



**Federal Trade Commission**

**E-Cigarette Report**

**for 2021**

ISSUED: 2024

## I. INTRODUCTION

This is the Federal Trade Commission’s third report on e-cigarette sales, advertising, and promotion, and it contains data for 2021, as well as corrected data for 2019 and 2020, and data from additional companies for 2020.<sup>1</sup> The prior reports presented data for 2015 through 2020. Data for the first report, covering 2015-2018, was obtained in response to compulsory process orders (“Orders”) to six then-leading domestic e-cigarette manufacturers: Fontem US, Inc. (a subsidiary of Imperial Brands plc that markets the blu brand); JUUL Labs, Inc. (that markets the JUUL brand); Logic Technology Development LLC (a subsidiary of Japan Tobacco International that markets the Logic brand); NJOY, LLC (that markets the NJOY brand); Nu Mark LLC (a subsidiary of Altria Group, Inc., that marketed the MarkTen and GreenSmoke brands), and R.J. Reynolds Vapor Company (a subsidiary of Reynolds American, Inc., that markets the Vuse brand). Data for the second report, covering 2019-2020, was received in response to Orders sent to the five original recipients that were still selling e-cigarette products.<sup>2</sup>

E-cigarettes are battery-powered devices that deliver aerosolized e-liquid, usually containing nicotine, when inhaled.<sup>3</sup> They include vape pens and personal vaporizers. Some e-cigarette systems have rechargeable batteries and are refillable. Closed refillable systems

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<sup>1</sup> The data contained in the tables appended to this report are also in an electronic spreadsheet available at: <https://www.ftc.gov/ecigarettedata>.

<sup>2</sup> At the end of 2018, Nu Mark stopped manufacturing and distributing e-cigarette products.

<sup>3</sup> Although the Commission’s definition of e-cigarettes could include cannabis vaping devices, none of the recipients of the Commission’s Orders reported selling such devices during the period covered by the Orders. As discussed below, the recipients reported selling a relatively small number of nicotine-free products.

The Commission’s e-cigarette definition does not encompass battery-operated devices that heat, but do not burn, tobacco or the products used in such devices.

(“cartridge systems”) consist of rechargeable devices that use sealed cartridges, pods, or tanks (“cartridges”) pre-filled with e-liquid that are replaced when the e-liquid is used up. Such pre-filled cartridges are usually designed to work with one brand’s or one manufacturer’s products. Closed non-refillable systems (“disposables”) come with pre-filled e-liquid and non-rechargeable batteries. Open system products are rechargeable devices and have tanks that are manually filled by the user with e-liquid. Generally, an open system device can be filled with e-liquid sold by any entity.

As described below, volatility in the e-cigarette market required the Commission to obtain information for this report not only from the five prior recipients, but also from four new companies: Breeze Smoke, LLC (that markets the Breeze brand); Kaival Brands Innovations Group, Inc. (which markets the BIDI Stick brand); Pop Vapor Co., LLC (which markets the Pop Vapor brand); and PVG2, LLC (which markets the Puff Bar brand). The five prior recipients dominate the cartridge systems market and, for 2021, had little or no footprint in the disposable market; the four new recipients, by contrast, had little or no cartridge sales and focus on disposables. Because of this, the data for cartridge-based systems and disposables are presented separately below.

Disposables are becoming increasingly popular among e-cigarette users. Unlike the cartridge market, the disposable market is extremely diffuse and not necessarily dominated by large sellers.<sup>4</sup> At the time the Orders were sent, the Commission believed the four new recipients

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<sup>4</sup> According to a 2023 Associated Press article, there were 365 unique disposable e-cigarette products by early 2020, with the number of such brands then multiplying many fold in subsequent years. See Matthew Perrone, *Thousands of unauthorized vapes are pouring into the US despite the FDA crackdown on fruity flavors*, Associated Press, June 26, 2023, <https://apnews.com/article/fda-vapes-vaping-elf-bar-juul-80b2680a874d89b8d651c5e909e39e8f>.

were likely among leading marketers of disposable e-cigarettes, but obtaining reliable information in such a fragmented market is difficult. In any case, the four new Order recipients represent only a few of the many marketers of disposable e-cigarettes. Thus, although the Commission believes this report reflects comprehensive data for the cartridge market as a whole, the report is likely not comprehensive or representative of the disposable market.

Data for this report was compiled from Orders issued by the Commission in June 2022.<sup>5</sup> In addition to seeking comprehensive data for 2021, the most recent Orders also asked the four first-time recipients to report sales and promotional expenditures that occurred in 2020 and three of them were able to report such information.

## **II. E-CIGARETTES SOLD AND GIVEN AWAY**

As reported in Table 1, combined sales by the reporting companies of closed-system and disposable e-cigarettes<sup>6</sup> (“combined sales”) grew from \$2.394 billion<sup>7</sup> in 2020 to \$2.763 billion in 2021. Indirect sales through retailers increased from 92.8% of combined dollar sales in 2020 to 96.7% in 2021. The companies’ direct sales to consumers decreased from \$159 million in

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<sup>5</sup> Generic versions of the Orders can be found at: <https://www.ftc.gov/reports/order-file-special-section-6b-report-e-cigarette-products-calendar-year-2021-generic-text>.

<sup>6</sup> The Commission is not including any data in this report about open system e-cigarette products. The reporting companies were and are not representative of the market for open system e-cigarette products. It appears that several of the reporting companies dabbled in that market from 2016 through 2019, before exiting it. One of the four first-time recipients reported sales of e-liquids for use in open system devices, but the Commission cannot report that data because to do so would reveal individual company data.

<sup>7</sup> All sales figures and advertising and promotion expenditures discussed in the text of this report that are stated in billions are rounded to the nearest million, those stated in millions are rounded to the nearest hundred thousand, and those stated in thousands are rounded to the nearest thousand. The precise, unrounded figures are in the tables at the end of the report.



2020 to \$83.7 million in 2021.<sup>8</sup> Highly discounted sales of products for \$1 or less decreased from \$13.3 million in 2020 to \$6.2 million in 2021.<sup>9</sup>

### Cartridge-Based Systems

The reporting companies' best-selling e-cigarette products have been cartridge system products. Cartridge-based systems can be distributed as individual devices, individual cartridges, multiple cartridges bundled together, one or more cartridges bundled with one or more devices, or multiple devices bundled together.

As reported in Table 2B, sales of one or more cartridges by themselves went down from 96.1% of dollar sales of closed system products in 2020 to 93.9% in 2021. Devices sold by themselves made up 3.7% of cartridge system sales in 2020 and 5.6% in 2021. Sales of cartridge and device bundles increased from 0.1% of closed-system sales in 2020 to 0.5% in 2021.

Indirect sales of cartridge system products by the reporting companies grew from 92.4% of their overall cartridge system sales in 2020 (measured in dollars) to 96.5% in 2021. Heavily discounted sales for \$1 or less decreased from \$13.3 million in 2020 to \$6.2 million in 2021.

Combined sales and giveaways<sup>10</sup> of cartridges increased from 943.3 million cartridges in

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<sup>8</sup> The decline in direct sales might be explained by the Preventing Online Sales of E-Cigarettes to Children Act, which took effect in March 2021, and which generally prohibits the United States Postal Service from shipping e-cigarette products and requires online e-cigarette sellers to verify the age of consumers through commercially available (or similar) databases and obtain proof of age from persons accepting delivery. As reported, other carriers such as DHL, FedEx and the United Parcel Service have also implemented bans on shipping e-cigarette products.

<sup>9</sup> The Commission's Orders asked the recipients to report sales for \$1 or less separately from indirect and direct sales, although they could have occurred at retail or directly through company representatives.

<sup>10</sup> The Commission's definition of E-Cigarette Products given away included all products distributed for free, whether given for free to retailers or wholesalers for subsequent sale to consumers, or given for free to retailers, wholesalers, or consumers through sampling, a free

2020 to 1.492 billion in 2021. Combined sales and giveaways of devices grew from 21.0 million in 2020 to 28.8 million in 2021. Giveaways of cartridges increased from 30,000 cartridges in 2020 to 94,000 in 2021. Cartridges sold for \$1 or less represented less than 0.01% of cartridges sold or given away in 2020 or 2021. Giveaways of devices declined from 5,000 in 2020 to 4,000 in 2021. At the same time, devices sold for \$1 or less (by themselves or with cartridges) went from 64% of devices sold or given away in 2020 (13.4 million devices) to 21.6% in 2021 (6.2 million devices).

#### Disposable E-Cigarettes

As reported in Table 1, sales of disposable, non-refillable e-cigarette products by the reporting companies increased from \$261.9 million in 2020 (representing 10.9% of combined sales) to \$267.1 million in 2021 (9.7% of combined sales).<sup>11</sup>

As reported in Table 3, the reporting companies sold or gave away 61.8 million disposable e-cigarettes to consumers in 2020 and 55.2 million in 2021. Of total sales and giveaways, indirect sales accounted for 97.4% in 2020 and 99.0% in 2021. Giveaways were 0.2% in 2020 and 0.03% in 2021. In 2020 and 2021, there were virtually no sales of disposables for \$1 or less.

### **III. CHARACTERISTICS OF E-CIGARETTE PRODUCTS**

#### Flavors

Tables 4A and 4B report the flavor characteristics of e-cigarette products sold or given away. The four primary flavor categories reported are: (1) tobacco flavors (e.g., absolute

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trial promotion, coupons for free product, or otherwise.

<sup>11</sup> Sales of disposables from 2019 are not comparable to sales from 2020 or 2021 because of the addition of companies focused on the sales of disposable e-cigarettes.

tobacco, classic tobacco, Carolina bold, and sweet original); (2) mint flavors (e.g., wintermint, spearmint, and wintergreen); (3) menthol flavors (e.g., bold menthol); and (4) “other” flavors. For 2015 through 2018, the Commission asked the companies to report menthol and mint flavors in a single category, but it required the companies to report menthol and mint separately for 2019 and subsequent years. The tables provide breakdowns of the “other” flavors. The subcategories include alcohol flavors (e.g., bourbon blend, Havana wine, mimosa, and peach schnapps); beverage flavors (e.g., caramel cafe, java jolt, chai, and lemon tea); candy or dessert flavors (e.g., lemon poppy seed, apple crumble, and chestnut croissant); fruit flavors (e.g., cherry, strawberry, watermelon, and mixed berry); fruity mint or menthol flavors (e.g., strawberry mint, berry mint, pear mint, and iced fruit); spice flavors (e.g., vanilla, ginger, cinnamon, and aniseed); and other flavors that do not fit in these categories. For 2020 and 2021, the Commission broke out beverage and candy dessert flavors that also use menthol or mint flavors (e.g., chocolate mint or cola mint).

Several events affected flavor sales. In November 2018, Juul, which was then the largest e-cigarette manufacturer, stopped selling flavors other than tobacco, menthol, and mint in retail locations, and, in October 2019, it stopped selling such “other” flavors online.<sup>12</sup> In January 2020, the Food and Drug Administration (“FDA”) amended its enforcement policy guidance such that companies that continued to sell flavored cartridge-based products (other than tobacco and menthol flavored) could face prosecution for failure to have premarket authorization.<sup>13</sup> Because

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<sup>12</sup> See, e.g., Matthew Perrone, *Juul halts sales of fruit, dessert flavors for e-cigarettes*, Associated Press, Oct. 17, 2019, <https://apnews.com/article/d3beff8e79934a828edf35de0ba4c2a3>.

<sup>13</sup> “Enforcement Priorities for Electronic Nicotine Delivery Systems (ENDS) and Other Deemed Products on the Market Without Premarket Authorization” (January 7, 2020; 85 Fed.

the amended policy did not apply to disposable or open system products, sales of disposables surged, particularly those that were “other” flavored.

In 2018, the most popular flavor category of e-cigarette cartridges was the “other” category, representing 42.1% of all cartridges sold or given away. The popularity of “other” flavored cartridges dropped to 0.8% of cartridges in 2020 and to 0.0% in 2021. In 2019, before the prohibition against mint cartridges, mint accounted for 44.1% of cartridges sold or given away. There were no sales of mint flavored cartridges in 2020 or 2021. Menthol accounted for 16.7% of cartridges sold or given away in 2019, 63.5% in 2020 and 69.2% in 2021. The percentage of tobacco-flavored cartridge products sold or given away declined from 35.7% in 2020 to 30.8% in 2021.

The most popular flavor category of disposable e-cigarettes in 2021 was the “other” flavor category, representing 71.0% of all devices sold or given away. The popularity of “other” flavored devices was down from 73.9% of disposable devices sold or given away in 2020. The most popular subcategories of the “other” flavor category were fruit-flavored and fruit & menthol/mint flavored, which together represented 58.5% of disposable devices sold or given away in 2020 and 56.5% in 2021. The popularity of mint and menthol-flavored disposables combined increased from 17.3% in 2020 to 19% in 2021. When one includes all flavors that include mint or menthol (e.g., strawberry mint or chocolate mint), those products represent 49.8% of disposable devices sold or given away in 2021, up from 46.2% in 2020. The percentage of tobacco flavored disposable products increased from 8.8% in 2020 to 10.0% in

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Reg. 720) (available at <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/enforcement-priorities-electronic-nicotine-delivery-system-ends-and-other-deemed-products-market>).

2021.

#### Nicotine Concentrations

The Commission asked the reporting companies to provide the nicotine concentrations of each of their products as measured in milligrams of nicotine per milliliter (“mg/ml”) of e-liquid. Tables 5A and 5B report nicotine concentration in ranges and averages. For cartridge products, the average nicotine concentration was 51.2 in both 2020 and 2021. For disposable products, the average nicotine concentration decreased from 50.5 in 2020 to 48.5 in 2021.

#### Bundling

Tables 6A and 6B provide details with respect to the bundling of cartridge system products. In 2020 and 2021, 99.8% or more of cartridges were distributed separately from a cartridge system device. In 2020, 43.8% of cartridges sold or given away were distributed in bundles containing two cartridges; this proportion decreased to 20.4% in 2021. In 2020 and 2021, practically no bundles contained more than four cartridges.

The proportion of cartridge system devices sold or given away bundled together with cartridges was 7.1% in 2021, up from 2.5% in 2020.

Table 7 provides details with respect to the bundling of disposable e-cigarette products. In 2020 and 2021, 99.7% and almost 100%, respectively, of disposable e-cigarettes were sold or given away as single devices.

#### **IV. ADVERTISING AND PROMOTIONAL EXPENDITURES BY CATEGORY**

Tables 8A and 8B show the annual expenditures of the reporting companies on e-cigarette advertising and promotion.<sup>14</sup> The tables list the amounts spent on the different types

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<sup>14</sup> The reported figures include all advertising and promotional expenditures related to e-cigarettes, regardless of whether such expenditures would constitute “commercial speech”

of media advertising (e.g., magazines) and sales promotion activities (e.g., distribution of coupons).<sup>15</sup>

The reporting companies spent \$859.4 million on e-cigarette advertising and promotion in 2021, up from \$768.8 million in 2020.<sup>16</sup> Almost all of these expenditures were by the five manufacturers that dominate the cartridge systems market. In 2021, advertising and promotion expenditures by the four reporting companies that sell disposable products were less than \$500,000.

The Commission is not reporting the amount spent on television advertising in 2020 or 2021 because only one company reported spending in that category.<sup>17</sup> This category includes advertising on broadcast, cable, and satellite television channels, Internet television (e.g., Hulu,

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or would be protected from law enforcement action under the First Amendment. They do not include the costs of employing full-time company employees or any overhead expenses attributable to the activities of such company employees. They also do not include advertising that will only be seen or heard by the trade.

<sup>15</sup> Numerous expenditures could have been reported in more than one expenditure category. The Orders instructed the recipients in which category to report an expenditure when it fell in multiple categories, but often told them to do so “to the extent practicable.” The Orders also said that expenditures should be included in only one category to the extent practicable.

<sup>16</sup> Definitions of the advertising and promotional expenditure categories appear in the Appendix to this report.

<sup>17</sup> If only one company reported spending money on a particular type of advertising or promotion in a year, the Commission is not reporting that expenditure in order to avoid potential disclosure of individual company data. For this reason, the Commission is not separately reporting the amount(s) spent in 2020, 2021, or either year on television advertising, radio advertising, “other audio-visual” advertising, newspaper advertising, retail-value-added promotions involving free e-cigarette products, public entertainment in adult-only facilities, consumer engagement that took place outside of adult-only facilities, and sponsorship.

In Tables 8A and 8B, “N/A” appears where the Commission is not reporting the expenditure in a category for this reason. The unreported expenditures are included in the “All other” category.

Netflix, Amazon Prime), and webisodes, but does not include product placement.

As in prior years, no company reported advertising e-cigarettes before or during movies in 2020 or 2021.

The Commission asked about radio advertising, including Internet radio, audio streaming services (e.g., Pandora and Spotify), and podcasts. The companies reported spending \$10.2 million on radio advertising for e-cigarettes in 2020. The Commission is not reporting the amount spent on radio advertising in 2021 because only one company reported such expenditures.

Spending on other audio-visual advertising was \$411,000 in 2021. The Commission defined other audio-visual advertising as audio and/or visual advertising other than TV, movie, or radio advertising, product placement, social media, endorsements, or transit advertising. It could include advertising on screens or monitors in commercial establishments, such as video arcades or retail shops, and video games. The Commission also is not reporting the amount spent on other audio-visual advertising in 2020 because only one company reported such expenditures.

The companies reported spending nothing in 2020 or 2021 on product placement in the creative content of any program or performance.

Spending on company websites directed to persons located in the United States increased from \$4.8 million in 2020 to \$7.3 million in 2021.

The Commission inquired about advertising on company-controlled social media accounts or channels (e.g., Facebook, Twitter, Instagram, Snapchat, Reddit, and YouTube) directed to persons located in the United States, including company-authored posts and replies, and re-posts of other users' content. The category excludes expenses related to celebrities, social media influencers, or other endorsers. Expenditures in this category increased from \$1.3 million

in 2020 to \$1.5 million in 2021.

The reporting category “other Internet and digital advertising” could include, among other things, banner, display, pop-up, and native advertising on third-party Internet sites, search advertising, sponsored digital content, advertising using a short message service (SMS text), multimedia messaging (MMS), instant messaging (IM), and direct messaging (DM), and advertising viewed in apps or video games. Spending on other Internet and digital advertising decreased from \$36.7 million in 2020 to \$15.8 million 2021.

The companies reported spending nothing in 2020 or 2021 to procure endorsements of e-cigarette products by celebrities, social media influencers, brand ambassadors, or other endorsers.

The reporting companies spent \$1.5 million on direct mail marketing in 2021, down from \$11.1 million in 2020. Email marketing expenditures for e-cigarettes increased from \$191,000 in 2020 to \$495,000 in 2021.

The companies reported spending nothing on newspaper advertising in 2021. Only one of them had newspaper advertising expenditures in 2020, so the Commission is not reporting those expenditures.

The amount reported on magazine advertising of e-cigarettes was \$2.7 million in 2020. This category includes advertising appearing in digital editions of magazines that are nearly identical to print editions. The Commission is not reporting magazine advertising expenditures in 2021.

Spending on outdoor advertising was \$7.2 million in 2020. Outdoor advertising includes billboards; signs and placards in arenas, stadiums, and shopping malls, whether they are open-air or enclosed; and any other advertising placed outdoors. The Commission is not reporting outdoor



advertising expenditures in 2021 because only one company reported such expenditures.

The companies reported no spending in 2020 or 2021 on transit advertising, that is advertising on or in private or public vehicles and ads placed at, on, or in any bus stop, taxi stand, transportation waiting area, subway or train station, airport, or any other transportation facility.

Spending on point-of-sale advertising – advertising displayed or distributed at a physical retail location – was \$96.5 million in 2021, up from \$61.9 million in 2020.

The largest promotional spending category in 2020 or 2021 was price discounts paid to cigarette product retailers or wholesalers to reduce the price of e-cigarette products to consumers. The companies reported spending \$261.6 million on price discounts in 2021, up from \$183.5 million in 2020.

Promotional allowances paid to retailers increased, from \$56.8 million in 2020 to \$76.6 million in 2021. Examples of promotional allowances paid to retailers might include payments for stocking, shelving, displaying, and merchandising brands, slotting fees, volume rebates, incentive payments, and the cost of e-cigarette products given to retailers for free for subsequent resale to consumers.

Promotional allowances paid to wholesalers also increased from \$131.8 million in 2020, when it was the third largest expenditure category, to \$194.8 million in 2021, when it was the second largest expenditure category. Examples of promotional allowances paid to wholesalers might include payments for volume rebates, incentive payments, value-added services, promotional execution, and satisfaction of reporting requirements.

Price discounts and promotional allowances together represented 62.0% of advertising and promotional expenditures in 2021, up from 51.7% in 2020.

The reporting companies spent \$27.4 million in 2021 on coupons to reduce the retail cost of e-cigarette products, down from \$35.3 million in 2020.

The Commission asked the companies about retail-value-added expenditures — promotions involving free products given to consumers at the point of sale, including online, in connection with a purchase of e-cigarette products. Some such promotions involve free e-cigarette products (e.g., buy two, get one free or buy a device and get a free e-liquid) while others involve other free products (e.g., buy two, get a free t-shirt). The companies reported no such expenditures in 2021 and the Commission is not reporting 2020 expenditures in that category because only one company reported such expenditures. The companies reported spending \$883,000 in 2021 on retail-value-added promotions involving items other than free e-cigarette products, down from \$3.1 million in 2020.

The companies reported that they spent nothing in 2020 or 2021 on branded specialty item distribution — that is, the selling or giving consumers items such as t-shirts, caps, sunglasses, key chains, or sporting goods bearing the brand name of an e-cigarette product. The companies also reported that in 2020 and 2021 they made no expenditures on specialty item distribution involving products not bearing an e-cigarette product brand name. When the distribution of items, whether branded or non-branded, is combined with the sale of e-cigarettes, the associated expenditures are reported as retail-value-added expenditures, not specialty item distribution.

Sampling includes the distribution of free e-cigarette products and the distribution of e-cigarette products sold at a price of \$1 or less.<sup>18</sup> Sampling includes the costs of the products

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<sup>18</sup> Highly discounted sales became more popular following the 2016 effective date of FDA's Deeming Regulation, which asserted jurisdiction over all tobacco products and, among other

themselves and all costs of organizing and conducting the sampling. The companies reported sampling spending of \$59.5 million in 2021, down from \$140.1 million in 2020, when it was the second largest expenditure category.

The Commission inquired about expenditures for public entertainment events (e.g., concerts or sporting events) that take place in adult-only facilities and that promote e-cigarette products. Expenditures in connection with such events were \$10.1 million in 2020. The Commission is not reporting expenditures on such adult-only events in 2021 because only one company reported such expenditures. As in prior years, the companies did not report any expenditures in 2020 or 2021 on public entertainment events promoting e-cigarette products that took place outside of adult-only facilities.<sup>19</sup>

The companies reported spending \$6.5 million in 2021 on consumer engagement (not involving the distribution of free e-cigarette products) that took place inside adult-only facilities. The Commission is not reporting expenditures on such consumer engagement in 2020 because only one company reported such expenditures. The Commission is not reporting expenditures in 2020 or 2021 on consumer engagement that took place outside of adult-only facilities, because, as in all prior years, only one company reported such expenditures.

Because only one company reported spending in this area, the Commission is not reporting expenditures in 2020 or 2021 on sponsoring sports teams or individual athletes.

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things, prohibited free sampling of tobacco products. *See* Deeming Tobacco Products To Be Subject to the Federal Food, Drug, and Cosmetic Act, as Amended by the Family Smoking Prevention and Tobacco Control Act; Restrictions on the Sale and Distribution of Tobacco Products and Required Warning Statements for Tobacco Products, 81 Fed. Reg. 28,974 (May 10, 2016).

<sup>19</sup> Some expenses related to public entertainment events could have been reported under the sampling category.

Finally, the Commission inquired about expenditures related to advertising or promotion through college campus programs including the use of brand ambassadors, campus representatives, or on campus or off campus events or promotions. This category is duplicative of expenditures for other categories. For all reporting years, the reporting companies stated that they spent nothing on such college campus programs.

#### **V. PRODUCT PLACEMENT**<sup>20</sup>

The Commission asked the reporting e-cigarette companies whether, in 2021 they or their agents: compensated anyone engaged in product placement in motion pictures, television shows, video games, magazines, or other publications (“in creative content”); solicited the appearance of e-cigarettes in creative content, or paid money or other compensation (including free product) in connection with the appearance of any e-cigarette product brand imagery in creative content; or granted approval for the appearance of an e-cigarette product in creative content. All of the reporting companies said they had not engaged in any of those activities.

#### **VI. AGE VERIFICATION**

All of the reporting companies maintained websites to advertise their e-cigarette brands and eight said they had online sales in 2021 or did until March 2021, shortly before prohibitions on mailing e-cigarettes took effect. The Commission inquired about any mechanisms used to deter entry onto those websites by underage persons. The companies used self-certification, asking website visitors to confirm that they were 21 years of age. One company did not require self-certification for a website that featured consumer reviews of its products. One company

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<sup>20</sup> For discussions of the e-cigarette companies’ activities in prior years with respect to product placement; age verification; social media accounts; affiliates; and celebrities, influencers, and endorsers, *see* Federal Trade Commission E-Cigarette Report for 2015-2018, available at [https://www.ftc.gov/system/files/ftc\\_gov/pdf/E-Cigarette-Report-2015-2018.pdf](https://www.ftc.gov/system/files/ftc_gov/pdf/E-Cigarette-Report-2015-2018.pdf).

began in November 2021 to require third-party age verification for website access.

During 2021, all of the reporting companies that offered online sales used third-party age verification services before allowing customers to purchase e-cigarette products. Six of them collected information including name, date of birth, and address and matched it to information in databases in order to verify that prospective customers were at least 21 years of age.

All but one of the companies that sold e-cigarettes online in 2021 reported that they followed state laws with respect to obtaining an adult signature upon delivery. Two companies always required adult signatures, and another said it always did so for purchases of \$100 or more. Another company reported that it also required adult signatures for the first completed purchase on an account and any time there was a mismatch between the billing and shipping address on an order.

The Commission asked the reporting companies about their mechanisms to prevent underage individuals from joining their mailing lists. Six companies said that they had mailing lists and five required third-party age verification to join.

Two companies said they had loyalty programs and a third said that it offered a non-traditional program through which participants could obtain discounts on up to two replacement devices per year. All three companies stated that they required third-party age verification in order to enroll in those programs.

## **VII. SOCIAL MEDIA ACCOUNTS**

Three of the companies used social media accounts to promote their e-cigarette products in 2021. Two companies said they maintained Twitter, Instagram, and Facebook accounts to

advertise their e-cigarette products, and one of them also used a YouTube account.<sup>21</sup> The final company used an Instagram account until February 2021 to advertise e-cigarette products.

The companies that used social media accounts reported that they used tools made available by the social media platforms, which permit account holders to designate age restrictions. Before allowing an individual to access a company account, the platforms confirm that the individual meets the designated age – based either on the age the individual reported when creating a personal account for the platform or on an affirmation that the user was of a certain required legal age in response to a challenge question.

#### **VIII. AFFILIATES**

All but one of the reporting companies said that they did not use online affiliate programs to market their e-cigarette products in 2021. One company had an affiliate program that primarily partnered with deal websites such as Groupon or Slick Deals, but also used vaping blog affiliates.

#### **IX. CELEBRITIES, INFLUENCERS, AND ENDORSERS**

The FTC asked the companies whether they engaged in marketing using celebrities, social media influencers, or other endorsers (collectively “influencers”) during 2021. None said that they used such influencers.

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<sup>21</sup> Twitter, Facebook/Instagram, and YouTube do not themselves sell e-cigarette or tobacco advertising.

**Table 1**  
**Total Product Sales**  
**(2015-2021)**

	2015	2016	2017	2018	2019
Total sales	\$304,170,046	\$485,707,484	\$779,836,399	\$2,043,703,005	\$2,702,608,307
Cartridge systems	\$259,984,551	\$417,302,598	\$707,415,500	\$1,969,019,051	\$2,633,333,620
Disposables	\$44,185,495	\$68,404,886	\$72,420,899	\$74,683,954	\$69,274,687
Indirect sales	\$268,574,275	\$434,303,079	\$688,737,154	\$1,882,071,547	\$2,476,086,257
Direct sales	\$35,480,872	\$49,820,558	\$89,659,841	\$130,375,025	\$219,777,702
Sales for \$1 or less	\$114,901	\$1,583,847	\$1,439,403	\$31,256,435	\$6,744,349

	2020	2021
Total sales	\$2,394,423,105	\$2,763,284,338
Cartridge systems	\$2,132,503,069	\$2,496,219,204
Disposables	\$261,920,036	\$267,065,134
Indirect sales	\$2,222,070,295	\$2,673,385,026
Direct sales	\$159,039,445	\$83,720,743
Sales for \$1 or less	\$13,313,364	\$6,178,569

**Table 2A**  
**Cartridge System Sales and Giveaways and Percentages of Total Sales**  
**(2015-2018)**

	2015		2016		2017		2018	
Cartridge system sales	\$259,984,551		\$417,302,598		\$707,415,500		\$1,969,019,051	
Cartridge sales	\$197,187,253	75.85%	\$338,234,357	81.05%	\$567,174,474	80.18%	\$1,560,395,293	79.24%
Device sales	\$649,055	0.25%	\$3,810,583	0.91%	\$23,614,906	3.34%	\$168,305,746	8.55%
Cartridge & device bundle sales	\$62,148,238	23.90%	\$75,257,657	18.03%	\$116,626,415	16.49%	\$240,318,013	12.21%
Indirect sales	\$225,163,505	86.61%	\$367,124,417	87.98%	\$622,341,019	87.97%	\$1,816,012,985	92.23%
Direct sales	\$34,706,146	13.35%	\$48,594,334	11.64%	\$83,635,077	11.82%	\$121,830,755	6.19%
Sales for \$1 or less	\$114,901	0.04%	\$1,583,847	0.38%	\$1,439,403	0.20%	\$31,175,312	1.58%
Total cartridges sold & given away	169,281,616		211,062,325		313,626,942		831,349,329	
Cartridges sold indirectly	152,178,291	88.99%	190,647,050	90.33%	286,283,022	91.28%	790,440,407	95.08%
Cartridges sold directly	12,225,256	7.22%	15,839,150	7.50%	22,703,264	7.24%	33,502,457	4.03%
Cartridges sold for \$1 or less	272,420	0.16%	2,878,860	1.36%	2,766,371	0.88%	4,338,265	0.52%
Cartridges given away	4,605,649	2.72%	1,697,265	0.80%	1,874,285	0.60%	3,068,201	0.37%
Total devices sold & given away	7,814,159		8,849,196		11,824,626		30,466,903	
Devices sold indirectly	6,953,901	88.99%	7,866,147	88.89%	11,004,545	93.06%	26,993,075	88.60%
Devices sold directly	100,612	1.29%	173,633	1.96%	442,840	3.75%	850,367	2.79%
Devices sold for \$1 or less	28,278	0.36%	328,816	3.72%	177,280	1.50%	2,310,951	7.59%
Devices given away	731,368	9.36%	480,600	5.43%	199,961	1.69%	312,510	1.03%



**Table 2B**  
**Cartridge System Sales and Giveaways and Percentages of Total Sales**  
**(2019-2021)**

	2019		2020		2021	
Cartridge system sales	\$2,633,333,620		\$2,132,503,069		\$2,496,219,204	
Cartridge sales	\$2,195,797,626	83.38%	\$2,049,604,163	96.11%	\$2,343,796,846	93.89%
Device sales	\$304,839,736	11.58%	\$79,817,393	3.74%	\$140,568,897	5.63%
Cartridge & device bundle sales	\$132,696,259	5.04%	\$3,034,366	0.14%	\$11,845,030	0.47%
Indirect sales	\$2,415,511,724	91.73%	\$1,970,584,791	92.41%	\$2,409,678,593	96.53%
Direct sales	\$211,101,250	8.02%	\$148,604,915	6.97%	\$80,362,042	3.22%
Sales for \$1 or less	\$6,720,647	0.26%	\$13,313,362	0.62%	\$6,178,569	0.25%
Total cartridges sold & given away	976,656,877		943,252,895		1,492,170,818	
Cartridges sold indirectly	919,757,576	94.17%	901,756,848	95.60%	1,461,217,090	97.93%
Cartridges sold directly	56,601,584	5.80%	41,460,034	4.40%	30,859,884	2.07%
Cartridges sold for \$1 or less	109,205	0.01%	6,333	0.00%	111	0.00%
Cartridges given away	188,512	0.02%	29,680	0.00%	93,733	0.01%
Total devices sold & given away	33,851,529		21,022,237		28,819,661	
Devices sold indirectly	25,010,441	73.88%	7,213,179	34.31%	22,278,184	77.30%
Devices sold directly	684,560	2.02%	357,093	1.70%	299,833	1.04%
Devices sold for \$1 or less	8,067,283	23.83%	13,447,132	63.97%	6,237,974	21.64%
Devices given away	89,245	0.26%	4,833	0.02%	3,670	0.01%

**Table 3**  
**Disposable Sales and Giveaways and Percentages of Total Sales**  
**(2015-2021)**

	2015		2016		2017		2018	
Disposable sales	\$44,185,495		\$68,404,886		\$72,420,899		\$74,683,954	
Indirect sales	\$43,410,770	98.25%	\$67,178,662	98.21%	\$66,396,135	91.68%	\$66,058,562	88.45%
Direct sales	\$774,726	1.75%	\$1,226,224	1.79%	\$6,024,764	8.32%	\$8,544,270	11.44%
Sales for \$1 or less	\$0	0.00%	\$0	0.00%	\$0	0.00%	\$81,123	0.11%
Total sold & given away	7,802,219		12,879,262		15,838,443		17,226,341	
Indirect sales	7,727,777	99.05%	12,635,814	98.11%	14,609,115	92.24%	15,402,865	89.41%
Direct sales	58,144	0.75%	157,888	1.23%	1,221,223	7.24%	1,706,549	9.91%
Sales for \$1 or less	0	0.00%	0	0.00%	0	0.00%	22,752	0.13%
Given away	16,298	0.21%	85,560	0.66%	8,105	0.05%	94,175	0.55%

	2019		2020		2021	
Disposable sales	\$69,274,687		\$261,920,036		\$267,065,134	
Indirect sales	\$60,574,533	87.44%	\$251,485,504	96.02%	\$263,706,433	98.74%
Direct sales	\$8,676,452	12.52%	\$10,434,530	3.98%	\$3,358,701	1.26%
Sales for \$1 or less	\$23,702	0.03%	\$2	0.00%	\$0	0.00%
Total sold & given away	16,072,942		61,777,815		55,249,753	
Indirect sales	14,366,110	89.38%	60,157,189	97.38%	54,713,029	99.03%
Direct sales	1,662,942	10.35%	1,610,919	2.61%	519,805	0.94%
Sales for \$1 or less	23,956	0.15%	2	0.00%	0	0.00%
Given away	19,934	0.12%	9,705	0.02%	16,919	0.03%

**Table 4A**  
**Percentages of Cartridges and Disposables with Various Flavors**  
**(2015-2018)**

	2015	2016	2017	2018
<b>Cartridge flavors</b>				
Tobacco	47.24%	39.80%	34.26%	20.96%
Menthol or Mint	39.00%	38.04%	36.26%	36.90%
All other	13.76%	22.16%	29.47%	42.14%
-Alcohol	0.11%	0.14%	0.04%	0.03%
-Beverage	3.56%	4.07%	5.37%	3.47%
-Candy/Dessert	4.47%	7.26%	6.67%	4.38%
-Fruit	4.72%	8.95%	15.27%	29.70%
-Fruit & Menthol/Mint	0.00%	0.02%	0.19%	0.09%
-Spice	0.90%	1.72%	1.04%	0.50%
-Other	0.00%	0.00%	0.88%	3.96%
<b>Disposable flavors</b>				
Tobacco	52.05%	45.64%	38.52%	35.44%
Menthol or Mint	25.95%	22.42%	25.72%	27.16%
All other	22.00%	31.94%	35.76%	37.40%
-Candy/Dessert	0.00%	0.00%	0.07%	0.12%
-Fruit	22.00%	26.81%	31.96%	33.16%
-Spice	0.00%	0.00%	3.73%	4.12%

**Table 4B**  
**Percentages of Cartridges and Disposables with Various Flavors**  
**(2019-2021)**

	2019	2020	2021
<b>Cartridge flavors</b>			
Tobacco	24.93%	35.70%	30.76%
Menthol	16.67%	63.54%	69.24%
Mint	44.13%	-0.07%	0.00%
All other	14.27%	0.83%	0.00%
-Alcohol	0.00%	0.00%	0.00%
-Beverage	1.11%	0.03%	0.00%
-Candy/Dessert	0.74%	0.00%	0.00%
-Fruit	11.53%	0.79%	0.00%
-Fruit &Menthol/Mint	0.34%	0.00%	0.00%
-Spice	0.31%	0.02%	0.00%
-Other	0.23%	0.00%	0.00%
<b>Disposable flavors</b>			
Tobacco	31.04%	8.79%	10.00%
Menthol	22.30%	10.35%	9.88%
Mint	7.37%	6.96%	9.13%
All other	39.29%	73.91%	70.99%
-Beverage	0.00%	5.08%	3.82%
-Beverage & Menthol/Mint	0.00%	1.25%	0.53%
-Candy/Dessert	0.02%	6.40%	6.66%
-Candy/Dessert & Menthol/Mint	0.00%	1.56%	2.32%
-Fruit	35.25%	32.48%	28.52%
-Fruit & Menthol/Mint	0.00%	26.05%	27.95%
-Spice	4.03%	1.08%	1.20%

**Table 5A**  
**Percentages of Cartridges, Disposables, and E-Liquid Containers**  
**Within Various Nicotine Concentration Ranges and**  
**Their Average Nicotine Concentrations**  
**Measured in Milligrams of Nicotine per Milliliter of E-liquid**  
**(2015-2018)**

	2015	2016	2017	2018
Cartridges - nicotine concentration				
0	0.21%	0.18%	0.03%	0.02%
1-10.99	0.58%	0.46%	0.01%	0.01%
11-20.99	11.42%	6.75%	8.21%	13.07%
21-30.99	15.52%	16.05%	10.67%	5.65%
31-40.99	0.82%	10.72%	20.62%	9.21%
41-50.99	0.00%	0.18%	1.33%	0.91%
51-60.99	71.44%	65.66%	59.13%	71.13%
Average (mg/ml)	47.46	47.23	46.79	49.41
Disposables - nicotine concentration				
0	-0.06%*	0.13%	0.00%	0.00%
11-20.99	28.72%	7.17%	1.93%	0.00%
21-30.99	71.34%	92.57%	68.91%	55.07%
31-40.99	0.00%	0.00%	1.20%	2.35%
41-50.99	0.00%	0.01%	7.16%	4.37%
51-60.99	0.00%	0.11%	18.49%	28.25%
61-70.99	0.00%	0.00%	2.31%	9.95%
Average (mg/ml)	25.04	27.06	34.53	39.53

\* Negative sales are because of returns from prior years.

**Table 5B**  
**Percentages of Cartridges, Disposables, and E-Liquid Containers**  
**Within Various Nicotine Concentration Ranges and**  
**Their Average Nicotine Concentrations**  
**Measured in Milligrams of Nicotine per Milliliter of E-liquid**  
**(2019-2021)**

	2019	2020	2020
Cartridges - nicotine concentration			
0	0.02%	0.01%	0.00%
1-10.99	0.01%	0.00%	0.00%
11-20.99	4.82%	5.49%	3.39%
21-30.99	5.51%	10.60%	15.86%
31-40.99	11.77%	9.24%	5.75%
41-50.99	0.01%	0.00%	0.00%
51-60.99	77.86%	74.66%	75.00%
Average (mg/ml)	52.31	51.22	51.22
Disposables - nicotine concentration			
0	0.00%	0.00%	1.86%
11-20.99	0.00%	0.00%	0.00%
21-30.99	49.13%	11.74%	11.56%
31-40.99	2.14%	-0.04%*	0.00%
41-50.99	6.42%	56.71%	66.19%
51-60.99	27.97%	27.18%	14.95%
61-70.99	14.35%	4.42%	5.45%
Average (mg/ml)	41.74	50.48	48.53

\* Negative sales are because of returns from prior years.

**Table 6A**  
**Bundling of Cartridge System Components**  
**(2015-2018)**

	2015	2016	2017	2018
% Devices bundled with cartridges	97.10%	95.40%	88.12%	63.03%
% Devices not bundled with cartridges	2.90%	4.60%	11.88%	36.97%
% Cartridges bundled with devices	4.88%	4.13%	3.33%	2.31%
% Cartridges not bundled with devices	95.12%	95.87%	96.67%	97.69%
# of devices bundled together				
1 device	100.01%	100.00%	99.98%	100.00%
2 or more devices	-0.01%*	0.00%	0.02%	0.00%
# of cartridges bundled together				
1 cartridge	4.50%	4.30%	5.05%	4.88%
2 cartridges	71.77%	69.16%	58.42%	26.06%
3 cartridges	3.58%	14.83%	11.41%	11.64%
4 cartridges	1.31%	4.27%	22.05%	56.33%
5 cartridges	18.84%	7.44%	0.09%	0.02%
6 or more cartridges	0.00%	0.00%	2.98%	1.06%

\* Negative sales are because of returns from prior years.

**Table 6B**  
**Bundling of Cartridge System Components**  
**(2019-2021)**

	2019	2020	2021
% Devices bundled with cartridges	26.90%	2.53%	7.12%
% Devices not bundled with cartridges	73.10%	97.47%	92.88%
% Cartridges bundled with devices	0.93%	0.03%	0.25%
% Cartridges not bundled with devices	99.07%	99.97%	99.75%
# of devices bundled together			
1 device	100.00%	100.00%	100.00%
2 or more devices	0.00%	0.00%	0.00%
# of cartridges bundled together			
1 cartridge	1.63%	0.66%	0.76%
2 cartridges	31.41%	43.82%	20.35%
3 cartridges	3.73%	0.44%	0.41%
4 cartridges	63.23%	55.08%	78.48%
5 cartridges	0.00%	0.00%	0.00%
6 or more cartridges	0.00%	0.00%	0.00%



**Table 7**  
**Percentages of Disposables Sold or Given Away Individually or in Bundles**  
**(2015-2021)**

	2015	2016	2017	2018
1	100.00%	100.00%	92.29%	96.30%
5	0.00%	0.00%	2.70%	3.70%
20	0.00%	0.00%	2.06%	0.00%
100	0.00%	0.00%	2.95%	0.00%

	2019	2020	2021
1	97.91%	99.74%	99.97%
5	1.89%	0.15%	0.00%
20	0.20%	0.10%	0.03%
100	0.00%	0.00%	0.00%

**Table 8A**  
**Advertising and Promotional Expenditures**  
**(2015-2018)**

	2015	2016	2017	2018
TV advertising	\$18,765,588	\$13,706,190	\$5,994,063	\$7,590,297
Movie advertising	\$0	\$0	\$0	\$0
Radio advertising	\$1,949,099	\$1,519,965	\$1,308,292	\$4,505,002
Other audio-visual advertising	\$0	\$0	N/A	N/A
Product placement	N/A	\$113,012	N/A	N/A
Company Internet sites	\$5,171,616	\$7,888,889	\$8,888,138	\$11,616,875
Social media	N/A	N/A	\$779,291	\$577,285
Other Internet and digital advertising	\$6,389,902	\$8,908,004	\$12,392,570	\$22,315,874
Endorsements	\$287,950	\$104,381	\$4,431,029	\$4,287,431
Direct mail marketing	N/A	N/A	\$1,249,778	\$4,325,312
Email marketing	\$66,648	\$225,703	\$152,984	\$430,359
Newspaper advertising	\$0	\$0	\$0	N/A
Magazine advertising	\$2,451,090	\$7,072,483	\$4,884,538	\$5,240,440
Outdoor advertising	\$969,603	\$2,815,302	\$2,854,201	\$1,028,472
Transit advertising	N/A	\$3,453,245	\$2,319,535	\$666,682
Point-of-sale advertising	\$13,365,702	\$26,462,177	\$21,445,036	\$45,872,667
Price discounts	\$11,184,584	\$33,709,537	\$33,648,290	\$155,124,847
Promotional allowances paid to retailers	\$28,430,304	\$36,305,608	\$40,944,305	\$73,852,950
Promotional allowances paid to wholesalers	\$21,072,195	\$29,273,783	\$52,326,119	\$141,375,232
Coupons for reduction of purchase price	\$22,788,155	\$20,395,598	\$27,154,852	\$36,461,104
Retail-value-added - free e-cigarette products	\$60,115	\$5,616,750	\$10,586,295	\$11,311,627
Retail-value-added - free items other than e-cigarette Products	N/A	N/A	\$0	N/A
Specialty item distribution - branded	N/A	N/A	N/A	\$211,770
Specialty item distribution - not branded	\$0	\$0	\$0	\$0
Sampling	\$22,962,323	\$32,439,417	\$14,153,277	\$58,083,793
Public entertainment - adult-only facilities	N/A	\$3,024,758	N/A	\$2,303,716
Public entertainment - not adult-only facilities	\$0	\$0	\$0	\$0
Consumer engagement - adult-only facilities	\$1,613,769	\$8,537,860	\$1,701,784	\$12,771,648
Consumer engagement - not adult-only facilities	N/A	N/A	N/A	N/A
Sponsorship	\$0	\$0	\$0	\$0
All other	\$40,280,324	\$29,401,798	\$31,341,033	\$43,587,550
<b>Total reportable expenditures</b>	<b>\$197,808,967</b>	<b>\$270,974,462</b>	<b>\$278,555,410</b>	<b>\$643,540,932</b>
Campus promotion	\$0	\$0	\$0	\$0

**Table 8B**  
**Advertising and Promotional Expenditures**  
**(2019-2021)**

	2019	2020	2021
TV advertising	\$93,786,067	N/A	N/A
Movie advertising	\$0	\$0	\$0
Radio advertising	\$54,182,097	\$10,243,086	N/A
Other audio-visual advertising	N/A	N/A	\$410,572
Product placement	\$0	\$0	\$0
Company Internet sites	\$7,972,951	\$4,777,192	\$7,337,571
Social media	\$1,370,151	\$1,256,964	\$1,498,684
Other Internet and digital advertising	\$79,185,896	\$36,675,237	\$15,778,407
Endorsements	\$6,792,765	\$0	\$0
Direct mail marketing	\$16,112,008	\$11,148,762	\$1,520,976
Email marketing	\$630,821	\$190,657	\$494,525
Newspaper advertising	\$57,746,568	N/A	\$0
Magazine advertising	\$12,967,789	\$2,744,355	N/A
Outdoor advertising	\$19,076,783	\$7,196,454	N/A
Transit advertising	N/A	\$0	\$0
Point-of-sale advertising	\$85,709,226	\$61,856,551	\$96,481,845
Price discounts	\$243,933,639	\$183,464,364	\$261,600,780
Promotional allowances paid to retailers	\$51,163,171	\$56,783,447	\$76,563,398
Promotional allowances paid to wholesalers	\$126,681,306	\$131,805,762	\$194,849,481
Coupons for reduction of purchase price	\$74,124,329	\$35,283,237	\$27,415,390
Retail-value-added - free e-cigarette products	N/A	N/A	\$0
Retail-value-added - free items other than e-cigarette Products	N/A	\$3,131,816	\$883,087
Specialty item distribution - branded	\$0	\$0	\$0
Specialty item distribution - not branded	N/A	\$0	\$0
Sampling	\$111,860,067	\$140,074,983	\$59,455,666
Public entertainment - adult-only facilities	\$4,265,926	\$10,057,822	N/A
Public entertainment - not adult-only facilities	\$0	\$0	\$0
Consumer engagement - adult-only facilities	\$16,134,780	\$0	\$6,480,800
Consumer engagement - not adult-only facilities	N/A	N/A	N/A
Sponsorship	N/A	N/A	N/A
All other	\$60,847,782	\$72,107,862	\$108,619,465
<b>Total reportable expenditures</b>	<b>\$1,124,544,123</b>	<b>\$768,798,550</b>	<b>\$859,390,643</b>
Campus promotion	\$0	\$0	\$0

## **APPENDIX**

### Advertising and Promotional Expenditure Categories for 2021

**TV Advertising:** Advertising on broadcast, cable, and satellite television channels, Internet television (e.g., Hulu, Netflix, Amazon Prime), and webisodes (e.g., web shows on YouTube), including spot ads, long-form commercials, and sponsored programming; but excluding, to the extent practicable, expenditures in connection with Product Placement, Social Media, Endorsements, or Public Entertainment (Adult-Only and Not Adult-Only).

**Movie Advertising:** Advertising spots before or during movies, including in movie theaters, on DVDs, and streamed movies (e.g., a movie streamed on Hulu); but excluding, to the extent practicable, expenditures in connection with TV Advertising, Product Placement, or Endorsements.

**Radio Advertising:** Advertising on broadcast, satellite, Internet radio, audio streaming services (e.g., Pandora and Spotify), and podcasts, including spot ads, long-form commercials, and sponsored programming; but excluding, to the extent practicable, expenditures in connection with Product Placement, Social Media, or Endorsements.

**Other Audio-Visual Advertising:** Audio, audio-visual, and video advertising not covered by TV Advertising, Movie Advertising, Radio Advertising, Product Placement, Social Media, Endorsements, or Transit Advertising, including advertising on screens or monitors in commercial establishments, such as video arcades or retail shops, and video games.

**Product Placement:** All expenditures for product placement in the creative content of any program or performance (e.g., movies, television shows, Internet series, video games, and other broadcast and digital media).

**Company Internet Sites:** All expenditures for any Company-owned or -operated Internet site, or any site operated on its behalf, that contains information about the Company's e-cigarette products, and that is directed to persons located in the United States; but excluding, to the extent practicable, expenditures in connection with Email Marketing, Coupons for Reduction of Purchase Price, Public Entertainment – Not Adult-Only Facilities, or Sponsorship.

**Social Media:** Advertising on any Company-controlled social media account or channel (e.g., Facebook, Twitter, Instagram, Snapchat, Reddit, YouTube) that is directed to persons located in the United States, including Company-authored posts and replies, and re-posts of other users' content on Company-controlled accounts or channels; but excluding expenses related to celebrities, social media influencers, brand ambassadors, or other endorsers endorsing e-cigarette products, which should be reported as Endorsements.

**Other Internet and Digital Advertising:** All expenditures for Internet or digital advertising directed to persons located in the United States that are not covered by TV Advertising, Movie Advertising, Radio Advertising, Other Audio-Visual Advertising, Product Placement, Social Media, Endorsements, or Email Marketing, including banner, display, pop-up, and

native advertising on third-party Internet sites, search advertising, sponsored digital content, advertising using a short message service (SMS text), multimedia (MMS) messaging, instant messaging (IM), and direct messaging (DM), and advertising viewed in apps or video games; but excluding, to the extent practicable, expenditures in connection with Coupons, Retail-Value-Added (Free E-Cigarette Products and Other Free Items), Specialty Item Distribution (Branded and Not Branded), Sampling, Public Entertainment (Adult-Only and Not Adult-Only), Consumer Engagement (Adult-Only and Not Adult-Only), or Sponsorship.

**Endorsements:** All expenditures to procure the mention or use of e-Cigarette Products by a celebrity, social media influencer, or other endorser, in any situation; but excluding expenditures related to an actor mentioning or using an e-cigarette product when assuming the role of a character, which should be reported as Product Placements.

**Direct Mail Marketing:** Direct mail marketing; but excluding, to the extent practicable, expenditures in connection with Endorsements, Email Marketing, Coupons, Retail-Value-Added (Free E-Cigarette Products and Other Free Items), Specialty Item Distribution (Branded and Not Branded), Sampling, Public Entertainment (Adult-Only and Not Adult-Only), Consumer Engagement (Adult-Only and Not Adult-Only), or Sponsorship.

**Newspaper Advertising:** Newspaper advertising, including print advertising and native advertising; but excluding, to the extent practicable, expenditures in connection with Endorsements, Coupons, Retail-Value-Added (Free E-Cigarette Products and Other Free Items), Specialty Item Distribution (Branded and Not Branded), Sampling, Public Entertainment (Adult-Only and Not Adult-Only), Consumer Engagement (Adult-Only and Not Adult-Only), or Sponsorship. To the extent that advertising appearing in print editions of newspapers also appears in nearly identical digital editions of the newspapers, such expenditures should be reported here, but other advertising on a newspaper website should be reported in Other Internet and Digital Advertising.

**Magazine Advertising:** Magazine advertising, including print advertising and native advertising; but excluding, to the extent practicable, expenditures in connection with Endorsements, Coupons, Retail-Value-Added (Free E-Cigarette Products and Other Free Items), Specialty Item Distribution (Branded and Not Branded), Sampling, Public Entertainment (Adult-Only and Not Adult-Only), Consumer Engagement (Adult-Only and Not Adult-Only), or Sponsorship. To the extent that advertising appearing in print editions of magazines also appears in nearly identical digital editions of the magazines, such expenditures should be reported here, but other advertising on a magazine website should be reported in Other Internet and Digital Advertising.

**Outdoor Advertising:** Billboards; signs and placards in arenas, stadiums, and shopping malls, whether any of the foregoing are open-air or enclosed; and any other advertising placed outdoors, regardless of their size; but excluding, to the extent practicable, expenditures in connection with Endorsements, Transit Advertising, Point-of-Sale Advertising, Coupons, Retail-Value-Added (Free E-Cigarette Products and Other Free Items), Specialty Item Distribution (Branded and Not Branded), Sampling, Public Entertainment (Adult-Only and Not Adult-Only), Consumer Engagement (Adult-Only and

Not Adult-Only), or Sponsorship. Expenditures for advertising placed inside physical retail locations, whether facing inward or outward, which should be reported in Point-of-Sale Advertising.

**Transit Advertising:** Advertising on or within private or public vehicles and all advertisements placed at, on or within any bus stop, taxi stand, transportation waiting area, subway or train station, airport or any other transportation facility; but excluding, to the extent practicable, expenditures in connection with Endorsements, Outdoor Advertising, Coupons, Retail-Value-Added (Free E-Cigarette Products and Other Free Items), Specialty Item Distribution (Branded and Not Branded), Sampling, Public Entertainment (Adult-Only and Not Adult-Only), Consumer Engagement (Adult-Only and Not Adult-Only), or Sponsorship.

**Point-of-Sale Advertising:** Advertising materials displayed or distributed at a physical retail location; but excluding, to the extent practicable, expenditures in connection with in store video advertising (which should be reported as Other Audio-Visual Advertising), Coupons, Retail-Value-Added (Free E-Cigarette Products and Other Free Items), Specialty Item Distribution (Branded and Not Branded), Sampling, Public Entertainment (Adult-Only and Not Adult-Only), Consumer Engagement (Adult-Only and Not Adult-Only), or Sponsorship.

**Price Discounts:** Expenditures paid to e-Cigarette Product retailers or wholesalers to reduce the price of e-cigarette products to consumers, including off invoice discounts, buy downs, voluntary price reductions, and trade programs; but excluding, to the extent practicable, expenditures in connection with Coupons or Retail-Value-Added – Free E-Cigarette Products.

**Promotional Allowances Paid to Retailers:** All expenditures for promotional allowances paid to E-Cigarette Product retailers to facilitate the sale or placement of any E-Cigarette Product, including, but not limited to, payments for stocking, shelving, displaying, and merchandising brands, slotting fees, volume rebates, incentive payments, and the cost of E-Cigarette Products given to retailers for free for subsequent resale to consumers; but excluding, to the extent practicable, expenditures in connection with Other Audio-Visual Advertising, Other Internet and Digital Advertising, Direct Mail Marketing, Newspaper Advertising, Magazine Advertising, Outdoor Advertising, Point-of-Sale Advertising, and Price Discounts.

**Promotional Allowances Paid to Retailers:** All expenditures for promotional allowances paid to E-Cigarette Product retailers to facilitate the sale or placement of any E-Cigarette Product, including, but not limited to, payments for volume rebates, incentive payments, value-added services, promotional execution, and satisfaction of reporting requirements; but excluding, to the extent practicable, expenditures in connection with Other Audio-Visual Advertising, Other Internet and Digital Advertising, Direct Mail Marketing, Newspaper Advertising, Magazine Advertising, Outdoor Advertising, Point-of-Sale Advertising, and Price Discounts.

**Coupons for Reduction of Purchase Price:** All expenditures associated with coupons used to reduce the retail cost of e-cigarette products (whether distributed in person, by mail, online, or otherwise and whether redeemed at the point of sale, by mail, online, or otherwise), including all redemption expenses and costs associated with promoting, designing, printing, and distributing the coupons. This includes coupons with offers such as “buy 2 e-cigarette products and get 50% off the price of a third product.” Coupons for free e-cigarette products or for e-cigarette products sold at a price of \$1 or less, with no purchase or payment required to obtain the coupons are reported as Sampling.

**Retail-value-added – Free E-Cigarette Products:** All expenditures associated with promotions involving free e-cigarette products that are given to consumers at the point of sale, including online, in connection with a purchase of e-cigarette products (e.g., buy two, get one free or buy a device and get free e-liquid), whether or not the free products are physically bundled together with the purchased products. For e-cigarette products bundled together to be reported in this category, one or more of the products in the bundle must be promoted as free.

**Retail-value-added – Free Items Other Than E-Cigarette Products:** All expenditures associated with promotions involving free items other than e-cigarette products that are given to consumers at the point of sale, including online, in connection with a purchase of e-cigarette products (e.g., buy two, get a free t-shirt), whether or not the free products are physically bundled together with the purchased products. For product bundles to be reported in this category, the products in the bundle that are not e-cigarette products must be promoted as free.

**Specialty Item Distribution – Branded:** All costs of distributing any items (other than e-cigarette products, written or electronic publications, and items whose sole function is to advertise or promote e-cigarette products) that bear the name, logo, or an image of any portion of the package of any e-cigarette product, when the items are not given to consumers at the point of sale (e.g., a branded umbrella redeemed with loyalty program points). The expenditures reported are the net cost to the Company, i.e., payments received from consumers for such items should be deducted.

**Specialty Item Distribution – Not Branded:** All costs of distributing any items (other than e-cigarette products, written or electronic publications, and items whose sole function is to advertise or promote e-cigarette products) that do not bear the name, logo, or an image of any portion of the package of any e-cigarette product, when the items are not given to consumers at the point of sale (e.g., a gift card to an online music retailer redeemed with loyalty program points). The expenditures reported are the net cost to the Company, i.e., payments received from consumers for such items should be deducted.

**Sampling:** All costs of sampling of e-cigarette products, including the costs of the products themselves and all costs of organizing, promoting, and conducting the sampling. Sampling includes the distribution of e-cigarette products sold at a price of \$1 or less. Sampling also includes the distribution of e-cigarette products for consumer testing or evaluation when consumers are able to use the products outside of a facility owned or operated by the

Company or its agents, but not the cost of actual clinical testing or market research associated with such distributions. Coupons distributed for free e-cigarette products or e-cigarette products sold at a price of \$1 or less, with no purchase or payment required to obtain the coupons, should be reported in this category.

**Public entertainment – Adult-Only Facilities:** All expenditures for public entertainment events (including, but not limited to, concerts and sporting events) referring or relating to e-cigarette products that take place in an Adult-Only Facility, includes expenditures promoting or sponsoring such events. Whenever such activities are combined with the consumer engagement in adult-only facilities, the expenditures connected with consumer engagement should be reported solely in Consumer Engagement – Adult-Only Facilities.

**Public Entertainment – Not Adult-Only Facilities:** All expenditures for public entertainment events (including, but not limited to, concerts and sporting events) referring or relating to e-cigarette products, at facilities that are open to persons under the legal age, including expenditures promoting or sponsoring such events. Whenever such activities are combined with the consumer engagement in facilities open to persons under the legal age, the expenditures connected with consumer engagement should be reported solely in Consumer Engagement – Not Adult-Only Facilities.

**Consumer Engagement – Adult-Only Facilities:** All expenditures for consumer engagement in adult-only facilities, when such activities do not involve the distribution of free e-cigarette products, e-cigarette products sold at a price of \$1 or less, or coupons for free e-cigarette products or e-cigarette products sold at a price of \$1 or less with no purchase or payment required to obtain the coupons, including any third-party agency fees, and excluding the cost of any coupons distributed.

**Consumer Engagement – Not Adult-Only Facilities:** All expenditures for consumer engagement at facilities open to persons under the legal age, when such activities do not involve the distribution of free e-cigarette products, e-cigarette products sold at a price of \$1 or less, or coupons for free e-cigarette products or e-cigarette products sold at a price of \$1 or less with no purchase or payment required to obtain the coupons, including any third-party fees, and excluding the cost of any coupons distributed in the course of consumer engagement activities.

**Sponsorship:** All expenditures for sponsorship of sports teams or individual athletes; but excluding, to the extent practicable, expenditures in connection with Endorsements. This category excludes expenditures promoting or sponsoring sporting events, which should be reported as Public Entertainment (Adult-Only or Not Adult-Only).

**All Other:** All expenditures for any advertising or promotional expenditures not covered by another reporting category.

**Campus Promotion:** All expenditures related to advertising or promotion through college campus programs, including but not limited to, compensation to campus representatives or brand ambassadors, expenditures for organizing, promoting, or conducting any campus



events or promotions, whether on campus or off campus, and all expenditures for implementing such programs or events. This category is duplicative of expenditures for other categories.