no therapeutic or smoking cessation claims are not covered by the Medicines and Related Substances Act and are therefore unregulated.

5.5. A Draft Control of Tobacco Products and Electronic Delivery Systems Bill was published for public comment in May 2018 but has not been tabled yet. The draft Bill is meant to repeal the Tobacco Products Control Act 1993, and thus include e-cigarettes in the regulatory scope of this Act. The draft Bill is intended to (among other issues);

5.5.1. Introduce plain packaging;
5.5.2. Remove designated smoking areas in indoor public areas/ restaurants and make all indoor public places 100% smoke free;
5.5.3. Ban tobacco use in certain outdoor public areas;
5.5.4. Ban the display of tobacco products at point of sale;
5.5.5. Ban cigarette vending machines; and
5.5.6. Regulate electronic nicotine and non-nicotine delivery systems like tobacco products.

5.6. The Customs and Excise Act No. 91 of 1964 as amended governs the implementation and administration of excise taxes in South Africa. Excise duties and levies are imposed mostly on high-volume daily consumable products (e.g. petroleum, alcohol and tobacco products) as well as certain non-essential or luxury items (e.g. electronic equipment and cosmetics). The Custom and Excise Act along with Schedule 1, Part 2A of the Act will provide for the implementation of excise levies on ENDS/ENDDS.

5.7. Administratively, the SARS utilises the World Customs Organisation (WCO)'s Harmonised Commodity Description and Coding System (HS) in the classification of products. SARS has classified electronic cigarettes under tariff subheading 8543.70 and the cartridges with the e-liquid under tariff subheading 3824.99.90, where;

5.7.1 Tariff heading **85.43** refers to "electrical machines and apparatus, having individual functions, not specified or included elsewhere in the Chapter", and tariff subheading **8543.70** refers to "other machines and apparatus".

5.7.2 Tariff heading **38.24** refers to "prepared binders for foundry moulds or cores; chemical products and preparations of the chemical or allied industries (including those consisting of mixtures of natural products), not elsewhere specified or included", and tariff subheading **3824.99** refers to "other".

5.8. E-liquid products, whether presented in cartridges, rods, bottles or pods cannot be classified under 24.03 purely because nicotine is a chemical classifiable in heading 29.39 and when mixed with other substance, the WCO determined these chemical mixtures to be classifiable in heading 38.24. According to SARS, if e-cigarettes are presented in the form of kits, they are classified with the device in terms of the components providing the essential character.

5.9. The WCO's seventh edition of the Harmonized System has proposed a comprehensive set of amendments that have been accepted by all Contracting Parties to the Harmonized System Convention[65]. These amendments include a new tariff heading **24.04** which includes "products containing tobacco, reconstituted tobacco, nicotine, or tobacco or nicotine substitutes, intended for inhalation without combustion; other nicotine containing products intended for the intake of nicotine into the human body". Further, there is also an amendment that creates a new subheading **8543.40** for "electronic cigarettes and similar personal electric vaporizing devices". These amendments will be effective as of 1 January 2022.

6. International Practice

6.1. More and more countries around the world are regulating the use of e-cigarettes. The most commonly used regulatory approaches include complete sale bans, age-of-purchase requirements, and advertising or promotion bans and taxes. In 2018, there were 98 countries that had national/federal laws regulating e-cigarettes and these laws primarily regulated the sale (including minimum age), advertising, promotion, sponsorship, packaging (child safety packaging, health warning labeling), product regulation (nicotine volume/concentration, safety/hygiene, ingredients/flavors), reporting/notification, taxation, use (vape-free) and classification of e-cigarettes[66]. It appears that more than 40 countries have banned the sale and/or use of vaping products.[67] The United States of America, the Republic of South Korea, Phillipines, Sweden, Latvia, Russia, Kenya, are just a few examples of countries that have incorporated ENDS/ENNDS taxation in the regulatory approaches. The discussion that follows details how e-cigarettes are taxed in these countries (*further details included as Annexure A*).

Republic of South Korea

6.2. The Republic of South Korea was the first country to introduce an excise tax on electronic cigarettes. In January 2011, the Enforcement Decree of the Local Tax Act was amended by extending the Tobacco Consumption Tax to electronic tobacco. Electronic tobacco is

defined in their legislation as "*tobacco made to give the same effect to smoking, by inhaling solution that contains nicotine through one's respiratory system, by using an electronic device*."[68] Electronic tobacco is also subject to a number of earmarked taxes and charges (i.e. national health promotion, tobacco consumption, local education, and individual consumption taxes).

Table 1: South Korea Excise Taxes on Electronic Tobacco*[69]*

Excise tax	Rate	Rand equivalent
Tobacco Consumption Tax	KRW 628 per milliliter	R9.14 per milliliter
National Health Promotion Fund	KRW 525 per milliliter	R7.64 per milliliter
Individual Consumption Tax	KRW 370 per milliliter	R5.39 per milliliter
Local Education Tax	KRW 276 per milliliter	R4.02 per milliliter
Green Fund Tax	KRW 24.4 per 20 cartridges	R0.36 per 20 cartridges

6.3. Recent reports[70] indicate that in 2020 Cabinet approved a plan to revise the national health promotion tax from the current level of 525 won to 1,050 won per milliliter, and endorsed the Ministry of Health and Welfare's plans to also double the tobacco consumption tax from 628 won to 1,256 won per milliliter and a proposal to increase indivial consumption tax from 370 won to 740 won per milliliter. These changes are said to have arisen due to complaints what was seen as a favourbale tax treatment of liquid-type e-cigarettes to other type of e-cigarettes of the same strength and conventional cigarettes. These changes were expected to take effect from January 2021 upon parliamentary approval.

Phillipines

6.4. The Philippines government enacted a law (Republic Act No. 11346) in July 2019 creating a new excise tax category for vapor products and imposing excise tax on vapor products. The Act defines vapor products as *"any liquid solution or gel which contains nicotine that transforms into an aerosol without combustion through the employment of a mechanical heating element, battery or circuit that can be used to heat such a solution or gel, and includes but is not limited to, a cartridge, a tank, and the device without a cartridge or tank".*[71] "*It also includes electronic nicotine and non-nicotine delivery systems (ENDS/ENNDS) explained as combinations of non-tobacco containing e-liquids or refills which contain up to sixty-five miligrams per mililiter (65mg/ml) of nicotine in the e-liquid or refill and an electronic delivery device to produce an aerosol, mist or vapor that users inhale*" (ibid).

6.5. The excise tax is structured as a progressive excise on vapor products (i.e. individual cartridge, refill, pod, or vapor products containing liquid solutions or gel) and was intended for implemention from the 01 January 2020. It set the rates at P10 pesos for 0ml to 10ml, P20 pesos for 10.01ml to 20ml, P30 pesos 20.01ml to 30ml, P40 pesos for 30.01ml to 40ml, P50 pesos for 40.01ml to 50ml and P10 additional pesos for every 10ml above 50ml. The rate of excise would increase by 5 per cent every year from January 2021.[72] However, the Republic Act No. 11346 was amended by the Republic Act No. 11467 which was accented January 2020. The new Act makes a disticntion

between nicotine salt and conventional 'freebase' or 'classic' nicotine with differentiated exicse duty rates applicable.

Table 2: Philippines Excise Taxes on Electronic Tobacco[73]

Effective Date	Nicotine Salt (Pesos per ml)	Freebase Nicotine (Pesos per 10 ml)
1 January 2020	P37.00	P45.00
1 January 2021	P42.00	P50.00
1 January 2022	P47.00	P55.00
1 January 2023	P52.00	P60.00
1 January 2024	rates of tax will increase by five percent (5%) every year effective January 1, 2024	

Sweden

6.6. The Swedish Taxation Committee took a decision that Sweden should start taxing e-nicotine products similarly to other taxed nicotine containing products. On July 1, 2018, a new tax on all e-liquids and similar nicotine products was implemented in Sweden.[74] The tax was a specifc tax of 2,000 Swedish Krona per litre (R3,577.27 per litre of e-liquid)[75] equivalent to SEK 2 per milliliter (R3.58 per milliliter) and SEK 200 per kilogram (R357.87 per kilogram) of the nicotine substance. Nicotine products that are classified as medicine are exempt from the tax. Nicotine containing liquid for disposable electronic cigarettes, cartridges or refill containers for electronic cigarettes may only be sold if the concentration of nicotine does not exceed 20 mg/ml.[76]

6.7. On 1 January 2021, an additional category of highly concentrated e-liquids was introduced to excise-duty-liable goods. It is defined as e-liquids with a nicotine content of at least 15mg per millilitre, and not exceeding 20mg per millilitre. The excise duty rate for highly concentrated e-liquids is SEK 4,000 per litre.[77]

Kenya

6.6. Kenya[78] introduced excise duty on electronic cigarettes levied on two bases, the device and the cartridge used in the e-cigarette. Electronic cigarettes are defined in Kenya's legislation (Excise Duty Act of 2015) as "*electronic nicotine delivery systems whether or not containing tobacco or tobacco substitutes and includes electronic cigarette cartridges*". The excise was initially charged at a rate of Ksh 3,000 per unit (R507.58 per unit) for the device and at a rate of Ksh 2,000 per unit (R338.39 per unit) for the cartridge. In 2019, the rates were increased to Ksh 3,156.00 per unit (R534.16 per unit) and Ksh 2,104.00 per unit (R356.11 per unit)[79], respectively. These rates substantially exceed the rate of tax imposed on conventional cigarettes which was KES 2,500 per thousand (i.e. 50 Ksh or R8.46 per pack of 20), and increased to Ksh 2,630.00 per thousand (i.e. 52,6 Ksh or R8.90 per pack of 20) in 2019.[80]

Latvia

6.7. Latvia introduced a tax on e-cigarettes through an amendment on its Law on Excise taxes. The law was amended to include the e-liquid used in electronic cigarettes to its list of goods that are subject to excise tax. The legislation defines liquid to be used in electronic cigarettes as *"liquid which is used in disposable and rechargeable electronic*

cigarettes or is used in order to fill up an electronic cigarette, and which contains or does not contain nicotine." The amendments went into effect in July 2016 and imposed a duty on the e-liquid used in disposable and refillable electronic cigarettes.[81] The excise tax is calculated on two bases – the volume of liquid measured in milliliters and the weight of nicotine measured in milligrams and it is levied at a rate of EUR 0.01 per ml (i.e. R0.19) for the volume of the liquid and at EUR 0.005 per mg (R 0.10) for the nicotine weight.[82]

6.8. The implementation of the tax is coupled with other regulations such as the 20mg/mL nicotine concentration restriction on e-liquids, single use e-cigarette as well as e-cigarette tanks that must not exceed 2mL, and a restiction on the volume of refill bottles, cannot exceed 10mL"[83].

Russia[84]

6.9. In Russia, the Tax Code of the Russian Federation added vapour products, the amendments to the Tax Code were approved in November 2016 but effected on the 1st of January 2017. Electronic nicotine delivery systems, e-liquids in ENDS and tobacco intended for consumption by heating were added as additional tax categories. ENDS are defined as *"disposable electronic devices that produce user-inhalable aerosol, vapor or smoke by heating the liquid." E*--liquids are defined as "*any liquids with nicotine concentrations of at least 0.1 mg per ml intended for use with electronic nicotine delivery systems*". Medical devices registered according to the legislation of the Russian Federation are excluded.

6.10. The tax per ENDS unit was introduced at 40 rubles (R9.13)[85] and the current rate is RUB 50 per unit (R11.42 per device). The tax on e-liquids was originally levied at RUB 10 per ml (R2.28 per ml). This rate has since risen to 13 rubles (R2.97) in January 2020 and it is anticipated to further increase to 14 rubles per ml (R3.20 per ml) in 2021.

United States of America (USA)

6.11. The USA does not have a federal level tax on e-cigarettes, however, approximately 23 States[86] (in certain cases counties or even lower levels of government) have enacted e-cigarette taxes, in some States, these taxes have been effected from as early as 2011. These States have taken different approaches to taxing e-cigarettes. The excise rates on e-cigarettes are charged either as a percentage of the wholesale price, a flat rate per milliliter of e-liquid (nicotine or both nicotine and non-nicotine), as a rate per cartridge or as a combination of these approaches. Table provides examples of how excise taxes on e-cigarettes are designed in the different States in the USA (*a longer list included as Annexure B*).

Table 3: Examples of State/County Level Excise Taxes on E-cigarettes

State	Tax base	Excise rate	Rand Equiv.[87]
Illinois	Wholesale price (device, e-liquid, and cartridges or pods)	15%	
Illinois – Local Taxes	City of Chicago - liquid nicotine product	USD 1.50 per unit	R25.04
	City of Chicago - Volume of liquid	USD 1.20 per fluid ml	R20.04
	Cook County - Volume of liquid	USD 0.20 per fluid ml	R3.34

State	Tax base	Excise rate	Rand Equiv.[87]
Minnesota	Wholesale price (closed system and e-liquid/cartridge with nicotine content)	95%	
New Hampshire	Closed system e-cigarettes - the volume of the liquid or other substance containing nicotine as listed by the manufacturer	USD 0.30 per ml	
	Open system e-cigarettes - wholesale sales price of the container of liquid or other substance containing nicotine	8%	
Washington	Liquid contained in closed system products with less than 5 milliliters capacity	USD 0.27 per ml	R4.51
	Liquid contained in open systems products with more than 5 milliliters capacity	USD 0.09 per ml	R1.50

Source: https://vaporproductstax.com/taxation-database/

7. Policy Design Options

7.1. It is evident from above discussion that a growing number of countries are implementing various tax measures to regulate the consumption of electronic cigarettes and some are investigating the possibilities. To implement an excise tax, there are a number of issues to consider when deciding on the appropriate design of the instrument to use for this purpose, namely:

7.1.1. type of instrument,
7.1.2. the coverage and base,
7.1.3. the structure, and
7.1.4. the excise duty rates.

Type of Instrument:

7.2. Excise taxes can take the form of an ad valorem or specific excise. Specific excise could be levied on volume/weight and ad valorem excise is based on the value of the excisable product. Specific rates are often much easier to administer but require regular updates / increases in the rates, to at least keep up with inflation. Ad valorem excise duties, on the other hand, can be partly avoided through under-invoicing and can become complex if there is no agreement of the value of the goods at the point of taxation. Ad valorem excise duties are also a challenge where less expensive (and lower quality) products are deliberately introduced at the point of taxation (and value addition only happens thereafter), with the intention to undermine the intent of the tax.

7.3. A number of countries apply ad valorem excise taxes on liquid solutions and/or devices (e.g. Indonesia, UAE). Also, a number of States in the USA have implemented ad valorem excise duties on vaping products, ranging from 8 per cent in Illinois to 95 per cent in Minnesota. Many of these States tax vaping products by including them in their definitions of other tobacco products—and thus vaping products are taxed at the same rate as other tobacco products.[88]

7.4. A specific excise could be more suited as it is levied on the volume/weight and could be directed at a specific externality, if that is the policy intention. Excise taxes are generally much easier to administer based on how they are designed. Some of the excise tax designs have a number of tiers (or bands) which may reduce the administrative simplicity of the tax regime.

7.5. It is recommended that South Africa adopts a specific excise regime for the taxation of ENDS/ENNDS. Specific excise regime is much easier to administer than an ad valorem excise.

Coverage and base:

7.6. Given the nature of electronic cigarettes, there are a number of components to consider regarding the coverage and base of the excise tax. Electronic cigarettes broadly consist of a battery, vaporizing chamber (with or without a heating coil) and a cartridge that contains a liquid solution (i.e. a mixture of propylene glycol, vegetable glycerin, flavourings and (usually) nicotine)[89] and other chemicals.

7.7. A number of countries tax the liquid solution, whereas others tax both the liquid solution and the device. With regards to the taxation of the electronic cigarette devices, it should be noted that South Africa also has a separate ad valorem excise regime which applies to what are considered luxury goods or non-essential goods. The goods on which ad valorem Excise duty is imposed are listed in Section B of Part 2 of Schedule 1 of the Custom and Excise Act with the rates set at either 7 or 9 per cent. Therefore, government could also consider including electronic cigarette devices in the ad valorem schedules.

7.8. It is recommended that South Africa's excise taxation of e-cigarettes should focus on the liquid solution based on volume (i.e. an amount per ml). It is important however to note that these e-liquids are produced in varying nicotine strengths, with nicotine-free variants and a variety of flavours that are also available in the market. Countries that have implemented the tax have focussed on different aspects of the liquid solution, either the liquid solution itself, the amount of nicotine, or a combination of the two elements.

Nicotine-based excise:

7.8.1 In this system, the tax is levied on the nicotine solution based on the amount of nicotine measured in milligrams (mg). It targets the nicotine content, which is the addictive substance in the products, but not necessarily the only potentially harmful ingredient in e-liquids. Commercially, e-liquid solutions come in various nicotine strengths ranging from zero nicotine up to over 50 mg and "*these values represent the amount of nicotine in each 1mL of e-liquid, and are sometimes expressed as a percentage (such as 1.8% instead of 18mg/mL)*"[90], meaning 1.8% nicotine by volume. As an example, a 30ml bottle with 18mg means that there is 540mg of nicotine in the bottle.

7.8.2 Taxing based on nicotine content would logically mean that the higher the nicotine level in the e-liquid solution the higher the tax would be and this will make high-nicotine liquids relatively more expensive than lower nicotine-liquids. This could encourage product reformulation towards lower nicotine content products,

however, it is urged[91] that this could lead to consumers switching to open delivery systems. These systems allow the users to customize the device and "*increasing the voltage in these systems can deliver higher nicotine yields and imitate the nicotine delivery of traditional cigarettes, even when using low nicotine liquids*".[92]

Solution-based excise:

7.8.3 It is a system where the tax is levied on the liquid solution regardless of whether it contains nicotine, propylene glycol (PG), vegetable glycerine (VG), and flavourings or other ingredients or chemicals. Such a system is a broad and general approach and will simply be a specific rate per millilitres (ml) of the liquid solution and does not favour any solution (e.g. low nicotine) over the others (e.g. high nicotine). It also does not seek to discourage consumption of a particular product or ingredient, or incentivise the reformulation of products towards any particular outcome. This excise structure has the advantage of simplicity regarding its administration.

7.8.4 However, if there are concerns that e-cigarettes are a potential gateway for non-smokers to get nicotine addiction and later graduate to tobacco smoking, then the tax that does not take into consideration the nicotine content of the solution, may not be ideal. Certainly, when a consumer is addicted to nicotine, be it from ENDS, especially from high concentrations of nicotine, tobacco smoking will remain an option for feeding a nicotine crave.

Hybrid excise system:

7.8.5 A hybrid tax system combines both the solution-based tax and nicotine-based structures. Here the system sets a specific excise rate per volume of liquid solution measured in millilitres (ml) and an additional rate to account for the nicotine content in the solution measured in milligrams (mg). A good example of this approach is Latvia which implemented an excise tax on e-liquid at 0.01 euro per ml and 0.005 euros per 1mg of nicotine.

7.8.6 It is recommended that South Africa follow the same approach as Latvia in levying the excise tax on both the solution and the nicotine content. This approach will address the concerns of renormalisation of 'smoking', the gateway effect associated with nicotine consumption, and all other health risks associated with ENDS/ENNDS given the fact that the potential harm reduction of ENDS/ENNDS does not mean they are without harm.

Excise structure:

7.9. There are a number of options that could be considered in structuring the excise tax regime for South Africa. If one is to narrow the excise tax coverage decision to either nicotine-based and solution-based systems following from the above discussion, considerations on the excise structure should address the following:

7.9.1 If the decision is to implement a solution-based excise, should the applicable rate be a flat rate or assume a progressive or tiered structure with bands? The

Philippines implemented a tiered structure on the liquid solution regardless of nicotine content in the solution.

7.9.2 Similarly, if the decision is to implement a nicotine-based system of excise, should the nicotine levels be taxed as a flat rate or take a form of a progressive rate structure? And should a threshold above which the tax is payable be applicable?

7.10. One of the important considerations in tax policy design is the administrative feasibility of the tax system. The more complex a tax system (i.e. tiers or bands, thresholds, etc.), the greater the costs for the revenue authority to administer it and the greater the compliance costs for taxpayers to determine their liability and report it.[93] It may be more appropriate for South Africa to implement a simplified system to reduce the administrative burden of the tax. Furthermore, the setting of a threshold for instance, would also create the difficulty of having to assume that some level of nicotine is acceptable. This system would therefore require mandatory labelling, even though it is not always a reliable indicator of nicotine content, and ongoing intensive monitoring to counter the issue of mislabelling.

7.11. It is recommended that South Africa implement an excise regime with flat rates for liquid solutions and nicotine content. This approach will minimise the administrative costs of the tax system and reduce the compliance burden for taxpayers. Furthermore, to aid administration, liable manufacturers will be required to have nicotine content certification or test report obtained and retained from a testing laboratory accredited with and using methodology recognised by the South African National Accreditation System (SANAS) or the International Laboratory Accreditation Cooperation (ILAC). In the absence of such a test report, a penalty rate could be considered or the highest level of nicotine concentration could be imputed on the e-liquid solution.

Excise duty rates:

7.12. Deciding on the rate at which to set the excise rates for e-cigarette is a challenge in itself given the current state of knowledge regarding the health harm or harm-reduction compared to other products in the market. There are a number of approaches available as policy options for consideration.

Option 1: Using the 40% benchmark

7.13. It's using the current policy guideline of targeted excise tax incidence that National Treasury employs for excise rate determination on other excisable products. Using this approach, traditional tobacco products are subject to excise duties equivalent to 40 per cent of the price of the most popular brand in each tobacco category. The products under consideration are not tobacco products, however should a similar approach be adopted it would necessitate the establishment of categories of products, especially where there are discernible price differences due to the presence or absence of nicotine in the products. A sample of 373 e-liquid solutions was taken from the online market and the prices were determined as shown in the table below.

Table 4: Summary of sampled E-liquids

	Nicotine (mg)	Volume (ml)	Prices	Rate	Rate Per ml
Minimum	0	2	R49,95	R33,30	R0,83
Maximum	50	120	R519,00	R346,00	R16,65
Average	9,14	66,92	R247,93	R165,29	R2,91

7.14. Using the 40 per cent incidence guideline above, it translates to a total excise duty ranging from as low as R33,30 to R346,00 with an average of R165,29. The last column represents the excise rate on a per millilitre basis. With this approach, the excise rate may be set at an average of R2,91 per millilitre apportioned on nicotine and non-nicotine elements of the solution based on a ratio of 70:30, respectively. This will imply a rate of R2,03 per milligram of nicotine and 87 cents per millilitre. The reason for higher ratio for nicotine is to ensure that products with high nicotine concentration levy a relative higher rate compare to lower nicotine products whilst non-nicotine products also levy an excise duty.

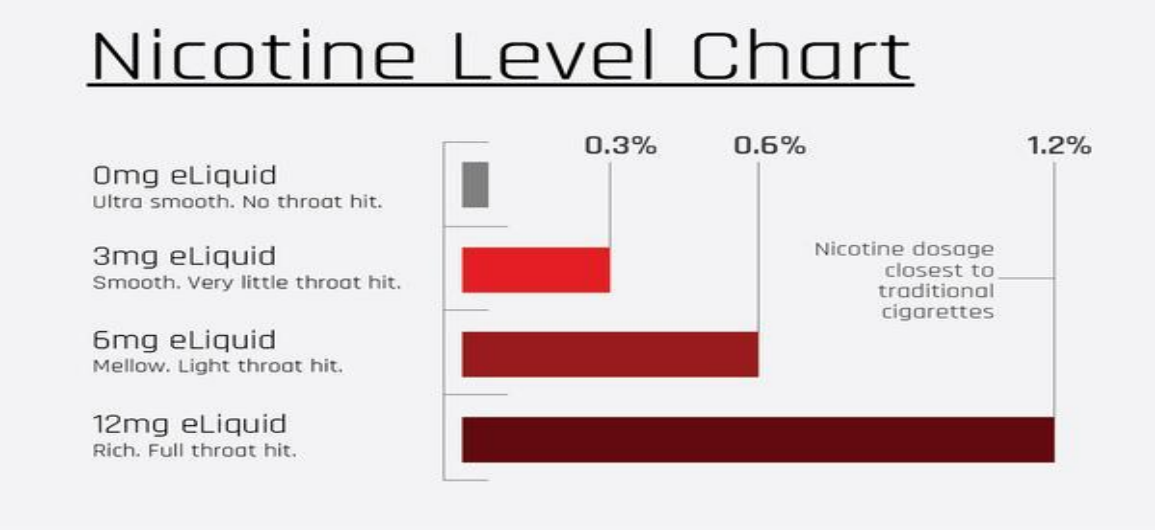
Option 2: Cigarettes equivalence

7.15. This option considers whether it would be appropriate to use the number of cigarette equivalence from e-liquid for the determination of the excise rate. From the onset, the science may not be exact considering that the method of delivery is different, however for the purposes of this exercise it is considered.

7.16. As argued in Eaton, Kwan and Stratton (2018)[94] though there is conclusive evidence indicating that "*exposure to nicotine from e-cigarettes is highly variable and depends on product characteristics (including device and e-liquid characteristics) and how the device is operated*", there is also "substantial evidence indicating that nicotine intake from e-cigarette devices among experienced adult e-cigarette users can be comparable to that from combustible tobacco cigarettes". Behar et al. (2015:15)[95] refers to this as "*compensatory puffing*" which is argued to be a phenomenon that has been previously reported on other products that have been reported as harm reduction products such as light cigarettes.

7.17. There are various estimates of the nicotine content in traditional cigarettes, ranging from 6mg to 28mg, with most cigarettes on average having about 10 to 12 mg of nicotine per stick, as shown below:

Diagram 3: Nicotine level equivalence



Source: https://www.liquidbarn.com/pages/understanding-nicotine-strengths. Accessed on 10 Nov 2020

7.18. Using the above diagram to estimate the nicotine cigarette equivalent excise duty rate provides the information as contained in the following table:

Table 5: Summary statistic of cigarette equivalent rates

	Nicotine (mg per ml)	Volume (ml)	Prices	Rate (nicotine @ R0,87 per 12 mg)	Rate (non-nicotine @ R0,30 per ml)	Total Excise	Incidence
Minimum	3	2	R49,95	R0,44	R0,60	R1,04	2%
Maximum	50	120	R519,00	R156,60	R36,00	R192,60	80%
Average	9,14	66,92	R247,93	R33,29	R22,15	R50,34	21%

7.19. The implication from the use of this approach is that e-liquid solution that do not contain nicotine will levy a relatively low excise based on a duty rate of R0,30 per millilitre than products that also contain nicotine. From incidence point of view, the total excise duties range from 2 per cent to 80 per cent with an average of 21 per cent. It should be noted that the high incidence in most cases is associated with a number of products in the market with high concentration of nicotine retailed a very low price compared to other products.

Option 3: Introductory rate

7.20. This is an introductory rate of 60 cents per millilitre on the volume of liquid solution plus 30 cents per milligram for the nicotine. Such a rate will be intended as an introductory rate and also to account for the relative harm reduction compared to other products even though it's not related to any specific proportion of harm reduction. Just like in the Latvia case, the proposed rate is higher for the e-liquid solution than for the nicotine levels.

7.21. This rate represents a total excise duty ranging from R4,50 to R90,30 with an average of R49,59. From incidence point of view, it ranges from 5 per cent to 48 per cent with an average of 21 per cent.

8. Conclusion

8.1. The regulation of tobacco products has come far and has made great strides in reducing tobacco use and related health harms, although there is still a lot to be done in this regard. The introduction of NGPs in the market has changed the landscape for both traditional tobacco products and related regulatory regimes. The WHO recommends that member countries regulate ENDS with the objective of preventing initiation of ENDS use by non-smokers and children, amongst others. South Africa is a signatory to the WHO FCTC, one of its objectives being to curb the demand and supply of these harmful products through taxation. Policymakers around the world are looking at regulating and taxing these products due to concerns about their health effects and the work already done on tobacco regulation. A number of countries have already introduced excise taxes on ENDS/ENNDS in various forms and other regulatory measures.

8.2. In South Africa, the marketing and distribution of ENDS/ENNDS is still unregulated and it is estimated that the consumption and market for these products is growing and the industry will continue growing. The NDoH has already started a process of amending the current tobacco control legislation (i.e. Tobacco Products Control Act 83 of 1993) to include the regulation of these new products. The proposal to implement an excise tax, as was announced by the Minister of Finance in both the 2019 and 2020 February Budgets, is part of a comprehensive package of regulatory measures that government intends to implement for the sector.

Annexure A – Summary of International Practice on Excise Taxes on E-cigarettes

Country	Year	Tax base	Rate (R equivalent)	Notes
Republic of South Korea	2011	Mixed (nicotine e-liquid & cartridges)	**E-liquid**: R4.017 to R 9.142 per mL **E-liquid cartridge:** R 0.355 per 20 cartridges	E-cigarettes subjected to a number of earmarked taxes and charges (i.e. national health promotion, tobacco consumption, local education, and individual consumption taxes)
Philippines	2020	E-liquid	Progressive rate that ranges from 10 pesos to 50 pesos per mL (R3.510 to R 17.514 per ml)	The excise tax is structured as a progressive excise on vapour products levied on e-liquids or refills which contain up to 65mg/ml of nicotine
Sweden	2018	E-liquid (both)	SEK 2 per mL (R3.58 per mL) and SEK 200 per kilogram (R357.87 per kilogram) of the nicotine substance	The excise is applied to producers, importers, and sellers of e-nicotine products, private import for personal use is exempt when limited to no more than 20 millilitres e-fluids or 200 grams of other products containing nicotine. Nicotine products that are classified as medicine are exempt from the tax.
Finland	2017	E-liquid	€0.30 per mL of e-liquid (R 5.80 per mL of e-liquid)	The tax is approximately one-tenth of the tax on tobacco cigarettes. This tax accompanied a reform to the Finnish Tobacco Act to also include regulations of e-cigarettes. Finland introduced e-cigarette regulations which covered flavour bans, age limits for buyers, prohibitions of marketing, displaying and distance selling, import restrictions and bans on use in non-smoking areas.
Kenya	2015	Mixed, the device and the cartridge used in the e-cigarette	**Device:** Ksh 3,156.00 per unit (R 534.16 per unit) in 2019 **Cartridge:** Ksh 2,104.00 per unit (R 356.11 per unit) in 2019	The excise rates substantially exceed the rate of tax imposed on conventional cigarettes
Italy	2019	E-liquid	**Nicotine e-liquid:** €0.08 per mL (R1.563 per mL) **Non-nicotine e-liquid:** €0.04 per mL (R 0.7825 per mL)	Excise initially introduced in 2014 as an ad valorem tax (58.5%) on the selling price. This tax regime was suspended and subsequently invalidated by the Constitutional Court which indicated that the taxable base which included devices and parts in addition to e-liquid was unconstitutional. The excise in its current form represents a tax cut of approx. 80 percent on nicotine-containing liquids, and approx. 90 percent on non-nicotine products.

Country	Year	Tax base	Rate (R equivalent)	Notes
Latvia	2016	Mixed, e-liquid and the weight of nicotine measured in ml	**E-liquid:** € 0.01 per mL (R0.19 per ml) **Nicotine:** € 0.005 per mg of nicotine (R0.09 per mg of nicotine)	The tax on e-cigarettes introduced through an amendment on its Law on Excise taxes. The law was amended to include the e-liquid used in electronic cigarettes to its list of goods that are subject to the excise tax.
Portugal	2014	Nicotine-containing liquid	2019, the rate was estimated at € 0.31 per ml (R 6.067 per mL)	
Russia	2017	Mixed, device and e-liquid with nicotine concentrations of at least 0.1 mg per ml	**Device:** RUB 50 per unit (R 11.418 per unit) **E-liquid**: 13 RUB per mL (R 2.969 per mL)	ENDS are defined as disposable electronic devices that produce user-inhalable aerosol, vapor or smoke by heating the liquid. Medical devices registered according to the legislation of the Russian Federation are excluded. Liquid for ENDS are defined as any liquid with nicotine concentrations of at least 0.1 mg per ml
Indonesia	2018	Retail selling price on liquid used in e-cigarettes	57% of the retail selling price	
United Arab Emirates (UAE)	2020	Mixed, e-liquid and device	100% of pre-tax price of the liquids and devices	The rate of excise for liquids and devices will be the same rate applied to tobacco products and energy drinks

Annexure B – Examples of State/County Level Excise Taxes on E-cigarettes in the USA

State	Tax base	Excise rate
Alaska	Juneau – wholesale price	45%
	Matanuska-Susitna Borough - wholesale price	55%
California	Wholesale price	62.5%
Connecticut	Liquid contained in closed system e-cigarette product	40 cents per ml
	Wholesale price of open system components	10%
Delaware	Liquid by volume	USD 0.05 per ml
Illinois	Wholesale price (device, e-liquid, and cartridges or pods)	15%
Illinois – Local Taxes	City of Chicago - liquid nicotine product	USD 1.50 per unit
	City of Chicago - Volume of liquid	USD 1.20 per fluid ml
	Cook County - Volume of liquid	USD 0.20 per fluid ml
Kansas	Liquid by volume	USD 0.05 per ml
Louisiana	Volume of consumable nicotine liquid solution	USD 0.05 per ml
Maine	Wholesale price (device and e-liquid)	43%
Maryland - Montgomery County	Wholesale price (device and e-liquid)	30%
Minnesota	Wholesale price (closed system and e-liquid/cartridge with nicotine content)	95%
Nevada	Wholesale price (device and e-liquid)	30%
New Hampshire	Closed system e-cigarettes - the volume of the liquid or other substance containing nicotine as listed by the manufacturer	USD 0.30 per ml
	Open system e-cigarettes - wholesale sales price of the container of liquid or other substance containing nicotine	8%
New Jersey	Volume of liquid nicotine	USD 0.10 per ml
New Mexico	Wholesale price of E-liquid	12.5%
	Closed system cartridge containing 5ml or less of E-liquid	Fifty cents (USD 0.50) per cartridge
New York	Retail price of vaping products	20%
North Carolina	Liquid by volume	USD 0.05 per ml

State	Tax base	Excise rate
Ohio	Vapor products – liquid volume or non-liquid weight	USD 0.01 multiplied by the vapor volume (one tenth of product that is either in liquid or non-liquid form)
Pennsylvania	Wholesale price (device and e-liquid)	40%
Vermont	Wholesale price (device and e-liquid)	92%
Washington	Liquid contained in closed system products with less than 5 milliliters capacity	USD 0.27 per ml
	Liquid contained in open systems products with more than 5 milliliters capacity	USD 0.09 per ml
Washington DC	Wholesale price (device or vapor cartridge of liquid nicotine)	91%
West Virginia	Liquid by volume	USD 0.075 per ml
Wisconsin	Liquid by volume	USD 0.05 per ml

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TAXATION OF ELECTRONIC NICOTINE AND NON-NICOTINE DELIVERY SYSTEMS

DISCUSSION PAPER

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NATIONAL TREASURY
Private Bag X115 | Pretoria, 0001, South Africa
Tel: +27 12 315 5944 | Fax: +27 12 406 9055
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