

Department of Planning and Budget 2018 Fiscal Impact Statement

1. Bill Number: HB58

House of Origin	<input checked="" type="checkbox"/>	Introduced	<input type="checkbox"/>	Substitute	<input type="checkbox"/>	Engrossed
Second House	<input type="checkbox"/>	In Committee	<input type="checkbox"/>	Substitute	<input type="checkbox"/>	Enrolled

2. Patron: Bell, John J.

3. Committee: General Laws

4. Title: State agencies; use of light-emitting diodes (LEDs) on outdoor lighting fixtures.

5. Summary: Requires any state agency that installs, replaces, or maintains an outdoor lighting fixture to use LEDs instead of traditional incandescent light bulbs when installing new outdoor lighting fixtures or replacing nonfunctioning bulbs on existing outdoor lighting fixtures unless the appropriate agency authority determines it is not cost efficient to do so. The bill creates an exception to these requirements for the installation or replacement of light bulbs on state-owned property that is listed individually on the Virginia Landmarks Register or is certified by the Director of the Virginia Department of Historic Resources as contributing to the historic significance of a historic district that is listed on the Virginia Landmarks Register. The bill also provides for the Department of General Services to include the requirement for the use of LEDs in the agency's purchasing regulations. Contracts entered into by the Department of Transportation on and after July 1, 2019, are subject to the requirement.

6. Budget Amendment Necessary: No.

7. Fiscal Impact Estimates: Indeterminate; see Item 8.

8. Fiscal Implications: The fiscal impact is indeterminate due to the many factors affecting lighting cost such as; lighting application, purchase price of the bulb, and the cost of energy. The bill requires light-emitting diodes (LEDs) to be used instead of traditional incandescent light bulbs when installing new outdoor lighting fixtures or replacing nonfunctioning light bulbs on existing outdoor fixtures unless a determination is made that LED use is not cost efficient or the property is listed individually or certified as contributing to a historic district on the Virginia Landmarks Register.

Although LED bulbs are often more expensive than incandescent bulbs upfront, they also have a longer life expectancy and are more energy efficient. Comparisons of the life expectancy and energy costs of incandescent and LED bulbs suggest that LEDs can be more cost effective in many lighting applications over the long term. According to Energy Saver (the U.S. Department of Energy's consumer resource on saving energy and using renewable energy technologies), LED bulbs typically use about 25 to 80 percent less energy than traditional incandescent bulbs and can last 3 to 25 times longer. As an illustration, Energy Saver compared bulbs having similar light levels. The bulbs used were a 60-watt

incandescent bulb and a 12-watt LED bulb. The findings indicated that the incandescent bulb's life expectancy averaged about 1,000 hours whereas the LED bulb averaged about 25,000 hours (or about 25 times longer) and the LED's annual energy cost was about 80 percent less than the incandescent.

In some cases, lighting fixtures are not capable of handling an LED bulb and would need to be replaced in order to accept an LED, which would be an additional upfront cost.

Virginia Department of Transportation Impact:

The Virginia Department of Transportation (VDOT) currently owns approximately 50,000 roadway lighting fixtures. Approximately three to five percent of all fixtures use LED bulbs and all others use high pressure sodium (HPS) bulbs. The bill requires LEDs to be used "instead of traditional incandescent light bulbs." Therefore, it is not expected to affect VDOT lighting.

9. Specific Agency or Political Subdivisions Affected: All state public bodies, to include authorities, departments, agencies, and institutions of the Commonwealth.

10. Technical Amendment Necessary: No.

11. Other Comments: If VDOT were to convert existing HPS fixtures to LEDs as they burned out, it would be expected to cost approximately \$2.0 million per year over five years. This is based on the assumption of 10,000 replacements per year over the typical five-year life span of a HPS fixture at a cost of \$200 per fixture. When replacing a HPS fixture with LED technology, the entire fixture must usually be replaced and not just the "bulb," which contributes to the initial upfront cost.

Date: 1/25/2018