

LEGISLATIVE FISCAL ESTIMATE

[First Reprint]

ASSEMBLY, No. 4933

STATE OF NEW JERSEY 220th LEGISLATURE

DATED: SEPTEMBER 7, 2023

SUMMARY

- Synopsis:** Requires DOT to develop program to implement adaptive traffic signal technology at certain intersections.
- Type of Impact:** Annual State expenditure increase.
- Agencies Affected:** Department of Transportation.

Office of Legislative Services Estimate

Fiscal Impact	<u>Annual</u>
State Expenditure Increase	Indeterminate

- The Office of Legislative Services (OLS) estimates that the bill would result in an indeterminate increase in Department of Transportation expenditures associated with the implementation of a program to employ adaptive traffic signal technology, or the best available traffic signal technology, at certain intersections throughout the State that are maintained by the department.
- The cost increases would stem from the establishment and implementation of the program, the development of a traffic threshold, and the installment of advanced adaptive traffic signal technology, or the best available traffic signal technology, at qualifying intersections throughout the State.
- The OLS is unable to quantify the potential fiscal impact of the bill because: (1) the type and cost of adaptive traffic signal technology, or the best available traffic signal technology, to be used in the program is not known; (2) the traffic threshold, to be developed by the department pursuant to the bill, is unknown, so the OLS is unable to determine the number of intersections that will qualify for the employment of adaptive traffic signal technology, or the best available traffic signal technology; and (3) it is unknown how frequently adaptive traffic signal technology, or the best available traffic signal technology, would be employed since the OLS is unable to determine how often traffic signals are inspected, serviced, or replaced.

- For reference, the OLS notes that a Florida state report from 2019 estimated that the cost of implementing adaptive signal control technologies in seven traffic corridors in different areas of that state ranged from \$30,000 to \$96,400 (in nominal dollars) per intersection.

BILL DESCRIPTION

The bill requires the Department of Transportation to establish and implement a program to employ adaptive traffic signal technology, or the best available traffic signal technology, at certain intersections of roads and highways that are maintained by the department and meet the traffic threshold established by the department pursuant to the bill.

The bill requires the department to develop a traffic threshold for intersections of roads and highways based on the volume and speed of through traffic. Meeting the traffic threshold would signify that the intersection qualifies for the employment of adaptive traffic signal technology, or the best available traffic signal technology, under the program. Once an intersection meets the traffic threshold, adaptive traffic signal technology, or the best available traffic signal technology, would be required to be installed at the intersection during inspection, servicing, or replacement of the traffic signals.

The bill also requires that the department consider practicality, financial feasibility, and the danger or limits on pedestrian travel when employing the technology at intersections.

FISCAL ANALYSIS

EXECUTIVE BRANCH

None received.

OFFICE OF LEGISLATIVE SERVICES

The OLS estimates that the bill would result in an indeterminate increase in State expenditures associated with the Department of Transportation's implementation of a program to employ adaptive traffic signal technology, or the best available traffic signal technology, at certain intersections throughout the State that are maintained by the department. The cost increases would stem from the establishment and implementation of the program, the development of a traffic threshold, and the installment of advanced adaptive traffic signal technology, or the best available traffic signal technology, at qualifying intersections throughout the State.

However, the OLS is unable to quantify the magnitude of these potential expenditures because: (1) the type and cost of adaptive traffic signal technology, or the best available traffic signal technology, is not known; (2) the traffic threshold, to be developed by the department pursuant to the bill, is unknown, so the OLS is unable to determine the number of intersections that will qualify for the employment of adaptive traffic signal technology, or the best available traffic signal technology; and (3) it is unknown how frequently adaptive traffic signal technology, or the best available traffic signal technology, would be employed since the OLS is unable to determine how often traffic signals are inspected, serviced, or replaced.

As noted by the Federal Highway Administration, "[a]daptive signal control technology adjusts the timing of red, yellow and green lights to accommodate changing traffic patterns and ease traffic congestion." The federal agency also provides on its website information on certain

state-level efforts to implement adaptive traffic signal technology; for purposes of this fiscal estimate, the most pertinent of these appears to be a Florida project. For reference, the OLS notes that a University of Florida Transportation Institute report entitled “Before and After-Implementation Studies of Advanced Signal Control Technologies in Florida,” submitted to that state’s Department of Transportation and published on August 29, 2019, estimated that the cost of implementing adaptive signal control technologies in seven traffic corridors ranged from \$30,000 to \$96,400 (in nominal dollars) per intersection. These traffic corridors were located in various parts of the state, the installation of the adaptive signal control technology occurred between November 2014 and April 2017, and the amounts noted above include equipment, installation, training, and maintenance costs.

Section: Authorities, Utilities, Transportation and Communications

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This legislative fiscal estimate has been produced by the Office of Legislative Services due to the failure of the Executive Branch to respond to our request for a fiscal note.

This fiscal estimate has been prepared pursuant to P.L.1980, c.67 (C.52:13B-6 et seq.).