



DEPARTMENT OF AUDITS AND ACCOUNTS

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January 11, 2021

Honorable James Beverly
State Representative
509-H Coverdell Legislative Office Building
Atlanta, Georgia 30334

SUBJECT: Fiscal Note
House Bill (LC 43 1716)

Dear Representative Beverly:

The bill would increase excise taxes on tobacco and vapor products, effective July 1, 2021. The taxes on:

- cigarettes would rise from 37¢ cents per pack to \$2.00.
- loose and smokeless tobacco from 10 percent to 40 percent of the wholesale price.
- little cigars from 2.5¢ per ten to 40 percent of the wholesale price.
- all other cigars from 23 percent to 40 percent of the wholesale price.
- all consumable vapor products and devices would be 40 percent of the wholesale price. Under current law, vapor products in a closed system will be taxed at 5¢ per fluid milliliter and all other consumable vapor products and devices will be taxed at 7 percent of the wholesale price beginning January 1, 2021.

Impact on State Revenue

Georgia State University's Fiscal Research Center (FRC) estimated that the bill would increase state revenue between \$566.9 million and \$705.2 million in fiscal year 2023 (Table 1), the first full year of the bill's effect on consumer behavior and revenue. The revenue would rise slightly in subsequent years. The attached appendix provides details of the analysis.

Table 1. Projected Revenue Gains under LC 43 1716

(\$ millions)	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Low Response, High Rev.	\$702.0	\$705.2	\$709.3	\$714.1	\$720.2
High Response, Low Rev.	\$691.6	\$566.9	\$571.4	\$576.3	\$581.8

Impact on State Expenditures

The Department of Revenue (DOR) estimated that the bill would result in approximately \$72,000 in one-time costs for changes to its information technology system.

Sincerely,



Greg S. Griffin
State Auditor



Kelly Farr, Director
Office of Planning and Budget

GSG/KF/mt

Analysis by the Fiscal Research Center

Traditional Tobacco Products

The use of tobacco has been in decline in Georgia since 2005, according to the Centers for Disease Control's State Tobacco Activities Tracking and Evaluation System (STATE). Based on statistics from the Georgia Department of Revenue (DOR), this decline in use has resulted in slowly declining revenues from the current excise tax on tobacco products between FY 2005 and FY 2020, about 0.6 percent per year.

In addition to the expected continuation of this slow decline in tobacco consumption, an increase in excise tax rates would be expected to have behavioral effects due to higher retail prices as more people reduce the amounts they consume, quit outright, or switch to alternatives. Recent empirical research into cigarette consumption, published in the Journal of Health Economics, found that a 1 percent increase in the final price of a pack of cigarettes results in a 0.98 percent decline, on average, in the quantity of cigarettes purchased (a -0.98 price elasticity). Though estimates have historically varied, this most recent research is the first to measure smokers responsiveness to price changes in a marketplace that includes a potential substitute for cigarettes not available in the past, so-called e-cigarettes.

In addition to the published research, STATE data on 14 states with increases in their cigarette tax that were comparable to the increase proposed in LC 43 1716 suggest similar implied elasticities. For these states, the decline in per capita cigarette sales compared to the trend prior to the tax change suggests long-run price elasticities averaging -0.9. For the two most recent changes, Florida's \$1.00 per pack increase in 2010 and Minnesota's \$1.74 per pack increase in 2014, implied long-run elasticities are -1.6 and -1.07 respectively.

Similar research indicates that higher retail prices for loose or smokeless tobacco (LST) and cigars would induce consumers to purchase less of these products as well. A one percent increase in the retail price of LST is predicted to reduce the amount of LST purchased by 0.2 percent (a -0.2 price elasticity) and a one percent increase in the price of cigars is predicted to reduce cigar consumption by 0.8 percent (a -0.8 price elasticity).

The increases in taxes are assumed to be fully passed through to consumers in higher retail prices. The proposed tobacco excise tax increases are estimated to increase the retail price on a pack of cigarettes by approximately 22.6 percent, small cigars by 3.6 percent, other cigars by 15.5 percent, and LST by 26.0 percent in FY 2022 over the baseline prices.

Key assumptions in high and low revenue estimates are as follows:

- STATE and DOR data through 2018 suggest that per capita cigarette consumption in Georgia has been declining by about 2.6 percent annually since 2013. Absent a change in cigarette taxes, this rate of decline is assumed to continue. Per capita consumption is estimated at approximately 40.4 packs of cigarettes per person per year as of FY 2020.
- Based on data from DOR and the Federal Trade Commission, per capita LST and cigar consumption are both expected to grow by 3.5 percent annually through 2026.

- Historical price trends are also assumed to continue in the absence of the proposed increase. According to STATE data, the average retail price of cigarettes in Georgia increased at an average annual rate of about 1.7 percent between 2010 and 2018. The estimate assumes this rate of inflation for all tobacco products through 2026.
- Population for the projection period is estimated by applying the latest available OPB population growth rate estimates to the Census population estimate for 2019.
- For cigarettes, the low revenue estimates assume a larger behavioral response to the tax-induced price increase in the number cigarette packs purchased. Specifically, a -1.2 long-run price elasticity is assumed after the first year of higher prices; the first-year response is assumed to be half that, a price elasticity of -0.6. The high revenue estimate assumes a less elastic or smaller behavioral response to the tax-induced price increase, using the low end of the range from the literature, a -0.6 price elasticity for all years. These elasticities were used to calculate per capita consumption changes from the baseline; forecasted Georgia populations were then used to calculate expected statewide consumption for each case.
- For LST, the low revenue estimates assume a -0.2 long-run price elasticity after the first year of higher prices; the first-year response is assumed to be half that, a price elasticity of 0.1. The high revenue estimate assumes a -0.05 price elasticity for all years, the low end of the range most often cited in the literature.
- For small and large cigars, the low revenue estimates assume a -0.8 long-run price elasticity after the first year of higher prices; the first-year response is assumed to be half that, a price elasticity of -0.4. The high revenue estimate assumes a -0.3 price elasticity for all years, the low end of the range most often cited.

Finally, because tobacco products, including consumable vapor products, are also subject to sales taxes charged on the total retail price including excise taxes, it is expected that sales tax revenues would also be impacted by the proposed excise tax changes. Under the high excise tax revenue case in the fiscal note, the increase in state sales tax revenue is estimated to be \$4.5 million in FY 2022. Under the low revenue case, which assumes a stronger negative behavioral response after the first year, the tax-induced price increases could reduce sales tax revenues by as much as \$2 million in the second year, FY 2023.

Tables 2 and 3 detail the results of the analysis for tobacco excise tax changes. Table 4 provides sales tax revenue changes.

Table 2. Prices and Consumption Under Alternate Behavioral Response Assumptions

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Cigarette Consumption (millions of packs)					
Low Response, High Revenue Case	362.7	357.8	352.9	348.1	343.3
High Response, Low Revenue Case	362.7	302.6	299.3	296.0	292.7
Wholesale purchases of LST (\$ in millions)					
Low Response, High Revenue Case	\$274.3	\$297.9	\$322.8	\$349.0	\$377.3
High Response, Low Revenue Case	\$270.7	\$286.1	\$310.0	\$335.2	\$362.4
Wholesale purchases of Large Cigars (\$ in millions)					
Low Response, High Revenue Case	\$190.6	\$200.9	\$211.3	\$221.9	\$232.9
High Response, Low Revenue Case	\$187.5	\$184.6	\$194.2	\$203.9	\$214.0
Wholesale purchases of Little Cigars (\$ in millions)					
Low Response, High Revenue Case	\$3.2	\$3.3	\$3.4	\$3.4	\$3.5
High Response, Low Revenue Case	\$3.2	\$3.2	\$3.3	\$3.4	\$3.4

Table 3. High and Low Projected Revenue Gains under LC 43 1716 (detail)

<i>(\$ millions)</i>	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Low Response, High Revenue Case					
Cigarettes	\$570.2	\$562.8	\$555.4	\$548.1	\$540.9
Loose or Smokeless Tobacco	\$81.9	\$89.0	\$96.4	\$104.2	\$112.7
Large Cigars	\$30.3	\$31.9	\$33.6	\$35.2	\$37.0
Little Cigars	\$1.3	\$1.3	\$1.3	\$1.3	\$1.4
High Response, Low Revenue Case					
Cigarettes	\$570.2	\$452.4	\$448.2	\$444.0	\$439.7
Loose or Smokeless Tobacco	\$80.5	\$84.3	\$91.3	\$98.7	\$106.7
Large Cigars	\$29.0	\$25.4	\$26.7	\$28.0	\$29.4
Little Cigars	\$1.2	\$1.3	\$1.3	\$1.3	\$1.3

Table 4. High and Low Projected Sales Tax Revenue Gains Under LC 43 1716

<i>(\$ millions)</i>	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Low Response, High Revenue Case	\$4.5	\$4.6	\$4.7	\$4.8	\$5.0
High Response, Low Revenue Case	\$3.6	-\$2.0	-\$2.1	-\$2.2	-\$2.3

Tax on Consumable Vapor Products:

The bill increases the current tax on consumable vapor products and devices in open and closed systems to 40 percent. Under current law, the tax is 7 percent of the wholesale price except in the case of vapor products in a closed system, on which the tax is 5¢ per fluid milliliter.

The Federal Drug Administration (FDA) defines the group of products that deliver nicotine through the vaporization of nicotine solution as Electronic Nicotine Delivery systems (ENDS). These products are sold in three broad forms: disposable e-cigarettes, rechargeable e-cigarettes, and vaporizers. According to Forbes and Statista, US retail sales of ENDS was approximately \$2.35 billion dollars in 2016.

The sale of e-cigarettes and other vapor products grew as fast as 21 percent annually when first widely available, though according to Neilson Market Research, this growth has slowed in recent years. Mordor Intelligence forecasts the e-cigarette market in the US to grow by 11.5 percent annually between 2020 and 2026.

Similar to tobacco, the increase in the retail sale price of ENDS under LC 43 1716 is likely to induce a behavioral response as people switch away from or reduce their consumption of ENDS products. A recent working paper published by the National Bureau of Economics Research (NBER) estimates the vaping product sales response to price changes at an own-price elasticity of -1.3. Other key facts and assumptions in estimating revenue from this tax are as follows:

- A 2018 study by the CDC estimates that Georgia represented about 3.46 percent of the retail sales of ENDS in 2016. The estimates assume that between 3 and 4 percent of the \$2.35 billion US retail sales of consumable vapor products in 2016 occurred in Georgia.
- Starting in FY 2016, North Carolina has collected a 5¢ per fluid milliliter tax on consumable vapor products. Based on 2016 retail sales of ENDS in North Carolina, one dollar in retail sales equates to approximately .95 milliliters of consumable vapor fluid. The estimates assume this conversion rate for the tax on consumable vapor products in closed systems for purposes of projecting the current-law baseline of revenue from the Georgia tax on these products.
- The estimates assume a 41 percent retail markup for consumable vapor products in open systems based on data from the National Association of Convenience Store Managers.
- Based on the prevailing market research, it is assumed that consumable vapor products sales growth in Georgia will be between 7 and 14 percent annually between 2016 and 2026.
- Federal regulators recently increased the minimum age to purchase ENDS products from 18 to 21, materially reducing the number of people eligible to purchase these products. Existing market size estimates are based on 18-20 year-olds being able to purchase these products, thus the estimates are reduced to account for this reduction in the pool of legal-age consumers. Survey data on e-cigarette use from the CDC suggest that 18-20 year-olds account for about 14.8 percent of the population using e-cigarettes.
- For consumable vapor products, the low revenue estimates assume a -1.2 long-run price elasticity after the first year of higher prices; the first-year response is assumed to be half

that, a price elasticity of -0.6. The high revenue estimate assumes a -0.6 price elasticity for all years.

Table 5. High and Low Projected Revenue Gains from Consumable Vapor Products

<i>(millions)</i>	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Baseline Expected Revenues from Consumable Vapor Products					
High Growth Estimate	\$12.3	\$14.0	\$16.0	\$18.2	\$20.7
Low Growth Estimate	\$6.3	\$6.7	\$7.2	\$7.7	\$8.3
Consumable Vapor Product Closed System Milliliters – LC 43 1716					
Low Response, High Revenue Case	88.8	101.2	115.4	131.5	149.9
High Response, Low Revenue Case	45.5	42.3	45.2	48.4	51.8
Wholesale Sales in Open and Closed Systems – LC 43 1716					
Low Response, High Revenue Case	\$76.2	\$86.9	\$99.0	\$112.9	\$128.7
High Response, Low Revenue Case	\$39.1	\$36.3	\$38.8	\$41.5	\$44.4
Net Revenue Gains from Consumable Vapor Product and Device Sales – LC 43 1716					
Low Response, High Revenue Case	\$13.75	\$15.68	\$17.87	\$20.37	\$23.22
High Response, Low Revenue Case	\$7.05	\$5.66	\$6.05	\$6.47	\$6.93