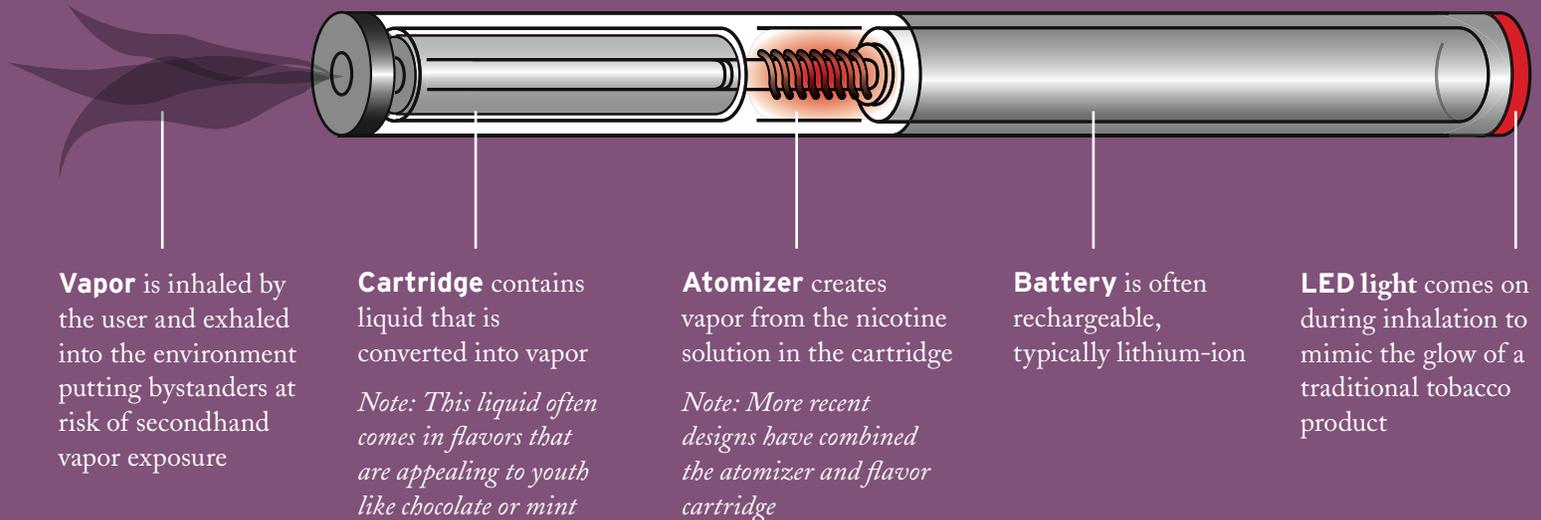


This fact sheet provides information about the public health concerns related to electronic smoking devices, the steps that have been taken to regulate electronic smoking devices, and what additional measures communities can take to limit access to and the availability of electronic smoking devices.

Regulating Toxic Vapor

A Policy Guide to Electronic Smoking Devices

Electronic smoking devices (also known as “electronic cigarettes,” “e-cigarettes,” “electronic nicotine delivery systems,” “e-cigars,” “e-cigarillos,” “e-pipes,” “e-hookahs,” “hookah pens,” etc.) are battery operated devices often designed to look like and be used in a similar manner to conventional tobacco products.¹ Electronic smoking devices are used to inhale a vaporized liquid solution that frequently, though not always, contains nicotine. Because the liquid solution is converted into vapor, electronic smoking device use is sometimes referred to as “vaping,” rather than smoking. The increasing popularity of electronic smoking devices, combined with loopholes in some existing tobacco control laws, have the potential to renormalize tobacco use.²



Policy Rationales for Restricting the Availability & Use of Electronic Smoking Devices

Hazardous Contents

Liquid solutions have addictive levels of nicotine sometimes 20 mg or higher³ and contain potentially life-threatening carcinogens and toxic chemicals.^{4,5} More than one study, including one conducted by the U.S. Food and Drug Administration (FDA), have found that electronic smoking devices contain a number of dangerous substances including tobacco-specific nitrosamines, which are human carcinogens;⁶ tobacco-specific impurities suspected of being harmful to humans like anabasine, myosmine, and β -nicotyrine;^{7,8} and inconsistent labeling of nicotine levels in electronic smoking device products.^{9,10} In one instance, diethylene glycol, an ingredient used in antifreeze and toxic to humans, was found.¹¹



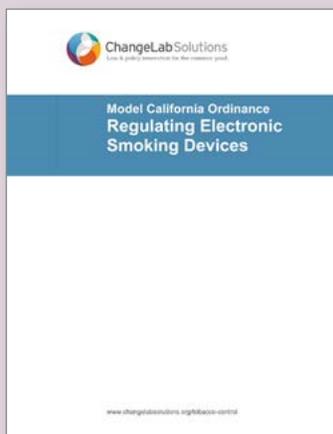
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Solutions**

Law & policy innovation
for the common good.

This fact sheet includes information about model language ChangLab Solutions has developed to assist California cities and counties interested in regulating electronic smoking devices. ChangeLab Solutions' model ordinances offer a variety of policy options that can be tailored to the specific goals and needs of a particular community. For more information, please visit www.changelabsolutions.org/landing-page/model-policies.

While ChangeLab Solutions' *Model California Ordinance Regulating Electronic Smoking Devices* was designed for

California communities, it can be adapted for use in other states. It is important to carefully review the existing law in your state, to understand the allowable regulations of other tobacco products, like electronic smoking devices. The best way to do this is to consult with an attorney licensed in your jurisdiction.



Exposure to Secondhand Vapor

The composition of the vapor emitted by an electronic smoking device has been found to contain several carcinogens, such as formaldehyde, acetaldehyde, lead, nickel, and chromium.^{12,13,14} Additionally, electronic smoking devices have been found to contain other hazardous substances such as PM_{2.5}, acrolein, tin, toluene, and aluminum,^{15,16,17} which are associated with a range of negative health effects such as skin, eye, and respiratory irritation,^{18,19,20,21} neurological effects,²² damage to reproductive systems,²³ and even premature death from heart attacks and stroke.²⁴

Though the quantity of these harmful compounds contained in the vapor emitted by electronic smoking devices is often less than what is found in traditional cigarette smoke,^{25,26} at least sodium, iron, aluminum, and nickel have been found in *higher* concentrations in emitted vapor than in cigarette smoke.^{27,28}

This is especially troubling given that more than one peer reviewed study has concluded that exposure to vapor from an electronic smoking devices may cause passive or secondhand vaping.^{29,30,31}

Rapid Growth in Popularity

There are over 400 brands of electronic smoking devices on the market.³² Awareness levels of electronic smoking device products among the general population has increased dramatically, from between 40.8 and 44.1 percent in 2010, to 60.9 percent in 2011.³³ Further, the number of current smokers who have ever used an electronic smoking device more than doubled between 2010 and 2011, with 21.2 percent of current smokers reporting they have tried electronic smoking devices in 2011.³⁴

Youth Appeal

The increase in use of electronic smoking devices among youth grades 6 to 12 is troubling. In 2012, 6.8 percent of all youth between 6th and 12th grade reported trying electronic smoking devices and 10 percent of high school students have tried them.³⁵

*Between 2011 and 2012, the percentage of all youth in grades 6 to 12 who had tried electronic smoking devices doubled.*³⁶

The solutions used in electronic smoking devices are often made in tempting flavors like chocolate and mint and are promoted as being healthy and environmentally friendly,³⁷ making them especially alluring to youth.³⁸ Recent national analyses of electronic smoking device users have indicated that young adults tend to be more likely to have tried them,³⁹ and that the perception of electronic smoking devices among smokers is that they are a safe alternative to cigarettes.⁴⁰

Some Electronic Smoking Devices Do Not Contain Tobacco

While many electronic smoking devices contain nicotine, some devices claim to be 100 percent nicotine and tobacco free.

Determining which electronic smoking devices are truly nicotine free may be difficult for local tobacco control enforcement, given that manufacturers are not required to disclose the ingredients that make up the liquid solution used in electronic smoking devices. Further, product testing has revealed that the information and ingredients listed on the packaging of electronic smoking devices can be misleading or incorrect.⁴¹

In some cases, vapor lounges or individuals create their own liquid solutions, and there is no way to be sure these homemade solutions are properly labeled or even safe for consumption. For these reasons, local jurisdictions may wish to regulate all electronic smoking devices, whether or not they contain nicotine. If so, communities will need to craft their policies carefully to ensure that all the products they wish to regulate are adequately covered (see the section, *Policy Options for Regulating the Use & Sale of Electronic Smoking Devices*, on page 5).

Renormalization of Tobacco Use

As electronic smoking devices are used in places where tobacco products' use has previously been prohibited, such as workplaces, restaurants, and bars, and as marketing of electronic smoking devices expands into outlets where other tobacco products are prohibited such as television commercials,⁴² electronic smoking devices have the potential to renormalize tobacco use. By encouraging experimentation with tobacco, especially among youth, electronic smoking devices have the potential to increase nicotine addiction among young people⁴³ and serve as a gateway to other tobacco products.⁴⁴

Lack of Regulations Ensuring Safety & Quality Control

Electronic smoking devices have often been represented as a safe alternative to cigarettes. However, there are significant concerns about the safety of these products. For example, the vapor inhaled by electronic smoking device users often contains nicotine levels that are inconsistent with their labeling. Two separate studies found that the nicotine levels of two individual products from different manufacturers were over 20 percent higher than what their labeling indicated.^{45,46}

Additionally, some cartridges can be refilled with liquid nicotine solution, creating the potential for exposure to dangerous concentrations of nicotine.⁴⁷ A recent analysis of electronic smoking device refill liquids found that “[t]he bottles of e-liquid are dangerous as they contain up to 720 mg of nicotine,” which is a potentially lethal amount of nicotine.⁴⁸

Poisonings from electronic smoking devices have increased dramatically in the last three and half years from “one [a month] in September 2010 to 215 a month in February 2014.”⁴⁹

Analysis of reports of poisonings from electronic smoking devices finds that people are more likely to report adverse health effects when compared to traditional cigarettes.⁵⁰

Clinical studies about the safety and efficacy of electronic smoking devices for their intended use have not been submitted to the FDA.⁵¹ This means that consumers have no way of knowing whether electronic smoking devices are safe for their intended use, what types or concentrations of potentially harmful chemicals the products contain, and what dose of nicotine the products deliver.



Public Health Support for the Regulation of Electronic Smoking Devices

The World Health Organization has strongly advised consumers against the use of electronic smoking devices until they are “deemed safe and effective and of acceptable quality by a competent national regulatory body.”⁵² The World Medical Association has determined electronic smoking devices “are not comparable to scientifically-proven methods of smoking cessation” and that “neither their value as therapeutic aids for smoking cessation nor their safety as cigarette replacements is established.”⁵³

Moreover, the State of California’s Tobacco Education and Research Oversight Committee (TEROC) “opposes the use of [electronic smoking devices] in all areas where other tobacco products are banned.”⁵⁴

The Legal & Regulatory Landscape

In many places, electronic smoking devices are completely unregulated. However, there is a growing patchwork of laws throughout the U.S. that regulate how electronic smoking devices are sold and, in some cases, where they are used. Here is an overview of the laws governing electronic smoking devices, as of May 2014. The current gaps in regulation are highlighted and the policy options available to local governments are explained.

At the Federal Level

As of February, 2014, the only existing federal restrictions on electronic smoking device use are as follows:

- The U.S. Department of Transportation interprets existing federal regulations against smoking on airplanes to apply to electronic smoking devices.⁵⁵
- The U.S. Air Force and U.S. Navy have both stated that their existing regulations governing tobacco use will apply to electronic smoking devices.^{56,57}

The 2009 Family Smoking Prevention and Tobacco Control Act (“the Tobacco Control Act”), which regulates the manufacturing and marketing of tobacco products, does not apply to electronic smoking devices, nor are electronic smoking devices subject to federal taxes. Therefore, no federal regulations currently exist for electronic smoking devices. There are also no federal regulatory standards for safety or quality control for electronic smoking devices before they can be sold to consumers. Under federal law, it is entirely legal to sell electronic smoking devices to children. Electronic smoking device advertisements are routinely seen on television, where conventional tobacco advertisements have not been seen for decades, and electronic smoking device manufacturers may freely introduce new products that have not been evaluated for safety.

The FDA issues the “deeming rule”

On April 25, 2014, the FDA took a significant step toward regulating these products by releasing its proposed “deeming rule,” which would extend the agency’s regulatory authority to a variety of tobacco products, including electronic smoking devices.⁵⁸ Although the Tobacco Control Act does not explicitly list all tobacco products by name, Congress gave FDA authority to issue a regulation deeming that any or all tobacco products are covered by the Tobacco Control Act. If the proposed deeming rule is finalized, it would extend several provisions of the Tobacco Control Act to electronic smoking devices. These provisions include the federal prohibition on sales to minors, the federal prohibition on free sampling, federal warning label requirements, and the requirement that tobacco manufacturers register with the FDA and seek the agency’s review of new tobacco products.

Until such time as the deeming rule is adopted, the FDA’s Center for Tobacco Products does not have authority to regulate the sale or use of electronic smoking devices as tobacco products. The FDA Center for Drug Evaluation and Research has limited authority to regulate electronic smoking devices as drugs or devices, but only if they are marketed for therapeutic purposes.⁵⁹

The FDA’s proposed deeming rule must go through a public notice and comment process before the agency can implement the rule, and the FDA will likely make changes to the rule in response to this process. Given the large volume of comments the agency has received, it will take at least a year, if not longer, for the FDA to implement the final rule. Thus, it is unclear when the FDA will release final regulations on electronic smoking devices.

The Deeming Rule & Preemption

Many jurisdictions have questions about whether the FDA deeming rule would affect state or local laws. The proposed deeming rule makes clear that state and local governments can continue to adopt and enforce laws relating to tobacco product sales, use, distribution, and advertising (within constitutional limitations). According to the deeming rule, these state and local laws can be “in addition to, or more stringent, than the requirements of the Tobacco Control Act and its implementing regulations.”⁶⁰ For example, the deeming rule would not affect states’ and localities’ ability to pass laws regulating where electronic smoking devices can be used, taxing electronic smoking devices, or requiring retailers to obtain a local license to sell electronic smoking devices. The deeming rule does identify some areas where local and state action could be preempted if the rule is finalized as written, including laws relating to manufacturing standards and labeling.

The popularity of electronic smoking devices has boomed, and calls to regulate them have increased at all jurisdictional levels.



At the State Level

In California, it is illegal to sell or otherwise furnish an electronic smoking device to a person under 18 years of age. For purposes of this state law, an electronic device is defined as a device that can deliver a dose of nicotine to the user through a vaporized solution.⁶¹ Local law enforcement agencies have the general authority to enforce this law under California Penal Code Section 830.1. Violators are subject to a fine of up to \$200 for a first violation; \$500 for a second violation; and \$1,000 for a third or subsequent violation.

The California smokefree workplace law, by contrast, does not expressly prohibit the use of electronic smoking devices in enclosed workplaces.⁶²

Local Policy Options for Regulating the Use & Sale of Electronic Smoking Devices

Regulating Use

Because the California state smokefree workplace law does not expressly prohibit the use of electronic smoking devices in places covered by that law,⁶³ many California communities are interested in prohibiting electronic smoking device use wherever conventional smoking is already prohibited. As discussed, it has been found that electronic smoking device vapor contains a variety of substances that are known to be toxic or carcinogenic. When electronic smoking devices are used in public places, bystanders may be involuntarily exposed to those chemicals resulting from secondhand vapor.

There is also considerable concern that the use of electronic smoking devices in places that are covered by a smokefree air law hinders enforcement of those laws.⁶⁴ Certain types of electronic smoking devices are often hard to distinguish from conventional cigarettes, and the confusion that results from inconsistently allowing their use in places where smoking is prohibited could have a chilling effect on enforcement of those laws altogether.⁶⁵ Relaxed enforcement of smokefree air laws could open the door for people to smoke conventional tobacco products in violation of smokefree laws without fear of consequences. Allowing electronic smoking device use in places that are otherwise smokefree also bears the risk of “re-normalizing” tobacco use, giving the mistaken impression that electronic smoking devices are safe or healthy rather than simply “less dangerous” than conventional cigarettes.⁶⁶

There are different ways for local governments to regulate electronic smoking device use. The most appropriate solution depends on whether there is an existing law in the jurisdiction that regulates smoking, and what the scope of any such law is.

The first step in regulating electronic smoking device use is therefore to review your local laws that govern smoking. In some cases, electronic smoking devices may actually be covered by an existing smokefree law.

To determine whether electronic smoking devices are covered by an existing smokefree law, look to see if the ordinances definition of “smoke” is broad enough to cover vapor or aerosol, or if the definition of “smoking” expressly includes the use of electronic smoking devices, electronic cigarettes, electronic nicotine delivery systems, personal vaporizers, etc.

If it is determined that a jurisdiction’s existing smokefree air law already applies to electronic smoking devices, the next step is to determine if that law is being enforced. It’s possible that law enforcement may not be aware that the law applies to electronic smoking devices.

Amending an existing smokefree air law

For California jurisdictions that already have a local smokefree air law, one way to address electronic smoking devices is to amend the definitions of “smoke” and “smoking” in the law to explicitly include “electronic smoking device vapor” and “electronic smoking device use.” For model definitions of “smoke” and “smoking” that cover electronic smoking devices, see ChangeLab

More than one peer reviewed study has concluded that exposure to vapor from a electronic smoking devices may cause passive or secondhand vaping.^{67,68,69}

Solutions’ *Model Comprehensive Smokefree Places Ordinance*.⁷⁰ Advocates who take this approach should be mindful of the fact that opening up any law to add an amendment gives potential opponents the opportunity to weaken it. For example, opponents might try to narrow the scope of places where smoking is prohibited.

In California, many cities and counties have smokefree air laws that cover some outdoor areas, but do not cover indoor workplaces, which are smokefree under state law. If one of these cities were to amend its ordinance to cover electronic smoking devices merely by updating its definitions of “smoke” and “smoking”, it would still not cover electronic smoking device use in indoor workplaces because the change still only applies to those places covered by *local* law. For this reason, in addition to updating its definitions of “smoke” and “smoking”, the jurisdiction would also need to amend its local smokefree air law to expressly prohibit the use of electronic cigarettes in those places of employment covered by the state smokefree workplace law.

Adopting a stand-alone law

Another option is to pass a stand-alone law specifically to prohibit electronic smoking device use in any place where smoking is prohibited by law. The advantage of this approach is that it provides a catch-all to regulate electronic smoking device use in exactly the same way as conventional tobacco use, regardless of whether existing smokefree air laws are local, state, or federal, and would apply prospectively to any future smokefree air laws passed in that jurisdiction. This approach does not require any existing law to be amended, reducing the likelihood that opponents could use the opportunity to weaken or repeal it. For model language prohibiting electronic smoking device use in places where smoking is prohibited, see ChangeLab Solutions' *Model California Ordinance Regulating Electronic Smoking Devices*.⁷¹

Adopting a new smokefree air law & working with private companies

Finally, there are some jurisdictions where there may not yet be a local smokefree air law. These jurisdictions are completely free to include electronic smoking devices in any smokefree air law drafted in the future.

It's important to remember that many locations are also subject to voluntary smokefree policies created by individual property owners/managers or businesses. For example, the Starbucks Coffee Company prohibits smoking in all outdoor seating areas in its cafes.⁷² Many hotel chains, such as Marriot and Westin, have also adopted policies to prohibit smoking entirely on their premises.⁷³ Private entities have a free hand to prohibit electronic smoking device use, and communities can work with them to develop or enhance such policies.

To help determine the most appropriate solution for a specific community to address electronic smoking device use, ChangeLab Solutions has developed a visual flow chart, which is available on our website at: www.changelabsolutions.org/publications/e-cig-ord.

Regulating Sales

In California, localities can regulate how electronic smoking devices are sold in a variety of ways, up to and including prohibiting the sale of electronic smoking devices altogether. In practice, when deciding precisely how to regulate electronic smoking devices, many jurisdictions seek to achieve consistency with existing laws governing conventional cigarettes and other tobacco products.

For example, jurisdictions may: prohibit the sale of electronic smoking devices to minors and require retailers to check ID; require retailers to keep electronic smoking device paraphernalia/accessories behind the counter; and prohibit the distribution of free samples of electronic smoking devices.

As of May 2014 "71 cities and counties in California [require] retailers to obtain a license to sell e-cigarettes."⁷⁴

Any jurisdiction wishing to regulate sales of electronic smoking devices should first become familiar with the scope of existing laws regarding tobacco. It is possible that existing laws regulating tobacco sales (e.g. a local tobacco retailer licensing law) already apply to electronic smoking devices. To determine whether an existing sales restriction applies to electronic smoking devices, look to the definitions in the law ("tobacco," "tobacco product," etc.). In many cases, a law has a very inclusive definition of tobacco that includes all products that contain nicotine (and would therefore apply to electronic smoking devices that contain nicotine, or that are packaged with cartridges or e-liquid containing nicotine). In other cases, electronic smoking devices may be mentioned directly. If it is determined that existing tobacco laws in a jurisdiction already apply to electronic smoking devices, the next step is to determine if those laws are being enforced. It's possible that law enforcement may not be aware that the law(s) apply to electronic smoking devices.

Amending an existing tobacco retailer licensing law

In cases where a local jurisdiction has an existing law governing tobacco sales that does not apply to electronic smoking devices, it is possible to amend that law to cover those products. One way to do this is to broaden the definitions of "tobacco product" and "tobacco paraphernalia," to cover electronic smoking devices and their associated products, such as e-liquid. This can be done simply by referencing these products by name in the definitions.



For model definitions that cover electronic smoking devices in this way, contact ChangeLab Solutions for assistance.* The advantage of this approach is that it is a simple way to uniformly and consistently apply a variety of tobacco laws to electronic smoking devices.

However, there are some reasons to be cautious with this approach. For example, opening up an existing law to the amendment process creates an opportunity for opponents of the law to limit the law's scope to (for instance) exempt certain types of products from the definition of "tobacco product" like new dissolvable tobacco or nicotine lozenges. This approach is also problematic in that it only affects the laws of the specific jurisdiction. If a city or county has a law prohibiting tobacco vending machines, and they amend the definition of "tobacco product" in their municipal code so that it includes electronic smoking devices, it would not address regulatory gaps at the state level, e.g. a state law like California's which prohibits self-service displays of tobacco products but does not prohibit self-service displays of electronic smoking devices.

Adopting a stand-alone law

In lieu of amending an existing tobacco retailer licensing law, a jurisdiction can adopt a stand-alone ordinance that regulates electronic smoking device in all the same ways that conventional tobacco products are regulated. For example, local governments can require retailers to check the ID of people who purchase electronic smoking device, prohibit self-service displays of electronic smoking devices, and prohibit retailers from giving out free samples to the public. Several states including California⁷⁵ have passed stand-alone laws that prohibit the sale of electronic smoking devices to minors. Many local governments in jurisdictions around the country have passed similar laws.⁷⁶ For communities that are interested in stand-alone laws such as these, see ChangeLab Solutions' *Model California Ordinance Regulating Electronic Smoking Devices* as a reference.⁷⁷

* Note, in some cases a jurisdiction may wish to regulate only those electronic smoking devices that contain nicotine or that can be used to deliver nicotine. This can be done by amending the definition of "tobacco product" to include all products containing nicotine that is either derived from tobacco or synthetically produced, and by changing the definition of tobacco or smoking-related "paraphernalia" to include devices that can be used to deliver a tobacco or nicotine product. For more on this approach, see ChangeLab Solutions' *Model Tobacco Retailer Licensing Ordinance* at: www.changelabsolutions.org/publications/model-TRL-Ordinance



Adopting a new tobacco retailer licensing (TRL) law

Local jurisdictions that don't already have a tobacco retailer licensing law might consider adopting one that covers both traditional tobacco products and electronic smoking devices and the various liquids sold with them as tobacco products and tobacco or smoking paraphernalia. Tobacco retailer licensing laws require retailers to abide by all applicable local, state and federal tobacco laws in order to maintain their license, and can contain a wide variety of additional conditions. For example, a TRL law may require retailers to agree not to sell electronic smoking devices to minors, to keep all electronic smoking devices behind the counter, or to agree not to give out electronic smoking device samples to prospective customers.

The advantage of including electronic smoking devices in a TRL law is that the requirements for tobacco retailing can be consistently applied to electronic smoking devices and other tobacco products in a uniform way, simplifying and streamlining enforcement. There are numerous city and county governments which have enacted TRL laws that apply to electronic smoking devices along with all other tobacco products.⁷⁸ For more information about tobacco retailer licensing, see *License to Kill? Tobacco Retailer Licensing as an Effective Enforcement Tool*, as well as ChangeLab Solutions' *Model Tobacco Retailer Licensing Ordinance*.⁷⁹

Taxing Electronic Smoking Devices

Finally, it may be possible for state and/or local governments to levy taxes on electronic smoking devices. In most jurisdictions, electronic smoking devices are currently not taxed the way that cigarettes and other tobacco products are, and federal law does not preempt state or local governments from taxing electronic smoking devices.

Numerous studies have shown that one of the most clearly effective ways of reducing tobacco use, particularly among minors, is to increase the price of those products.⁸⁰ Not only do higher excise taxes on tobacco products lower rates of use, but they also create a source of revenue that can be used to offset health costs related to tobacco and to fund public health efforts.⁸¹

If there is not an existing state or local law that levies a tax on electronic smoking devices, it may be possible to enact one in order to bring taxes on these products more in line with the taxes on conventional cigarettes and/or other tobacco products. Policy questions that may arise include how to set the taxation rate given the many different forms in which electronic smoking devices and their components are sold, and whether the taxation rate should be lower than the rate for conventional tobacco products. Minnesota is the first state in the country to tax electronic smoking devices as a tobacco product. Although the law itself does not explicitly mention electronic smoking devices, the definition of “tobacco products” is broad enough to cover any product that contains or is derived from tobacco.⁸² The Minnesota Department of Revenue has issued a notice clarifying that in its opinion the tobacco products tax applies to electronic smoking devices.⁸³ As of January 2014, several other states are considering this strategy, for example Delaware, Maine, Massachusetts, New Mexico, Oklahoma, and Utah.⁸⁴

Electronic Smoking Devices & the Minnesota Department of Revenue

In October, 2012, the Minnesota Department of Revenue clarified its position that the state’s tobacco products tax applies to electronic smoking devices. More specifically, the notice states that electronic smoking devices (or any components thereof) that contain nicotine constitute tobacco products under the assumption that all nicotine is derived from tobacco. Products containing nicotine that are not derived from tobacco are exempt from the tax; however, the burden is on the taxpayer to prove this to the department. Furthermore, the sales price of an entire electronic smoking device “kit” or package is subject to the tax unless a wholesaler sells the nicotine-containing component (such as a cartridge or liquid bottle) separately and can isolate the cost of the product.

How We Can Help

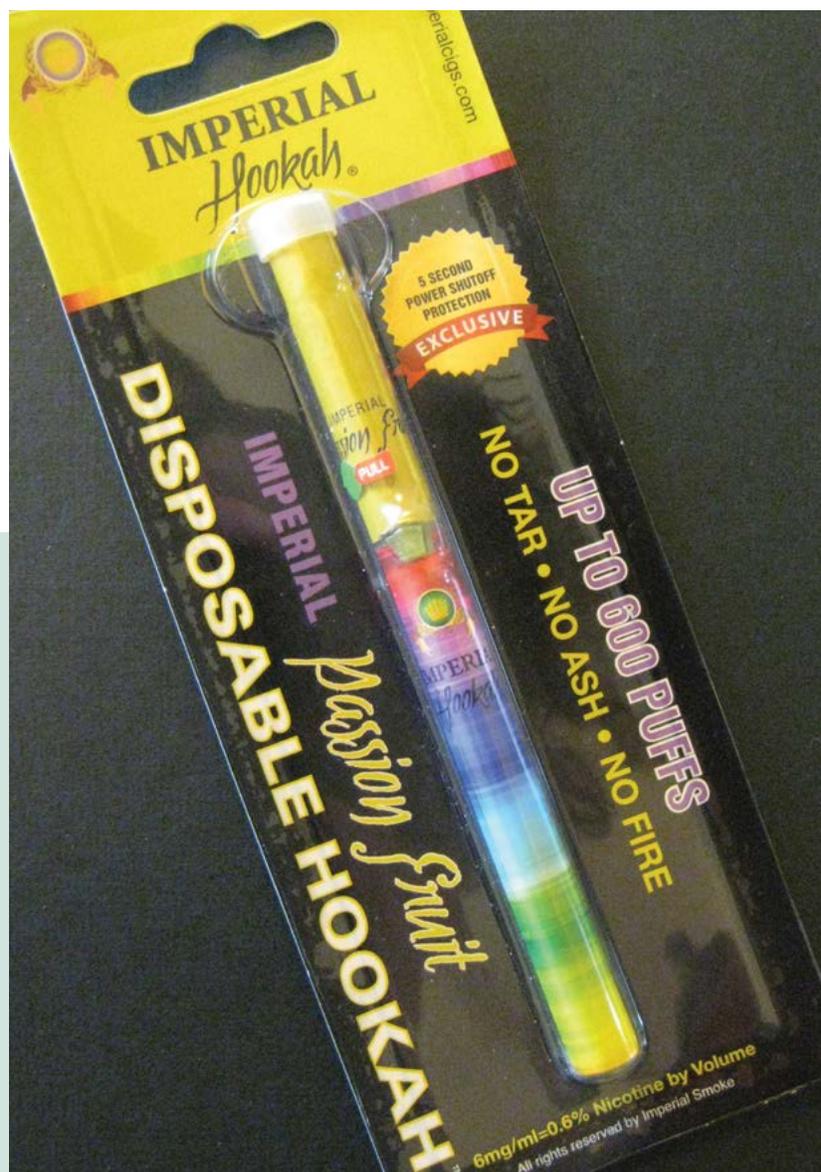
Additional materials related to electronic smoking devices are available on our [website](#) including our *Model California Ordinance Regulating Electronic Smoking Devices*.

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