HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: CS/HB 47 Firesafety Devices
SPONSOR(S): Insurance & Banking Subcommittee; Hooper
TIED BILLS: **IDEN./SIM. BILLS:** CS/SB 264

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
1) Insurance & Banking Subcommittee	11 Y, 1 N, As CS	Vanlandingham	Cooper
2) Business & Professional Regulation Subcommittee	12 Y, 0 N	Collins	Luczynski
3) Regulatory Affairs Committee			

SUMMARY ANALYSIS

When working properly, smoke alarms reduce the risk of death in a fire by 50-75 percent. Ninety-five percent of all homes have at least one smoke alarm; however, studies show that the alarms in up to a fifth of homes are not working, and these homes account for a disproportionate share of fire deaths.

The primary reason why smoke alarms fail is a missing, disconnected, or dead battery. In reported home fires in which battery-operated smoke alarms were present but failed to sound, 87 percent of these alarms had batteries that were missing, disconnected, or dead.

To reduce the incidence of battery failure in smoke alarms, the bill requires the gradual adoption of tamper-resistant smoke alarms powered by a non-removable lithium “long life” battery designed to last for 10 years. In jurisdictions that have adopted similar measures, data indicate a significant decline in alarm failures.

The bill does not require existing smoke alarms to be immediately replaced. Instead, the provision applies to new installations and applies when existing smoke alarms are replaced. Manufacturer comments generally indicate that smoke alarms should be replaced every ten years.

The bill does not apply to new construction, because it exempts any smoke alarm or fire alarm system that is electrically wired or connects to a panel. Current residential building codes already require smoke alarms to be wired to commercial power.

It is uncertain how quickly the new model smoke alarms would be installed, because the bill does not call for any new inspections, and single-family and duplex homes do not typically receive fire inspections. However, public, commercial, and multi-family apartment buildings are regularly inspected, and to the extent these buildings do not already meet the new standard, they would have to when replacing existing smoke alarms.

The bill has an indeterminate, but insignificant fiscal impact. See fiscal comments.

The bill has an effective date of July 1, 2013.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Current Situation

Generally

Home fires kill an average of 2,650 citizens a year in the United States and injure 12,890 more.[1] A disproportionate share of fire deaths occur in homes without working smoke alarms. While only 37 percent of reported home fires occur where there is no working smoke alarm, such fires account for nearly two thirds (62 percent) of all home fire deaths.

In contrast, homes with working smoke alarms have a significantly reduced risk of fire death. Between 2005 and 2009, the risk of fire death in a home with a working smoke alarm was 50 to 75 percent lower than the risk of fire death in homes that had no working smoke alarm.

Ninety-five percent of all homes have at least one smoke alarm. However, studies show that the alarms in up to a fifth of these homes are not working. The primary reason why smoke alarms fail is a missing, disconnected, or dead battery. Specifically, in reported home fires in which battery-operated smoke alarms were present but failed to sound, more than half (59 percent) of the alarms had missing or disconnected batteries. Moreover, in an additional 28 percent of these alarms failures, the batteries were dead.

Smoke Alarms powered by Non-Removable Lithium "Long Life" Batteries

Traditional smoke alarms powered by 9-volt batteries can easily be disabled when someone removes or fails to replace its battery. However, new model smoke alarms are powered by non-removable lithium "long life" batteries that are sealed into the housing of the alarm, making them tamper-resistant and addressing the issue of disablement and failed maintenance by consumers. In addition, the batteries are designed to last for 10 years, consistent with the national smoke alarm standard requiring all smoke alarms be replaced after 10 years of operation.[2]

In the past few years, several jurisdictions have adopted measures to require these new model smoke alarms in certain properties, including the states of California, Louisiana, Michigan, North Carolina, and Oregon, and the cities of Philadelphia, Pennsylvania, and Madison and Milwaukee, Wisconsin.

In 1999, the State of Oregon adopted a requirement that all solely battery-powered smoke alarms sold in the State must have 10-year life batteries. Preliminary Oregon State Fire Marshal data suggest that since these requirements went into effect, there has been a 37 percent decline in alarm failures due to dead or missing batteries.[3]

Effect of Proposed Changes

The bill amends s. 633.025(9), F.S., to require that any battery-operated smoke detector installed on or after January 1, 2014, contain a built-in battery capable of powering the smoke detector for at least 10 years. The bill does not require existing smoke alarms to be immediately replaced. Instead, the provision applies to new installations and applies when an existing smoke alarm is replaced. Manufacturer comments generally indicate that smoke alarms should be replaced every 10 years.

[1] Fire Safety data from National Fire Protection Association, "Smoke Alarms in U.S. Home Fires," September 2011.
[2] National Fire Alarm Code, NFPA 72.
[3] California State Fire Marshal, Smoke Alarm Task Force Final Report Analysis and Recommendations, August 2011.

The requirements of the bill would raise Florida's minimum fire-safety standards. Current law enables local authorities, including a municipality, county, or special district with fire-safety responsibilities, to adopt standards that are more stringent.[4]

The bill also clarifies that its effect is applicable to newly-constructed one-family and two-family dwellings, notwithstanding language in what would become s. 633.025(10), F.S., stating that "the provisions of the Life Safety Code shall not apply to newly constructed one-family and two-family dwellings." The Life Safety Code is part of the Florida Fire Prevention Code, which provides Florida's minimum fire safety standards.

Application

The legislation excludes and does not apply to any electrically-operated smoke alarm, a fire alarm system with a smoke detector, a fire alarm device that connects to a panel, or any similar device that uses a low-power radio frequency wireless communication signal.

This means that the bill does not have an effect on most new construction, because the current Florida Building Code already requires that "smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source."[5]

Enforcement

It is uncertain how quickly the new model smoke alarms would be installed. The bill does not mandate any new inspections, nor does it prohibit the sale of old-model smoke alarms operated by 9-volt batteries.

Currently, existing single-family and duplex homes are not inspected by any state or local authority, unless those homes are being substantially renovated. Such homeowners are generally left to self-comply with applicable fire-safety regulations.

In contrast, public, commercial, and multi-family apartment buildings are regularly inspected. The Bureau of Fire Prevention, Division of State Fire Marshall, conducts annual inspections of more than 14,000 state-owned buildings and facilities. Counties, cities and local fire marshals and inspectors (collectively known as Authorities Having Jurisdiction, or AHJs) conduct regular inspections of commercial properties and multi-family apartment buildings.

B. SECTION DIRECTORY:

Section 1: creates s. 633.025(9), F.S., to require certain battery-operated smoke alarms to meet specified standards.

Section 2: provides an effective date of July 1, 2013.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

   None.

2. Expenditures:

   Indeterminate, but likely insignificant, as the bill does not require any new inspections.

[4] Section 633.025(4), F.S.
[5] R314.4, 2010 Florida Building Code, Residential, effective March 15, 2012 to current.

Per Florida's fire safety and building codes, many state buildings already have fire safety systems that are wired to power or otherwise meet standards that are more stringent than those called for by the bill, and thus are exempted.

For those state facilities or buildings that do use battery operated smoke alarms and would be required to install 10-year smoke alarms, there would be an associated cost; however, this cost would be defrayed over the life of the alarm because fewer batteries would have to be purchased. Any labor cost associated with such battery replacement would also be eliminated.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

2. Expenditures:

Indeterminate, but likely insignificant, as the bill does not require any new inspections.

As stated above, pursuant to the state's fire safety and building codes, many public buildings already have fire safety systems that are wired to power or otherwise meet standards that are more stringent than those called for by the bill, and thus are exempted.

For those public facilities or buildings that do use battery operated smoke alarms and would be required to install 10-year smoke alarms, there would be an associated cost; however, this cost would be defrayed over the life of the alarm because fewer batteries would have to be purchased, and any labor cost associated with such battery replacement would also be eliminated.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

Tamper-resistant smoke alarms operated by 10-year batteries bear a higher up-front cost than smoke alarms operated by 9-volt batteries, but this difference diminishes over the life of the alarm. Sealed 10-year lithium battery-operated smoke alarms retail for about $20, while an ionization smoke alarm with a 9-volt battery retails on average for $10-12.

However, fire safety officials encourage homeowners to change their alarm's batteries at least once per year, and 9-volt batteries retail for two or three dollars. Thus, consumers who do not have to purchase batteries for the 10-year smoke alarm can actually save money over the life of the alarm.[6] Any labor cost associated with such battery replacement would also be eliminated.

In light of these facts, it appears that the only way a consumer could save money using a smoke alarm powered by 9-volt batteries over the life of the alarm is if they failed to replace their batteries as recommended. Such failed maintenance increases the likelihood that the smoke alarm will fail to operate, providing the impetus for this legislation. As a result, the cost to the consumer is insignificant, if not reduced, by the use of the 10-year lithium battery.

D. FISCAL COMMENTS:

None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

[6] National Association of State Fire Marshals, Science Advisory Committee, Recommendation on Updates to the NASFM Smoke Alarm Guidance Document Regarding the Use of 10-Year Long-Life Batteries, April 2012.

The bill does not appear to require counties or municipalities to spend funds or take an action requiring the expenditure of funds, reduce the authority that counties or municipalities have to raise revenues in the aggregate, or reduce the percentage of a state tax shared with counties or municipalities.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

None.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/ COMMITTEE SUBSTITUTE CHANGES

On February 13, 2013, the Insurance & Banking Subcommittee considered the bill and adopted an amendment clarifying that the bill's effect is applicable to one-family and two-family dwellings. The analysis has been updated to reflect the change made by adoption of the amendment.