

Department of Legislative Services
 Maryland General Assembly
 2023 Session

FISCAL AND POLICY NOTE
 First Reader

House Bill 719 (Delegate Bagnall)
 Appropriations

Public Schools - Heating, Ventilation, and Air-Conditioning Systems and Carbon Dioxide Monitors - Monitoring and Reporting Requirements

This bill requires the Interagency Commission on School Construction (IAC) to complete a statewide heating, ventilation, and air-conditioning (HVAC) system assessment of all public school facilities, as specified, by July 1, 2025. Following the assessment, IAC must develop uniform HVAC standards and incorporate them into existing facility sufficiency standards. Local school systems must develop and implement plans for corrective actions in response to the assessment. The bill also requires local school systems to require every public school classroom to be equipped with a carbon dioxide monitor, as specified. **The bill takes effect July 1, 2023.**

Fiscal Summary

State Effect: General fund expenditures increase by as much as \$75.1 million in FY 2024 for IAC to conduct the statewide HVAC assessment; contractual staffing costs to oversee the assessment continue until the assessment is complete. No effect on revenues.

| (in dollars) | FY 2024 | FY 2025 | FY 2026 | FY 2027 | FY 2028 |
|----------------|----------------|-------------|---------|---------|---------|
| Revenues | \$0 | \$0 | \$0 | \$0 | \$0 |
| GF Expenditure | 75,089,200 | 104,400 | 0 | 0 | 0 |
| Net Effect | (\$75,089,200) | (\$104,400) | \$0 | \$0 | \$0 |

Note: () = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate increase; (-) = indeterminate decrease

Local Effect: Local school system expenditures increase significantly, likely by tens of millions of dollars statewide, to remediate HVAC deficiencies and install carbon dioxide detectors in every classroom. No effect on revenues. **This bill imposes a mandate on a unit of local government.**

Small Business Effect: Meaningful.

Analysis

Bill Summary:

Statewide Assessment

The statewide assessment of HVAC systems in public schools must include specified elements, be completed by a certified testing and balancing (TAB) technician, and be reviewed by a mechanical engineer. The mechanical engineer must (1) verify and, if necessary, adjust the estimated minimum outside air ventilation rates; (2) determine what, if any, additional adjustments, repairs, upgrades, or replacements are needed to meet specified standards; and (3) provide a cost estimate for any additional adjustments, repairs, upgrades, or replacements.

The corrective plan developed and implemented by local school systems must address specified items and may include additional items. Local school systems may not use portable filtration and air cleaners to address any corrective measures, except as specified. Repairs must be made by a mechanical engineer and any adjustments to HVAC systems must generally be completed by a certified TAB technician.

The Maryland State Department of Education (MSDE) must enter the HVAC assessment data into the Integrated Master Facility Asset Library (IMFAL) required under current law and make each assessment available as a stand-alone report.

Carbon Dioxide Detectors

Carbon dioxide detectors required to be installed in every classroom by the bill must include specified features, including the capacity to notify the teacher, through visual indicator or through other electronic means, when the carbon dioxide levels in the classroom have exceeded specified levels.

To ensure that peak carbon dioxide concentrations in a classroom remain below dangerous levels, local school systems must take specified actions if the carbon dioxide level exceeds those levels for more than 15 minutes at least five times in a month. MSDE may alter the required actions to reflect available technology and to achieve the bill's intent.

Current Law: Chapter 14 of 2018, the 21st Century School Facilities Act, required IAC, in consultation with local school systems, to adopt educational facilities sufficiency standards for Maryland public schools by July 1, 2018. The standards are defined as a uniform set of criteria and measures for evaluating the physical attributes and educational suitability of public elementary and secondary school facilities in the State. The standards include specified categories, and they must be reviewed and updated periodically.

Chapter 14 also required IAC to develop a facility condition index, which is a calculation to determine the relative physical condition of public school facilities by dividing the total repair cost of a facility by its total replacement cost.

Chapter 14 also required IAC to complete an initial statewide facilities assessment using the sufficiency standards by July 1, 2019. In completing the assessment, IAC had to incorporate the index, contract with an independent third-party vendor to conduct the data collection and assessment, use existing data sources to the extent possible, and coordinate with local school systems to identify data elements to be used. Due to procurement delays, the assessment was not completed until July 2021.

Chapter 32 of 2022 required that future inspections of school buildings to update the statewide facility assessment must include specified items for each school building, including temperature, humidity, carbon dioxide levels, and the functionality of specified building systems, among others. During an inspection, if any of certain specified items rises to such a severe level that requires the school to be closed, the local school system must submit a plan to IAC on how it will address the issue, and IAC must work to prioritize funding to address the issue.

Based on recommendations by the Workgroup on the Assessment and Funding of School Facilities, IAC was required to adopt regulations by May 1, 2020, that establish the use of facility assessment results in annual school construction funding decisions beginning no earlier than fiscal 2021. The workgroup ultimately recommended postponing the use of the results of the facility assessment for funding purposes until fiscal 2027 at the earliest.

IAC must enter the facility assessment data into an integrated data system (*i.e.*, IMFAL). IAC must manage the library and provide local school systems with access to it using a cloud-based system. Following the completion of the initial assessment, IAC must develop standards and procedures to comprehensively update the facilities assessment so that the data is not more than four years old. Local school systems must cooperate with IAC and contribute data as requested to update the assessment. The contract to develop IMFAL was awarded in June 2022; it is expected to be operational in summer 2023.

State Fiscal Effect:

Statewide Assessment

IAC advises that a statewide HVAC assessment of indoor air quality in all 1,400 public schools costs as much as \$75 million. The assessments require installation of measurement equipment, extended data collection over multiple days, and repeated visits to each facility to assess air quality in every room and diagnose causes for readings that exceed safe levels. As procurement of a contractor to conduct the assessment likely takes

6 to 12 months, completing the assessment in as little as one year after procurement requires a substantial investment in personnel and equipment. Requirements to have certified technicians and engineers manage the assessment also make it very expensive to conduct.

Staffing Needs

Given the level of complexity and the duration of the required assessment, IAC cannot absorb management of the assessment with existing staff.

General fund expenditures increase by \$89,204 in fiscal 2024, which accounts for a 90-day start-up delay from the bill's July 1, 2023 effective date. IAC has determined that one regular full-time position is needed to implement this bill. However, the Department of Legislative Services (DLS) advises that the added responsibilities incurred by this legislation are not permanent because the assessment must be completed by July 1, 2025, and, thus, may be performed by a contractual employee. This estimate reflects the cost of hiring one construction architect/engineer to manage the contractor(s) conducting the statewide HVAC assessment. It includes a salary, fringe benefits, one-time start-up costs, and ongoing operating expenses

| | |
|-----------------------------------|-----------------|
| Contractual Position | 1.0 |
| Salary and Fringe Benefits | \$81,795 |
| Operating Expenses | <u>7,409</u> |
| Total FY 2024 IAC Staffing | \$89,204 |

Future year expenditures reflect a full salary with annual increases and employee turnover as well as annual increases in ongoing operating expenses.

This estimate does not include any health insurance costs that could be incurred for specified contractual employees under the State's implementation of the federal Patient Protection and Affordable Care Act.

Local Expenditures: Local school systems must install carbon dioxide detectors in every classroom in every school in their jurisdiction. IAC advises that some school systems have taken steps to install detectors, but not necessarily in every classroom. Moreover, the detectors installed may not meet the criteria in the bill and, thus, will have to be replaced.

In addition, the bill requires local school systems to correct any HVAC deficiencies identified by the statewide HVAC assessment. Although a reliable estimate is not feasible, the cost of such repairs is likely significant. Anne Arundel County Public Schools advises that testing and rebalancing an HVAC system in one high school can cost as much as \$170,000; it further advises that its maintenance backlog for building controls is

approximately \$6 million. Therefore, local school systems likely incur significant costs to comply with the bill, likely in the tens of millions of dollars across all 24 school systems.

Although local school systems do not incur any direct costs for the statewide HVAC assessment, the nature of the assessment likely is very disruptive to school operations and for facility staff.

Small Business Effect: Small businesses that conduct indoor air quality testing and remediation likely experience a significant increase in the demand for their services.

Additional Comments: DLS notes that IAC is the owner of IMFAL and is responsible for the statewide assessment. Therefore, despite the bill requiring MSDE to enter the HVAC assessment data into IMFAL and make each assessment available as a stand-alone report, DLS assumes that IAC enters the data instead. Otherwise, general fund expenditures increase for MSDE to do so.

Additional Information

Prior Introductions: Similar legislation has not been introduced within the last three years.

Designated Cross File: SB 835 (Senator Brooks) - Budget and Taxation.

Information Source(s): Maryland State Department of Education; Public School Construction Program; Board of Public Works; Baltimore City Public Schools; Anne Arundel County Public Schools; Department of Legislative Services

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