

# Fiscal Impact of E-Cigarettes

## Summary

The proliferation of electronic cigarettes (e-cigarettes) has generated interest in their possible taxation. The purchase of e-cigarettes is not currently subject to the existing tobacco tax.

Under current Arizona law, regular tobacco cigarettes are taxed at \$2 per pack, which equates to 42.5% of the current retail value. Applying this effective tax rate to e-cigarettes would generate an estimated \$6.0 million in additional revenue to the state. Based on options discussed in other states, Arizona could generate as little as \$283,700 or as much as \$13.5 million in additional revenue.

## Background

E-Cigarettes are designed to have the appearance and use of a tobacco cigarette, but they are not combustible, nor do they contain tar. A key difference is how the nicotine is delivered. For e-cigarettes, nicotine-laced liquid contained in a cartridge is vaporized by an internal heating element and then inhaled by the smoker. The nicotine content in e-liquids can vary from zero to 48 milligrams. The typical e-cigarette contains between 17-24 milligrams of nicotine, which is equivalent to a pack of cigarettes.

E-Cigarettes have been widely available in the U.S. since 2007. The U.S. market has grown from \$400 million in 2011 to \$2 billion in 2014. A Wells Fargo market analyst suggests that e-cigarette sales could surpass tobacco cigarette sales within the next 10 years.

While Arizona's tobacco tax does not apply to them, e-cigarettes are subject to the state's sales tax (which also applies to regular cigarettes).

## National Analysis

In 2014, 15 state legislatures considered taxing e-cigarettes. Revenue estimates range from \$500,000 to as high as \$35 million (*see Table 1 for more information*). Per smoker revenue estimates range from \$1.42 to \$22.73. These estimates are significantly affected by the proposed tax rates which can either be a percentage of the wholesale or retail price of e-liquid or a fixed rate per milliliter of e-liquid.

There are 2 states that currently tax e-cigarettes: Minnesota (the tax is 95% of the wholesale price of e-liquid) and North Carolina (the tax is \$0.05 per milliliter of e-liquid sold). Depending on what method of taxation Arizona chooses, the revenue raised could differ considerably.

## Arizona Analysis

If taxed at a rate equivalent to that of tobacco cigarettes, e-cigarettes are estimated to generate \$6.0 million. Currently, the tax on tobacco cigarettes in Arizona is \$2 per pack of cigarettes. The average pre-tax cost of a pack of cigarettes is \$4.71, which amounts to an effective tax rate of 42.5%. Applying that same per pack tax rate to e-cigarettes requires knowing what amount of e-liquid is the equivalent of a "pack" of tobacco cigarettes. In terms of nicotine content, a pack of cigarettes equals 1 milliliter of e-liquid. The average cost of 1 milliliter is \$2.50. Applying the 42.5% tax yields \$1.06 per milliliter in taxes.

Arizona accounts for approximately 1.2% of all regular cigarette packs sold in the U.S. Applying that consumption percentage to the estimated \$2.0 billion U.S. e-cigarette market yields \$23.6 million in e-cigarette sales in Arizona. Applying a 40% "tax avoidance factor" (*see discussion below*) lowers Arizona's taxable e-cigarette sales to \$14.2 million. At an average cost of \$2.50 per milliliter, approximately 5.7 million milliliters of taxable e-liquid are sold in Arizona. Applying the \$1.06 per milliliter tax rate yields an increase in taxes of \$6.0 million in FY 2016.

Other tax options include taxing e-liquid by volume or taxing a percentage of the wholesale or retail price of e-liquid. North Carolina applies a tax of \$0.05 per milliliter of e-liquid sold. Using the same 5.7 million milliliter estimate of taxable e-liquids sold in Arizona, this option would generate total revenue of \$283,700.

Minnesota applies a 95% tax on the wholesale price of e-liquid. Under this option, the JLBC Staff assumes the average wholesale price for 1 milliliter of e-liquid is \$1.80, or 72% of the average retail price of \$2.50. Applying a 95% tax on the wholesale price adds \$1.71 per milliliter and would generate total revenue of \$9.7 million.

In the state of Washington, there was a proposal to apply a 95% tax on the retail price of e-liquid. Applying a 95% tax on the retail price adds \$2.38 per milliliter. In that circumstance, the tax would generate total revenue of \$13.5 million.

The JLBC Staff estimates account for a tax avoidance factor. Tax avoidance may occur when consumers respond to the increased price of e-cigarettes by either reducing consumption or purchasing e-liquids online or in a nearby state that does not assess an excise tax on this merchandise. Under either

scenario, these sales (or lack of sales) reduce potential excise tax collections.

Because of these factors, the JLBC Staff assumes that 40% of e-cigarette related sales will avoid the excise tax. This estimate is based on the level of the market

online. Some online e-cigarette sales may be taxed, but the imposition of a new excise tax would encourage smokers to find tax-free online sources. If tax avoidance exceeds 40% of sales, then revenues would be lower than estimated.

**Table 1**

**State E-Cigarette Proposals**

| <u>State</u>                 | <u>Tax Rate</u>   | <u>Estimated Revenue</u> | <u>Estimated Revenue Per Smoker</u> |
|------------------------------|---|--------------------------|-------------------------------------|
| New Jersey                   | \$2.70 on retail price (same as cigarette tax rate)               | \$35,000,000             | \$22.73                             |
| Ohio                         | 49% of wholesale price  | 10,000,000               | 3.71                                |
| Minnesota <sup>1/</sup>      | 95% of wholesale price  | 9,600,000                | 9.42                                |
| North Carolina <sup>1/</sup> | \$0.05/mL   | 5,100,000                | 2.44                                |
| South Carolina               | \$0.05/mL   | 2,571,400                | 2.39                                |
| Washington <sup>2/</sup>     | 95% of taxable sales price  | 1,700,000                | 1.42                                |
| Rhode Island                 | 80% of wholesale price  | 750,000                  | 4.10                                |
| Vermont                      | 92% of wholesale price  | 500,000                  | 4.84                                |
| Oregon                       | 81.25% of wholesale price   | N/A                      | N/A                                 |
| Hawaii                       | 100% of wholesale price   | N/A                      | N/A                                 |
| Indiana                      | 24% of wholesale price  | N/A                      | N/A                                 |
| Kentucky                     | 15-40%  | N/A                      | N/A                                 |
| Massachusetts                | 90% of wholesale price  | N/A                      | N/A                                 |
| Michigan                     | \$0.15/1.5 mL and a proportionate rate on all fractions of 1.5 mL | N/A                      | N/A                                 |
| New York                     | 75% of wholesale price  | N/A                      | N/A                                 |
| <b>Arizona Tax Options</b>   |   |                          |                                     |
| Option 1                     | 95% of taxable sales price  | 13,477,300               | 11.89                               |
| Option 2                     | 95% of wholesale price  | 9,703,700                | 8.56                                |
| Option 3                     | 42.5% of retail price (equivalent to cigarette tax rate)          | 6,024,100                | 5.32                                |
| Option 4                     | \$0.05/mL   | 283,700                  | 0.25                                |

<sup>1/</sup> Minnesota and North Carolina are the only states that have adopted e-cigarette taxes.

<sup>2/</sup> Washington's FY 2015 revenue estimate assumes a lower annual tax compliance rate and e-cigarette sales than in subsequent fiscal years. In the 2015-2017 biennium (FY 2016 and FY 2017), the revenue estimate increases to an average of \$19.4 million each year.