

Date of Hearing: May 18, 2022

ASSEMBLY COMMITTEE ON APPROPRIATIONS

Chris Holden, Chair

AB 2232 (McCarty) – As Introduced February 15, 2022

Policy Committee:	Education	Vote:	5 - 1
	Higher Education		9 - 2

Urgency: No State Mandated Local Program: Yes Reimbursable: Yes

SUMMARY:

This bill establishes requirements for Heating, Ventilation, and Air Conditioning (HVAC) system maintenance and inspection in schools, colleges, and universities and requires school and college classrooms to be equipped with carbon dioxide monitors.

Specifically, this bill:

- 1) Requires a covered school, as defined, and requests the University of California (UC) to ensure that facilities, including, but not limited to, classrooms for students, have HVAC systems that meet minimum ventilation requirements set forth in the California Code of Regulations.
- 2) Establishes specific protocols for the inspection of HVAC system filters, outside air ventilation rates, control systems, testing and recalibration of carbon dioxide sensors, and recommendations for repairs or replacements, and requires this enhanced inspection to be performed at least one every five years during the currently-required annual inspection.
- 3) Requires a covered school and requests the UC to ensure that all classrooms are equipped with a carbon dioxide monitor that meets specified requirements, including the ability to be connected to existing building systems.
- 4) Requires a covered school and requests the UC to keep a complete and accurate record for each incident where the carbon dioxide set point was exceeded in a classroom and a record of any remediation or adjustments made as a result of the exceedance, maintain these records for at least five years, and make these records available to the public upon request.
- 5) Requires HVAC testing to be performed by a Certified TAB Technician or an HVAC Acceptance Test Technician. A “Certified TAB Technician” is defined as a technician certified to perform testing, adjusting, and balancing of HVAC systems by the Associated Air Balance Council, the National Environmental Balancing Bureau, or the Testing, Adjusting and Balancing Bureau.
- 6) Defines “covered school” to mean a school district, a county office of education, a charter school, a private school, the California Community Colleges (CCCs), or the California State University (CSU).

FISCAL EFFECT:

- 1) Significant costs, potentially in the hundreds of millions of dollars to Proposition 98 (GF) once every five years for school districts and community colleges to perform the enhanced HVAC inspections. According to data provided by this bill’s sponsors, costs could range from \$17,750 to \$22,750 per K-12 school, or, from \$166 million to \$240 million for 10,545 K-12 schools every five years. This assumes all schools would contract with a third party for the inspections. Costs could be lower if in-house labor is used. However, if the Commission on State Mandates determines that this bill imposes a state-mandated program, then costs, including in-house labor costs for inspections performed by school district staff, would be reimbursable, to the extent those costs exceed the cost of the regular annual inspection. Additional, potentially reimbursable costs in the tens of millions of dollars to Proposition 98 (GF) every five years for the community colleges to perform the enhanced inspections. Additional costs, potentially in the tens of thousands of dollars to the General Fund once every five years for CSU and UC to perform the enhanced inspections.
- 2) Significant one-time cost, likely in excess of \$100 million to Proposition 98 (GF), for school districts and community colleges to install carbon dioxide monitors in every classroom. This assumes an installation cost of \$600 for the estimated 213,000 K-12 classrooms that do not already have monitors and an unknown number of community college classrooms that do not already have monitors. If the Commission on State Mandates determines that this bill imposes a state mandate program, then this cost—including the cost of in-house labor to install them—would be reimbursable. Significant one-time cost, likely in excess of \$100 million to the General Fund for CSU and UC to install carbon monoxide monitors in every classroom. CSU estimates a one-time cost of \$115 million (\$5 million per campus for 23 campuses) for this purpose.

COMMENTS:

Purpose of the Bill. This bill seeks to ensure healthy indoor air quality for all public and private K-12 pupils and public college and university students in California. In doing so, it (a) establishes detailed requirements for the inspection of HVAC systems at least once every five years (to be performed during the currently-required annual inspection), (b) requires HVAC systems to perform at specified standards, (c) requires HVAC testing and inspections to be performed by technicians with specified certifications, and (d) requires the installation of carbon dioxide monitors that meet specified requirements in every classroom.

HVAC System Inspections. Existing law requires K-12 school facilities to be in “good repair,” which is defined to mean clean, safe, and functional. There is no such definition for college and university facilities. The Occupational Safety and Health Standards Board (OSHSB) requires HVAC systems to be maintained in accordance with the State Building Standard Code and to be inspected at least annually, with problems fixed within a reasonable time. According to this bill’s author, the regulations requiring the annual inspections do not set forth specific testing requirements, and requirements proposed by this bill are based on standards developed by the American Society of Heating, Refrigerating and Air-Conditioning Engineers.

Carbon Dioxide Detectors. This bill requires a carbon dioxide monitor to be installed in every K-12 and college and university classroom and requires the monitors to meet specified requirements. Existing law, beginning January 1, 2023, requires that all new school and CCC facilities have a carbon dioxide detector installed in each classroom. In its next regulatory code cycle, the Division of the State Architect (DSA) is considering a requirement that all

modernization projects include the installation of carbon dioxide detectors in classrooms. It is not clear whether the monitors installed pursuant to DSA requirements meet the specifications required by this bill.

The CalSHAPE Ventilation Program, created pursuant to AB 841 (Ting), Chapter 372, Statutes of 2019, provides grants to schools to install carbon dioxide monitors. The maximum grant allowance is \$600 per monitor. It is expected that there will sufficient funding to cover more than 3,500 schools, which would reduce the cost of this bill. That reduction is reflected in the fiscal effect above.

Implications for Staffing. This bill requires HVAC testing and inspections to be performed by technicians with specific certifications. Not all technicians have these certifications, which are highly specialized. It is not clear whether existing school and college staff meet these requirements, or if existing staff will need to be replaced or retrained or if schools and colleges will need to contract out for these services.

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